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GVK Power (Goindwal Sahib) Limited
Petitioner

Through



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Date: 03.12.2020
Place: Hyderabad

**BEFORE THE HON'BLE PUNJAB STATE ELECTRICITY
REGULATORY COMMISSION, CHANDIGARH
REVIEW PETITION NO. OF 2020**

IN THE MATTER OF:

GVK Power (Goindwal Sahib) Limited
Plot No.10, Paigah House,
Sardar Patel Road,
Secunderabad – 500003

...Petitioner

Versus

Punjab State Power Corporation Limited
The Mall, Patiala (Punjab)

...Respondent

**PETITION UNDER SECTION 94(1)(f) OF THE ELECTRICITY ACT,
2003 READ WITH REGULATION 64 OF PUNJAB STATE ELECTRICITY
REGULATORY COMMISSION (CONDUCT OF BUSINESS)
REGULATIONS, 2005 SEEKING REVIEW OF ORDER DATED
17.09.2020 IN PETITION NO. 34 OF 2019 AND FOR CLARIFICATION
OF ORDER DATED 17.09.2020**

Most respectfully showeth:

I. CONSPECTUS

1. The Petitioner, GVK Power (Goindwal Sahib) Ltd. ("**Petitioner**" / "**GVK**") has filed the present review petition under Section 94(1)(f) of the Electricity Act, 2003 ("**Electricity Act**") read with Regulation 64 of Punjab State Electricity Regulatory Commission (Conduct of Business) Regulations, 2005 ("**PSERC CBR 2005**") seeking review of Order dated 17.09.2020 passed by this Hon'ble Commission in Petition No. 34 of 2019 ("**Order under Review**"). A certified copy of the Order dated 17.09.2020 passed by this Hon'ble Commission in Petition No. 34 of 2019, received by GVK on 25.09.2020 is annexed hereto and marked as **Annexure P-1**.

2. By way of the Order under Review, this Hon'ble Commission has tried up the Annual Fixed Charges ("**AFC**") and Energy Charges for FY 2017-18 and FY 2018-19.

3. The present petition has been filed seeking review of the Order dated

17.09.2020 on account of error apparent on the face of the record and for clarification, as under:

- (a) The Interest & Finance Charges towards Long Term Loans have been approved on actuals whereas the same ought to have been allowed on normative basis for FY 2017-18 and FY 2018-19.
- (b) The components of O&M Expenses have been wrongly computed as under:
- (i) Employee Cost: Escalation 4.86% has been applied to GVK's employee cost for FY 2017-18 to determine the Employee Cost for FY 2018-19 instead of the actual expenditure incurred by GVK as per the audited accounts towards employees cost for FY 2018-19.
- (ii) R&M and A&G Expenses:
- The basis for computation of baseline values may be clarified.
 - The baseline values considered for computing R&M and A&G Expenses is erroneous as incorrect comparison has been made between GVK's Project to PSPCL's generating stations for the purpose of industry benchmarks. Such comparison is erroneous since accounts and accounting policies followed by GVK and PSPCL are different. Without such analysis, GVK's Project and PSPCL's generating stations cannot be compared.
 - This Hon'ble Commission has failed to consider the actual expenditure incurred by GVK towards components of A&G Expenses and R&M Expenses as detailed in the subsequent paragraphs.
- (iii) K-Factor: There is an error in the computation of 'K-Factor' since baseline O&M Expenses for the Control Period have been wrongly computed.
- (c) Interest on Working Capital
- (i) There is an error in the computation on working capital in as much as the actual fuel charges paid by PSPCL to GVK have been considered, whereas working capital is to be computed on normative basis in terms of Regulation 34 read with Regulation 25.1 of the Punjab State Electricity (Terms and Conditions of

Tariff) Regulations, 2014 (“**PSERC Tariff Regulations 2014**”).

- (ii) Since the component of Working Capital viz. Fuel Cost for two months has been erroneously determined, there is an error in the computation of ‘Receivables equivalent to two months’.
- (d) Depreciation: There is an error in the computation of depreciation, inasmuch a double adjustment on account of free hold land in computing the depreciation has been done. While arriving at the weighted average rate of depreciation as 4.77%, the rate of depreciation on free hold land was considered as 0%, However, in computing the depreciation, the value of land from the Average Gross Fixed Asset (“**GFA**”) has been deducted, which has led to a double deduction. The depreciation allowed ought to be Rs 146.17 Crore for FY 2017-18 and Rs 146.51 Crore for FY 2018-19 Crores.

II. DESCRIPTION OF PARTIES

4. The Petitioner, GVK Power (Goindwal Sahib) Limited, a company incorporated under the provisions of the Companies Act, 1956 on 04.12.1997. The registered office of the Appellant is at Paigah House, 156-159 Sardar Patel Road, Secunderabad, 540003.

5. The Respondent, Punjab State Power Corporation Ltd (“**PSPCL**”) is a distribution licensee, in terms of Section 2(17) of the Electricity Act, operating in the State of Punjab having its registered office at The Mall, Patiala (Punjab).

III. FACTUAL BACKGROUND

6. On 26.05.2009, GVK executed the Amended and Restated Power Purchase Agreement (“**PPA**”) with erstwhile Punjab State Electricity Board (now PSPCL), for supply of Contract Capacity (540 MW) from the Project. A copy of the Amended and Restated PPA dated 26.05.2009 between GVK and PSPCL is annexed hereto and marked as **Annexure P-2**.

7. On 16.04.2016, the Commercial Operation Date (“**COD**”) of the Project was attained.

8. On 15.09.2017, GVK filed Petition No. 54 of 2017 before this Hon’ble Commission seeking approval of completed capital cost and determination of tariff for FY 2016-17.

9. On 29.12.2017, GVK filed Petition No. 68 of 2017 *inter-alia* challenging the

deduction of amounts payable to GVK by PSPCL towards energy charges including surface transportation of coal costs.

10. On 29.12.2017, GVK filed Petition No. 69 of 2017 for determining tariff during the Control Period (FY 2017-18 to FY 2019-2020) in terms of the PSERC Tariff Regulations 2014.

11. On 06.03.2019, this Hon'ble Commission passed an Order in Petition No. 68 of 2017, *inter alia* determining the energy charges payable by PSPCL to GVK for supply of power. GVK has filed Appeal No. 189 of 2019 against the said Order and the same is pending adjudication before the Hon'ble Appellate Tribunal for Electricity. The energy charges including surface transportation charges payable to GVK would be subject to the outcome of the said Appeal. GVK reserves its rights in this regard.

12. On 26.11.2019, GVK filed Petition No. 32 of 2019 for True up of Tariff for FY 2016-17 in terms of the Punjab State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2005 ("**PSERC Tariff Regulations 2005**").

13. On 23.12.2019, GVK filed Petition No. 34 of 2019 for Truing up of Tariff for FY 2017-18 and FY 2018-19 in terms of PSERC Tariff Regulations 2014.

14. On 17.01.2020, this Hon'ble Commission passed the final order in Petition No. 54 of 2017 and determined: -

(a) Completed capital cost of the Project as Rs 3058.37; and

(b) Annual Fixed Charges ("**AFC**") for FY 2016-17.

15. On 23.01.2020, GVK filed Appeal No. 41 of 2020 before the Hon'ble Appellate Tribunal for Electricity ("**Hon'ble Tribunal**") challenging the Order dated 17.01.2020 passed by this Hon'ble Commission in Petition No. 54 of 2017. The said appeal is pending adjudication before the Hon'ble Tribunal. The submissions in the present petition are without prejudice to GVK's rights and contentions in Appeal No. 41 of 2020.

16. On 05.08.2020, this Hon'ble Commission passed Order in Petition No. 69 of 2017. A copy of the Order dated 05.08.2020 passed by this Hon'ble Commission in Petition No. 69 of 2017 is annexed hereto and marked as **Annexure P-3**.

17. On 07.09.2020, this Hon'ble Commission passed Order in Petition No. 32 of 2019 approving the AFC for FY 2016-17. A copy of the Order dated 07.09.2020 passed by this Hon'ble Commission in Petition No. 32 of 2019 is annexed hereto and marked as **Annexure P-4**.

18. On 17.09.2020, this Hon'ble Commission passed Order in Petition No. 34 of 2019 approving the AFC for FY 2017-18 and FY 2018-19.

19. On 21.10.2020, GVK has filed a review petition against the Order dated 05.08.2020 in Petition No. 69 of 2017 and the same is pending adjudication before this Hon'ble Commission. GVK reserves its rights in this regard.

20. GVK reserves its right to challenge the above-mentioned orders in accordance with law. It is respectfully submitted that there are errors apparent on the face of the record in Order dated 17.09.2020 and the same is s contrary to the principles enshrined in the PSERC Tariff Regulations 2014. Accordingly, GVK has filed the present petition seeking review of Order dated 17.09.2020 as detailed in the subsequent paragraphs.

IV. LEGAL FRAMEWORK FOR REVIEW

21. The present petition has been filed in terms of Section 94(1)(f) of the Electricity Act read with Regulation 64 of the PSERC CBR 2005. Regulation 64 of PSERC CBR 2005 provides as under:

“64. Review of the decisions, directions and orders:-

(1) Any person aggrieved by a decision or order of the Commission, from which no appeal is preferred or allowed, and who, from the discovery of new and important matter or evidence which, after the exercise of due diligence, was not within his knowledge or could not be produced by him at the time when the decision/order was passed by the Commission or on account of some mistake or error apparent on the face of record, or for any other sufficient reason, may apply for review of such order within 60 days of the date of decision/ order of the Commission...”

22. In terms of per Order 47, Rule 1 of the Code of Civil Procedure, 1908 (“**CPC**”), the power of review can be exercised on any of the following grounds:

- (a) Discovery of new and important matter or evidence which, after the exercise of due diligence, was not within knowledge of the petitioner or could not be produced by him;
- (b) Mistake or error apparent on the face of the record;
- (c) Any other sufficient reason.

23. The Hon'ble Supreme Court in the following cases, with respect to

exercise of review jurisdiction has observed as under:

(a) ***BCCI v. Netaji Cricket Club & Ors : (2005) 4 SCC 741***

"89. Order 47, Rule 1 of the Code provides for filing an application for review. Such an application for review would be maintainable not only upon discovery of a new and important piece of evidence or when there exists an error apparent on the face of the record but also if the same is necessitated on account of some mistake or for any other sufficient reason.

90. Thus, a mistake on the part of the court which would include a mistake in the nature of the undertaking may also call for a review of the order. An application for review would also be maintainable if there exists sufficient reason therefore. What would constitute sufficient reason would depend on the facts and circumstances of the case. The words 'sufficient reason' in Order 47, Rule 1 of the Code is wide enough to include a misconception of fact or law by a court or even an Advocate. An application for review may be necessitated by way of invoking the doctrine "actus curiae neminem gravabit".'

(b) ***Thungabhadra Industries Ltd Vs. Govt of Andhra Pradesh : AIR 1964 SCC 1372***

"11. We do not consider that this furnishes a suitable occasion for dealing with this difference exhaustively or in any great detail, but it would suffice for us to say that where without any elaborate argument one could point to the error and say here is a substantial point of law which stares one in the face, and there could reasonably be no two opinions entertained about it, a clear case of error apparent on the face of the record would be made out..."

24. Additionally, on certain issues, as detailed hereunder, GVK is seeking issuance of clarifications from the Order under Review by this Hon'ble Commission.

V. GROUNDS WITH LEGAL SUBMISSIONS

25. It is submitted that there are errors apparent on the face of record in the Order under Review with respect to truing up of tariff for FY 2017-18 and FY 2018-19, which have been computed contrary to the PSERC Tariff Regulations 2014:

- (a) Interest on Loan
- (b) O&M Expenses
- (c) Interest on working capital
- (d) Depreciation

Re. Interest on Loan

26. It is submitted that in terms of Regulation 24 of the PSERC Tariff Regulations 2014, interest ought to be computed taking into account the opening

gross normative loan on the completed capital cost approved this Hon'ble Commission and the actual rate of interest paid by GVK. GVK had computed the interest taking into account repayment towards outstanding loan amounts and applicable interest rates in line with the PSERC Tariff Regulations, 2014. The computation of interest on term loans is based on the following:

- (a) The opening gross normative loan on the Completed Capital Cost as approved by this Hon'ble Commission.
- (b) The rate of interest has been considered at the actual applicable interest rate which was at 13.22 % p.a., for FY 2017-18 and 13.22 % p.a. for FY 2018-19.
- (c) The repayment for the period FY 2017-18 and FY 2018-19 has been considered equal to the depreciation allowed for that year.

27. However, in the Order under Review, interest charges have been allowed at a much lower rate, as under:

“Commission’s Analysis

*“6.8 The Closing balance of loan amounting to Rs.1999.59 Crore as on 31.3.2017 determined by the Commission in FY 2016-17 in Petition no 32 of 2020, has been considered as the opening loan balance for FY 2017-18. Asset addition of Rs.12.90 Crore for FY 2017-18 and Rs.0.84 Crore for FY 2018-19 has been approved in this Order. 70% of asset addition has been considered to be sourced from debt i.e. Rs. 9.03 (12.90*70%) Crore for FY 2017-18 and Rs. 0.59 (0.84*70%) Crore for FY 2018-19 as normative loan. Repayment of loan has been considered equal to depreciation allowed as per Regulation 24.3 of PSERC MYT Regulations, 2014. GVK claimed the weighted average rate of interest 13.22% for FY 2017-18 and FY 2018-19 which has been considered for calculating interest on long term loan and since rates at which loan has been taken by GVK are less than SBI advance rate, the same have been considered to calculate the interest. The interest on long term loans is calculated as under:*

Table No.20: Interest charges on Long Term Loans determined by the Commission for FY 2017-18 and FY 2018- 19

(Rs. Crore)

Sr.No	Particulars	FY 2017-18	FY 2018-19
1	Opening balance of loan	1999.59	1867.04
2	Add: Receipt of loan during the year	9.03	0.59
3	Less: Repayment of loan during the	141.58	141.90
4	Closing balance of loan	1867.04	1725.73
5	Average Loan	1933.32	1796.39
6	Rate of interest	13.22%	13.22%
7	Interest Charges	255.58	237.48

6.9 As per the Annual Audited Accounts of GVK for FY 2017-18 and FY 2018-19 interest has been worked out to Rs.573.57 Crore and Rs.636.29 Crore respectively on average Loans of Rs.3567.86 Crore and Rs 3758.93 Crore for FY 2017-18 and FY 2018-19 respectively. However, GVK has a liability of Rs. 313.91 Crore and Rs 852.24 Crore towards interest accrued for FY 2017-18 and FY 2018-19 respectively. The interest actually paid on long term loans is as under:

Table No.21: Interest actually paid by GVK for FY 2017-18 and FY 2018-19

(Rs. Crore)

Sr. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	Interest charges as per annual audited accounts	448.37*	573.57	636.29
2	Interest paid: Current year Previous year	221.95 -	259.66 226.42	- 97.96
3	Closing balance of interest due but not paid as per annual audited accounts	226.42	313.91	852.24

* In the Annual Audited Accounts of GVK for FY 2016-17 interest charges were shown as Rs 451.91 Crore. But in the Annual Audited Accounts of FY 2017-18, the previous year figures of interest charges for FY 2016-17 has been rearranged/regrouped as Rs. 448.37 Crore and Rs 3.54 (451.91 - 448.37) Crore has been shown as Other Finance Charges.

6.10 The Commission determined interest charges for FY 2017-18 and FY 2018-19 as under:

Table No.22: Interest charges allowed by the Commission for FY 2017-18 and FY 2018-19

(Rs. Crore)

Sr. No	Particulars	FY 2017-18	FY 2018-19
1	Interest determined as per Table 20	255.58	237.48
2	Interest actually paid by GVK	259.66	97.96
3	Interest allowed	255.58	97.96

6.11 As per the Annual Audited Accounts for FY 2017-18 and FY 2018-19, finance charges amount to Rs. 3.44 Crore and 0.28 Crore on the average loan amount of Rs. 3567.86 Crore and Rs.3758.93 Crore respectively. Finance charges proportionately work out as Rs.1.86 Crore and Rs 0.13 Crore on the average loan of Rs 1930.65 Crore and Rs.1788.66 Crore for FY 2017-18 and FY 2018-19 respectively and the same are allowed. Thus, total interest and finance charges for FY 2017- 18 and FY 2018-19 work out to Rs. 257.44 (255.58+1.86) Crore and Rs. 98.09 (97.96+ 0.13) Crore respectively.

Accordingly, the Commission allows interest and finance charges of Rs.257.44 Crore and Rs. 98.09 Crore for FY 2017-18 and FY 2018-19 respectively.”

28. It is submitted that this Hon’ble Commission in Order dated 17.01.2020 has worked out average long-term loan as Rs. 2070.22 Crores based on normative parameters in terms of PSERC Tariff Regulations 2005. It is submitted that once normative approach has been adopted by the Hon’ble Commission, there cannot be any further adjustments on the basis of actual expenses on account of it being less. This position of law has been upheld by the Hon’ble Tribunal in ***Haryana Power Generation Co. Ltd. v. Haryana Electricity Regulatory Commission***, Judgment dated 31.07.2009 in Appeal No. 42 & 43 of 2008. The relevant portion is reproduced hereunder:

“34. ... In our opinion, once the State Commission adopts normative approach, it is neither in the interest of the long term development of the electricity industry in the State nor is a fair play to the appellant to deny the benefits of the normative approach to the appellant. The very purpose of normative approach is that the parties are informed of the benchmarks beforehand and that if they are in a position to better the benchmarks, they are entitled to the benefits unless there is some unhealthy practice adopted by them. In the case before us, if the appellant is able to raise resources below the benchmark rates, it indicates efficiency on the part of the appellant for which it should be allowed benefit in terms of the norms. Otherwise, the purpose of normative approach would get defeated and the appellant may not remain adequately motivated to work with the desired efficiency. It is true that the consumers should not be burdened with unnecessary costs, but the same is equally applicable to the appellant when it is denied recovery of costs incurred by it if the same is not in line with the norms.”

Evidently, as the average long-term loan has been calculated on normative basis, the interest paid by GVK ought to be considered on normative basis. Accordingly, computation of interest on actuals instead of normative loan amount as claimed by GVK, is contrary to the PSERC Tariff Regulations 2014, as well as the settled position of law as laid down by the Hon’ble Tribunal. The interest on loan approved in the Order under Review is based on actuals, the same is an error apparent as the same ought to have been considered and allowed on normative parameters.

29. It is submitted that this Hon’ble Commission has allowed interest on loan amounts computed on normative average loan and not on actuals in Order dated 03.09.2019 passed by this Hon’ble Commission in ***Everest Power Pvt. Ltd. v. Punjab State Power Corporation Ltd. & Anr.***, Petition No. 23 of 2017, as under:

“5.9 The Closing loan balance of Rs. 395.84 crore was determined by the Commission in True-Up of FY 2016-17, which is considered as the opening loan balance for FY 2017-18. Asset addition of Rs.2.65 crore for FY 2017-18, Rs.1.51 crore for FY 2018-19 and Rs.4.31 crore for FY 2019- 20 has been approved in this Order. 70% of asset addition has been considered to be sourced from debt i.e. Rs.1.86 crore(2.65*70%) for FY 2017-18, Rs.1.06 crore(1.51*70%) for FY 2018-19 and Rs.3.02 crore(4.31*70%) for FY 2019-20 as normative loan. Repayment of loan equal to depreciation allowed has been considered on normative basis as per Regulation 24.3 of PSERC MYT Regulations, 2014. The Petitioner claimed the weighted average rate of interest 13.35% for FY 2017-18. The weighted average rate of interest projected as @13.18% and @13.24% for FY 2018-19 and FY 2019-20 respectively. The interest on long term loans is calculated in the Table-2.18.

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
1.	Opening balance of loan	395.84	356.43	316.11
2.	(+)Loan addition during year	1.86	1.06	3.02
3.	(-): Repayment(normative) during the year	41.27	41.38	41.53
4.	Closing balance of loan	356.43	316.11	277.60
5.	Average Loan	376.14	336.27	296.86
6.	Weighted Average Rate interest on Loan (%)	13.35%	13.18%	13.24%
7.	Interest on Loan	50.21	44.32	39.30

30. It is evident from the Order under Review that the Hon’ble Commission has taken the opening loan balance as Rs 1999.59 Crore for FY 2017-18, Rs 1867.04 Crore for FY 2018-19 which is the normative loan amount determined by this Hon’ble Commission in Petition No. 54 of 2017. Once this Hon’ble Commission has computed a normative outstanding loan amount, the interest payable ought to also be considered on normative basis and allowed to GVK.

31. Accordingly, the interest (excluding finance charges) on long term loans that ought to be allowed by this Hon’ble Commission is as under:

(Rs. In Crores)

2017-18	2018-19

255.53	236.81
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Re. Operation and Maintenance Expenses

32. In terms of Regulation 26 of the PSERC Tariff Regulations 2014, O&M Expenses are computed on the basis of (a) Employee Costs and (b) Repair and Maintenance Costs, Administrative and General Costs. Further, the baseline values for determination of O&M Costs are to be determined by this Hon'ble Commission in terms of Regulation 8 of the PSERC Tariff Regulations 2014.

33. Regulation 8 of the PSERC Tariff Regulations 2014, provides that baseline values for the control period shall be determined by the Hon'ble Commission *inter alia* based on:

- (a) Figures approved by the Hon'ble Commission in the past;
- (b) Latest audited accounts;
- (c) Estimates of the expected figures for the relevant year;
- (d) Industry standards and benchmarks.

34. It is submitted in the Order under Review, baselines values have been computed erroneously and contrary to Regulation 8 of the PSERC Tariff Regulations 2014 since two different set of baseline values have been used for calculating the Employee Expenses and R&M and A&G Expenses. For the purposes of calculating the Employee Cost, this Hon'ble Commission has considered the actual employee cost for FY 2017-18 as the baseline, whereas for calculating the R&M and A&G Expenses the baseline values have been determined based on audited accounts of GVK for FY 2016-17, FY 2017-18 and FY 2018-19 along with the industry benchmark. However, it is unclear as to the basis for determining the baseline cost.

A. Employee Costs

35. The findings of this Hon'ble Commission towards Employee Expenses in the Order under Review are as under:

“Commission's Analysis

3.8 GVK in Petition no 69 of 2017 claimed an employee cost of Rs 15.58 Crore and Rs 17.92 Crore for FY 2017-18 and FY 2018- 19 respectively. The Commission in its Order dated 05.08.2020 had approved employee cost of Rs 9.99 Crore and Rs 10.70 Crore for FY 2017-18 and FY 2018-19 respectively.

[...]

3.10 The employee cost is considered in two parts -Terminal benefits and other employee cost. Terminal benefits are to be allowed on actual basis. GVK has claimed Rs. 9.99 Crore and Rs. 12.67 Crore as employee cost for FY 2017-18 and FY 2018-19 respectively as per Annual Audited Accounts which includes Terminal benefit of Rs 0.73 Crore and Rs.0.99 Crore respectively. The Commission allows the actual Terminal benefit of Rs 0.73 Crore and Rs.0.99 Crore for FY 2017-18 and FY 2018-19 respectively. Accordingly, terminal benefits allowed by the Commission for FY 2017-18 and FY 2018-19 are as under

Table No. 3: Terminal benefits allowed by the Commission

(Rs. Crore)

Sr. No	Particular	FY 2017-18	FY 2018-19
1.	Terminal Benefits	0.73	0.99

3.11 The 'Other Employee Cost' of Rs. 9.26 Crore was provisionally approved by the Commission in Order dated 05.08.2020 in Petition no 69 of 2017 for FY 2017-18. Since, the plant has run for 349 days in that year, therefore taking FY 2016-17 as the baseline year is not feasible. The Commission considers Rs. 9.26 Crore as baseline for calculating 'Other Employee Cost' for subsequent years

[...]

3.13 Accordingly, the Commission has calculated the INDEX n for FY 2017-18 and FY 2018-19 as under

Table No. 4: WPI and CPI Increase considered for FY 2017-18

Sr. No.	Particulars	FY 2016-17	FY 2017-18	Increase (%) over FY 2016-17
1	CPI	275.92	284.42	3.08
2	WPI	111.60	114.90	2.96

$$\text{INDEX } n/\text{INDEX } n-1 = (0.5*3.08) + (0.5*2.96) = 3.02\%$$

Table No. 5: WPI and CPI Increase considered for FY 2018-19

Sr. No.	Particulars	FY 2017-18	FY 2018-19	Increase (%)
1	CPI	284.42	299.92	5.45
2	WPI	114.88	119.79	4.28

$$\text{INDEX } n/\text{INDEX } n-1 = (0.5*5.45) + (0.5*4.28) = 4.86\%$$

3.14 The Commission considers the escalation of 3.02% and 4.86% to determine other employee cost for FY 2017-18 and FY 2018-19 respectively. The other employee cost and employee cost approved by the Commission for FY 2017-18 and FY 2018-19 is as under:

Table No.6 : Employee Cost approved by the Commission for FY 2017-18 and FY 2018-19

(Rs. Crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19
1.	<i>Other Employee Cost</i>	9.26	9.26
2.	<i>Escalation Factor</i>	3.02%	4.86%
3.	Other Employee Cost	9.26	9.71
4.	Terminal Benefits	0.73	0.99
5.	Total Employee Cost	9.99	10.70

36. It is submitted that after having considered actual employee cost for FY 2017-18 as the baseline value, escalation of 4.86% has been considered for determining employee cost for FY 2018-19. Such a computation constitutes an error apparent since:

- (a) Using FY 2017-18 as baseline does not reflect the increase in number of employees in FY 2018-19 due to increase in plant operations. The same is evident from the fact that the PLF of the plant increased from 32% in FY 2017-18 to 52% in FY 2018-19
- (b) In terms of Regulation 8.1(b) of the PSERC Regulations 2014, the latest audited accounts of GVK ought to be considered. The audited accounts for FY 2018-19 were placed on record by GVK in Petition No. 34 of 2019 vide Affidavit dated 31.07.2020.

Similarly, using employee cost incurred by GVK in FY 2017-18 as a baseline to compute the employee cost for FY 2018-19 would not be correct since employee cost of FY 2018-19 does not reflect the increase in the number of employees.

37. As per the audited accounts, GVK has incurred the Employee Cost of Rs. 9.99 Crores for FY 2017-18 and Rs. 12.67 Crore for FY 2018-19. The increase in cost is due to increase in the number of employees in FY 2018-19 from 117 to 143 due to the increase in operation of the Project as compared to previous years.

38. It is submitted GVK is required to pay competitive remuneration to employees in order to match industry standards. Regulation 8.1(b) of PSERC Tariff Regulations 2014 provides that approval of employee costs shall be based in industry benchmarks. However, the increase in employee cost at the rate of 4.86% is not reflective of the industry standard. It appears that this Hon'ble Commission has considered the employee cost of PSPCL's generating stations as industry standard for computing the employee cost of GVK.

39. In this regard, it is pertinent to note that in terms of Note 6 to Regulation 26 of PSERC Tariff Regulations 2014, an exceptional increase in employee cost on account of pay revision etc. would be considered separately by the Hon'ble Commission. Pertinently, GVK is a private company and pay revisions, such as in government organisations / companies, are not applicable to it. Thus, GVK has to provide regular increments to employees, which in the year 2017-18 and FY 2018-19 was 15%. Therefore, it is prayed that the Hon'ble Commission may allow Employee Cost for FY 2017-18 and FY 2018-19 on actuals and the Order under Review may be modified in line with the aforesaid submissions.

40. Accordingly, the employee expenses as part of the O&M Expenses that ought to be allowed by this Hon'ble Commission based the audited accounts for FY 2018-19 is Rs 12.67 Crores.

B. Repair & Maintenance and A&G Expenses

41. It is submitted that this Hon'ble Commission has considered the R&M and A&G expenses based on audited accounts of GVK for FY 2017-18 to FY 2018-19 along with industry benchmark for determining the baseline values, as under:

“3.23 The Commission also observes that, the A&G and R&M expenses of GHTP and GGSSTP (Thermal Plants) of PSPCL are lower than GVK in spite of being older and of higher capacity as shown in the table below:

Table No. 10: Comparison of A&G and R&M expenses of PSPCL owned Thermal Plants and GVK for FY 2017-18 and FY 2018-19

(Rs. Crore)

Sr. No.	Particulars	FY 2017-18			FY 2018-19		
		GHTP	GGSSSTP	GVK	GHTP	GGSSSTP	GVK
1	Capacity (MW)	920	840	540	920	840	540
2	A&G and R&M expenses	48.59	61.06	64.96	49.80	62.58	55.18

3.24 The Commission has taken into consideration R&M and A&G expenses based on audited accounts of GVK for FY 2016-17, FY 2017-18 & FY 2018-19 and the industry benchmark for determining the baseline values of R&M and A&G expenses for FY 2017-18 as under:

Table No. 11: Determination of Baseline value of the R&M and A&G expenses for FY 2017-18 based on the Annual Audited Accounts for FY 2016-17, 2017-18 and FY 2018-19

(Rs. Crore)

Sr. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19	Base line value for FY 2017-18
I	A&G Expenses				

1.	Insurance	2.68	6.02	2.84	2.76
2.	Rent	0.03	0.03	0.06	0.05
3.	Rates & Taxes	0.51	3.63	1.12	0.82
4.	Legal & Professional Charges	3.41	4.67	9.34	3.00
5.	Auditor's Remunerations: Statutory Audit	0.02	0.03	0.07	0.03
	Tax Audit	0	0.02	0	0.02
	Other Services	0	0.01	0.01	0.01
6.	Provision for Diminution in value of Investment	0.28	0.12	0.00	0.00
7.	Communication cost	0.22	0.21	0.08	0.08
8.	Travelling expenses	0.28	0.75	0.98	0.63
9.	Miscellaneous expenses	1.54	5.69	2.12	2.12
10.	Inventory Written off	0	0.53	0.00	0.00
11.	Contract Manpower	5.15	13.48	16.63	8.00
12.	Ash Handling Charges	0.77	3.12	3.10	0.00
13.	Water drawl charges	0	1.21	0.00	0.00
14.	Power & Fuel	6.93	13.33	4.36	4.36
15.	Total	21.82	52.85	40.71	21.88
II	R & M Expenses				
1.	Consumption of Stores &	1.19	10.07	11.64	4.00
2.	Repair: Buildings	0	0.27	0.29	0.27
3.	Repair: Plant & Machinery	0.12	1.17	1.48	1.17
4.	Repair: Other Assets	0.29	0.6	1.06	0.60
5.	Total	1.60	12.11	14.47	6.04
	R&M and A&G Expenses	23.42	64.96	55.18	27.92

3.25 The Commission has already approved investment/expenditure of Rs. 12.90 Crore and Rs. 0.84 Crore for FY 2017-18 and FY 2018-19 respectively as per the Capital Investment Plan. Capitalization of assets is considered as an addition to Gross Fixed Assets based on the nature of the capital expenditure. The additional capitalization/GFA during FY 2017-18 and FY 2018-19 is being considered as Rs. 12.90 Crore and Rs. 0.84 Crore respectively.

3.26 The Commission considers Rs. 27.92 Crore as base R&M and A&G expenses for FY 2017-18 and determines the K factor for the 1st Control Period as under:

Table No.12: R&M and A&G expenses based on K factor and indexation for FY 2017-18 and FY 2018-19 determined by the Commission

(Rs. Crore)

Sr. No.	Particulars	Amount
1.	Opening GFA as on 1.4.2017	3058.37
2.	Addition during the year	12.90
3.	Closing GFA as on 31.3.2018	3071.27
4.	Average GFA	3064.82
5.	R&M and A&G expenses	27.92
6.	Less: Audit Fee	0.06

7	Base R&M and A& G expenses	27.86
8.	K factor	0.909%

3.27 The Commission determines the R&M and A&G expenses for FY 2017-18 and FY 2018-19 based on K factor calculated above as under:

Table No. 13: R&M and A&G determined by the Commission for FY 2017-18 and FY 2018-19

(Rs. Crore)

Sr. No.	Particula	FY 2017-18	FY 2018-19
1	Opening GFA	3058.37	3071.27
2	Addition during the year	12.90	0.84
3	Closing GFA	3071.27	3072.11
4	Average GFA	3064.82	3071.69
5	K factor	0.909%	0.909%
6	WPI Index (as per para 3.13)		4.28%
7	R&M and A&G expenses after adjusting WPI increase and K factor	27.86	29.12
8	Audit Fee	0.06	0.08
9	Total R&M and A&G expenses	27.92	29.20

3.28 The O&M expenses consisting of employee cost and R&M and A&G expenses as determined in para 3.14 and 3.27 are approved as under:

Table No.14: O&M expenses for FY 2017-18 and FY 2018-19

(Rs. Crore)

Sr. No	Particulars	FY 2017-18	FY 2018-19
1	Employee Cost	9.99	10.70
2	R&M and A&G Expenses	27.92	29.20
3	O&M Expenses	37.91	39.90

42. Evidently, the baseline values have been computed comparing A&G and R&M expenses of PSPCL's generating stations with that of GVK's Project. It is submitted that such a comparison constitutes an error apparent since:

- (a) No detailed analysis or break up of R&M and A&G Costs incurred by PSPCL's Plants have been provided. In such a scenario it would not be appropriate to treat the same as an industry benchmark for computation of baseline values in terms of Regulation 8 of the PSERC Tariff Regulations 2014.
- (b) In order to determine the baseline values, a detailed comparative analysis of PSPCL's and GVK's accounting policies ought to be done. In the absence of such an analysis, comparison of two differently situated power plants is erroneous and without basis.

43. In any event, comparing PSPCL's generating station and GVK's Project on the basis of actual expenditure incurred towards R&M & A&G expense is

misleading and any comparison should be based on total O&M cost including employee cost, as GVK runs the plant through the support of outsourced manpower, which is cost effective and operationally efficient as it does not increase the fixed cost of the plant. Moreover, since the employees are outsourced, GVK has flexibility to scale up or scale down the cost based on the operation requirements. However, in accounting since these outsourced manpower are not employees of the company it is accounted under the account head contract manpower or legal and professional expenses, which comes under Administrative and General Expenses. In the event such a comparison between GVK and PSPCL were to be carried out, the ratio of the O&M Expenses as a percentage of the operating revenue of PSPCL's generating station would accurately reflect the industry standards and benchmarks in the State of Punjab. Such comparison for FY 2017-18 and 2018-19 is given hereunder:

Particulars	FY 2017-18			FY 2018-19		
	GGSSSTP	GHTP	GVK	GGSSSTP	GHTP	GVK
ARR	1,161.55	1,337.38	1,504.50	1,036.95	1,215.40	1,809.60
Employee Cost	306.18	125.01	9.99	321.06	140.22	12.67
R&M and A&G Expenses	61.06	48.59	56.99	62.58	49.80	52.94
O & M Expenses	367.24	173.60	66.98	383.64	190.02	65.61
% of O & M expenses on ARR	31.62%	12.98%	4.45%	37.00%	15.63%	3.63%

Note: Figures for O&M Expenses of PSPCL's Plants (GGSSSTP and GHTP) have been taken from Tariff Order dated 27.05.2019 in Petition No. 2 of 2019 (for FY 2017-18) and Tariff Order dated 01.06.2020 in Petition No. 30 of 2019 (for FY 2018-19) Source : . <http://pserc.gov.in/pages/tariff-orders.html>

It is evident from the above that GVK's expenses as compared to PSPCL are significantly lower. Therefore, O&M Expenses of GVK for FY 2017-18 on actuals ought to be taken as baseline figures for arriving at K factor.

44. It is submitted that since there is an error in the computation of the baseline values for computation of R&M and A&G Expenses therefore the computation of K-Factor is also erroneous.

45. As regards the expenditure claimed by GVK towards certain components of A&G Expenses, it is submitted as under:

(a) Insurance

46. GVK had claimed Rs 6.02 Crore for FY 2017-18 and Rs 2.85 Crores as expenditure towards insurance on actuals based on audited accounts. However, this Hon'ble Commission has merely considered an average of expenditure towards insurance for FY 2017-18 and FY 2018-19 as baseline value. It is submitted that the increase in Insurance expenses in FY 2017-18 is due to the fact that insurance companies hiked their premium in a concerted manner. Until the FY 2016-17 insurance companies were offering discount up to 99% on the tariff rates for FLEXA Perils and charging a lower premium for covering Natural catastrophes peril. However, in FY 2017-18 the general insurance companies decided not to offer any discount which led to increase in premiums by 2 to 3 times. However, in FY 2018-19, insurance companies started offering the discount again. GVK availed insurance policies after inviting proposals from various insurance companies and the expenditure incurred by GVK is reasonable and prudent. However, this Hon'ble Commission has failed to consider the actual expenditure incurred by GVK towards the same.

(b) Rates and Taxes.

47. GVK has claimed Rs 3.63 Crore and Rs 1.12 Crore for FY 2017-18 and FY 2018-19 towards rates and taxes on actuals based on audited accounts. However, this Hon'ble Commission has considered an average of the rates and taxes claimed by GVK for FY 2016-17 and FY 2018-19 to determine the baseline cost and escalated the same by the K-Factor and WPI Index. It is submitted that the increase in rates and taxes in FY 2018-19 was account of the arrangement fee paid for procuring coal under Shakti Scheme. It is submitted that GVK had tied up coal under Shakti Scheme pursuant to the Order dated 01.02.2016 of this Hon'ble Commission wherein GVK was directed to tie up a firm source of fuel due to the cancellation of its captive coal blocks. Furthermore, this Hon'ble Commission approved the procurement of coal under Shakti Scheme vide its Order dated 11.06.2018. Accordingly, the incidental cost incurred for procuring coal under Shakti Scheme such as arrangement fee included in the cost of Rates and Taxes for FY 2018-19 ought to be allowed to GVK on the basis of actuals.

(c) Legal and Professional Fee

48. GVK had claimed Rs 4.67 Crores for FY 2017-18 and Rs 9.34 Crores for FY 2018-19 towards the Legal and Professional Fee on actuals basis the audited

accounts. However, this Hon'ble Commission has considered the baseline value of the same as Rs 3 Crore and escalated the same by K Factor and WPI Index. It is submitted that the basis of considering Rs 3 Crore as the baseline value for the same is not clear. It is submitted that the increase in the legal and professional fees was on account of pending arbitration cases with BHEL, hiring of consultancy services for coal sourcing, commencement fees paid to IDBI etc. Further the technical manpower services have increased due to increase in operation of plant as compared to FY 2016-17. It is submitted that GVK ought to be allowed Legal and Professional fee on actuals.

(d) Contract Man Power.

49. GVK has claimed Rs 13.48 Crores for FY 2017-18 and Rs 16.63 Crores for FY 2018-19 as expenditure towards contract man-power on actuals based on audited accounts. This Hon'ble Commission has determined the baseline value of contract man-power as Rs 8 Crore without any basis or justification. It is submitted that the actual expenditure as incurred by GVK may be allowed as the same is based on actuals.

(e) Ash Handling Charges

50. GVK has claimed Rs 3.12 Crores and Rs 3.10 Crores for FY 2017-18 and FY 2018-10 as expenditure towards ash handling charges on actuals basis audited accounts. This Hon'ble Commission has not allowed GVK any expenditure on this account on the basis that there is no income from sale of fly ash and that the expenses have already been approved for contract man power. It is submitted that the total revenue from Fly ash till date is Rs.14.28 Cr. However, as per the directions of MoEF vide notification S.O 763 (E) dated 14th September 1999 as amended by Notification SO. 2804(E), dated 03.11.2009. GVK is mandated to keep the funds in a separate account to be utilized for a specific purpose. Accordingly, GVK has not been treating the same as an income. Copies of the MoEF Notification dated 14.09.1999 and amendment dated 03.11.2009 have been annexed hereto and marked as **Annexure P-5 (Colly)**.

51. Furthermore, it is submitted that there are separate contracts for different activities and the contract man-power claimed by GVK does not cover the ash-handling charges. Accordingly, this Hon'ble Commission ought to allow the ash handling charges on actuals. Copies of the Job Orders for Operation and Maintenance of the Complete Ash Handling Plant (AHP) executed between the

Petitioner and M/s Globus Engineers are annexed hereto and marked as **Annexure P-6 (Colly)**.

(f) Water drawal charges

52. GVK has claimed Rs 1.21 Crores towards water drawal charges for FY 2017-18. this Hon'ble Commission has not allowed any expenditure towards water charges for FY 2017-18 and FY 2018-19. It is submitted that this Hon'ble Commission vide its Order dated 06.03.2019 in Petition No. 68 of 2017 has noted that PSPCL has agreed to pay water charges to GVK as under:

"10.12 Water Charges

PSPCL has agreed to pay actual water charges and therefore, there is no dispute in this matter."

53. It is submitted that since GVK has only received the bill for FY 2018-19 from the Bari Doab Drainage Division, Amritsar, it has claimed water charges for the said year. As and when GVK receives the bill for FY 2018-19, GVK shall claim the water charges accordingly. It is submitted that this Hon'ble Commission ought to allow water charges for FY 2018-19 on the basis of actuals. A copy of the bill for water charges dated 21.05.2019 for FY 2018-19 is annexed hereto and marked as **Annexure P-7**.

(g) Power and Fuel

54. GVK has claimed Rs 13.33 Crore and Rs 4.36 Crore for FY 2017-18 and FY 2018-19 respectively for Power and Fuel on actuals basis audited accounts. This Hon'ble Commission has considered the baseline value of power and fuel as Rs 4.36 Crore, being the lower of the amounts claimed by GVK. It is submitted that for FY 2017-18 the expenses towards power and fuel have increased as the bill for 01.04.2016 to 01.11.2017 of Rs. 5.58 Cr for power procured from Chola Sahib Line of PSPCL, was raised by PSPCL in the month of November 2017. The same has been accounted for in FY 2017-18. Out of the total Bill amount of Rs. 5.58 Cr, a sum of Rs. 3.58 Cr. pertains to FY 2016-17. GVK further submits no power bills were raised for the month of October, November and December 2018 and hence the cost of power in FY 2018-19 is lower as compared to the FY 2017-18. Therefore, the baseline value of Rs 4.36 Crore being equivalent to power and fuel cost of 10 months in FY 2018-19 ought not be considered as the baseline value. Accordingly, GVK ought to be allowed the expenditure on actual basis as per the bills raised by PSPCL for FY 2017-18 and FY 2018-19. The detailed break up of expenses incurred towards power and fuel have been provided to this

Hon'ble Commission vide GVK's Affidavit dated 31.07.2020 in response to this Hon'ble Commission's queries dated 08.07.2020 in Petition No. 34 of 2019.55. As regards the expenditure claimed by GVK towards Consumption of stores under R&M Expenses, it is submitted that GVK has claimed Rs 10.07 Crores and Rs 11.64 Crore towards Consumption of stores for FY 2017-18 and FY 2018-19 on actuals basis audited accounts. This Hon'ble Commission has observed that the same is abnormally high considering the Project is new and only become operational since 16.04.2016. It is submitted that as the Project was operational for only 48 days in FY 2016-17, whereas the operation levels have significantly increased in FY 2017-18 and FY 2018-19. Hence the cost of consumables have increased accordingly. Therefore, Hon'ble Commission ought to allow the same basis the actual cost incurred by GVK.

Re. Interest on Working Capital

55. In terms of Regulation 34 of the PSERC Tariff Regulations 2014, the components of working capital for calculating the interest of working capital, as under:

- (a) Fuel Cost for 2 months corresponding to the normative annual plant availability factor;
- (b) Operation and maintenance Expenses for 1 month;
- (c) Maintenance spares @ 15% of the O&M Expenses;
- (d) Receivables equivalent to 2 months of fixed and variable charges for sale of electricity calculated on the normative plant availability factor.

56. It is an admitted position that interest on working capital is payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on normative basis. In this regard, it is submitted that as the PSERC Tariff Regulations 2014 specifically provide that the interest on working capital is to be determined based on normative working capital. Once normative approach has been used to arrive at completed capital cost of the Project, then the same ought to continue.

57. However, by way of the Order under Review, the components of working capital have been limited to actuals instead of the normative parameters prescribed under Regulation 34 of PSERC Tariff Regulations, 2014, as under:

“Commission’s analysis

7.8 As per PSERC Regulations, the rate of interest on working capital shall be equal to the weighted average rate of interest paid/ payable on loans by the generating company or the State Bank of India Advance rate as on April 1 of the relevant year, whichever is less. The interest on working capital is payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on normative basis.

7.9 The Weighted Average Rate of Interest has been considered for FY 2017-18 and FY 2018-19 @12.25% p.a as claimed by GVK in this petition. The State Bank of India Advance Rate as on 01.04.2017 and 01.04.2018 is 13.85 % p.a and 13.45% p.a. respectively.

7.10 As per the Annual Audited Accounts of GVK for FY 2017-18 and FY 2018-19 the fuel cost was Rs 635.58 Crore and Rs. 1112.36 Crore respectively. The energy charges paid by PSPCL during FY 2017-18 and FY 2018-19 were originally Rs. 416.74 Crore and Rs. 724.38 Crore which were later revised in terms of the Commission’s Order dated 06.03.2019 to Rs. 470.51 Crore including Rs. 53.77 Crore as arrears for FY 2017- 18. The fuel cost for FY 2018-19 was revised to Rs. 833.90 Crore including arrears of Rs. 109.22 Crore. Thus, fuel cost of Rs. 470.51 Crore and Rs. 833.90 Crore has been considered for the determination of receivables for FY 2017-18 and FY 2018-19 respectively

7.11 Interest on working capital for MYT Control Period has been calculated as per PSERC MYT Regulations 2014. Interest on Working capital has been calculated for FY 2017-18 and FY 2018-19 by applying the rate of interest of 12.25 % p.a. on components of Working capital i.e. (maintenance spares @ 15% of O&M expenses, O&M expenses for one month and Receivables @ 2 month Annual Fixed Cost) as given below:

Table No.24: Interest on Working Capital approved by the Commission for FY 2017-18 and FY 2018-19.

(Rs. Crore)

Sr.	Particulars	FY 2017-18	FY 2018-19
1	Fuel Cost for two months	78.42	138.98
2	Maintenance spares @15% of O&M	5.69	5.98
3	O&M Expenses for one month	3.16	3.32
4	Receivables for two months	180.43	216.89
5	Total Working Capital	267.70	365.18
6	Rate of Interest (%)	12.25%	12.25%
7	Interest on Working Capital	32.79	44.73

Thus, the Commission approves working capital requirement of Rs.267.70 Crore for FY 2017-18 and Rs. 365.18 Crore for FY 2018-19 and interest thereon of Rs. 32.79 Crore and Rs. 44.73 Crore for FY 2017-18 and FY 2018-19 respectively.

58. It is submitted that the Hon’ble Tribunal in the following judgments has held that when the applicable Tariff Regulations provide that working capital is to be assessed on normative basis then the interest on working capital also has

to be determined on normative working capital calculated in accordance with the Regulations, as under:

- (a) *Reliance Infrastructure Ltd. v. Maharashtra Electricity Regulatory Commission* : 2009 ELR (APTEL) 0672 (Para 11 – 13)
- (b) *Reliance Infrastructure Ltd. v. Maharashtra Electricity Regulatory Commission*, Appeal No. 117 of 2008 (Judgment dated 28.08.2009) (Para 15 – 16)
- (c) *DPSC Limited v. West Bengal Electricity Regulatory Commission*, Appeal No. 67 of 2009 (Judgment dated 06.09.2011) (Para 9.10 – 9.11)
- (d) *Gujarat Urja Vikas Nigam Ltd. v. Gujarat Electricity Regulatory Commission & Anr.*, Appeal No. 37 of 2014 (Judgment dated 03.03.2015) (Para No. 31).

59. Accordingly, it is submitted that there is an error apparent on the face of the record inasmuch while computing Working Capital in the Order under Review, working capital has been considered based on actual expenditures instead of normative parameters. In this regard, it is noteworthy that:

- (a) Fuel Cost for two months: Regulation 34.1(a)(i) provides that fuel cost for 2 months shall correspond to the **normative annual plant availability factor**. However, GVK's claim has been limited to two months of the Energy Charges paid by PSPCL. Such an artificial capping, not only impacted Fuel Cost but also the component of 'Receivables for 2 months' as provided under Regulation 34.1(a)(iv).
- (b) O&M Expenses for one month and Maintenance Spares: As stated hereinabove, GVK has prayed for re-computation of O&M expenses in line with the PSERC Tariff Regulations 2014, accordingly, any change in O&M expenses will also impact the component of working capital.

60. Accordingly, the Interest on Working Capital that ought to be allowed by this Hon'ble Commission is as under:

<i>S. No.</i>	<i>Particulars</i>	<i>FY 2017-18</i>	<i>FY 2018-19</i>
1	Fuel Cost – Primary Fuel & Secondary Fuel (for 2 months)	250.75	301.60
2	O&M expenses for one month	5.58	5.47

<i>S. No.</i>	<i>Particulars</i>	<i>FY 2017-18</i>	<i>FY 2018-19</i>
3	Maintenance spares (15% of O&M expenses)	10.05	9.84
4	Receivables (2 months of Fixed and Variable Cost based on Normative Annual Plant Availability Factor)	365.61	415.22
5	Total working capital	631.99	732.13
6	Rate of interest (p.a.)	12.25%	12.25%
7	Interest on working capital	77.42	89.69

Re. Depreciation

61. Regulation 21 of the PSERC Tariff Regulations 2014 provides for calculation of Depreciation in respect of coal based thermal generating plants. This Hon'ble Commission by way of the Order under Review has calculated the depreciation as under:

“Commission’s Analysis

...

4.6 The Commission considers the rate of depreciation as 4.77% claimed by GVK in its revised submission dated 31.07.2020 for FY 2017-18 and FY 2018-19 and determines Gross Fixed Assets (net of land and land rights) as under:-

Table No. 16: Gross Fixed Assets (net of Land and land Rights) determined by the Commission for FY 2017-18 and FY 2018-19

(Rs Crore)

<i>Sr.No</i>	<i>Particulars</i>	<i>FY 2017-18</i>	<i>FY 2018-19</i>
1	Opening GFA	3058.37	3071.27
2	Addition during the year	12.90	0.84
3	Closing GFA	3071.27	3072.11
4	Average GFA	3064.82	3071.69
5	Land and Land rights	96.75	96.75
6	Average GFA (net of land and land rights)	2968.07	2974.94
7	Rate of Depreciation	4.77%	4.77%
8	Depreciation	141.58	141.90

62. However, it is submitted that there is a calculation error in computing the depreciation. It is submitted that the weighted average rate of depreciation that ought to be considered is 4.77%, which is worked out by considering depreciation of Free hold land as 0%.

63. Accordingly, the depreciation as calculated by GVK and which ought to be allowed by this Hon'ble Commission, is as under:

Sr.No	Particulars	FY 2017-18	FY 2018-19
1	Opening GFA	3058.37	3071.27
2	Addition during the year	12.90	0.84
3	Closing GFA	3071.27	3072.11
4	Average GFA	3064.82	3071.69
5	Land and Land rights	96.75	96.75
6	Average GFA (net of land and land rights)	2968.07	2974.94
7	Rate of Depreciation	4.77%	4.77%
8	Depreciation	146.17	146.51

64. It is submitted that once the weighted average rate has been arrived at by considering the Freehold land at 0% depreciation, there should not be further deductions of Freehold land from the Average Capital Cost. Therefore, there has been a double deduction of the value of land in the computation of depreciation and the same constitutes an error apparent and mistake in the calculation of depreciation.

65. In these circumstances, it is most respectfully submitted that the facts and circumstances of the present case warrants intervention of this Hon'ble Commission by exercising its power to review its Order dated 17.09.2020 and grant relief to GVK as sought herein. Non-intervention by this Hon'ble Commission would cause substantial harm/ prejudice to GVK and the same would not be in line with the principles of '*Actus Curiae Neminem Gravabit*' i.e., no person should be prejudiced by the act of courts.

67. It is submitted that the above facts and findings clearly demonstrate the errors apparent on the face of the record. The present Review Petition is being filed *bona fide* and in the interest of justice. No appeal has been preferred by GVK challenging the Order Under Review.

68. GVK craves leave of this Hon'ble Commission to produce such additional material as may be considered necessary for proper adjudication of this Review Petition and to refer to rely upon its submissions/ documents as made/ filed in the Original Petition.

69. GVK has paid the requisite fee of Rs. 3,00,000/- (along with hearing fees) as per the Punjab State Electricity Regulatory Commission (Fee) Regulations, 2005, on 24.11.2020 vide transaction no. NEFT-IOBA0001430-PbStateEle.

PRAYER

70. In view of the above and in the interest of justice, it is most respectfully prayed that this Hon'ble Commission may be pleased to:-

- (a) Review/modify the Order dated 17.09.2020 in Petition No. 34 of 2019 in terms of the submissions made paragraph 21 to 67 in the present Review Petition; and
- (b) Pass such other order(s) as this Hon'ble Commission may deem fit and proper in the facts and circumstances of the case.

GVK Power (Goindwal Sahib) Ltd.

Through:



J. Sagar Associates
Advocates for the Petitioner
B-303, 3rd Floor, Ansal Plaza,
Hudco Place, August Kranti Marg
New Delhi -110049

Place: Hyderabad
Date: 03.12.2020

**BEFORE THE PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
AT CHANDIGARH**

REVIEW PETITION NO. 34 OF 2020

IN THE MATTER OF:

Petition on behalf of Petitioner / GVK Power (Goindwal Sahib) Ltd. under Section 94(1)(f) of the Electricity Act, 2003 read with Regulation 64 of Punjab State Electricity Regulatory Commission (Conduct of Business) Regulations, 2005 seeking review of Order dated 17.09.2020 passed in Petition No. 34 of 2019

IN THE MATTER OF:

GVK Power (Goindwal Sahib) Limited
Plot No.10, Sardar Patel Road,
Secunderabad - 500 003

... Petitioner

Versus

Punjab State Power Corporation Limited
The Mall, Patiala (Punjab)

... Respondent

AFFIDAVIT

I, P. Rama Mohana Rao, son of P. Krishna Murthy, aged about 61 years, resident of E-308, First Lane, Czech Colony, Sanath Nagar, Hyderabad - 500018, working as Assistant Vice President (Finance) with the Petitioner Company, do solemnly affirm and state as follows:-

1. I say that I am duly authorized and competent to affirm this Affidavit for and on behalf of the GVK Power (Goindwal Sahib) Ltd. and I am acquainted with the facts and circumstances of the present case. I state that I have read and understood the contents of the accompanying Petition.
2. I state that the facts stated in the accompanying Petition are true and correct to the best of my knowledge based on the records maintained by the Petitioner and that the legal submissions made therein are based upon information received by me and believed to be true. The present Petition has been drafted pursuant to my instructions and its contents are true and correct.
3. I state that the Annexures, if any, annexed to the Petitioner are true copies of the respective originals.

ATTESTED

Mohd Hameed Khan
B.A.B.Ed., LL.B
ADVOCATE & NOTARY
H.No. 1-8-495/19/C,
Vikar Nagar, Near Prakash Nagar,
Begumpet, Secunderabad, Hyd
Cell: 9391025702



For GVK POWER (GOINDWAL SAHIB) LTD.

QNV
Authorized Signatory

4. I say that no similar petition, writ petition, suit or appeal regarding the matter in respect of which the present Petition has been preferred or is pending before any Court or any other authority.

For GVK POWER (GOINDWAL SAHIB) LTD.

QAN
Authorised Signatory

DEPONENT

VERIFICATION

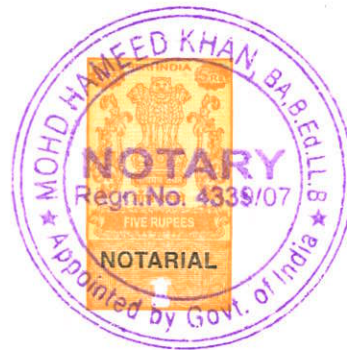
I, the deponent above named, do hereby verify that the contents of my above affidavit are true and correct, no part of it is false and nothing material has been concealed therefrom.

Verified at Hyderabad on this 3rd day of December, 2020.

For GVK POWER (GOINDWAL SAHIB) LTD.

QAN
Authorised Signatory

DEPONENT



ATTESTED

3/12/2020
Mohd Hameed Khan
B.A.B.Ed., LL.B
ADVOCATE & NOTARY
H.No. 1-8-495/19/C,
Vikar Nagar, Near Prakash Nagar,
Begumpet, Secunderabad, Hyd.
Cell: 9391025702

PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
SITE NO. 3, BLOCK B, SECTOR 18-A MADHYA MARG, CHANDIGARH

Petition No. 34 of 2019

Petition for True up of Tariff for the Control Period (FY 2017-18 to 2018-19) under Sections 62 and 86 of the Electricity Act, 2003 read with (a) Punjab State Electricity Regulatory Commission (Terms & Conditions of determination of Generation, Transmission, wheeling and retail supply tariff), Regulations, 2014; and (b) Amended and Restated Power Purchase Agreement dated 26.05.2009 executed between Petitioner (Goindwal Sahib) Limited and Punjab State Power Corporation Limited (formerly known as Punjab State Electricity Board)

In the matter of: GVK Power (Goindwal Sahib) Limited, Plot No. 10, Paigah House, Sardar Patel Road, Secunderabad-500003.

.Petitioner

Versus

Punjab State Power Corporation Limited, The Mall, Patiala.

.Respondent

1. ✓ GVK Power (Goindwal Sahib) Limited,
Plot No. 10, Paigah House, 156-159,
Sardar Patel Road, Secunderabad – 500003
2. The Chief Engineer, ARR/TR
Punjab State Power Corporation Limited,
Shed No. F-4, Shakti Vihar, Patiala.

Memo No./

4122

Dated: 22.09.2020

A copy of the Order dated 17.09.2020, passed by the Commission, in the above noted petition, is enclosed herewith.

DA/As above


Dy. Registrar

PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
 SITE NO. 3, BLOCK B, SECTOR 18-A, MADYA MARG, CHANDIGARH

Petition No.34 of 2019

Date of Order: 17.09.2020

Present : Ms. Kusumjit Sidhu, Chairperson
 Shri S.S.Sarna, Member
 Ms. Anjali Chandra, Member

In the matter of : Petition for True up of Tariff for the control period (FY 2017-18 and 2018-19) under section 62 and 86 of the Electricity Act 2003 read with (a) Punjab State Electricity Regulatory Commission (Terms and conditions for determination of Generation, Transmission, wheeling and Retail Supply Tariff) Regulations, 2014; and (b) Amended and Restated Power Purchase Agreement dated 26.05.2009 executed between GVK Power (Goindwal Sahib) Limited and Punjab State Power Corporation Limited (formerly known as Punjab State Electricity Board)

AND

In the matter of: GVK Power (Goindwal Sahib) Limited, Paigarh House, 156-159, Sardar Patel Road, Secunderabad-540003.

-----Petitioner

Versus

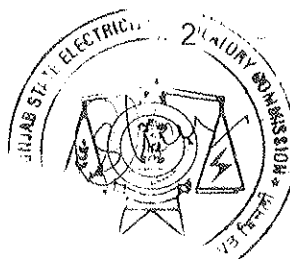
Punjab State Power Corporation Limited.

-----Respondent



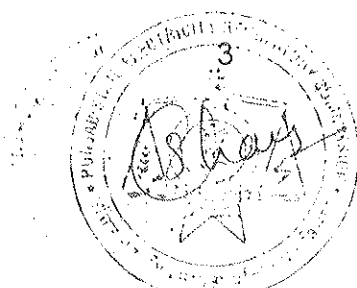
ORDER

- 1.1 GVK Power (Goindwal Sahib) Limited (GVK) has filed the present petition for True Up of the Annual Fixed Cost for FY 2017-18 and FY 2018-19 of its 2x270 MW Coal Based Thermal Power Project at Goindwal Sahib in the State of Punjab. The present Petition for True up for FY 2017-18 and FY 2018-19 has been prepared on the basis of audited financial statements for FY 2017-18 and FY 2018-19 and PSERC (Terms & Conditions for Determination of Tariff) Regulations, 2014. GVK has prayed as follows:
- a) Admit the present petition.
 - b) Allow the Annual Fixed Cost for the Control Period as per the Table No. 12 of the petition.
 - c) Allow the Annual Energy Charge for the Control period as per Table No. 17 of the petition.
 - d) To pass any other Order as the Commission may deem fit and appropriate under the circumstance of the case and in the interest of justice.
- 1.2 The discrepancies observed in the petition by the Commission were conveyed to GVK on 21.02.2020. After the Lockdown, the Petition was admitted on 03.06.2020 and GVK was asked to issue a public notice. The matter was delayed by GVK and the Commission directed GVK to file its reply to the deficiencies and revise its submission as per the capital cost approved by the Commission in its Order dated 17.01.2020 in Petition no 54 of 2017. The petition was taken up for hearing on 24.06.2020.



GVK requested to file the revised figure(s) according to its petition no. 54 of 2017. The Commission vide order dated 08.07.2020 directed GVK to file the same along with the rejoinder to the reply filed by PSPCL. GVK was also directed to reply to the deficiencies observed by the Commission vide notice no. PSERC/Reg/2618-2619 dated 21.02.2020 and submit the information mentioned in Annexure-A enclosed with the Order within 3 weeks. PSPCL was allowed to submit their sur-rejoinder filed by GVK as well as information mentioned in Annexure-A within a further one week. The petition was fixed for hearing as well as public hearing on 05.08.2020. Public notice was issued on 10.07.2020 in three newspapers. GVK responded to the deficiencies and filed its reply alongwith revised submissions on 31.07.2020 through email and hard copy on 04.08.2020. The Public hearing was held on 05.08.2020. No one from the public appeared in the hearing. PSPCL and GVK were allowed to file rejoinder and surrejoinder. The final hearing took place on 09.09.2020 and the Order was reserved. The Commission directed GVK to submit its rejoinder on the same day of hearing i.e. on 09.09.2020 itself. GVK submitted rejoinder on 09.09.2020 through email and hard copy on 10.09.2020.

- 1.3 The commercial operation of this project was declared on 16.04.2020. The Commission vide its Order dated 17.01.2020 in Petition no. 54 of 2017 approved the capital cost of the project and determined the Annual Fixed Cost for the energy supplied by the to PSPCL. The true up for FY 2016-17 was

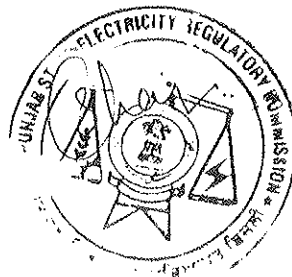


approved vide Order dated 07.09.2020 in Petition No. 32 of 2019. The Business Plan and Capital investment Plan for the First MYT Period was approved vide Order dated 30.07.2020 in Petition no 70 of 2017. The Commission vide its order dated 05.08.2020 in Petition no 69 of 2017 allowed Rs.605.64 Crore and Rs 471.61 Crore as provisional AFC for FY 2017-18 and FY 2018-19 respectively.

2.0 Capital Cost for FY 2017-18 and FY 2018-19

GVK's submission

- 2.1 GVK has claimed capital expenditure of Rs. 4383.54 Crore as on 01.04.2017. GVK submitted that at the time of filing MYT petition for the control period of FY 2017-18 to FY 2019-20 (petition no. 69 of 2017), an additional capital expenditure of Rs. 230 Crore during FY 2017-18 was envisaged against which it has incurred an amount of Rs. 13.74 Crore only in FY 2017-18 and FY 2018-19. GVK submitted that it was unable to carry out several pending works within the original scope due to financial constraints. The additional capital expenditure of Rs. 12.90 Crore incurred by it in FY 2017-18 and Rs. 0.84 Crore in FY 2018-19 was towards the Initial capital spares (BTG) which was contemplated under the original scope of project works and towards the Coal Testing Laboratory respectively.
- 2.2 GVK craved liberty to claim the balance amount of Rs. 216.26 Crore in the remaining MYT Control Period for FY 2019-20. GVK further requested the Commission to allow the actual

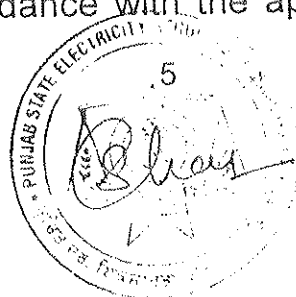


additional capitalization of Rs. 13.74 Crore as incurred by it in FY 2017-18 and FY 2018-19.

- 2.3 GVK vide its revised submissions on 31.07.2020, submitted that the actual expenditure incurred by it as on CoD was Rs.4267 Crore. However, vide Order dated 17.01.2020 in petition no. 54 of 2017, the Commission has approved the capital cost of Rs. 3058.37 Crore, and the same has been considered for the purpose of the revised submissions.
- 2.4 In its reply to deficiencies, GVK stated that Rs. 0.84 Crore is the amount incurred by GVK towards the coal testing laboratory for FY 2018-19. The total amount incurred towards coal testing lab is Rs. 1.54 Crore. The balance amount of Rs. 0.70 Crore was incurred in FY 2019-20 and the same has been claimed as Additional Capitalization under Petition No. 70 of 2017.

PSPCL's submission

- 2.5 PSPCL vide submission dated 23.06.2020 stated that GVK's submissions under this head are based on the underlying assumption that since the tariff for the base year i.e. FY 2016-2017 is yet to be determined by the Commission, GVK is entitled to true-up of its tariff for FY 2017-18 based on its claimed capital cost (revised) i.e. Rs. 4267.40 Crore. It was reiterated by PSPCL that the figures submitted by GVK no longer hold good in the light of the Final Tariff Order passed by the Commission wherein the completed capital cost has been approved at Rs. 3058.57 Crore. Thus, GVK is required to revise the same in accordance with the approved capital cost of the



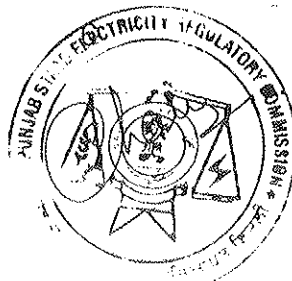
project. As regards the claim of additional capital expenditure of Rs.13.84 Crore in FY 2017-18 and FY 2018-19, it was reiterated that the same is first to be adjudicated in the pending proceedings in Petition No.70/2017 before any true-up in that behalf can be claimed from the Commission.

- 2.6 PSPCL in its submission received on 25.08.2020 stated that the capital cost as claimed by GVK for FY 2017-18 and 2018-19 in the revised submission is in line with the approved capital cost of the project as approved in the Tariff Order for FY 2017-18 to FY 2019-20 and thus may be accepted by the Commission.

Commission's Analysis

- 2.7 The Commission has approved the capital cost of Rs. 3058.37 Crore as on 31.03.2017 in its Order dated 07.09.2020 in petition no. 32 of 2019 for True-up of FY 2016-17. Capital Investment Plan for the first MYT period has also been approved vide Order dated 30.07.2020 in Petition no. 70 of 2017. In the present petition GVK has claimed additional capital expenditure of Rs. 12.90 Crore towards the Initial capital spares (BTG). Further Rs. 0.84 Crore have been claimed towards the coal testing laboratory set up by GVK as per directions of the Commission in Order dated 06.03.2019 in petition no. 68 of 2017.

Regulation 3.19 and 18.2 of the PSERC Tariff Regulations, 2014 specifies as under:



"3.19. "Cut-off Date" means 31st March of the year closing after two years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of a year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation;

18.2. The Capital Expenditure of the following nature actually incurred after the cut-off date may be admitted by the Commission subject to prudence check:

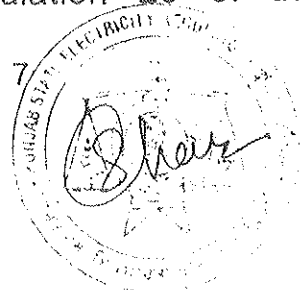
- a. Un-discharged/Deferred liabilities relating to works/services within the original scope of work;*
- b. Liabilities to meet award of arbitration or for compliance of the order or decree of a court;*
- c. On account of change of law;*
- d. Any additional works/services which have become necessary for efficient and successful operation of the project, but not included in the original project cost; and*
- e."*

In view of the above, the Commission allows the additional capital expenditure of Rs. 12.90 Crore in FY 2017-18 and Rs. 0.84 Crore in FY 2018-19. Considering the capital cost of Rs. 3058.37 Crore as on 31.03.2017 and the additional capital expenditure of Rs. 12.90 Crore during FY 2017-18, the capital cost as on 31.03.2018 works out Rs. 3071.27 Crore for FY 2017-18. Further, considering the capital cost of the project as Rs. 3071.27 Crore as on 01.04.2018 and additional capital expenditure of Rs. 0.84 Crore during FY 2018-19, the capital cost as on 31.03.2019 works out Rs. 3072.11 Crore for FY 2018-19.

3.0 Operation & Maintenance Expenses

GVK's Submission

3.1 GVK submitted that Regulation 26 of the PSERC Tariff



Regulations, 2014 provides for Operations & Maintenance expenses along with its subsequent amendment vide 03.02.2016.

3.2 GVK further submitted that Regulations 8.1 and 8.2 of PSERC Tariff Regulations, 2014 provide for determination of Baseline values by this Commission based on estimates of the expected figures for the relevant year, industry bench mark/ norms and other factors etc. However, since no baseline values were approved by the Commission, GVK has adopted the baseline values for the O& M expenses as provided in the CERC Regulations.

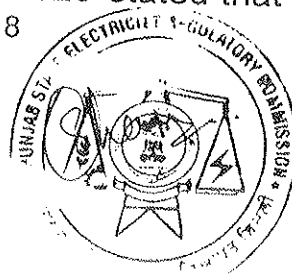
Employee Cost:

- 3.3 The Employee cost includes salaries payable to employees, allowances and other terminal benefits.
- 3.4 **Inflation factor:** The escalation index has been computed in terms of the PSERC MYT Regulations, 2014 considering the WPI (available till March 2019) and CPI index (available till March ,2019) as under:-

Table No. 1: Computation of Escalation Index

Period	FY 2016-17	FY 2017-18	FY 2018-19
CPI Index (April-March)	275.92	284.41	299.92
Increase/Decrease (%)		3.08	5.45
WPI Index (April-March)	116.60	114.90	119.80
Increase/Decrease (%)		2.96	4.27
CPI:WPI Index (50:50)(%)		3.02	4.86

- 3.5 In view of the above, the inflation factor for the period 2017-18 and 2018-19 as per PSERC Tariff Regulation, 2014 has been computed as 3.02% and 4.86%. GVK in its revised submission dated 31.07.2020 and 09.09.2020 stated that the inflation factor



is on the lower side considering the average rise in salaries and other expenses and in order to retain employees with experience, it has to pay competitive remuneration to match industry standards. Considering the fact that Employee Expenses is the most critical component in the overall operational expenditure, a 3.906% hike in Employee Expenses is insufficient to maintain salaries even at industry average for the Control Period.

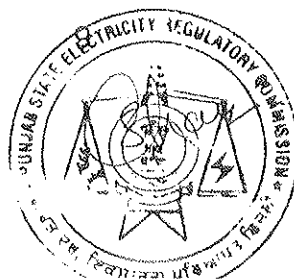
- 3.6 GVK has incurred an expenditure of Rs. 9.99 Crore for FY 2017-18 and Rs 12.67 Crore for FY 2018-19 on employee cost. In its submission dated 31.07.2020 GVK stated that the increase in cost is due to increase in number of employees in FY 2018-19 from 114 to 143 which was in turn due to increase in operation of the plant as compared to previous years. Accordingly, the Employee Cost for the Period 2017-18 and FY 2018-19 is as under:-

Table No 2 : Employee Cost submitted by GVK for FY 2017-18 and FY 2018-19

		(Rs.Crore)	
Sr.No	Particular	FY2017-18	FY 2018-19
1	Employee Cost	9.99	12.67

PSPCL's Submission

- 3.7 PSPCL vide memo no. 5612 dated 21.08.2020 submitted that GVK in the present Petition has claimed a sum of Rs. 154.98 Crore for FY 2017-18 and Rs. 164.10 Crore for FY 2018-19 as Operations & Maintenance (O&M) expenses in accordance with the formula prescribed under Regulation 26.1 of the PSERC Tariff Regulations. The inflation factor is to be used for indexing



the employee cost which is to be a combination of the Consumer Price Index (CPI) and Wholesale Price Index (WPI) of nth year and is to be calculated as $0.50 \times \text{CPI}_n + 0.50 \times \text{WPI}_n$.

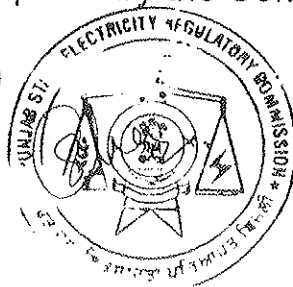
PSPCL submitted that under the PSERC Tariff Regulations, the Commission has prescribed definitive formulae based on realistic indexes and GVK cannot be permitted to seek deviation from the same. Any additional employee cost beyond what is permissible under the Regulations, is to be borne by GVK itself and cannot be permitted to be passed on to the consumers in the State.

Commission's Analysis

- 3.8 GVK in Petition no 69 of 2017 claimed an employee cost of Rs 15.58 Crore and Rs 17.92 Crore for FY 2017-18 and FY 2018-19 respectively. The Commission in its Order dated 05.08.2020 had approved employee cost of Rs 9.99 Crore and Rs 10.70 Crore for FY 2017-18 and FY 2018-19 respectively.
- 3.9 The baseline values of O&M expenses are to be determined as per Regulations 8(1) of PSERC MYT Regulation-2014, which states as

"8.1 Baseline values

- a) The baseline values for the control period shall be determined by Commission and the projections for the control period shall be based on these figures.
- b) The baseline values shall be inter-alia based on figures approved by the Commission in the past, latest audited accounts, estimates of the expected figures for the relevant year, industry benchmarks/norms and other factors considered appropriate by the Commission."



3.10 The employee cost is considered in two parts -Terminal benefits and other employee cost. Terminal benefits are to be allowed on actual basis. GVK has claimed Rs. 9.99 Crore and Rs. 12.67 Crore as employee cost for FY 2017-18 and FY 2018-19 respectively as per Annual Audited Accounts which includes Terminal benefit of Rs 0.73 Crore and Rs.0.99 Crore respectively. The Commission allows the actual Terminal benefit of Rs 0.73 Crore and Rs.0.99 Crore for FY 2017-18 and FY 2018-19 respectively. Accordingly, terminal benefits allowed by the Commission for FY 2017-18 and FY 2018-19 are as under

Table No. 3 : Terminal benefits allowed by the Commission (Rs. Crore)

Sr.No	Particulars	FY 2017-18	FY 2018-19
1	Terminal benefits	0.73	0.99

3.11 The 'Other Employee Cost' of Rs. 9.26 Crore was provisionally approved by the Commission in Order dated 05.08.2020 in Petition no 69 of 2017 for FY 2017-18. Since, the plant has run for 349 days in that year, therefore taking FY 2016-17 as the baseline year is not feasible. The Commission considers Rs. 9.26 Crore as baseline for calculating 'Other Employee Cost' for subsequent years.

3.12 The Employee Costs are to be determined as per Regulation 26.1 of PSERC MYT Regulations, 2014 (as amended from time to time). Relevant sections of Regulation 26 of MYT Regulations, 2014 are reproduced below for reference:



$$(ii) EMP_n = (EMP_{n-1}) * (INDEX_n / INDEX_{n-1})$$

- *INDEX_n* - Inflation Factor to be used for indexing the Employee Cost.
- This will be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) of *n*th year and shall be calculated as under:-

$$INDEX_n = 0.50 * CPI_n + 0.50 * WPI_n$$

'WPI_n' means the average rate (on monthly basis) of Wholesale Price Index (all commodities) over the year for the *n*th year.

'CPI_n' means the average rate (on monthly basis) of Consumer Price Index (Industrial workers) over the year for the *n*th year.

3.13 Accordingly, the Commission has calculated the *INDEX_n* for **FY 2017-18 and FY 2018-19** as under:

Table No. 4: WPI and CPI Increase considered for FY 2017-18

Sr. No.	Particulars	FY 2016-17	FY 2017-18	Increase (%) over FY2016-17
1	CPI	275.92	284.42	3.08
2	WPI	111.60	114.90	2.96

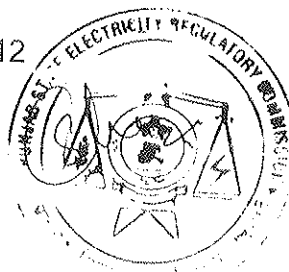
$$INDEX_n / INDEX_{n-1} = (0.5 * 3.08) + (0.5 * 2.96) = 3.02\%$$

Table No. 5: WPI and CPI Increase considered for FY 2018-19

Sr. No.	Particulars	FY 2017-18	FY 2018-19	Increase (%)
1.	CPI	284.42	299.92	5.45
2	WPI	114.88	119.79	4.28

$$INDEX_n / INDEX_{n-1} = (0.5 * 5.45) + (0.5 * 4.28) = 4.86\%$$

3.14 The Commission considers the escalation of 3.02% and 4.86% to determine other employee cost for FY 2017-18 and FY 2018-



19 respectively. The other employee cost and employee cost approved by the Commission for FY 2017-18 and FY 2018-19 is as under:

Table No.6 : Employee Cost approved by the Commission for FY 2017-18 and FY 2018-19

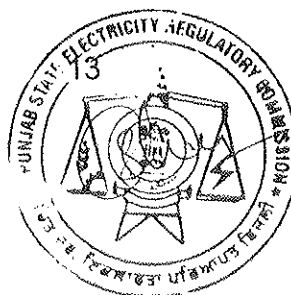
(Rs. Crore)			
Sr. No.	Particulars	FY 2017-18	FY 2018-19
1.	Other Employee Cost	9.26	9.26
2.	Escalation Factor	3.02%	4.86%
3.	Other Employee Cost	9.26	9.71
4.	Terminal Benefits	0.73	0.99
5.	Total Employee Cost	9.99	10.70

Note: Since the Commission has not taken FY 2016-17 as base year for calculation of employee cost, the question of escalation over FY 2016-17 has not been considered.

Repair and Maintenance and A&G Expenses

GVK's Submission:

- 3.15 GVK in its revised submission dated 31.07.2020 stated that the R&M and A&G expenses are linked to K factor and WPI Index, "K" being the constant (expressed in percentage) that governs the relationship between R&M and A&G expenses and Gross Fixed Assets. For computing K factor, GVK has estimated the R&M expenses and A&G expenses by deducting the projected Employee Cost for the FY 2017-18 from the total O&M expenses as per the CERC Regulations for the FY 2017-18. The details are as under:-



**Table No 7 : Computation of K by GVK for the Control period
(Rs. Crore)**

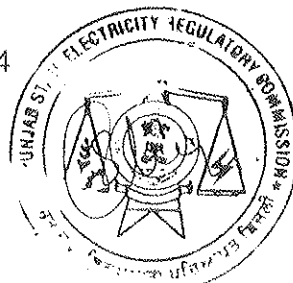
Particulars	FY 2017-18
Total O&M expenses for the FY 2017-18 as per CERC Regulations	154.98
Less : Employee Cost for the FY 2017-18	9.99
R&M and A&G costs	144.99
Opening GFA	3058.37
Closing GFA	3071.27
Average GFA	3064.82
R&M and A&G Exp. as % of GFA	4.73
K factor	4.73

3.16 In view of the above, GVK prayed to approve the K Factor as mentioned above. GVK has considered the said K factor (as 4.73%) for the FY 2017-18.

3.17 GVK in its revised submission dated 31.07.2020 and 09.09.2020 submitted that the increase in WPI Index works out to 4.27% for FY 2018-19. Hence, for the purpose of R&M and A&G Expenses, the Petitioner has considered the escalation Index of 4.27% (i.e., average of increase in WPI for FY 2018-19 as per latest data available). Accordingly, GVK has projected combined R&M and A&G expenses as under:

**Table no. 8: O&M Expenses for FY 2017-18 and FY 2018-19
(Rs. Crore)**

Sr.No	Particulars	FY 2017-18	FY 2018-19
1	Opening FGA	3058.37	3071.27
2	Additional Capitalization	12.90	0.84
3	Closing GFA	3071.27	3072.11
4	Average GFA	3064.82	3071.49
5	K Factor(adjusted for WPI index)	4.73%	4.9%
6	Escalation factor		4.27
7	R & M and A & G Expenses	144.99	151.51
8	Employee Cost	9.99	12.67
9	Total O&M Expenses	154.98	164.18



3.18 GVK in its revised submission dated 31.07.2020 and 09.09.2020 has stated that since the actual O&M expenses FY 2017-18 and FY 2018-19 incurred are lower than the normative O&M expenses hence, it prays that the Commission may allow the normative O&M expenses for the purpose of the present true up for FY 2017-18 and FY 2018-19.

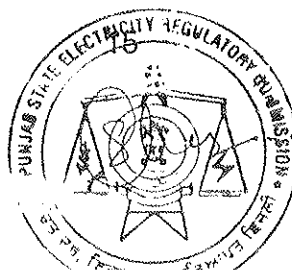
Table No.9: Actual O&M Expenses claimed by GVK
(Rs. Crore)

Sr.No	Particulars	FY 2017-18	FY 2018-19
1	R&M Expenses	19.15	25.86
2	A & G Expenses	37.85	27.08
3	R & M and A& G Expenses	56.99	52.94
4	Employee Cost	9.99	12.67
5	Total O & M Expenses	66.98	65.61

3.19 GVK prayed to allow O & M expenses as detailed above in line with provisions of PSERC Tariff Regulations,2014.

PSPCL's submission:

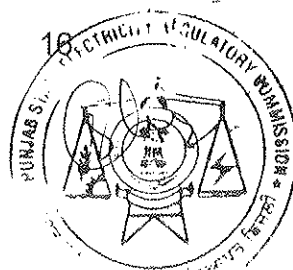
3.20 PSPCL vide memo no. 5612 dated 21.08.2020 submitted that as regards calculation of Repair and Maintenance Costs (R&M) and Administrative and General Costs(A&G) is concerned, the Regulations provide the same to be calculated as $R\&M_n + A\&G_n = K * GFA * (WPI_n / WPI_{n-1})$, wherein 'K factor' is a constant (expressed in %) governing the relationship between R&M and A&G expenses and gross fixed assets (GFA). Thus, for the purpose of calculation of the same, the gross fixed assets, as approved by the Commission are required to be taken as a



base of which % value of the summation of R&M and A&G expenses is considered to the 'K factor'. The Commission while arriving at the above figures, has also held that while scrutinising the books of accounts of GVK, it has been observed that certain expenses under this head are abnormally high for FY 2017-18 as compared to FY 2016-17 and FY 2018-19. As such, it is clear that the figures submitted by GVK in the present true-up Petition are highly inflated and are inadmissible in view of the already determined O&M Expenses by the Commission in the Tariff Order for FY 2017-19.

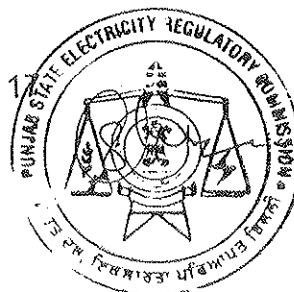
Commissions' Analysis

- 3.21 R&M and A&G expenses are a part of O&M expenses. The Commission had provisionally approved O&M expenses for FY 2017-18 and FY 2018-19 as Rs. 27.92 Crore and Rs. 29.20 Crore respectively vide its Order dated 05.08.2020 in Petition no 69 of 2017. The opening value of approved Gross Fixed Assets as on 1.04.2017 is Rs. 3058.37 Crore as determined in the para 25 of Petition no 54 of 2017.
- 3.22 GVK in their annual audited accounts for FY 2016-17, FY 2017-18 and FY 2018-19 have shown other expenses including R&M and A&G expenses as Rs. 23.42 Crore, Rs. 232.63 Crore and Rs.130.67 Crore respectively. However, these included liquidated damages of Rs. 167.67 Crore and Rs.17.37 Crore for FY 2017-18 and FY 2018-19 respectively. The liquidated damages cannot be considered as a part of R&M and A&G expenses. Similarly, expenses of Rs.58.12 Crore on account of Bad debts written off and provision for doubtful debts cannot be

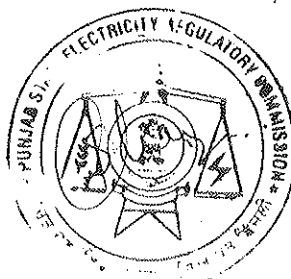


considered as R&M and A&G expenses. Therefore, the R&M and A&G expenses works out to be Rs. 23.42 Crore, Rs.64.96 Crore and Rs 55.18 Crore for FY 2016-17, FY 2017-18 and FY 2018-19 respectively. On scrutiny, it has been found that certain A&G expenses are abnormally high for FY 2017-18 as compared to FY 2016-17 and FY 2018-19. These are:

- i) Insurance: GVK has incurred expenses of Rs. 6.02 Crore in FY 2017-18 as compared to Rs. 2.68 Crore, and Rs. 2.84 Crore on Insurance in FY 2016-17 and FY 2018-19 respectively.
- ii) Rates and Taxes: GVK has incurred expenses of Rs. 3.63 Crore in FY 2017-18 as compared to Rs. 0.51 Crore and Rs. 1.12 Crore on Rates and taxes in FY 2016-17 and FY 2018-19 respectively.
- iii) Power and Fuel: GVK has incurred expenses of Rs. 13.33 Crore in FY 2017-18 as compared to Rs. 6.93 Crore and Rs. 4.36 Crore on power and fuel in FY 2016-17 and FY 2018-19 respectively.
- iv) Provision for Diminution in value of Investment: In the order dated 17.1.2020 in Petition 54 of 2017, the Commission has noted that GVK had diverted the funds meant for capital expenditure out of the loan taken from financial institutions by investment in Mutual Funds. The Commission has neither considered interest paid on loans used for such other investments nor income earned from such other business/investment as part of the capital expenditure.



- v) Miscellaneous Expenses: GVK has incurred expenditure of Rs. 5.69 Crore in FY 2017-18 as compared to Rs. 1.54 Crore and Rs. 2.12 Crore on miscellaneous expenses in FY 2016-17 and FY 2018-19 respectively.
- vi) Legal and Professional charges: GVK has incurred legal and professional charges of Rs 4.67 Crore and Rs.9.34 Crore during FY 2017-18 and FY 2018-19 respectively as compared to Rs 3.41 Crore in FY 2016-17.
- vii) GVK has achieved PLF of approximate 4%, 32% and 52% during FY 2016-17, FY 2017-18 and Rs 2018-19 respectively. In this regard the following has been observed:
- Contract Manpower: GVK has shown expenses on contract manpower as Rs 5.15 Crore, Rs. 13.48 Crore and Rs 16.63 Crore for FY 2016-17, FY 2017-18 and FY 2018-19 respectively as against employee cost of Rs 8.66 Crore, Rs 9.99 Crore and Rs 12.67 Crore for FY 2016-17, FY 2017-18 and Rs 2018-19 respectively.
 - Consumption of stores: GVK has incurred Rs 10.07 Crore on consumption of stores and spares in FY 2017-18 as against Rs. 1.19 Crore in FY 2016-17 which is abnormally high considering the fact that the plant is new and has only been operational since 16.4.2016.
 - Ash Handling Charges: GVK has claimed ash handling charges of Rs 0.77 Crore, Rs.3.12 Crore



and Rs.3.10 Crore for FY 2016-17, FY 2017-18 and FY 2018-19 respectively, but has not shown any income from sale of ash. These charges cannot be allowed considering labour, power and water charges are already being allowed separately.

3.23 The Commission also observes that, the A&G and R&M expenses of GHTP and GGSSTP (Thermal Plants) of PSPCL are lower than GVK in spite of being older and of higher capacity as shown in the table below:

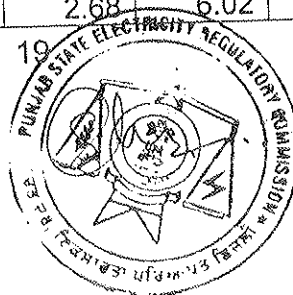
Table No. 10: Comparison of A&G and R&M expenses of PSPCL owned Thermal Plants and GVK for FY 2017-18 and FY 2018-19
(Rs. Crore)

Sr. No.	Particulars	FY 2017-18			FY 2018-19		
		GHTP	GGSSSTP	GVK	GHTP	GGSSSTP	GVK
1	Capacity (MW)	920	840	540	920	840	540
2	A&G and R&M expenses	48.59	61.06	64.96	49.80	62.58	55.18

3.24 The Commission has taken into consideration R&M and A&G expenses based on audited accounts of GVK for FY 2016-17, FY 2017-18 & FY 2018-19 and the industry benchmark for determining the baseline values of R&M and A&G expenses for FY 2017-18 as under:

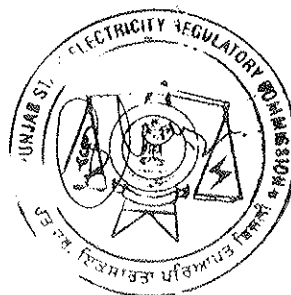
Table No. 11: Determination of Baseline value of the R&M and A&G expenses for FY 2017-18 based on the Annual Audited Accounts for FY 2016-17, 2017-18 and FY 2018-19
(Rs. Crore)

Sr. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19	Base line value for FY 2017-18
1	A&G Expenses				
1.	Insurance	2.68	6.02	2.84	2.76



Sr. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19	Base line value for FY 2017-18
2.	Rent	0.03	0.03	0.06	0.05
3.	Rates & Taxes	0.51	3.63	1.12	0.82
4.	Legal & Professional Charges	3.41	4.67	9.34	3.00
5.	Auditor's Remunerations:				
	Statutory Audit	0.02	0.03	0.07	0.03
	Tax Audit	0	0.02	0	0.02
	Other Services	0	0.01	0.01	0.01
6.	Provision for Diminution in value of Investment	0.28	0.12	0.00	0.00
7.	Communication cost	0.22	0.21	0.08	0.08
8.	Travelling expenses	0.28	0.75	0.98	0.63
9.	Miscellaneous expenses	1.54	5.69	2.12	2.12
10.	Inventory Written off	0	0.53	0.00	0.00
11.	Contract Manpower	5.15	13.48	16.63	8.00
12.	Ash Handling Charges	0.77	3.12	3.10	0.00
13.	Water drawl charges	0	1.21	0.00	0.00
14.	Power & Fuel	6.93	13.33	4.36	4.36
15.	Total	21.82	52.85	40.71	21.88
II	R & M Expenses				
1.	Consumption of Stores & Spares	1.19	10.07	11.64	4.00
2.	Repair: Buildings	0	0.27	0.29	0.27
3.	Repair: Plant & Machinery	0.12	1.17	1.48	1.17
4.	Repair: Other Assets	0.29	0.6	1.06	0.60
5.	Total	1.60	12.11	14.47	6.04
	R&M and A&G Expenses	23.42	64.96	55.18	27.92

3.25 The Commission has already approved investment/expenditure of Rs. 12.90 Crore and Rs. 0.84 Crore for FY 2017-18 and FY 2018-19 respectively as per the Capital Investment Plan. Capitalization of assets is considered as an addition to Gross Fixed Assets based on the nature of the capital expenditure. The additional capitalization/GFA during FY 2017-18 and FY 2018-19 is being considered as Rs. 12.90 Crore and Rs. 0.84 Crore respectively.



3.26 The Commission considers Rs. 27.92 Crore as base R&M and A&G expenses for FY 2017-18 and determines the K factor for the 1st Control Period as under:

Table No.12: R&M and A&G expenses based on K factor and indexation for FY 2017-18 and FY 2018-19 determined by the Commission

(Rs. Crore)

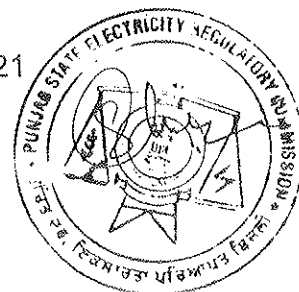
Sr. No.	Particulars	Amount
1.	Opening GFA as on 1.4.2017	3058.37
2	Addition during the year	12.90
3.	Closing GFA as on 31.3.2018	3071.27
4.	Average GFA	3064.82
5.	R&M and A&G expenses	27.92
6	Less: Audit Fee	0.06
7	Base R&M and A& G expenses	27.86
8.	K factor	0.909%

3.27 The Commission determines the R&M and A&G expenses for FY 2017-18 and FY 2018-19 based on K factor calculated above as under:

Table No. 13: R&M and A&G determined by the Commission for FY 2017-18 and FY 2018-19

(Rs. Crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19
1	Opening GFA	3058.37	3071.27
2	Addition during the year	12.90	0.84
3	Closing GFA	3071.27	3072.11
4	Average GFA	3064.82	3071.69
5	K factor	0.909%	0.909%
6	WPI Index (as per para 3.13)		4.28%
7	R&M and A&G expenses after adjusting WPI increase and K factor	27.86	29.12
8	Audit Fee	0.06	0.08
9	Total R&M and A&G expenses	27.92	29.20



3.28 The O&M expenses consisting of employee cost and R&M and A&G expenses as determined in para 3.14 and 3.27 are approved as under:

Table No.14: O&M expenses for FY 2017-18 and FY 2018-19

(Rs. Crore)			
Sr. No	Particulars	FY 2017-18	FY 2018-19
1	Employee Cost	9.99	10.70
2	R&M and A&G Expenses	27.92	29.20
3	O&M Expenses	37.91	39.90

4.0 Depreciation

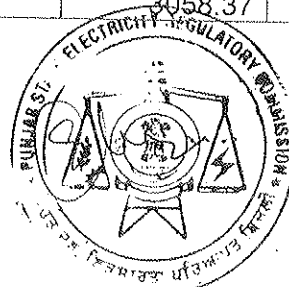
GVK's Submission:

- 4.1 GVK submitted that Regulation 21 of the PSERC Tariff Regulations, 2014, as amended by Notification dated 03.02.2016, provides for calculation of depreciation in respect of Coal Based Thermal Generating Plants.
- 4.2 GVK further submitted that depreciation for Generation Assets shall be calculated annually as per the straight-line method over the useful life of the Asset at the rate of depreciation specified by the Central Electricity Regulatory Commission ("CERC") from time to time. Accordingly, GVK has computed the depreciation on the Gross Fixed Assets excluding land. GVK in its revised submission dated 31.07.2020 has submitted the depreciation charge for the Control Period as under:

Table No.15 : Depreciation Charges for the Control Period

(Rs. Crore)

Sr.No	Particulars	FY 2017-18	FY 2018-19
1	Opening Gross Fixed Assets	3058.37	3071.27

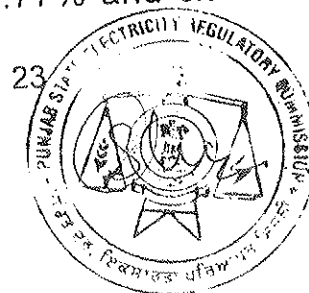


2	Less: Undischarged liabilities included in the above	0.00	0.00
3	Opening Capital Cost excluding undischarged liabilities (1-2)	3058.37	3071.27
4	Additional Capitalization	12.90	0.84
5	Closing Capital Cost (3+5)	3071.27	3072.11
6	Average Capital Cost (Average of 3 and 5)	3064.82	3071.69
7	Freehold Land	96.75	96.75
8	Rate of Depreciation	4.77%	4.77%
9	Remaining depreciable value{90%x(6-7)}	2671.26	2677.44
10	Depreciation (annualised) {Minimum of (8x6) and 9}	146.17	146.51
11	Depreciation (for the period) (=10)	146.17	146.51
12	Cumulative depreciation at the end of the period	285.98	432.49

4.3 GVK prayed the Commission to allow depreciation as detailed above in line with the provisions of the PSERC Tariff Regulations, 2014. GVK in its submission on 09.09.2020 submitted that the difference in the annual depreciation is due to the reason that while calculating the weighted average depreciation rate, rate of depreciation of land has been considered at 0%. The value of land had not been deducted from the Gross Fixed Assets, while computing depreciation. Deducting the value of land from the Gross Fixed Assets, the rate of depreciation comes upto 4.77% as claimed in the Petition. Accordingly, GVK prayed to the Commission to approve the depreciation rate at 4.77%.

PSPCL's Submission

4.4 PSPCL vide memo no. 5612 dated 21.08.2020 submitted that in terms of Regulation 21 of the PSERC Tariff Regulation 2014, GVK has calculated depreciation for generation assets as per the straight-line method over the useful life of the Asset at a weighted average rate of 4.77% and claimed a depreciation of



Rs.146.17 Crore and Rs.146.51 Crore in FY 2017-18 and 2018-19. However, in the original Petition filed by it, depreciation has been claimed at a weighted average rate of 4.80%. Since, depreciation approved by the Commission in the Tariff Order for FY 2017-18 is based upon the annual audited accounts of GVK for the said FY, the same may be approved as against the claimed figures by GVK in the present Petition

Commission's Analysis

- 4.5 As regards the Depreciation, Regulation 21 of PSERC MYT Regulations, 2014 has been amended vide notification dated 03.02.2016 as under:

"21.1. The value base for the purpose of depreciation shall be the capital cost of the assets admitted by the Commission:

Provided that land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset;

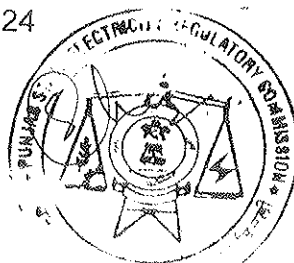
Provided further that depreciation shall be calculated after deduction of consumer contributions, capital subsidies/ Government grants.

21.2. The cost of the asset shall include additional capitalization.

21.3. The cost shall include foreign currency funding converted to equivalent rupees at the exchange rate prevalent on the date when foreign currency shall actually be availed but not later than the date of commercial operation.

21.4. Depreciation for generation and transmission assets shall be calculated annually as per straight line method over the useful life of the asset at the rate of depreciation specified by the Central Electricity Regulatory Commission from time to time.

21.5. Depreciation for distribution assets and other assets not



specified by CERC shall be at the rates notified by the Commission:

Provided that the total depreciation during the life of the asset shall not exceed 90% of the original cost;

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation/ put in use of the asset shall be spread over the balance useful life of the assets;

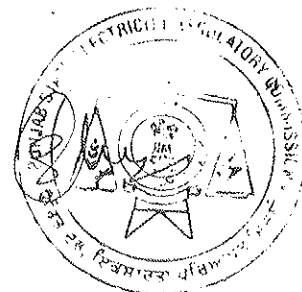
Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site.

21.6. Depreciation shall be chargeable from the first year of commercial operation/asset is put in use. In case of commercial operation of the asset/put in use of asset for part of the year, depreciation shall be charged on pro rata basis."

- 4.6 The Commission considers the rate of depreciation as 4.77% claimed by GVK in its revised submission dated 31.07.2020 for FY 2017-18 and FY 2018-19 and determines Gross Fixed Assets (net of land and land rights) as under:-

Table No. 16: Gross Fixed Assets (net of Land and land Rights) determined by the Commission for FY 2017-18 and FY 2018-19

		(Rs Crore)	
Sr.N	Particulars	FY 2017-18	FY 2018-19
0			
1	Opening GFA	3058.37	3071.27
2	Addition during the year	12.90	0.84
3	Closing GFA	3071.27	3072.11
4	Average GFA	3064.82	3071.69
5	Land and Land rights	96.75	96.75
6	Average GFA (net of land and land rights)	2968.07	2974.94
7	Rate of Depreciation	4.77%	4.77%
8	Depreciation	141.58	141.90



Accordingly, the Commission approves depreciation Charges of Rs.141.58 Crore and Rs.141.90 Crore for FY 2017-18 and FY 2018-19 respectively.

5.0 Return on Equity

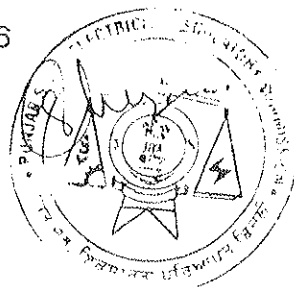
GVK's Submission

- 5.1 GVK submitted that Regulations 19 & 20 of PSERC Tariff Regulations, 2014 provides for Debt Equity Ratio and Return on Equity.
- 5.2 GVK in its revised submission dated 31.07.2020 and 09.09.2020 has stated that in the Order dated 17.01.2020 this Commission has approved a capital cost of Rs.3058.37 Crore. GVK submitted that the actual equity invested amounts to more than 30% of the capital cost. Hence, the normative equity has been considered as 30% of the capital cost. Balance equity shall be considered under normative loan.

Table No.17: Return on Equity submitted by the GVK

Sr.No	Particulars		(Rs. Crore)	
			FY 2017-18	FY 2018-19
1	Opening Gross Block excluding undischarged liabilities)	(a)	3058.37	3071.27
2	Equity percentage in Opening Gross Block	(b)	30%	30%
3	Normative Opening Equity	(c)	917.51	921.38
4	Normative Equity addition @30% due to additional Capitalisation during the year	(d)	3.87	0.25
5	Actual Equity addition during the year(as per Annual Accounts)	(e)	13.41	-
6	Normative Equity addition considered for ROE computation(Minimum of d and e)	(f)	3.87	-
7	Normative Closing Equity (c + f)	(g)	921.38	921.63
8	Average Equity(Average of c and g)	(h)	919.45	921.51
9	Normative Rate of ROE as per PSERC 2014 Tariff Regulations	(i)	15.50%	15.50%
10	Return on Equity (h x i)		142.51	142.83

- 5.3 GVK prayed this Commission to allow the Return on Equity at



the rate of 15.50% in accordance with the PSERC Tariff Regulations, 2014.

PSPCL's Submission

- 5.4 PSPCL vide memo no. 5612 dated 21.08.2020 that based on Regulation 19 and 20 of the PSERC Tariff Regulations, 2014, GVK has submitted a break up of debt and equity and calculation of return on equity thereon based upon the normative rate of 15.50%. The debt equity ratio and return of equity as claimed by GVK for FY 2017-18 and 2018-19 in the present Petition is in line with the approved capital cost of the project as approved in the Tariff Order for FY 2017-19 and thus may be accepted by the Commission.

Commission's Analysis:

- 5.5 Regulation 20 of PSERC MYT Regulations, 2014 provides for recovery of Return on Equity which is reproduced hereunder:

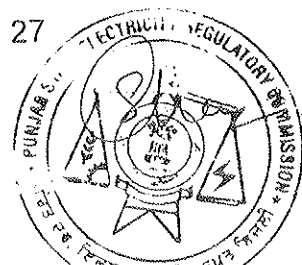
"20. RETURN ON EQUITY

Return on Equity shall be computed at the rate of 15.5% on the paid up equity capital determined in accordance with regulation

19: Provided that assets funded by consumer contributions, capital subsidies/Govt. grants shall not form part of the capital base for the purpose of calculation of Return on Equity."

- 5.6 Regulation 19 of PSERC MYT Regulations, 2014 provides for Debt-Equity Ratio which is reproduced hereunder:

"19. DEBT EQUITY RATIO



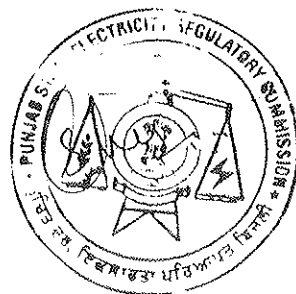
19.1. Existing Projects - In case of the capital expenditure projects having Commercial Operation Date prior to the effective date, the debt-equity ratio shall be as allowed by the Commission for determination of tariff for the period prior to the effective date:

Provided that the Commission shall not consider the increase in equity as a result of revaluation of assets (including land) for the purpose of computing return on equity.

.....”

19.2. New Projects – For capital expenditure projects declared under commercial operation on or after the effective date:

- a. A Normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff;
- b. In case the actual equity employed is in excess of 30%, the amount of equity for the purpose of tariff determination shall be limited to 30%, and the balance amount shall be considered as normative loan;
- c. In case, the actual equity employed is less than 30%, the actual debt-equity ratio shall be considered;
- d. The premium, if any raised by the Applicant while issuing share capital and investment of internal accruals created out of free reserve, shall also be reckoned as paid up capital for the purpose of computing return on equity subject to the



normative debt-equity ratio of 70:30, provided such premium amount and

internal accruals are actually utilized for meeting capital expenditure of the Applicant's business.

19.3. Renovation and Modernization: Any approved capital expenditure incurred on Renovation and Modernization including the approval in the Capital Investment plan shall be considered to be financed at normative debt-equity ratio of 70:30. If the actual equity employed is less than 30% then the actual debt equity ratio shall be considered."

- 5.7 The Commission in its Order dated 05.08.2020 in Petition no 69 of 2017 approved provisional return on equity of Rs.142.51 Crore and Rs.142.83 Crore for FY 2017-18 and FY 2018-19. Further, the Commission in its Order dated in Petition no 32 of 2020 (GVK's True Up for FY 2016-17) approved equity of Rs. 917.51 Crore as on 31.03.2017 which is considered as opening balance for FY 2017- 18. As per Regulation 19 of PSERC MYT Regulations, 2014, Debt Equity ratio of 70:30 has to be considered. Equity of Rs. 3.87(30% of Rs.12.90 Crore of assets addition of FY 2017-18) Crore and Rs 0.25 (30% of Rs. 0.84 Crore of asset addition of FY 2018-19) Crore have been considered for determining return on equity for FY 2017-18 and FY 2018-19 respectively.
- 5.8 The Commission worked out Return on Equity @ 15.50 % on the average paid up equity capital as under:

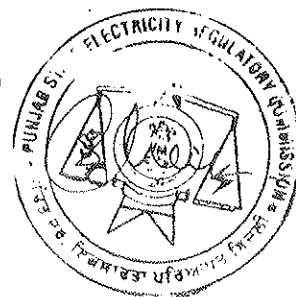


Table No.18: Return on Equity for FY 2017-18 and FY 2019-20 determined by the Commission

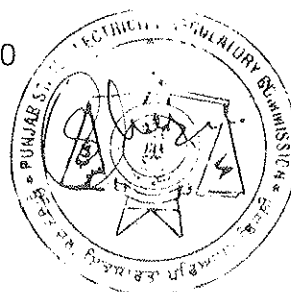
Sr. No	Particulars	(Rs Crore)	
		FY 2017-18	FY 2018-19
1	Opening Equity for the year	917.51	921.38
2	Addition of Equity during the year	3.87	0.25
3	Closing Equity for the year	921.38	921.63
4	Average Equity for the year	919.45	921.51
5	Rate of Return on Equity (%)	15.50%	15.50%
6	Return on Equity	142.51	142.83

Accordingly, the Commission approves Return on Equity of Rs.142.51 Crore for FY 2017-18 and Rs.142.83 Crore for FY 2018-19.

6.0 INTEREST AND FINANCE CHARGES

GVK's Submissions

- 6.1 GVK submitted that Regulation 24 of the PSERC Tariff Regulations, 2014 provides for Interest and Finance Charges on Loan Capital.
- 6.2 GVK in its revised submission dated 31.07.2020 and 09.09.2020 stated that the interest payable towards Long Term Loans has been calculated on the outstanding loan amounts and prevailing interest rates on the said amounts on the basis of the Completed Capital Cost of the Project as determined by this Commission vide Order dated 17.01.2020. The interest expenses have been computed taking into account repayment towards outstanding loan amounts and applicable interest rates in line with the PSERC Tariff Regulations, 2014.
- 6.3 GVK further submitted that in terms of the PSERC Tariff



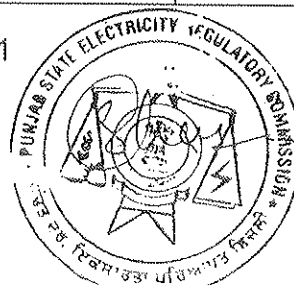
Regulations, 2014, the computation of interest on term loans is based on the following:

- (a) The opening gross normative loan on the Completed Capital Cost as approved by this Commission.
- (b) The rate of interest has been considered at the actual applicable advance rate of State Bank of India as on 01.04.2017 and 01.04.2018, which was at 13.22% p.a. for FY 2017-18 and 13.22% p.a. for FY 2018-19.
- (c) The repayment for the Control Period i.e., FY 2017-18 to FY 2018-19 has been considered equal to the depreciation allowed for that year.

6.4 The details of interest on long term loan as submitted by GVK is as under:

Table No. 19: Interest on Long Term Loans for FY 2017-18 and FY 2018-19

Sr. No	Particulars	(Rs. Crore)	
		FY 2017-18	FY 2018-19
1	Gross Normative Loan-Opening	2140.86	2149.89
2	Cumulative Repayment upto Previous year (Cumulative depreciation upto Previous year)	139.81	285.98
3	Net Loan Opening	2001.05	1863.91
4	Less: Repayment during the year (Considering depreciation as Principal Repayment)	146.17	146.51
5	Loan Addition due to additional Capitalization during the year (Actual additional capitalisation-Normative Equity Addition considered for ROE computation)	9.03	0.59
6	Net Loan Closing	1863.91	1717.99
7	Average Loan	1932.48	1790.95



Sr. No	Particulars	FY 2017-18	FY 2018-19
8	Weighted Average Rate of Interest on Loan (Normative)	13.22%	13.22%
9	Interest on Loan	255.53	236.81

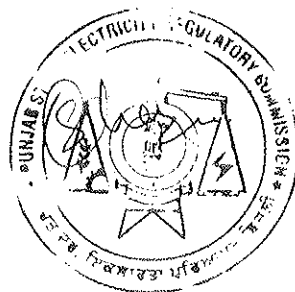
6.5 GVK prayed this Commission to allow the interest on Loan Capital as detailed above in accordance with the provisions of the PSERC Tariff Regulations, 2014.

PSPCL's Submission

6.6 PSPCL vide memo no. 5612 dated 21.08.2020 submitted that GVK has claimed a sum of Rs. 255.53 Crore for FY 2017-18 and Rs. 236.81 Crore for FY 2018-19 as interest on financing charges on long-term loan capital calculated on the normative loan amounts and prevailing interest rates on the said amounts on the basis of the completed capital cost of the project as determined by the Commission vide Order dated 17.01.2020. Since the interest and finance charges on long-term loan capital approved by the Commission in the Tariff Order for FY 2017-19 is based upon Order dated 17.01.2020 passed in petition No.54/2017 and the annual audited accounts of the Petitioner for the said Financial Year, the same may be approved as against the claimed figures by GVK in the present Petition.

Commission's Analysis

6.7 Regulation 24 of PSERC MYT Regulations, 2014 provides for Interest on Loan Capital which is reproduced hereunder:

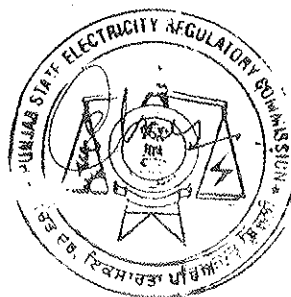


"24. INTEREST ON LOAN CAPITAL

24.1. For existing loan capital, interest and finance charges on loan capital shall be computed on the outstanding loans, duly taking into account the actual rate of interest and the schedule of repayment as per the terms and conditions of relevant agreements. The rate of interest shall be the actual rate of interest paid/payable (other than working capital loans) on loans by the licensee or the State Bank of India Advance Rate as on April 1 of the relevant year, whichever is less.

24.2. Interest and finance charges on the actual loan capital for new investments shall be computed on the loans, duly taking into account the actual rate of interest and the schedule of repayment as per the terms and conditions of relevant agreements. The rate of interest shall be the actual rate of interest paid/payable (other than working capital loans) on loans by the licensee or the State Bank of India Advance Rate as on April 1 of the relevant year, whichever is less.

24.3. The repayment for each year of the tariff period shall be deemed to be equal to the depreciation allowed for the corresponding year. In case of de-capitalisation of assets, the repayment shall be adjusted by taking into account cumulative depreciation made to the extent of de-capitalisation.



24.4. The Commission shall allow obligatory taxes on interest, finance charges (including guarantee fee payable to the Government) and any exchange rate difference arising from foreign currency borrowings, as finance cost.

24.5. The interest on excess equity treated as loan shall be serviced at the weighted average interest rate of actual loan taken from the lenders."

6.8 The Closing balance of loan amounting to Rs.1999.59 Crore as on 31.3.2017 determined by the Commission in FY 2016-17 in Petition no 32 of 2020, has been considered as the opening loan balance for FY 2017-18. Asset addition of Rs.12.90 Crore for FY 2017-18 and Rs.0.84 Crore for FY 2018-19 has been approved in this Order. 70% of asset addition has been considered to be sourced from debt i.e. Rs. 9.03 (12.90*70%) Crore for FY 2017-18 and Rs. 0.59 (0.84*70%) Crore for FY 2018-19 as normative loan. Repayment of loan has been considered equal to depreciation allowed as per Regulation 24.3 of PSERC MYT Regulations, 2014. GVK claimed the weighted average rate of interest 13.22% for FY 2017-18 and FY 2018-19 which has been considered for calculating interest on long term loan and since rates at which loan has been taken by GVK are less than SBI advance rate, the same have been considered to calculate the interest. The interest on long term loans is calculated as under :



Table No.20: Interest charges on Long Term Loans determined by the Commission for FY 2017-18 and FY 2018-19

(Rs. Crore)

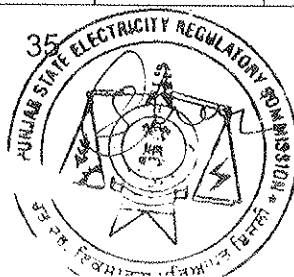
Sr.No	Particulars	FY 2017-18	FY 2018-19
1	Opening balance of loan	1999.59	1867.04
2	Add: Receipt of loan during the year	9.03	0.59
3	Less: Repayment of loan during the year	141.58	141.90
4	Closing balance of loan	1867.04	1725.73
5	Average Loan	1933.32	1796.39
6	Rate of interest	13.22%	13.22%
7	Interest Charges	255.58	237.48

6.9 As per the Annual Audited Accounts of GVK for FY 2017-18 and FY 2018-19 interest has been worked out to Rs.573.57 Crore and Rs.636.29 Crore respectively on average Loans of Rs.3567.86 Crore and Rs 3758.93 Crore for FY 2017-18 and FY 2018-19 respectively. However, GVK has a liability of Rs. 313.91 Crore and Rs 852.24 Crore towards interest accrued for FY 2017-18 and FY 2018-19 respectively. The interest actually paid on long term loans is as under:

Table No.21: Interest actually paid by GVK for FY 2017-18 and FY 2018-19

(Rs. Crore)

Sr.No	Particulars	FY 2016-17	FY2017-18	FY 2018-19
1	Interest charges as per annual audited accounts	448.37*	573.57	636.29
2	Interest paid:			
	Current year	221.95	259.66	-
	Previous year	-	226.42	97.96
3	Closing balance of interest due but not paid as per annual audited accounts	226.42	313.91	852.24



* In the Annual Audited Accounts of GVK for FY 2016-17 interest charges were shown as Rs 451.91 Crore. But in the Annual Audited Accounts of FY 2017-18, the previous year figures of interest charges for FY 2016-17 has been rearranged/regrouped as Rs. 448.37 Crore and Rs 3.54 (451.91 - 448.37) Crore has been shown as Other Finance Charges.

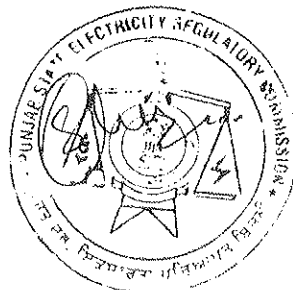
6.10 The Commission determined interest charges for FY 2017-18 and FY 2018-19 as under:

Table No.22: Interest charges allowed by the Commission for FY 2017-18 and FY 2018-19

Sr.No	Particulars	(Rs. Crore)	
		FY 2017-18	FY 2018-19
1	Interest determined as per Table 20	255.58	237.48
2	Interest actually paid by GVK	259.66	97.96
3	Interest allowed	255.58	97.96

The balance amount of interest i.e. Rs.139.52 (237.48 - 97.96) Crore of FY 2018-19 will be considered in the year in which they will actually be paid by GVK.

6.11 As per the Annual Audited Accounts for FY 2017-18 and FY 2018-19, finance charges amount to Rs. 3.44 Crore and 0.28 Crore on the average loan amount of Rs. 3567.86 Crore and Rs.3758.93 Crore respectively. Finance charges proportionately work out as Rs.1.86 Crore and Rs 0.13 Crore on the average loan of Rs 1930.65 Crore and Rs.1788.66 Crore for FY 2017-18 and FY 2018-19 respectively and the same are allowed. Thus, total interest and finance charges for FY 2017-18 and FY 2018-19 work out to Rs. 257.44 (255.58+1.86) Crore



and Rs. 98.09 (97.96+ 0.13) Crore respectively.

Accordingly, the Commission allows interest and finance charges of Rs.257.44 Crore and Rs. 98.09 Crore for FY 2017-18 and FY 2018-19 respectively.

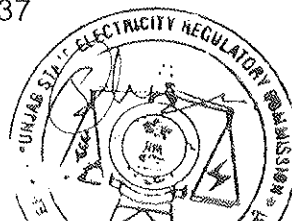
7.0 INTEREST ON WORKING CAPITAL:

GVK's Submissions

- 7.1 GVK submitted that Regulation 34 of the PSERC Tariff Regulations, 2014 provides for components of Interest on Working Capital in respect of Coal Based Thermal Generating Plants.
- 7.2 The weighted average rate of interest is computed at 12.25 % p.a. for FY 2017-18 and 12.25 % p.a. for FY 2018-19. Interest on working capital is computed on normative basis as per PSERC Tariff Regulations, 2014
- 7.3 GVK in its revised submission dated 31.07.2020 and 09.09.2020 has calculated the interest on working capital for MYT Control Period (i.e. FY 2017-18 to FY 2018-19) as per PSERC Tariff Regulations, 2014. Interest on working capital is projected for the Control Period by applying the rates as mentioned above on the components of Working Capital as given in the table below:

Table No. 23: Interest on Working Capital claimed by GVK
(Rs.Crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19
1	Fuel Cost – Primary Fuel & Secondary Fuel	250.75	301.60



	(for 2 months)		
2	O&M expenses for one month		
3	Maintenance spares (15% of O&M expenses)	5.58	5.47
4	Receivables (2 months of Fixed and Variable Cost based on Normative Annual Plant Availability Factor)	10.05	9.84
		365.61	415.22
5	Total working capital		
6	Rate of interest (p.a.)	631.99	732.13
7	Interest on working capital	12.25%	12.25%
		77.42	89.69

7.4 Accordingly, GVK prayed to allow the interest on Working Capital as detailed above in line with the provisions of the PSERC Tariff Regulations, 2014.

PSPCL's submission:

- 7.5 PSPCL vide memo no. 5612 dated 21.08.2020 GVK has submitted that it has calculated interest on working capital on the basis of computed working capital as provided under Regulation 34 of the PSERC Tariff Regulations and claimed a sum of Rs. 77.42 Crore and Rs. 89.69 Crore for FY 2017-18 and 2018-19.
- 7.6. PSPCL further submitted that the Commission had approved the working capital requirement based upon the audited annual statement of accounts and actual fuel cost and receivables received by the Petitioner during the relevant FY. The amounts claimed by GVK in the present Petition appear to be highly inflated as against the approved interest on working capital allowed by the Commission. As such, GVK is entitled only to a working capital requirement of Rs. 268.15 Crore for FY 2017-18, Rs.392.17 Crore for FY 2018-19 for which interest thereon of Rs. 32.85 Crore, Rs.48.04 Crore and Rs. 26.39 Crore only for FY 2017-18 and FY 2018-19 respectively which is



permissible under the applicable Regulations.

Commission's Analysis

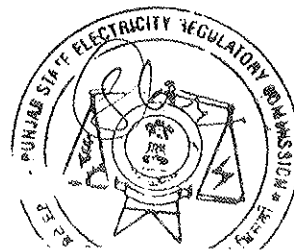
7.7 Regulation 34 of PSERC MYT Regulations, 2014 provides for Interest on Working Capital which is reproduced hereunder:

“34.1. Components of Working Capital

- a. *Coal-based Thermal Generating Plants: The Working Capital shall cover the following:*
 - i. *Fuel Cost for 2 months corresponding to the normative annual plant availability factor;*
 - ii. *Operation and maintenance (O&M) Expenses for 1 month;*
 - iii. *Maintenance spares @ 15% of the O&M expenses;*
 - iv. *Receivables equivalent to two (2) months of fixed and variable charges for sale of electricity calculated on the normative annual plant availability factor.*
- b.
- c.”

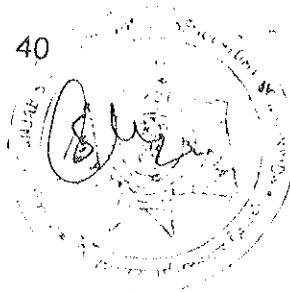
34.2 *Rate of Interest on Working Capital shall be as per Regulation 25.1 which is reproduced hereunder:*

25.1 *The rate of interest on working capital shall be equal to the actual rate of interest paid on working capital loans by the licensee/generating company/SLDC or the State Bank of India Advance Rate as on April 1 of the relevant year, whichever is less. The interest on working capital shall be payable on normative basis notwithstanding that the licensee/generating company/SLDC has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on the normative figures. In case, the licensee/generating company/SLDC has not availed any working capital loan during the year, the rate of interest shall be weighted average of the interest rates on working capital loan of the*



previous three years."

- 7.8 As per PSERC Regulations, the rate of interest on working capital shall be equal to the weighted average rate of interest paid/ payable on loans by the generating company or the State Bank of India Advance rate as on April 1 of the relevant year, whichever is less. The interest on working capital is payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on normative basis.
- 7.9 The Weighted Average Rate of Interest has been considered for FY 2017-18 and FY 2018-19 @12.25% p.a as claimed by GVK in this petition. The State Bank of India Advance Rate as on 01.04.2017 and 01.04.2018 is 13.85 % p.a and 13.45% p.a respectively.
- 7.10 As per the Annual Audited Accounts of GVK for FY 2017-18 and FY 2018-19 the fuel cost was Rs 635.58 Crore and Rs. 1112.36 Crore respectively. The energy charges paid by PSPCL during FY 2017-18 and FY 2018-19 were originally Rs. 416.74 Crore and Rs. 724.38 Crore which were later revised in terms of the Commission's Order dated 06.03.2019 to Rs. 470.51 Crore including Rs. 53.77 Crore as arrears for FY 2017-18. The fuel cost for FY 2018-19 was revised to Rs. 833.90 Crore including arrears of Rs. 109.22 Crore. Thus, fuel cost of Rs. 470.51 Crore and Rs. 833.90 Crore has been considered for the determination of receivables for FY 2017-18 and FY 2018-19 respectively.



7.11 Interest on working capital for MYT Control Period has been calculated as per PSERC MYT Regulations 2014. Interest on Working capital has been calculated for FY 2017-18 and FY 2018-19 by applying the rate of interest of 12.25 % p.a. on components of Working capital i.e. (maintenance spares @ 15% of O&M expenses, O&M expenses for one month and Receivables @ 2 month Annual Fixed Cost) as given below:

Table No.24: Interest on Working Capital approved by the Commission for FY 2017-18 and FY 2018-19.

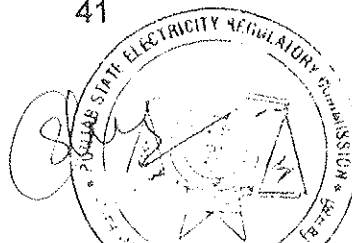
(Rs. Crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19
1	Fuel Cost for two months	78.42	138.98
2	Maintenance spares @15% of O&M	5.69	5.98
3	O&M Expenses for one month	3.16	3.32
4	Receivables for two months	180.43	216.89
5	Total Working Capital	267.70	365.18
6	Rate of Interest (%)	12.25%	12.25%
7	Interest on Working Capital	32.79	44.73

Thus, the Commission approves working capital requirement of Rs.267.70 Crore for FY 2017-18 and Rs. 365.18 Crore for FY 2018-19 and interest thereon of Rs. 32.79 Crore and Rs. 44.73 Crore for FY 2017-18 and FY 2018-19 respectively.

8.0 STATUTORY LEVIES AND TAXES

8.1 GVK submitted that Regulation 23 of the PSERC Tariff Regulations, 2014 provides for Income Tax which is reproduced hereunder:



"23.1 Obligatory taxes, if any, on the income of the generating company or the licensee or the SLDC from its core/licensed business shall be computed as an expense and shall be recovered from the customers/consumers:

Provided that tax on any income other than the core/licensed business shall not constitute a pass through component in tariff and tax on such other income shall be payable by the generating company or the licensee or the SLDC.

23.2 Tax on income, if actually liable to be paid, shall be limited to tax on return on equity allowed, excluding incentives.

23.3 Tax on income shall be considered at income tax rate including surcharge, cess etc. as applicable during the relevant year in accordance with the provisions of Income Tax Act, 1961 duly amended from time to time.

23.4 The benefits of tax holiday and the credit for carrying forward losses applicable as per the provisions of the Income Tax Act, 1961 shall be fully passed on to the customers/consumers.

23.5 The penalty, if any, arising on account of delay in deposit of tax or short deposit of tax amount shall not be claimed by the generating company or the licensee or the SLDC, as the case may be."

- 8.2 GVK submitted that it is entitled at actuals, as pass through, any cess, duty, tax, government levy and royalty etc., payable for generation and supply of power to the PSPCL from time to time. GVK in its submission dated 31.07.2020 stated that no claims have been made for FY 2017-18 and FY 2018-19.

PSPCL's submission:

- 8.3 GVK has submitted that as per Regulation 23 of the Tariff Regulations, it is entitled a pass through of actual taxes paid by it during the FY 2017-2019. It is submitted that per Regulation 23.2 of the PSERC Tariff Regulation 2014, tax on income, if



actually liable to be paid, is to be limited to tax on return on equity allowed, excluding incentives. As such, it is submitted that since the Regulations provide a cap on pass through of tax on income only to the extent of tax paid on return of equity, the return on equity is liable to be first determined for GVK's project for FY 2017-2019. As stated hereinabove, the Commission has approved a sum of Rs.142.51 Crore and Rs.142.83 Crore as the return on equity for FY 2017-18 and 2018-19. As such, GVK is only entitled to the tax paid on the said amount. The Commission while allowing any pass through of tax in the tariff may kindly take note of the above.

Commission's Analysis

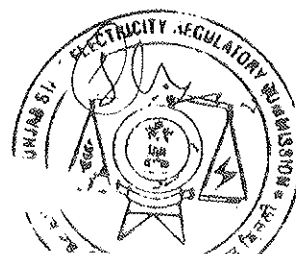
- 8.4 The benefits of any tax Holiday have to be passed on to the consumer/customer as per PSERC MYT Regulations 2014. GVK has claimed Nil on account of taxes for FY 2017-18 and FY 2018-19.

The Commission does not approve any amount on account of taxes and duties for FY 2017-18 and FY 2018-19.

9.0 Non-Tariff Income

- 9.1 GVK has submitted actual Non tariff income for FY 2017-18 is Rs 0.56 Crore and for FY 2018-19 is Rs. 0.27 Crore as per audited annual accounts. The breakup for the same is as below:

(a) Interest on Fixed Deposits – Rs.0.47 Crore and Rs. 0.22 Crore in FY 2017-18 and FY 2018-19 respectively.



(b) Sale of Scrap – Rs.0.09 Crore and 0.04 Crore in FY 2017-18 and FY 2018-19 respectively.

9.2 GVK further submitted that in accordance with Regulation 28 of the PSERC Tariff Regulations,2014, the Non-Tariff Income has been deducted to arrive at the Net Annual Fixed Cost for FY 2017-18 and FY 2018-19.

PSPCL's submission

9.3 PSPCL submitted that GVK has stated that non-tariff income is required to be deducted while arriving at the AFC for a relevant FY as per Regulation 28 of the PSERC Tariff Regulations. It is submitted that since in Petition No.69/2017, GVK has not submitted any claim of non-tariff income, the AFC of GVK as determined by the Commission in the Tariff Order for FY 2017-19 is liable to be revised by deducting the above said amounts as submitted by GVK in the present Petition.

Commission's Analysis

9.4 The Non-Tariff Income has been determined as per Regulation-28 of PSERC MYT Regulations-2014(amended from time to time).

9.5 The Commission notes that Audited Annual Accounts of GVK for FY 2017-18 and FY 2018-19 show "Other income" as Rs.0.61 Crore and Rs. 0.27 Crore respectively which includes income from bank deposits of Rs. 0.47 Crore and Rs 0.22 Crore respectively. As per para 20.3.4 of the Order dated 17.01.2020 in Petition no 54 of 2017, the Commission had observed that



GVK had diverted funds meant for capital expenditure out of the loan taken from financial institutions by investing the same in Mutual Funds. The Commission has neither considered interest paid on loans used for such other investments nor income earned from such other business/investment as part of the capital expenditure. Other income includes non-operating income of Rs. 0.14 Crore and Rs. 0.05 Crore for FY 2017-18 and FY 2018-19 respectively on account of credit balance written off and sale of scrap. The Commission notes that Rs. 3.12 Crore and Rs. 3.10 Crore have been booked under Ash Handling charges during FY 2017-18 and FY 2018-19 respectively but no income from Ash has been booked during FY 2017-18. Accordingly, the Commission determines Non-Tariff Income as Rs. 0.14 Crore and Rs. 0.05 Crore as per Audited Annual Accounts of FY 2017-18 and FY 2018-19 respectively.

Accordingly, the Commission approves Non-Tariff Income as Rs. 0.14 Crore and Rs. 0.05 Crore for FY 2017-18 and FY 2018-19 respectively.

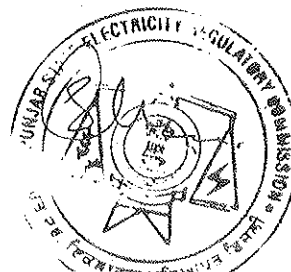
10.0 Capacity charges for FY 2017-18 to 2019-20

10.1 The Capacity charges from FY 2017-18 to FY 2019-20, as projected by GVK and approved by the Commission are summarized in the following table:-

Table No.25: Annual fixed charges for FY 2017-18 and 2018-19

(Rs Crore)

Sr. No.	Particulars	Approved in Petition no. 69	Submitted by GVK	Approved by the Commission
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		of 2017					
		FY 2017-18	FY 2018-19	FY 2017-18	FY 2018-19	FY 2017-18	FY 2018-19
1	O&M Expenses	37.91	39.90	66.98	65.61	37.91	39.90
2	Depreciation	142.47	142.80	146.17	146.51	141.58	141.90
3	Interest charges	250.04	98.09	255.53	236.81	257.44	98.09
4	Return on Equity	142.51	142.83	142.51	142.83	142.51	142.83
5	Interest on Working Capital	32.85	48.04	77.42	89.69	32.79	44.73
6	Income tax	0.00	0.00	0.00	0.00	0.00	0.00
7	Total Expenses	605.78	471.66	688.61	681.45	612.23	467.45
8	Less: Non-Tariff Income	0.14	0.05	0.56	0.27	0.14	0.05
9	Annual Fixed Charges	605.64	471.61	688.05	681.18	612.09	467.40

10.2 GVK shall be entitled for payment of capacity charges in accordance with Regulation 30 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (as amended) where the same is not specified in the PSERC Tariff Regulations.

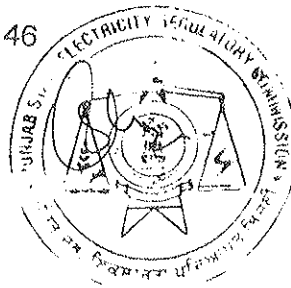
11.0 Generation for FY 2017-18 and FY 2018-19

GVK's submission

11.1 GVK in its petition has submitted the month-wise details of annual availability of the Project for FY 2017-18 and FY 2018-19. The gross generation, auxiliary consumption and Scheduled generation for FY 2017-18 and FY 2018-19 are as under:

Table No. 26: Gross Generation, Auxiliary Consumption and Scheduled generation for FY 2017-18 and FY 2018-19

Sr. No.	Year	Gross Generation (MU)	Auxiliary Consumption (MU)	Scheduled Generation (MU)	Aux Consumption (%)
1.	FY 2017-18	1,542.44	155.32	1,387.12	10.07%
2.	FY 2018-19	2,447.47	244.22	2,203.24	9.98%

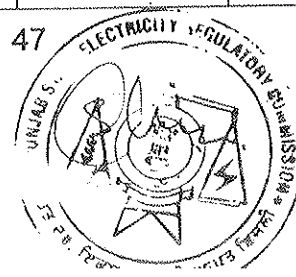


11.2 GVK submitted that it could not achieve the target PAF during FY 2017-18 and FY 2018-19 on account of non-availability of coal due to cancellation of the captive coal block allocated to GVK pursuant to judgment of Hon'ble Supreme Court and consequent Cancellation Order dated 24.09.2014. GVK submitted that cancellation of coal blocks has been held to be a Change in Law and Force Majeure event by the Arbitral Tribunal vide its award dated 10.04.2017. Since force majeure was because of factors beyond the control of GVK, it is excused from performance and target PAF should be considered in relation to actual coal available.

In its revised submission on 31.07.2020, GVK submitted the month-wise generation details for FY 2017-18 and FY 2018-19 as under:

Table No.27: Month-wise details of annual generation for FY 2017-18 and FY 2018-19 submitted by GVK FY 2017-18

Month	PAF (%)	PLF (%)	Gross Generation (MU)	Auxiliary Consumption (MU)	Scheduled Generation (MU)	Aux Consumption (%)
Apr-17	-	-	-	-	-	-
May-17	-	-	-	-	-	-
Jun-17	21.56	16	61.40	6.74	54.66	10.98
Jul-17	49.12	39	154.37	14.89	139.48	9.65
Aug-17	55.10	44	175.39	17.22	158.17	9.82
Sep-17	81.05	64	252.35	23.70	228.65	9.39
Oct-17	56.28	49	195.38	18.76	176.62	9.60
Nov-17	69.65	39	151.95	15.14	136.81	9.96
Dec-17	63.78	52	204.79	18.93	185.86	9.24



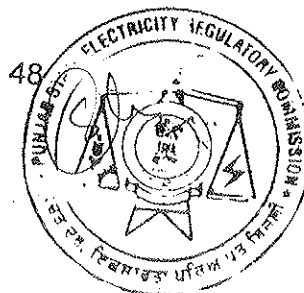
Month	PAF (%)	PLF (%)	Gross Generation (MU)	Auxiliary Consumption (MU)	Scheduled Generation (MU)	Aux Consumption (%)
Jan-18	29.95	23	93.03	9.06	83.97	9.74
Feb-18	43.93	35	127.85	12.89	114.96	10.08
Mar-18	35.65	27	119.94	12.01	107.93	10.01
			1,536.46	149.34	1,387.12	9.72

FY 2018-19

Month	PAF (%)	PLF (%)	Gross Generation (MU)	Auxiliary Consumption (MU)	Scheduled Generation (MU)	Aux Consumption (%)
Apr-18	34.85	26	99.56	10.46	89.09	10.51
May-18	86.70	62	247.11	24.67	222.44	9.98
Jun-18	46.68	42	164.08	16.99	147.09	10.35
Jul-18	41.20	38	152.79	15.18	137.61	9.94
Aug-18	49.14	36	147.31	15.78	131.53	10.71
Sep-18	59.41	37	145.43	15.09	130.34	10.38
Oct-18	52.05	51	205.62	19.25	186.37	9.36
Nov-18	58.53	54	210.10	18.87	191.23	8.98
Dec-18	81.90	66	263.63	23.82	239.81	9.04
Jan-19	99.98	64	257.09	23.59	233.50	9.18
Feb-19	85.30	64	232.84	20.97	211.87	9.01
Mar-19	98.67	78	310.39	28.02	282.37	9.03
			2,435.94	244.22	2,203.24	9.55

PSPCL's submission

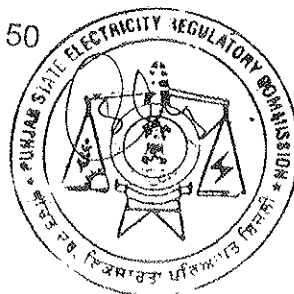
11.3 PSPCL vide submissions received on 25.08.2020 submitted the details of declared capacity, scheduled energy, PAF and PLF of the project for FY 2017-18 and FY 2018-19.

Commission's Analysis

loading the coal in to the trucks, unloading of the same at the railway siding and loading the same to the railway wagons, coal sampling cost for analysis to obtain the GCV of coal received and the railway freight, all form part of the Landed Cost of Coal. Thus, the actual landed cost of coal is to be considered for computation of fuel cost/coal cost. Consequently, GVK filed Petition No. 68 of 2017 invoking the dispute resolution procedure envisaged under the PPA. The Commission disposed of the said Petition by its order dated 06.03.2019 which was challenged by both GVK and PSPCL before the Hon'ble Tribunal. Since the matter is sub-judice before the Hon'ble Tribunal, GVK craves leave of the Commission to approach the Commission for modification of the variable cost sought in this Petition, as and when Hon'ble Tribunal decides the matter.

GVK procured coal from e-auction/imported coal and under Shakti scheme and did not source any coal from BCCL mines. Therefore, comparison of GVK's surface transportation cost with BCCL is not tenable. The surface transportation charges paid by GVK do not depend solely on the distance between the railway siding and the mine. The rates paid by GVK for surface transportation should be allowed.

The Regulations under Section 178 or 181 of the Electricity Act override PPAs as held by Hon'ble Supreme



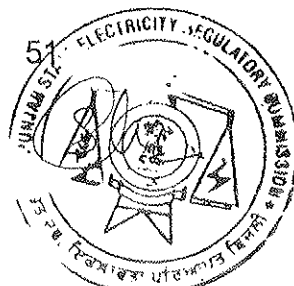
Court in PTC judgment. The said position has been upheld by the Hon'ble Tribunal in the case of OPGCL Vs OERC wherein it was held that PPA, even though approved by the Commission, cannot override regulations and tariff for supply of power has to be determined in terms of applicable regulations.

ii) Landed cost of secondary fuel

The Secondary fuel for the Plant is LDO / HFO. This Secondary Fuel is being procured from PSU Oil Marketing companies. This Secondary Fuel is delivered at site and the weighted average cost incurred on the same may be allowed by the Commission. The energy charge is to be determined as per Regulation 39.4 of the PSERC Tariff Regulations.

iii) Normative Auxiliary energy consumption

As per Regulation 36 of the PSERC Tariff Regulations, 2014, the norms for performance parameters which includes normative auxiliary energy consumption for Coal-based generating stations shall be as per the CERC norms. Accordingly, as per Regulation 36(E)(a) of the CERC Tariff Regulations, 2014, the normative auxiliary energy consumption is 8.5% for a unit of 200 MW series. Further, for thermal generating stations with induced draft cooling towers, additional 0.5% is allowed. Thus, normative auxiliary consumption has been considered at 9% for the computation of energy charge. In its revised



submissions on 31.07.2020 and 09.09.2020, GVK has claimed actual auxiliary consumption of 9.55% for FY 2017-18 and 9.72% for FY 2018-19 explaining that the auxiliary consumption has been on higher side because of part load operation of the plant during FY 2017-18 and FY 2018-19.

iv) Fuel Transit & Handling Losses

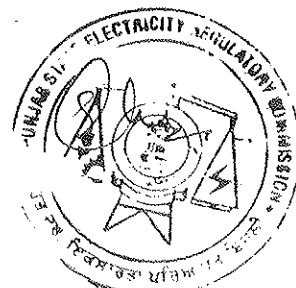
Normative transit and handling loss are considered in accordance with Regulation 40 of the PSERC Tariff Regulations 2014. Further, in its revised submission on 31.07.2020 and 09.09.2020, GVK stated that normative transit and handling loss are 1% in accordance with Regulation 40 of the PSERC Tariff Regulations 2014. However, actual transit and handling losses have been considered for calculation of Energy Charges. Fuel Transit & Handling Losses are 4.20% and 2.43% for FY 2017-18 and FY 2018-19 respectively. Pursuant to the cancellation of the captive coal blocks, coal has been procured in FY 2017-18 under e-auction mode. In FY 2018-19, coal was procured under Shakti Scheme (supply commenced on March 2018). The coal is being transported to the Project on road/rail mode as coal is allocated from various mines which are not under the control of GVK. Furthermore, the railway sidings at the mines are not available to GVK since preference is given to public sector companies/pendency of rakes. Therefore, GVK is required to transport coal over longer distances by



road/rail mode resulting in higher Fuel Transit & Handling Losses. The same are due to reasons beyond control of GVK and the Commission may allow the same.

v) Station Heat Rate

As per Regulation 36 of the PSERC Tariff Regulations, 2014, the norms for performance parameters; which includes Station Heat Rate for Coal-based generating stations shall be as per the CERC norms. Regulation 36(C)(b) of the CERC Tariff Regulations 2014, specifies that for tariff calculation, the design station heat rate is to be multiplied by a factor of 1.045 for a new coal based thermal power plant. The Guaranteed Heat Rate for the power plant under the EPC contract is 2221 Kcal/kWh. Accordingly, the Station Heat Rate of GVK for tariff calculation purpose comes out to be 2321 kcal/kWh, which has been considered for Energy Charge calculation. In the revised submission on 31.07.2020 and 09.09.2020, GVK stated that the actual station heat rate as achieved by GVK for FY 2017-18 and FY 2018-19 is 2475 kcal/kWh and 2315 kcal/kWh respectively. Increase in Station Heat Rate for FY 2017-18 is due to part load operations. GVK further requested the Commission to approve Gross Station Heat Rate of 2475 kcal/kWh for FY 2017-18. GVK has submitted that the Station Heat Rate of 2315 kcal/kWh has been achieved in FY 2018-19 and the Commission may allow it to retain the efficiency gains



in terms of Regulation 30 of PSERC Tariff Regulations, 2014.

12.2 Accordingly, GVK has computed the actual Energy Charges for FY 2017-18 and FY 2018-19 as under:

Table No.29 : Computation of actual Energy Charges by GVK for FY 2017-18 and FY 2018-19

Sr. No.	Particulars	FY 2017-18		FY 2018-19	
		Submitted in the Petition	Revised submission received on 31.07.2020	Submitted in the Petition	Revised submission received on 31.07.2020
1	Variable Charge per Unit (Rs. / kWh)	4.58	4.65	5.05	5.10
2	Scheduled Energy (in MUs)	1387.12	1387.12	2203.24	2203.24
3	Annual Energy Charge (Rs. in Crore)	635.30	645.01	1112.64	1123.65

PSPCL's submission

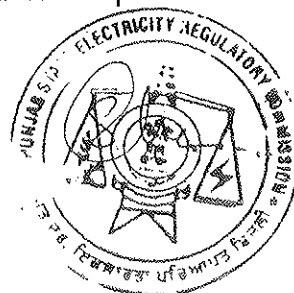
12.3 PSPCL vide its submissions dated 23.06.2020 and 21.08.2020 submitted as under:

- i) PSPCL submitted that GVK has stated that apart from the approved coal being procured by it through SHAKTI Scheme 2017, it is procuring domestic coal from e-auctions conducted by Coal India Limited which is allocated from mines of Central Coal Fields and Northern Coal fields. This necessitates GVK to transport the coal by road, unload the same at railway siding and then load the coal to the railway wagons whenever it is allotted by the Indian Railways for onward transportation to the Project and this process includes road transportation



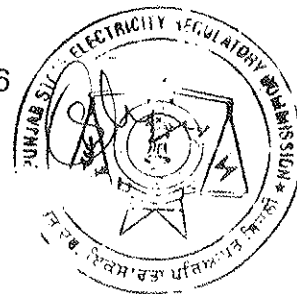
charges and handling charges related to loading the coal in to the trucks, unloading the same at the railway siding and loading the same into the railway wagons. Further, at the project site, the coal sample is taken from the railway wagons and sent for analysis to obtain the GCV of coal received. All these costs are stated to form part of the landed cost of coal including the railway freight. GVK has also submitted that the outcome of Appeal No.189/2019 and Appeal No.192/2019 pending adjudication before the Hon'ble Appellate Tribunal would also have a material bearing on the Variable Cost as sought by GVK.

- ii) PSPCL submitted that the Commission in its Order dated 06.03.2018 passed in Petition No.68/2019 has settled the issue of cost of coal after taking into consideration all relevant facts and circumstances and the regulatory position and has held that in case of any surface transportation cost incurred by GVK beyond the pick-up point within the mine (external STC), payment of same would be limited to the cost incurred to carry the coal to the nearest railway siding and would be as per the rates prescribed by M/s Bharat Coking Coal Ltd.(BCCL) upto 20KM and the said charges would be charged with separate bills for cost of coal and STC.As regards the costs claimed by GVK towards expenditure incurred on account of testing of coal for GCV, the Commission in the above said Order has clarified that GVK is not to be paid any testing charges and is required to construct its own



testing facility. GVK has challenged the above said findings of the Commission before the Appellate Tribunal in Appeal No.189/2019. However, no stay has been granted by the Appellate Tribunal in favour of GVK and as such, the above findings of the Commission are binding upon GVK. Therefore, in order to claim charges for any external STC, GVK is required to submit separate bills in consonance with the rates prescribed by M/s BCCL as decided by the Commission in the above said Order and GVK is not entitled to any testing charges till it establishes a coal testing facility of its own.

- iii) PSPCL submitted that GVK has stated that in Petition No.68/2017, GVK had raised disputes regarding reimbursements of costs incurred by it in procuring coal for its project and after final adjudication of the said Petition vide the Commission's Order dated 06.03.2019, PSPCL has paid a sum total of Rs.470.08 Crore for claims of GVK in FY 2017-18 and Rs.892.23 Crore for FY 2018-19. However, PSPCL is yet to pay balance sums of Rs.106.11 Crore towards claims of FY 2017-18 and Rs.218.27 Crore towards claims of FY 2018-19 which amounts are subject matter of the cross Appeals [being Appeal Nos.189 and 192 of 2019] pending adjudication before the Hon'ble Appellate Tribunal. PSPCL further submitted that GVK has stated that it would approach the Commission to claim modifications in its variable cost as

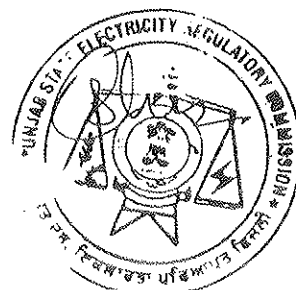


and when the said Appeals are adjudicated by the Hon'ble Appellate Tribunal.

As no stay has been granted by the Appellate Tribunal in favour of GVK or PSPCL in the above Appeals and as such, presently the above findings of the Commission and amounts already paid by PSPCL are binding upon the parties. PSPCL further submitted that actual energy charges of Rs. 470.51 Crore and Rs.833.80 Crore paid to GVK for FY 2017-18 and FY 2018-19 respectively are in compliance of Order dated 06.03.2019 passed in Petition No.68/2017 and Order dated 27.05.2019 passed in Petition No.1/2018 by the Hon'ble Commission.

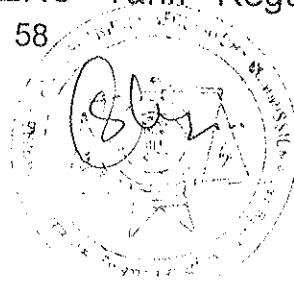
- iv) PSPCL submitted that GVK has prayed that it be allowed the weighted average cost incurred by it on procurement of secondary fuel being procured from PSU Oil Marketing Companies. In this regards it is submitted that Regulation 37.2 of the Tariff Regulations provides as under:

"37.2 Initially, the LFC of primary fuel and secondary fuel for tariff determination shall be based on actual weighted average cost of primary fuel and secondary fuel for the preceding three months, and in the absence of landed costs for the preceding three months, LFC shall be based on the latest procurement price of primary fuel and secondary fuel for the generating station."



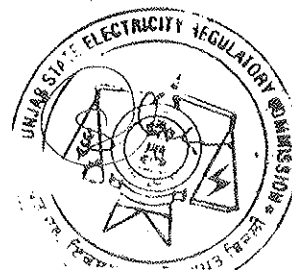
In view of the above, it is submitted that GVK may be allowed the cost of secondary fuel strictly in accordance with the above Regulation.

- v) PSPCL submitted that as regards the claim of GVK towards normative auxiliary energy consumption and station heat rate, the same are to be allowed by the Commission in accordance with the norms prescribed under the Regulation 36 of the CERC Tariff Regulations 2014.
- vi) PSPCL further submitted that as regards the claim for transit and handling charges, the Commission in its Order dated 06.03.2019 has clarified that transit and handling charges for the coal are to be paid to GVK only if it shows actual loss after proper checking and weighment at both loading and project end and the bills included proof of actual loss and states whether actual loss was being billed or the normative loss of 1.0% as per Regulation 40 of the PSERC Tariff Regulations, 2014. The present Petition being completely silent on the actual losses having been faced by it, GVK is only entitled to transit and handling losses as percentage of the quantity of domestic coal being procured by it from Coal India limited as 1.0% percent. However, GVK is required to provide complete details of same. In view thereof, PSPCL submitted that:
- 1) The normative auxiliary consumption has been considered at 9% by GVK as per Regulation 36(E)(a) of CERC Tariff Regulations 2014, for



computation of energy for FY 2017-18 and FY 2018-19;

- 2) The fuel transit & handling loss has been considered by PSPCL as per the Commission's Order dated 06.03.2019 passed in Petition No.68/2017 in the following manner:
 - a) For FY 2017-18 & for FY 2018-2019 (01.04.2018 to 30.09.2018) as 1% or actual transit loss whichever is less.
 - b) For FY 2018-2019 (01.10.2018 to 31.03.2019) as 0.8 % as per applicable CERC tariff regulation or actual transit loss whichever is less; and
- 3) The station heat rate for FY 2017-18 and FY 2018-19 has been calculated on the basis of Regulation 36 (c) and (b) of the CERC Tariff Regulation, 2014. The design station heat rate has been multiplied by a factor 1.045 which comes out to be 2321 Kcal/Kwh.
- vii) PSPCL submitted that GVK has submitted that GVK and PSPCL have undertaken a reconciliation process pursuant to the Commission's Order dated 06.03.2019 in Petition No.68 of 2019 against which cross Appeals being Nos.189 and 192 of 2019 are pending adjudication before the Hon'ble Appellate Tribunal. GVK has challenged the above said Order dated 06.03.2019 before the Hon'ble Appellate Tribunal in Appeal No.189/2019 on the findings with respect to following issues:

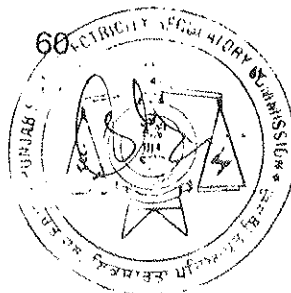


- Calculation of capacity charges after inclusion of 9% normative auxiliary consumption
 - Testing charges of coal
 - IEGC compensation for backing down power and surface transportation charges
- viii) PSPCL submitted that it has also filed an Appeal against the said Order before the Hon'ble APTEL in Appeal No. 192/2019 on the following issues:

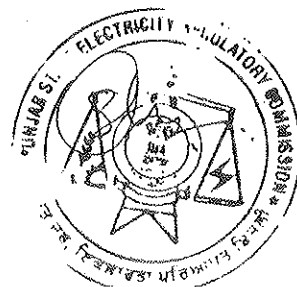
- Calculation of GCV on ARB total moisture and
- Rebate reversal rate and interest on rebate

Both the above said Appeals are pending adjudication before the Hon'ble Appellate Tribunal where no stay of operation of Order dated 06.03.2019 has been granted and as such the said Order is binding upon both parties. The other issues as decided by the Commission have remained unchallenged by either parties and thus the said Order to that extent has attained finality and is binding on both the parties.

- ix) PSPCL submitted that GVK is being paid the Landed Fuel Cost (LFC) based upon the actual procurement price of the fuel based upon original bills submitted by it to PSPCL under the orders of the Commission. As such, there is no occasion for the Commission to determine an energy charge rate for GVK in terms of the formula provided under Regulation 39.4 of the PSERC Tariff Regulations 2014.



- x) PSPCL submitted that GVK in its revised submissions has claimed actual transit and handling losses for calculation of energy charges at the rate of 4.20% and 2.43% for FY 2017-18 and FY 2018-19 respectively. GVK has sought the same on grounds that pursuant to cancellation of the captive coal blocks, coal has been procured by GVK in FY 2017-18 under e-auction mode and in FY 2018-19 coal has been procured under Shakti scheme. Thus, coal has been transported to project on road/rail mode over longer distances by road/rail mode resulting in higher fuel transit and handling losses. The Commission in its Order dated 06.03.2019 in petition 68 of 2017 has already clarified that transit and handling charges for coal would be capped at 1% upto 30.09.2018 and at 0.8% from 01.10.2018 onwards as per applicable PSERC Tariff Regulations amended from time to time. Therefore, GVK has to show the actual transit and handling loss including proof of actual loss which would be capped as per order dated 06.03.2019 in petition 68 of 2017.
- xi) PSPCL vide Memo No. 5458/TR-5/963 dated 24.07.2020 submitted the details of payments made to GVK on monthly basis with regards to energy charges including details of fuel cost for true-up of FY 2017-18 and FY 2018-19 with segregation of the payments made to GVK on the basis of weighted average cost of coal to PSPCL's



generating stations and payments on the basis of Shakti coal as well as details of arrears.

Commission's Analysis

- 12.4 The energy charges for FY 2017-18 and FY 2018-19 are payable by PSPCL to GVK in terms of the PPA, Order dated 01.02.2016 common to petition no. 65 of 2013 & 33 of 2015, Order dated 06.03.2019 in petition no. 68 of 2017 and Order dated 27.05.2019 in petition no. 01 of 2018 as applicable. The said Orders are under challenge in Hon'ble APTEL either by GVK or by PSPCL or by both, however there is no stay on the operation of these Orders.
- 13.0 Interest on under-recovered or over-recovered fixed charges:
- 13.1 The Commission notes that the applicability of Regulation 9 of PSERC Regulations, 2005 would be on the distribution companies or generating cum distribution companies and cannot be applied as it is to the standalone generating companies. The Commission observes that Regulation 8 (13) of CERC (Terms and Conditions of Tariff) Regulation, 2014 are squarely applicable to under recovery or over recovery of fixed charges in case of generating companies.
- 13.2 The Regulation 8 (13) of CERC (Terms and Conditions of Tariff) Regulation, 2014 is re-produced below for reference: -
- "The amount under-recovered or over-recovered, along with simple interest at the rate equal to the bank rate on 1st April of the respective year, shall be recovered or refunded by the generating company or the transmission*



licensee, as the case may be, in six equal monthly installments starting within three months from the date of the tariff order issued by the Commission".

13.3 The Commission decides to adopt the CERC Regulations for determining interest equivalent to bank rate on under recovery or over recovery of fixed charges.

Accordingly, interest shall be allowable or recoverable as per Regulation 8 (13) of CERC (Terms and Conditions of Tariff) Regulation, 2014 on under-recovered or over-recovered Annual Fixed Charges (AFC) determined by the Commission.

This Petition stands disposed off accordingly.

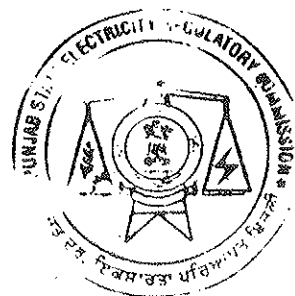
Anandra
(Anjuli Chandra)
Member

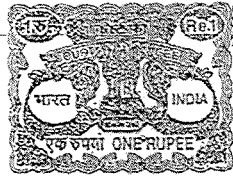
Sarna
(S.S. Sarna)
Member

Kusumjit Sidhu
(Kusumjit Sidhu)
Chairperson

Chandigarh
Dated: 17.09.2020.

Authenticated
Registrar
Punjab State Electricity Regulatory Commission
Chandigarh





*Amended and Restated Power Purchase Agreement
between*

*Punjab State Electricity Board
(the "Procurer")*

And

*GVK Power (Goindwal Sahib) Limited
(the "Seller")*

Date: 26/05/2009

**2x270MW COAL FIRED THERMAL POWER PLANT AT
GOINDWAL SAHIB, DISTRICT TARN TARAN
PUNJAB**

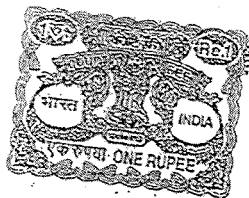
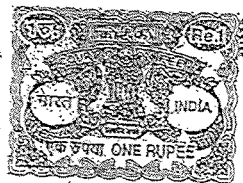


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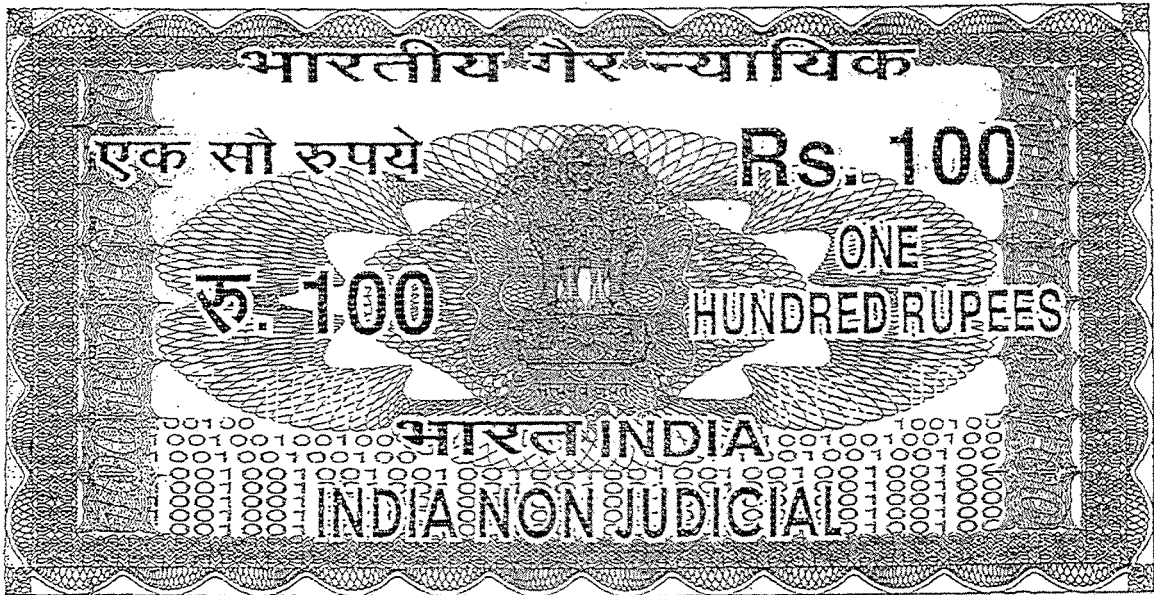
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ఆంధ్ర ప్రదేశ్ రాష్ట్రం ఆంధ్ర ప్రదేశ్ ANDHRA PRADESH Saleema AA 241197
 S.No. 3624 Date 23/05/2009 Rs. 100
 Name V-Mohan SALEEMA ANJUM
 S/o. W/o. D/o. Shankar STAMP VENDOR
 For Whom G.V.K Power (Goindwal Sahib) Ltd Sec-bad S.V.L.No.3/2009
 H.No.13-4-661/A,
 KARWAN, HYDERABAD.

This Amended and Restated Power Purchase Agreement (the "Agreement") is entered into on this 26th day of May 2009 between

1. Punjab State Electricity Board, a Board established under The Electricity (Supply) Act 1948, having its Head Office at "The Mall, Patiala - 147 001, Punjab, India" (hereinafter referred to as the "Procurer", which expression unless repugnant to the context or meaning thereof shall be deemed to include its successors, and permitted assigns) of the first part; and
2. GVK Power (Goindwal Sahib) Limited, a Company incorporated under The Companies Act, 1956, having its registered office at "Paigah House", 156-159, Sardar Patel Road, Secunderabad- 500 003, Andhra Pradesh, India" (hereinafter referred to as the "Seller", which expression unless repugnant to the context or meaning thereof shall be deemed to include its successors, and permitted assigns) of the second part. hereinafter referred to as "Party" or "Parties" as appropriate;



ఆంధ్ర ప్రదేశ్ రాష్ట్రం ఆంధ్ర ప్రదేశ్ ANDHRA PRADESH *Saleema* AA 241198
 S.No. *3625* Date *23/05/2009* Rs. *100*
 Name *V. Mohan*
 S/o. W/o. D/o. *Shankar*
 For Whom *G.V.K. Power (Goindwal Sahib) Ltd Secbad*
 SALEEMA ANJUM
 STAMP VENDOR
 S.V.L.No. 3/2009
 H.No. 13-4-661/A,
 KARWAN, HYDERABAD.

Whereas:

The Government of Punjab and the Procurer had invited proposals during the year 1996 to establish a coal based power station with an Installed Capacity of approximately 462.5 MW at Goindwal Sahib, Amritsar District in the state of Punjab, India and the Seller having been selected by the Government of Punjab and the Procurer on the basis of International Competitive Bidding has accepted the invitation of the Government of Punjab and the Procurer to Build, Own and Operate the coal based power station;

Whereas the Procurer and the Seller entered into a Power Purchase Agreement (PPA) on 17th April 2000.

Whereas the Parties have entered into a Memorandum of Understanding on 8th February 2006 and have agreed to modify the Power Purchase Agreement dated 17th April 2000 to incorporate among other things the revised capacity 2 x 250 MW (+20%) of the Power Station agreed between the Parties, adoption of CERC norms for Tariff calculation and schedule for achieving commercial operation of Unit-1 & Unit-2 of the Power Station;

Whereas the Punjab State Electricity Regulatory Commission ("PSERC") (hereinafter referred to as "Commission") was established after the signing of the Power Purchase

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Saleema

AA 241199

S.No. 3676 Date 23/05/2009 Rs. 100

Name V. Mohan

S/o. W/o. D/o. Shankar

For Whom GVK Powey (Grindwal Sahib) Ltd Secbad

SALEEMA ANJUM
STAMP VENDOR
S.V.L.No.3/2009
H.No.13-4-661/A,
KARWAN, HYDERABAD.

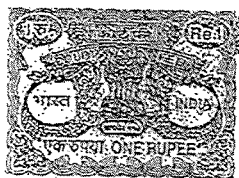
Agreement (PPA) dated 17th April 2000 and PSERC is empowered to regulate electricity purchase and procurement process of the Procurer, the terms and conditions of this Agreement including the price at which electricity shall be procured from the Seller

Whereas the Seller has agreed to sell the entire Contracted Capacity and energy generated by the Project to the Procurer and the Procurer has agreed to purchase the Contracted Capacity and scheduled energy from the Seller in accordance with the terms and conditions of this Amended and Restated Power Purchase Agreement

Whereas subsequently the Seller filed Petition for an amendment in the capacity of the Project to 2x270 MW from 2x300 MW indicated in the Amended & Restated PPA initialled between the Parties in January, 2007, and accordingly the Contracted Capacity of the project shall now be 2x270 MW.

Whereas the Project has been since allotted the Tokisud North Sub Block as a captive coal mine and a part of Saregarha Block in the state of Jharkhand for supply of coal to the Project;

Whereas the PSERC had issued the order dated 29.04.08 in case of Petition No. 4 of 2007 filed by M/s GVK for approval of capital cost of the project and M/s GVK filed an Appeal



No. 104 of 2008 in the Appellate Tribunal for Electricity against this order to which the Tribunal has issued the order dated 08.04.2009 allowing additional costs to M/s GVK.

Whereas the estimated costs as approved by PSERC and additional costs allowed by Appellate Tribunal shall now be indicated in the estimated cost listed in the Schedule-11.

Whereas the Parties mutually desire to amend and restate the Power Purchase Agreement dated 17th April 2000 and enter into this Agreement, as per the order of the PSERC dated 06 March 2009 on Petition no. 3 of 2007 filed for approval of the initialed Amended and Restated PPA between the Parties;

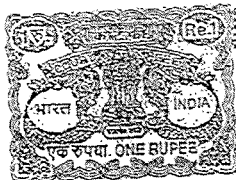
Whereas M/s GVK Power (Goindwal Sahib) Ltd. filed the Appeal No. 70 of 2009 in the Appellate Tribunal for Electricity against the order of PSERC dated 06.03.09 which is yet to be decided.

Whereas M/s GVK Power also filed an Interim Application No. 167 of 2009 before the Appellate Tribunal to allow them to sign the Amended & Restated PPA as per the order of PSERC dated 6.3.2009 without prejudice to their right to appeal.

Whereas the Appellate Tribunal has issued the order dated 19.05.09 against I.A. No. 167 of 2009 allowing both the parties to sign the Amended & Restated PPA as per the order of PSERC dated 6.3.2009 and reserving the right to appeal of both the parties in any Court of Law.

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties, in supercession of all agreements, letters, communications and the like, anterior to this Agreement, as follows:

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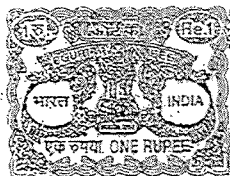
ARTICLE 1: DEFINITIONS AND INTERPRETATION

1.1 Definitions

The terms used in this Agreement, unless as defined below or repugnant to the context, shall have the same meaning as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under, including those issued/framed by Appropriate Commission (as defined hereunder), as amended or re-enacted from time to time.

The following terms when used in this Agreement shall have the respective meanings, as specified below:

"Act" or "Electricity Act 2003"	means the Electricity Act 2003 or any amendments made to the same or any succeeding enactment thereof;
"Agreed Form"	means, in relation to any document, the form of the said document most recently agreed to by the Parties and initialled by them for identification;
"Agreement" or "Power Purchase Agreement" or "PPA"	means this document including its recitals and Schedules;
"Appropriate Commission"	means the Punjab State Electricity Regulatory Commission (PSERC) or its successors;
"Availability Based Tariff" or "ABT"	Shall mean all the regulations contained in the Central Electricity Regulatory Commission (terms and conditions of Tariff) Regulations as applicable.
"Availability Factor" or "Availability"	shall have the meaning ascribed thereto in ABT ;
"Available Capacity"	shall have the meaning ascribed thereto in ABT;
"Auxiliary Energy Consumption or AUX"	means, in relation to a period in case of a generating station means, the quantum of energy consumed by auxiliary equipment of the generating station and transformer losses within the generating station expressed as a percentage of the sum of the gross energy generated at the generator terminals of all the Units of the generating station.
"Bill Dispute Notice"	means the notice issued by a Party raising a Dispute regarding a Monthly Bill or a Supplementary Bill issued by the other Party;
"Business Day"	means with respect to the Seller and the Procurer, a day other than Sunday or a statutory holiday, on which the banks remain open for business in the State in which the Procurer's registered office is



located;

"Capacity Charge" or shall have meaning ascribed thereto in Schedule 6

"Capacity Charges"

"Capacity Notice"

shall have the meaning ascribed thereto under ABT or the Grid Code;

"Capital Cost"

means

actual capital cost of the Project on a relevant date which shall not be later than the Commercial Operation Date of the Power Station, as certified by the auditors appointed jointly by the Seller and Procurer and as approved by PSERC.

provided that Capital Cost shall always exclude cost overruns arising due to a Seller Event of Default, or costs due to events for which compensation has been received by the Seller from the Procurer or Insurers or third parties;

Provided further that the Capital Cost in relation to a Unit shall be the Capital Cost allocated in proportion to the Contracted Capacity of the said Unit.

"Capital Structure Schedule"

Structure

shall mean sources of finance used to finance the Capital Cost as provided in the Financing Agreements;

"Captive Coal Mine(s)"

means the Tokisud North Sub Block" in the Hazaribagh District of Jharkhand State in India, and any other coal mine/block allocated by the Government of India for supplying coal to the Project and associated fuel transport system up to the Power Station; "

"Central Transmission Utility" or "CTU"

shall have the meaning ascribed thereto in the Electricity Act, 2003;

"CERC"

means the Central Electricity Regulatory Commission, as defined in the Electricity Act, 2003, or its successors;

"CERC Regulations"

Tariff

Means the regulations formed by CERC under section 178 of the Electricity Act, 2003 and titled the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations as applicable.

"CERC Norms"

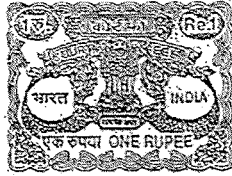
means the norms for determination of tariff for the coal based power stations under the CERC (Terms and conditions of Tariff) Regulations as applicable.

"Change in Law"

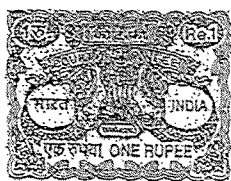
shall have the meaning ascribed thereto in Article 13.1.1;

"Commercial Operation

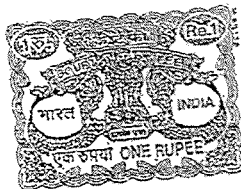
means, in relation to a Unit, the date one day after the date when the



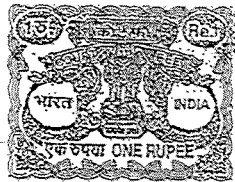
- "Date" or "COD" Procurer receives a Final Test Certificate of the Independent Engineer as per the provisions of Article 6.3.1 and in relation to the Power Station shall mean the date by which such Final Test Certificates as per Article 6.3.1 are received by the Procurer for all the Units;
- "Commissioning" or means, in relation to a Unit, that the Unit or in relation to the Power Station, all the Units of the Power Station have passed the Commissioning Tests successfully;
- "Commissioned" with its grammatical variations means the tests provided in Schedule 4 herein;
- "Commissioning Tests" or "Commissioning Test" means the Unit in respect of which COD has occurred;
- "Commissioned Unit" means one or more main contractors, appointed by the Seller to design, engineer, supply, construct and commission the Project;
- "Construction Contractor/s" means the period from (and including) the date upon which the Construction Contractor is instructed or required to commence work under the Construction Contract up to (but not including) the Commercial Operation Date of the Unit in relation to a Unit and of all the Units in relation to the Power Station;
- "Construction Period" means the period, commencing from the date of issue of a Seller Preliminary Default Notice or a Procurer Preliminary Default Notice as provided in Article 14 of this Agreement, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances
- "Consultation Period" means the period beginning on the Effective Date (as defined hereunder) and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that :
- "Contract Year"
- (i) in the financial year in which Scheduled COD of the first Unit would have occurred, a Contract Year shall end on the date immediately before the Scheduled COD of the first Unit and a new Contract Year shall begin once again from the Scheduled Commercial Operation Date of the first Unit and end on immediately succeeding March 31 and provided further that
 - (ii) the last Contract Year of this Agreement shall end on the last day of the term of this Agreement;



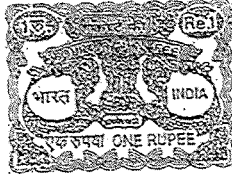
- "Contracted Capacity" means
- a) (i) for the first Unit, [270] MW; (ii) for the second Unit, [270] MW; rated capacity and in relation to the Power Station as a whole means [540] MW rated capacity at the generator terminals of the units.
- or
- such rated capacities as may be determined in accordance with Article 6.3.4 or Article 8.2 of this Agreement;
- "Control Centre" or "Nodal Agency" means the RLDC or SLDC or such other load control centre designated by the Procurer from time to time through which the Procurer shall issue Dispatch Instructions to the Seller for the Power Station;
- "Debt Service" means the amounts which are due under the Financing Agreements by the Seller to the Lenders, expressed in Rupees (with all amounts denominated in currencies other than Rupees being converted to Rupees at the Reference Exchange Rate, the selling rate in Rupees for the Foreign Currency on the relevant day, as notified by the State Bank of India as its TT Rate at 12:00 noon on the Notice to Proceed.);
- "Declared Capacity" In relation to a Unit or the Power Station at any time means the net capacity of the Unit or the Power Station at the relevant time (expressed in MW at the Interconnection Point) as declared by the Seller in accordance with the Grid Code and dispatching procedures as per the Availability Based Tariff;
- " Delivery Point " or "Interconnection Point" means the points of delivery specified in Schedule 7 for fulfilling the obligation of the Seller to deliver the Contracted Capacity less Auxiliary Energy Consumption to the Procurer;
- "Direct Non-Natural Force Majeure Event" shall have the meaning ascribed thereto in Article 12.3(ii)(1).
- "Dispute" means any dispute or difference of any kind between the Procurer and the Seller, in connection with or arising out of this Agreement including any issue on the interpretation and scope of the terms of this Agreement as provided in Article 17;
- "Dispatch Instruction" means any instruction issued by the Procurer through the respective SLDC and RLDC to the Seller, in accordance with applicable Grid



Code and this Agreement;	
"Due Date"	means the thirtieth (30th) day after a Monthly Bill or a Supplementary Bill is received and duly acknowledged by the Procurer (or, if such day is not a Business Day, the immediately succeeding Business Day) by which date such bill is payable by the Procurer;
"Effective Date"	means the date of signing of this Agreement by the Parties;
"Electricity Laws"	means the Electricity Act, 2003 and the rules and regulations made thereunder from time to time along with amendments thereto and replacements thereof and any other Law pertaining to electricity including regulations framed by the Appropriate Commission;
"Electrical Output"	means the net electrical output of the Power Station at the Delivery Point, as expressed in kWh;
"Emergency"	means a condition or situation that, in the opinion of the Procurer or RLDC or SLDC or the agency responsible for operating and maintaining the Interconnection and Transmission Facilities or the transmission company, as the case may be, poses a significant threat to the Procurer's or the said agency's or transmission company's ability to maintain safe, adequate and continuous electricity supply to its customers, or seriously endangers the security of persons, plant or equipment;
Energy Charges	shall have the meaning ascribed to this term under Schedule - 6
"Energy Output"	means for any period, the Energy Units actually delivered by the Project, as metered at the Interconnection Point, reduced by the Energy Units supplied by the Procurer to the Seller at the Interconnection Point or to any Project facility for which the Seller is responsible located inside or outside the Project boundary such as raw water or other pumping stations;
"Expiry Date"	means the 25 th anniversary of the Commercial Operation Date of the Power Station. For the avoidance of doubt, in case the COD of the Power Station occurs on June 1, 2013, then the 25th anniversary of the Scheduled COD of the Power Station shall occur on June 1, 2038, i.e. in the Contract Year 2038-39;
"Final Test Certificate"	means <ul style="list-style-type: none"> a) a certificate of the Independent Engineer certifying and accepting the results of a Commissioning Test/s in accordance with Article 6.3.1 of this Agreement; or b) a certificate of the Independent Engineer certifying the result of a Repeat Performance Tests in accordance with Article 8.2.1 of this Agreement;



"Financial Closure" or "Financial Close"	means the execution of all the Financing Agreements required for the Project and fulfilment of conditions precedents and waiver, if any, of any of the conditions precedent for the initial draw down of funds there under.
"Financing Agreements"	means all the loan agreements, notes, indentures, security agreements, letters of credit and other documents relating to the financing of the Project on or before the COD of the Power Station, as may be amended, modified, refinanced or replaced from time to time, but without in anyway increasing the liabilities of the Procurer therein;
"Force Majeure"	shall have the meaning ascribed thereto in Article 12.3;
"Forced Outage"	shall have the meaning ascribed thereto in Grid Code;
"Fuel"	means primary fuel used to generate electricity namely, domestic coal
"Fuel Supply Agreements"	means the agreement(s) entered into between the Seller and the Fuel Supplier for the purchase, transportation and handling of the Fuel, required for the operation of the Power Station. In case the transportation of the Fuel is not the responsibility of the Fuel Supplier, the term shall also include the separate agreement between the Seller and the Fuel Transporter for the transportation of Fuel in addition to the agreement between the Seller and the Fuel Supplier for the supply of the Fuel;
"Functional Specifications"	means the technical requirements and parameters described in Schedule 3 of this Agreement and as provided in Grid Code relating to the operation, maintenance and dispatch of any Unit and the Power Station;
"Grid Code" or "IEGC"	means any set of regulations or codes issued by Appropriate Commission as amended and revised from time to time and legally binding on the Seller' and the Procurer' governing the operation of the Grid System or any succeeding set of regulations or code;
"Grid System"	means the Interconnection and Transmission Facilities and any other transmission or distribution facilities through which the Procurer's supply electricity to their customers or the transmission company transmits electricity to the Procurer;
"Independent Engineer"	means an independent consulting engineering firm or group appointed jointly by the Procurer and the Seller to carry out the functions in accordance with Article 4.7.1 and Article 6, Article 12 and Article 8 herein.



functions in accordance with Article 4.7.1 and Article 6, Article 12 and Article 8 herein.

provided that separate Independent Engineer may be appointed for the purposes of Article 4.7.1, Article 6, Article 12 and Article 8; provided further that the separate Independent Engineer may be appointed for each financial year for the purposes of Article 8, and in such case, such Independent Engineer shall be appointed at least ninety (90) days prior to the beginning of the financial year. shall have the meaning ascribed thereto in Article 12.3(ii)(2).

"Indirect Non-Natural Force Majeure Event"

"Indian Governmental Instrumentality"

means the GOI, Government of Punjab, and any ministry or department or board or agency other regulatory or quasi-judicial authority controlled by GOI or Government of Punjab where the Procurer and Project are located and includes the Appropriate Commission;

"Infirm Power"

means energy produced by a generating unit and delivered to the Procurer prior to the Commercial Operation Date of such generating unit;

"Initial Consents"

shall mean the consents listed in Schedule 2;

"Initial Performance Retest Period"

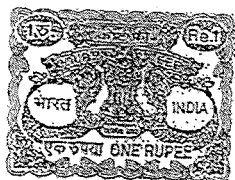
shall have the meaning ascribed thereto in Article 6.3.3 of this Agreement;

"Interconnection Facilities" or

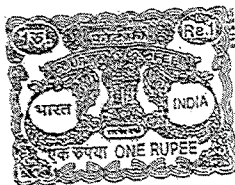
"Interconnection and Transmission Facilities"

means the facilities on the Procurer's side of the Interconnection Point for receiving and metering Electrical Output in accordance with this Agreement and which shall include, without limitation, all other transmission lines and associated equipment, transformers and associated equipment, relay and switching equipment and protective devices, safety equipment and, subject to Article 9, the Metering System required for the Project.

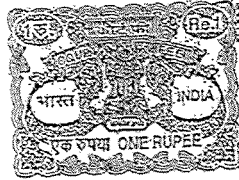
The Interconnection Facilities also include the facilities for receiving power at the Delivery Point where the transmission line from the Power Station Switchyard end is injecting power into the transmission network (including the dedicated transmission line connecting the Power Station with the STU /CTU transmission network);



"Invoice" or "Bill"	means either a Monthly Tariff Invoice, a Supplementary Invoice or a Procurer Invoice;
"Late Payment Surcharge"	shall have the meaning ascribed thereto in Article 11.3.4;
"Law"	means, in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include all rules, regulations, decisions and orders of the Appropriate Commission ;
"Lenders"	means the banks, other financial institutions, multilateral agencies, RBI registered non banking financial companies, mutual funds and agents or trustees of debenture / bond holders, including their successors and assignees, who have agreed as on or before COD of the power station to provide the Seller with the senior debt financing described in the Capital Structure Schedule, and any successor banks or financial institutions to whom their interests under the Financing Agreements may be transferred or assigned: Provided that, such assignment or transfer shall not relieve the Seller of its obligations to the Procurer under this Agreement in any manner and shall also does not lead to an increase in the liability of the Procurer;
"Letter of Credit" or "L/C"	shall have the meaning ascribed thereto in Article 11.4.1;
"Meters" or "Metering System"	means meters used for accounting and billing of electricity in accordance with Central Electricity Authority (Installation and Operations of Meters) Regulations, 2006, Grid Code and ABT, as amended from time to time;
"Maintenance Outage"	shall have the meaning as ascribed to this term as per the provisions of the Grid Code.
"MCR"	means gross Power Station or Unit Maximum Continuous Rating as defined in the Grid Code;
"Minimum Offtake Guarantee"	means guaranteed offtake of sixty five per cent (65%) of the total



	contracted capacity for the procurer during a contract year.
"Month"	means a period of thirty (30) days from (and excluding) the date of the event, where applicable, else a calendar month;
"Monthly Bill" or "Monthly Invoice"	means a monthly invoice comprising Capacity Charges (applicable after COD of the first unit) and Energy Charges, including incentive and penalty, as per Schedule 6 hereof;
"Natural Force Majeure Event"	shall have the meaning ascribed thereto in Article 12.3(i).
"Non-Natural Force Majeure Event"	shall have the meaning ascribed thereto in Article 12.3(ii).
"Normative Availability"	means equal to eighty per cent (80%) Availability at the Delivery Point on Contract Year basis ³ .
"Operating Period"	in relation to the Unit means the period from its COD and in relation to the Power Station the date by which all the Units achieve COD, until the expiry or earlier termination of this Agreement in accordance with Article 2 of this Agreement;
"O&M Contract" or "O&M Contracts"	means the contract/s entered into by the Seller with the Operator or operators, if any;
"Operating Procedures"	shall have the meaning ascribed thereto in Grid Code;
"Operator" or "Operators"	means one or more contractors appointed as operator of power generation facilities of the Power Station pursuant to an O&M contract, if any;
"Party" and "Parties"	shall have the meaning ascribed thereto in the recital to this Agreement;
"Performance Guarantee"	means the irrevocable unconditional bank guarantee, submitted and to be submitted by the Seller to the Procurer from a scheduled bank specified by the Procurer, in the form attached hereto as Schedule 9, in accordance with Article 3 of this Agreement and which shall include the additional bank guarantee furnished by the Seller under this Agreement;
"Performance Test"	means the test carried out in accordance with Article 1.2 of Schedule 4 of this Agreement;
"Preliminary Default Notice"	shall have the meaning ascribed thereto in Article 14 of this agreement;
"Power Station"	means the:



- (a) Thermal power generation facility comprising of any or all the Units;
- (b) any associated fuel handling, treatment or storage facilities of the power generation facility referred to above;
- (c) any water supply, treatment or storage facilities required for the operation of the power generation facility referred to above;
- (d) the ash disposal system including ash dyke [as applicable];
- (e) township area for the staff colony; and
- (f) bay/s for transmission system in the switchyard of the power station,
- (g) all the other assets, buildings/structures, equipments, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility;

whether completed or at any stage of development and construction or intended to be developed and constructed as per the provisions of this Agreement.

"Project"

means the coal based Thermal Power Station to be established at Goindwal Sahib undertaken for design, financing, engineering, procurement, construction, operation, maintenance, repair, refurbishment, development and insurance by the Seller in accordance with the terms and conditions of this Agreement;

"Project Documents"

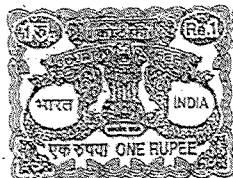
mean

- a) Construction Contracts;
- b) Fuel Supply Agreements including the Fuel Transportation Agreement,
- c) O&M contracts;

d) any other agreements designated in writing as such, from time to time, jointly by the Procurer and the Seller;

"Prudent Utility Practices"

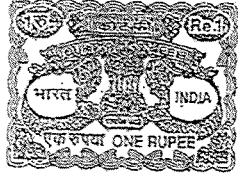
means the practices, methods and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation and maintenance of power generation equipment of the type specified in this Agreement and which practices, methods and standards shall be adjusted as



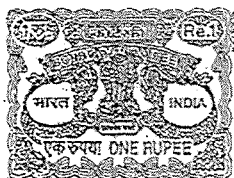
	necessary, to take account of:
	a) operation and maintenance guidelines recommended by the manufacturers of the plant and equipment to be incorporated in the Project;
	b) the requirements of Indian Law; and
	c) the physical conditions at the Site;
"Repeat Performance Test"	shall have the meaning ascribed thereto in Article 8.1 of this agreement;
"RPC"	means the relevant Regional Power Committee established by the Government of India for a specific Region in accordance with the Electricity Act, 2003 for facilitating integrated operation of the power system in that Region;
"RBI"	means Reserve Bank of India;
"Regional Energy Accounts" or "REA"	means as defined in the Grid Code and issued by the relevant RPC secretariat or other appropriate agency for each Week and for each Month (as per their prescribed methodology), including the revisions and amendments thereof;
"RLDC"	means the relevant Regional Load Dispatch Centre as defined in the Electricity Act, 2003, in the region in which the Project is located;
"Rupees" or "Rs."	means the lawful currency of India;
"SBAR"	means the prime lending rate per annum applicable for loans with one (1) year maturity as fixed from time to time by the State Bank of India. In the absence of such rate, any other arrangement that substitutes such prime lending rate as mutually agreed to by the Parties;
"Selectee"	means a new company (i) proposed by the Lenders pursuant to Schedule 10 hereof and approved by the Procurer (ii) or proposed by the Procurer in accordance with Schedule 10 hereof and approved by the Lenders, for substituting the Seller for the residual period of the PPA by amendment of the PPA or by execution of a fresh PPA in accordance with the terms and conditions contained in the said Schedule.
"SERC"	means the State Electricity Regulatory Commission, as defined in the Electricity Act, 2003, or its successors;
"Scheduled COD" or "Scheduled Commercial Operation"	means the date on or before which COD of a Generating Unit is required to occur, which shall be thirty six (36) Months from the date of Financial Closure for the First Generating Unit and six (6)



Date"	months from the COD of the First Generating Unit for the Second Generating Unit or such other dates from time to time, specified in accordance with the provisions of this Agreement;
"Scheduled Connection Date"	Shall mean the date falling 210 ¹⁰ days before the Scheduled COD of first Unit;
"Scheduled Energy" or "Scheduled Generation"	means scheduled generation as defined in the ABT;
"Scheduled Outage"	shall have the meaning ascribed to this term as per the provisions of the Grid Code;
"Scheduled Synchronisation Date"	means in relation to a Unit, the date, which shall be maximum of one hundred and eighty (180) days prior to the Scheduled COD of the respective Unit;
"Settlement Period"	means the time block for issue of daily generation and drawal schedules as provided in ABT;
Site	means the land over which the Project will be developed as provided in Schedule 1;
"SLDC"	means the relevant State Load Dispatch Centre as defined in the Electricity Laws, in the State where the Procurer's registered office is located;
"State Transmission Utility" or "STU"	shall have the meaning ascribed thereto in the Electricity Act 2003;
"Supplementary Bill"	means a bill other than a Monthly Bill raised by any of the Parties in accordance with Article 11;
"Tariff Payment"	means the payments under Monthly Bills as referred to in Schedule 6 and the relevant Supplementary Bills;
"Tariff"	means the tariff as computed in accordance with Schedule 6 and approved by PSERC.
"Tested Capacity"	in relation to a Unit, or the Power Station as a whole (if all the Units of the Power Station have been Commissioned) means the results of the most recent Performance Test or Repeat Performance Test carried out in relation to the Power Station in accordance with Article 6, Article 8 and Schedule 4 of this Agreement;
"Termination Notice"	shall mean the notice given before termination of this Agreement in accordance with relevant clauses of this Agreement
"Term of Agreement"	shall have the meaning ascribed thereto in Article 2.1;



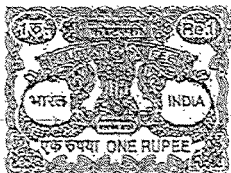
- "Total Debt Amount" Means the sum of the following amounts, expressed in Rupees (with all amounts denominated in currencies other than Rupees being converted to Rupees at the Reference Exchange Rate, the selling rate in Rupees for the Foreign Currency on the relevant day, as notified by the State Bank of India as its TT Rate at 12:00 noon on the date of issuance of Substitution Notice by the Lenders
- (a) the principal amount of the senior debt incurred by the Seller (as per the terms of the Financing Agreements) to finance the Project according to the Capital Structure Schedule which remains outstanding on the date of issuance of Substitution Notice by the Lender after taking account of any senior debt repayments which could have been made out of the Monthly Tariff Payments received by the Seller on or before the date of issuance of Substitution Notice by the Lender as per the terms provided in the Financing Agreements ; and
 - (b) all accrued interest and financing fees payable under the Financing Agreements on the amounts referred to in (a) above from the date of the Capacity Charge payment (as specified in paragraph 1.2 of Schedule 6 hereof) immediately preceding the date of issuance of Substitution Notice by the Lender or, if the Capacity Charges have not yet fallen due to be paid, from the most recent date when interest and financing fees were capitalised, and
 - (c) if this Agreement is terminated during the Construction Period, any amounts owed to the Construction Contractor for work performed but not paid for under the Construction Contract (other than amounts falling due by reason of the Seller's default);
- "Unit" Means one steam generator, steam turbine, generator and associated auxiliaries of the Power Station
- "Unscheduled Interchange" or "UI" shall have the meaning ascribed thereto in Rule 24 of the CERC (Terms and Conditions of Tariff) Regulations as applicable.
- "Week" means a calendar week commencing from 00:00 hours of Monday, and ending at 24:00 hours of the following Sunday;
- "Wheeling Charges" or "Transmission Charges" are the charges paid by the Procurer to the CTU or STU or any other agency for the transfer of power from the Power Station switchyard end to the Procurer's network.



1.2 Interpretation

Save where the contrary is indicated, any reference in this Agreement to:

- 1.2.1 A "Recital", an "Article", a "Schedule" and a "paragraph/Clause" shall be construed as a reference to a Recital, an Article, a Schedule and a paragraph/clause respectively of this Agreement.
- 1.2.2 An "affiliate" of any party shall mean a company that either directly or indirectly controls or is controlled by or is under common control of the same person which controls the concerned party; and control means ownership by one company of at least twenty six percent (26%) of the voting rights of the other company.
- 1.2.3 A "crore" means a reference to ten million (10,000,000) and a "lakh" means a reference to one tenth of a million (1,00,000);
- 1.2.4 An "encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect.
- 1.2.5 "indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;
- 1.2.6 A "person" shall be construed as a reference to any person, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests.
- 1.2.7 The "winding-up", "dissolution", "insolvency", or "reorganization" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the Law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganization, dissolution, arrangement, protection or relief of debtors.
- 1.2.8 Words importing the singular shall include the plural and vice versa.
- 1.2.9 This Agreement itself or any other agreement or document shall be construed as a reference to this or to such other agreement or document as it may have been, or may from time to time be, amended, varied, novated, replaced or supplemented.



- 1.2.10 A Law shall be construed as a reference to such Law including its amendments or re-enactments from time to time.
- 1.2.11 A time of day shall, save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.
- 1.2.12 Different parts of this Agreement are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this Agreement, they shall be interpreted in a harmonious manner so as to give effect to each part.
- 1.2.13 The tables of contents and any headings or sub-headings in this Agreement have been inserted for ease of reference only and shall not affect the interpretation of this Agreement.
- 1.2.14 All interest payable under this Agreement shall accrue from day to day and be calculated on the basis of a year of three hundred and sixty five (365) days.
- 1.2.17 The words "hereof" or "herein", if and when used in this Agreement shall mean a reference to this Agreement.

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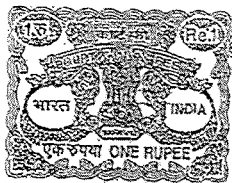
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2 ARTICLE 2 : TERM OF AGREEMENT

2.1 *Effective Date and Term of Agreement*

This Agreement shall come into effect from the Effective Date. This Agreement shall be valid for a term commencing from the Effective Date until the Expiry Date ("Term of Agreement") unless terminated earlier pursuant to Article 2.2. Upon the occurrence of the Expiry Date, this Agreement shall, subject to Article 13.9, automatically terminate, unless mutually, extended by the Parties on mutually agreed terms and conditions, atleast one hundred and eighty (180) days prior to the Expiry Date, subject to approval of the Appropriate Commission, as necessary.

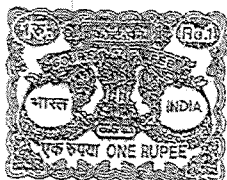
2.2 *Early Termination*

This Agreement shall terminate before the Expiry Date:

- i. if either the Procurer or Seller exercises a right to terminate, pursuant to Article 3.3.2, Article 3.3.3, , Article 4.5.3, , Article 14.4.5 or Schedule 8 of this Agreement or any other provision of this Agreement; or
- ii. in such other circumstances as the Seller and the Procurer may agree, in writing.

2.3 *Survival*

- 2.3.1 The expiry or termination of this Agreement shall not affect accrued rights and obligations of the Parties under this Agreement, including the right to receive Liquidated Damages as per the terms of this Agreement, nor shall it affect any continuing obligations for which this Agreement provides, either expressly or by necessary implication, the survival of, post its expiry or termination.



3 ARTICLE 3 : CONDITIONS SUBSEQUENT TO BE SATISFIED BY THE SELLER AND THE PROCURER

3.1 Satisfaction of conditions subsequent by the Seller and the Procurer

3.1.1 Prior to the Effective Date, the Seller have provided to the Procurer, the Performance Guarantee from any of the banks specified by the Procurer, of an aggregate amount of Rupees 40.5 crores. Subject to Article 3.4, the Performance Guarantee shall be initially valid till three (3) Months after the Scheduled COD of the Power Station and which shall be extended from time to time to be valid up to three (3) Months after the actual COD of the Power Station. In case the validity of Performance Guarantee is expiring before the validity period specified in this Article, the Seller shall at least thirty (30) days before the expiry of the Performance Guarantee replace the Performance Guarantee with another Performance Guarantee or extend validity of existing Performance Guarantee which is valid and in force till the validity period specified in this Article.

3.1.2 The Seller agrees and undertakes to duly perform and complete the following activities within 12 (twelve) Months from the Effective Date unless such completion is affected due to any Force Majeure event or if any of the activities is specifically waived in writing by the Procurer :

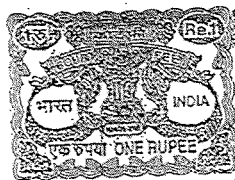
i). the Seller shall have received the Initial Consents as mentioned in Schedule 2, either unconditionally or subject to conditions which do not materially prejudice its rights or the performance of its obligations under this Agreement ;

ii) the Seller shall have executed Fuel Supply Agreement and provided the . copies of the same to the Procurer;

iii)the Seller shall have

a) awarded the main plant contract for boiler, turbine and generator ("BTG"), for the Project and shall have given to such contractor an irrevocable notice to proceed ; and

b) the Seller shall have achieved Financial Closure;



- iv. the Seller shall have made available to the Procurer the data with respect to the Project for design of Interconnection Facilities and Transmission Facilities, if required;
- v. the Seller shall have finalised the specific delivery point for supply of power in consultation with the Procurer;
- vi. the Seller shall have taken the possession of the land for the Power Station and have paid the Price of the Land, if any to the State Government authority acquiring the land,
- vii. the Seller shall have provided an irrevocable letter to the Lenders duly accepting and acknowledging the rights provided to the Lenders under the terms of this Agreement and all other Project Documents.

3.1.3 Joint responsibilities of the Procurer and the Seller

The Procurer and Seller shall jointly appoint the Independent Engineer for the purposes of carrying out the functions as specified in Article 4.7.1, Article 6, Article 8 and Article 12, herein within a period of eight (8) months from the Effective Date.

3.2 Progress Reports

The Seller and the Procurer shall notify one another in writing at least once a Month on the progress made in satisfying the conditions in Articles 3.1.2, and 3.1.3.

3.3 Consequences of non-fulfillment of conditions under Article 3.1

- 3.3.1 If any of the conditions specified in Article 3.1.2 is not duly fulfilled by the Seller even within three (3) Months after the time specified under Article 3.1.2, then on and from the expiry of such period and until the Seller has satisfied all the conditions specified in Article 3.1.2, the Seller shall be liable to furnish to the Procurer additional weekly Performance Guarantee of Rs. 2.025 crores within two (2) business days of expiry of every such week. Such additional Performance Guarantee shall become part of the Performance Guarantee and all the provisions of this Agreement shall be construed accordingly. The Procurer shall be entitled to hold and/or invoke the Performance Guarantee, including such increased Performance Guarantee, in accordance with the provisions of this Agreement.



3.3.2 Subject to Article 3.3.3 if:

- (i). fulfilment of any of the conditions specified in Article 3.1.2 is delayed beyond the period of three (3) Months and the Seller fails to furnish any additional Performance Guarantee to the Procurer in accordance with Article 3.3.1 hereof; or
- (ii). the Seller furnishes additional Performance Guarantee to the Procurer in accordance with Article 3.3.1 hereof but fails to fulfil the conditions specified in Article 3.1.2 for a period of eight (8) months beyond the period specified therein,

the Procurer or Seller shall have the right to terminate this Agreement by giving a Termination Notice to the Seller / Procurer in writing of at least seven (7) days.

If the Procurer or the Seller elect to terminate this Agreement in the event specified in the preceding paragraph of this Article 3.3.2, the Seller shall be liable to pay to the Procurer an amount of Rupees 54 crores only as liquidated damages. The Procurer shall be entitled to recover this amount of damages by invoking the Performance Guarantee to the extent of Rupees 54 crores and shall then return the balance Performance Guarantee, if any, to the Seller. If the Procurer is unable to recover the said amount of Rupees 54 crores or any part thereof from the Performance Guarantee the amount not recovered from the Performance Guarantee, if any, shall be payable by the Seller to the Procurer within ten (10) days from the end of eight (8) Months period from the due date of completion of conditions subsequent.

It is clarified for removal of doubt that this Article shall survive the termination of this Agreement.

3.3.3 In case of inability of the Seller to fulfil the conditions specified in Article 3.1.2 due to any Force Majeure event, the time period for fulfilment of the Condition Subsequent as mentioned in Article 3.1.2 shall be extended for the period of such Force Majeure event, subject to a maximum extension period of ten (10) Months, continuous or non-continuous in aggregate. Thereafter, this Agreement may be terminated by either the Procurer or the Seller by giving a notice of at least seven (7) days, in writing to the other Party.

3.3.4 Due to the provisions of Article 3.3.3 if there is any increase in the time period for completion of Conditions Subsequent mentioned under Article 3.1.2 there



shall be an equal increase in the time period for Scheduled COD and Scheduled Connection Date.

3.4 *Reduction in the amount of Performance Guarantee*

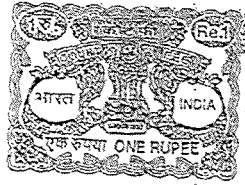
- 3.4.1 On the due fulfilment by the Seller of all the conditions specified under Article 3.1.2 and investment by the Seller of at least twenty five percent (25%) of the total equity required for the Project as certified by the lead lender of the Seller, the Performance Guarantee then existing shall be reduced by an aggregate amount of Rupees 13.5 crores. for the period specified in Article 3.4.2.
- 3.4.2 The Performance Guarantee specified in Article 3.4.1 hereof shall be in substitution of the earlier Performance Guarantee furnished under Article 3.1.1

The Performance Guarantee furnished under this Article shall be initially valid till three (3) Months after the Scheduled COD of the Power Station and which shall be extended from time to time to be valid upto three (3) Months after the actual COD of the Power Station.

- 3.4.3 The Performance Guarantee furnished under Article 3.1, 3.3 and 3.4 shall be for guaranteeing the due and timely completion of the Project and achievement of Scheduled Commercial Operation Date of each Unit within the time specified in this Agreement.
- 3.4.4 The failure on the part of the Seller to furnish and maintain the Performance Guarantee as mentioned above shall be a material breach of the term of this Agreement on the part of the Seller.
- 3.4.5 If the Seller fails to achieve COD of each of the Units on their respective Scheduled Commercial Operation Date specified in this Agreement, subject to conditions mentioned in Article 4.5.1, the Procurer shall have the right to encash the Performance Guarantee and appropriate in its favour as liquidated damages an amount specified in Article 4.6.1, without prejudice to the other rights of the Procurer under this Agreement.

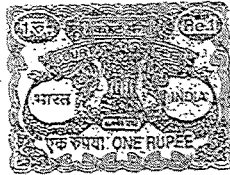
3.5 *Return of Performance Guarantee*

- 3.5.1 The Performance Guarantee as submitted by Seller in accordance with Article 3.4 shall be released by the Procurer within three (3) Months from the actual Commercial Operation Date of the Power Station. In the event of delay in achieving Scheduled COD of any of the Units by the Seller (otherwise than due to Force Majeure event) and consequent part invocation of the Performance Guarantee by the Procurer, the Procurer shall release the Performance Guarantee if any, remaining unadjusted under Article 3.4, after the satisfactory completion by the Seller of all the requirements regarding



achieving the Scheduled Commercial Operation Date of the remaining Units of the Power Station. It is clarified that the Procurer shall also return/release the Performance Guarantee in the event of (i) applicability of Article 3.3.2 to the extent the Performance Guarantee is valid for an amount in excess of Rupees 54 crores, or (ii) termination of this Agreement under Article 3.3.3.

3.5.2 The release of the Performance Guarantee shall be without prejudice to other rights of the Procurer under this Agreement.



4 ARTICLE 4 : DEVELOPMENT OF THE PROJECT

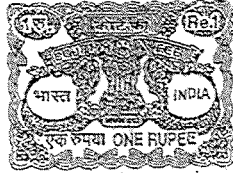
4.1 *The Seller's obligation to build, own and operate the Project*

- 4.1.1 Subject to the terms and conditions of this Agreement, the Seller undertakes to be responsible, at Seller's own cost and risk, for:
- a) obtaining the Initial Consents and maintaining in full force and effect all Consents required by it pursuant to this Agreement and Indian Law;
 - b) executing the Project in a timely manner so as to enable each of the Units and the Power Station as a whole to be Commissioned no later than its Scheduled Commercial Operations Date and such that as much of the Contracted Capacity as can be made available through the use of Prudent Utility Practices will be made available reliably to meet the Procurer's scheduling and dispatch requirements throughout the term of this Agreement
 - c) owning the Project throughout the term of this Agreement free and clear of encumbrances, except those expressly permitted by Article 16;
 - d) procure the requirements of electricity at the Project (including construction, commissioning and start-up power) and to meet in a timely manner all formalities for getting such a supply of electricity;
 - e) provide on a timely basis relevant information on Power Station specifications which may be required for interconnecting system with the transmission system;
 - f) fulfilling all other obligations undertaken by him under this Agreement.

4.2 Procurer's obligation

Subject to the terms and conditions of this Agreement, the Procurer:

- a) shall be responsible for procuring the Interconnection and Transmission Facilities¹⁴ to enable the Power Station to be connected to the Grid System not later than the Scheduled Connection Date;
- b) shall ensure that the Seller is provided an electrical connection for reasonable construction, commissioning and start up power at the Project as reasonably requisitioned by the Seller by written intimation to the Procurer, on the then prevalent terms and conditions as applicable to such consumers.;



- c) shall be responsible for payment of the Transmission Charges and RLDC and SLDC charges;
- d) shall make all reasonable arrangements for the evacuation of the Infirm Power from the Power Station; subject to the availability of transmission lines and
- e) fulfilling obligations undertaken by them under this Agreement.

4.2 *Purchase and sale of Available Capacity and Scheduled Energy*

- 4.3.1 (a) Subject to the terms and conditions of this Agreement, the Seller undertakes to sell to the Procurer, and the Procurer undertakes to pay the Tariff for all of the Available Capacity up to the Contracted Capacity and Scheduled Energy of the Power Station, throughout the term of this Agreement.
- b) Prior to the Commercial Operation Date of any generating Unit, the Seller shall sell and the Procurer shall purchase all the Infirm Power produced by that generating Unit for the consideration which shall be as per clause 1.2.9 of Schedule 6.

4.3.2 Unless otherwise instructed by the Procurer, the Seller shall sell all the Available Capacity up to the Contracted Capacity of the Power Station pursuant to Dispatch Instructions.

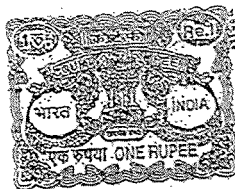
4.4 *Right to Available Capacity and Scheduled Energy*

4.4.1 Subject to other provisions of this Agreement, the entire Contracted Capacity of the Power Station and all the Units of the Power Station shall at all times be for the exclusive benefit of the Procurer and the Procurer shall have the exclusive right to purchase the entire Contracted Capacity from the Seller. The Seller shall not grant to any third party or allow any third party to obtain any entitlement to the Available Capacity and/or Scheduled Energy

4.4.2 Notwithstanding Article 4.4.1, the Seller shall be permitted to sell power, being a part of the Available Capacity of the Power Station to third parties if:

- (a) there is a part of Available Capacity which has not been Dispatched by the Procurer, ordinarily entitled to receive such part;

4.4.3 If the Procurer does not avail of power up to the Available Capacity provided by the Seller and the provisions of Article 4.4.2 have been complied with, the Seller shall be entitled to sell such Available Capacity not procured, to any person without losing the right to receive the Capacity Charges from the Procurer for such un-availed Available Capacity. In such a case, the sale realization in excess of Energy Charges,



shall be equally shared by the Seller with the Procurer. In the event, the Seller sells such Available Capacity to the shareholders of the Seller or any direct or indirect affiliate of the Seller/shareholders of the Seller without obtaining the prior written consent of the Procurer, the Seller shall be liable to sell such Available Capacity to such entity at tariffs being not less than the Tariff payable by the Procurer. In such case, fifty percent (50%) of the excess over Energy Charges recovered by the Seller from sale to third party shall be retained by the Seller and the balance fifty percent (50%) shall be provided by the Seller to the Procurer/s. During this period, the Seller will also continue to receive the Capacity Charges from the Procurer. Upon the Procurers intimating to the Seller of its intention and willingness to avail of the part of the Available Capacity not availed of and therefore sold to the third party, the Seller shall, notwithstanding anything contained in the arrangement between the Seller and said third party, commence supply of such capacity to the Procurer/s from the later of two (2) hours from receipt of notice in this regard from the Procurer/s or the time for commencement of supply specified in such notice.

4.4.4 The Seller shall not itself use any of the electricity generated by the Power Station during the term of this Agreement, except for the purpose of meeting the Power Station's auxiliary load requirements, as per the norms laid down by the Appropriate Commission and load requirements of the housing colony for the staff.

4.4.5 The sale under Unscheduled Interchange shall not be considered as sale to third party for the purposes of this Agreement.

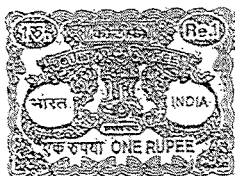
4.5 Extensions of time

4.5.1 In the event that:

- (a) the Seller is prevented from performing its obligations under Article 4.1.1(b) by the stipulated date, due to any Procurer Event of Default; or
- (b) a Unit cannot be Commissioned by its Scheduled Commercial Operations Date because of Force Majeure Events.

the Scheduled Commercial Operations Date, the Scheduled Connection Date and the Expiry Date shall be deferred, subject to the limit prescribed in Article 4.5.3, for a reasonable period but not less than 'day for day' basis, to permit the Seller through the use of due diligence, to overcome the effects of the Force Majeure Events affecting the Seller or in the case of the Procurer's Event of Default, till such time such default is rectified by the Procurer.

4.5.2 If the Parties have not agreed, within thirty (30) days after the affected Party's performance has ceased to be affected by the relevant circumstance, on how long the Scheduled Commercial Operation Date, the Scheduled Connection



Date or the Expiry Date should be deferred by, any Party may raise the Dispute to be resolved in accordance with Article 17.

4.5.3 In case of extension occurring due to reasons specified in Article 4.5.1(a), the original Scheduled Commercial Operation Date of any Unit or the original Scheduled Commercial Operations Date of the Power Station as a whole, would not be extended by more than two (2) years or the date on which the Seller elects to terminate this Agreement, whichever is earlier.

As a result of such extension, the date newly determined shall be deemed to be the Scheduled Commercial Operations Date for the purposes of this Agreement.

4.6 Liquidated damages for delay in providing Contracted Capacity

4.6.1 If any Unit is not Commissioned by its Scheduled Commercial Operation Date other than for the reasons specified in Article 4.5.1, the Seller shall pay to the Procurer liquidated damages, for the delay in such Commissioning or making the Unit's Contracted Capacity available for dispatch by such date. The sum total of the liquidated damages payable by the Seller to the Procurer for such delayed Unit shall be calculated as follows:

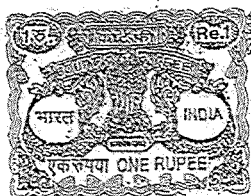
$$SLDb = [CCun \times dn \times DR1], \text{ if } dn \leq 60$$

$$SLDb = [CCun \times 60 \times DR1] + [CCun \times (dn - 60) \times DR2], \text{ if } dn > 60$$

Where:

- a) "SLDb" are the liquidated damages payable by the Seller during the period beginning with the day from the Scheduled Commercial Operation Date of a Unit up to and including the day on which Unit is actually Commissioned;
- b) "CCun" is the Contracted Capacity of Unit "n";
- c) "d" is the number of days in the period beginning with the day after the Scheduled Commercial Operation Date of Unit "n" up to and including the day on which such Unit is actually Commissioned;
- d) "DR1" is Rs. Ten Thousand (10,000) of damages per MW per day of delay in case "d" is less than 60 days and "DR2" is Rs. Fifteen Thousand (15,000) of damages per MW per day of delay in case "d" is equal to or more than 60 days

4.6.2 The Seller's maximum liability under this Article 4.6 shall be limited to the amount of liquidated damages calculated in accordance with Article 4.6.1 for



and upto twelve (12) Months of delay for the Unit. Provided that in case of failure of the Seller to Commission the Unit even after expiry of twelve (12) Months from its Scheduled Commercial Date, the provisions of Article 14 shall apply.

4.6.3 The Seller shall pay the amount calculated pursuant to Article 4.6.1 to the Procurer within ten (10) days of the earlier of:

- (a) the date on which the Unit is actually Commissioned; or
- (b) expiry of the twelve (12) month period mentioned in Article 4.6.2.

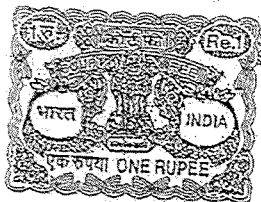
If the Seller fails to pay the amount of damages within the said period of ten (10) days, the Procurer shall be entitled to recover the said amount of the liquidated damages by invoking the Performance Guarantee. If the then existing Performance Guarantee is for an amount which is less than the amount of the liquidated damages payable by the Seller to the Procurer under this Article 4.6, then the Seller shall be liable to forthwith pay the balance amount.

4.6.4 The Parties agree that the formula specified in Article 4.6.1 for calculation of liquidated damages payable by the Seller under this Article 4.6, read with Article 14 is a genuine and accurate pre-estimation of the actual loss that will be suffered by the Procurer in the event of Seller's delay in achieving Commissioning of a Unit by its Scheduled COD.

4.7 Liquidated damages for delay due to Procurer Event of Default and Non Natural Force Majeure Events and Natural Force Majeure Event (affecting the Procurer)

4.7.1 If

- a) a Unit cannot be commissioned by its Scheduled Commercial Operations Date, due to a Procurer Event of Default or due to Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer) provided such Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer/s) has continued for a period of more than three (3) continuous or non-continuous Months; or
- b) a Unit is available for conducting Commissioning Tests and is anticipated to be capable of duly completing the Commissioning Tests as certified by the Independent Engineer, but the said Commissioning Tests are not undertaken or completed due to such Procurer Event of Default or due to Non Natural Force Majeure Event (or Natural Force



Majeure affecting the Procurer) provided such Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer) has continued for a period of more than three (3) continuous or non-continuous Months:

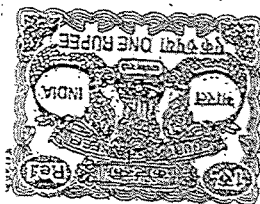
such Unit shall, until the effects of the Procurer Event of Default or of Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer) no longer prevent the Seller from undertaking a Commissioning Test/s, be deemed to have a Tested Capacity equal to the Contracted Capacity and to this extent, be deemed to have been Commissioned with effect from the Scheduled COD without taking into account delay due to such Procurer Event of Default or Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer) and shall be treated as follows.

a) In case of delay on account of the Procurer Event of Default, the Procurer shall make payment to the Seller of Capacity Charges calculated on Normative Availability of Contracted Capacity of such Unit for and during the period of such delay

b) In case of delay on account of Direct Non Natural Force Majeure Event, the Procurer shall make payment to the Seller of Capacity Charges calculated on Normative Availability of Contracted Capacity of such Unit for the period of such events in excess of three (3) continuous or non-continuous Months in the manner provided in (d) below.

c) In case of an Indirect Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer), the Procurer shall make payments for amounts ("Debt Service") relating to such Unit, which are due under the Financing Agreements, subject to a maximum of Capacity Charges based on Normative Availability, for the period of such events in excess of three (3) continuous or non-continuous Months in the manner provided in (d) below.

d) In case of delay due to Direct and Indirect Non Natural Force Majeure Events (or Natural Force Majeure affecting the Procurer), the Procurer shall be liable to make payments mentioned in (b) and (c) above, after Commissioning of the Unit, in the form of an increase in Capacity Charges. Provided such increase in Capacity Charges shall be determined by Appropriate Commission on the basis of putting the Seller in the same economic position as the Seller would have been in case the Seller had been paid amounts mentioned in (b) and (c) above in a situation where the Direct Non Natural Force Majeure or Indirect Non Natural Force Majeure Event, as the case may be, had not occurred.



For the avoidance of doubt, it is specified that the charges payable under this Article 4.7.1 shall be paid by the Procurer as per the Contracted Capacity.

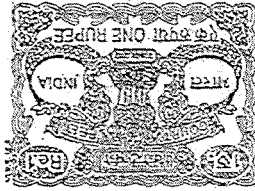
4.7.2 In every case referred to in Article 4.7.1 hereinabove, the Seller shall undertake a Commissioning Test/s as soon as reasonably practicable [and in no event later than two (2) weeks or such longer period as mutually agreed between the Seller and the Procurer] after the point at which it is no longer prevented from doing so by the effects of Force Majeure Events or Procurer Event of Default (as appropriate) and if such Commissioning Test/s is not duly completed and / or demonstrate/s a Tested Capacity of a Unit which is less than ninety five (95) percent of its Contracted Capacity, then:

- a) The Unit which fails the Commissioning Tests, shall be deemed to have not been Commissioned from the deemed COD referred to in Article 4.7.1;
- b) The Seller shall repay to the Procurer, all sums received by way of Capacity Charge for such Unit along with interest at the same rate as Late Payment Surcharge; and
- c) If the Seller fails to achieve Commissioning by the Scheduled Commercial Operation Date, it shall also pay liquidated damages to the Procurer for such Unit calculated in accordance with Article 4.6.

4.8 Limit on amounts payable due to default

4.8.1 The Parties expressly agree that the Procurer's only liability for any loss of profits or any other loss of any other kind or description whatsoever (except claims for indemnity under Article 15), suffered by the Seller by reason of the Procurer's failure to meet its obligations under Article 4.2(a) to Article 4.2(d) shall be to pay the Seller the amounts specified in Article 4.7 and Article 14.

4.8.2 Similarly, Seller's only liability for any loss suffered by the Procurer of any kind or description whatsoever (except claims for indemnity under Article 15), by reason of the Seller's failure to meet its obligations of Commissioning the various Units on their Scheduled COD, shall be as per Article 4.6 and Article-14.



5 ARTICLE 5 : CONSTRUCTION

5.1 *Seller's Construction Responsibilities*

The Seller shall be responsible for designing, constructing, erecting, commissioning, completing and testing the Power Station in accordance with the following, it being clearly understood that in the event of inconsistency between two or more of the following, the order of priority as between them shall be the order in which they are placed, with 'applicable law' being the first:

- a) applicable Law;
- b) the Grid Code;
- c) the terms and conditions of this Agreement;
- d) the Functional Specifications; and
- e) Prudent Utility Practices.

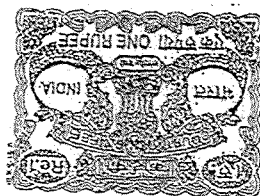
Notwithstanding anything to the contrary contained in this PPA, the Seller shall ensure that the technical parameters or equipment limits of the Project shall always be subject to the requirements as specified in points (a) to (e) above and under no event shall over-ride or contradict the provisions of this Agreement and shall not excuse the Seller from the performance of his obligations under this Agreement.

5.2 *The Site*

The Seller acknowledges that, before entering into this Agreement, it has had sufficient opportunity to investigate the Site and accepts full responsibility for its condition (including but not limited to its geological condition, on the Site, the adequacy of the road and rail links to the Site and the availability of adequate supplies of water) and agrees that it shall not be relieved from any of its obligations under this Agreement or be entitled to any extension of time or financial compensation by reason of the unsuitability of the Site for whatever reason.

5.3 *Information Regarding Interconnection Facilities*

The Procurer shall provide the Seller, on a timely basis, all information with regard to the Interconnection and Transmission Facilities as is reasonably necessary to enable the Seller to design, install and operate all interconnection plant and apparatus on the Seller's side of the Interconnection Point.



5.4 *Quality of Workmanship*

The Seller shall ensure that the Power Station is designed, built and completed in a good workmanlike manner using sound engineering construction practices and using only materials and equipment that are new and of international utility grade quality such that, the useful life of the Power Station will be till the Expiry Date.

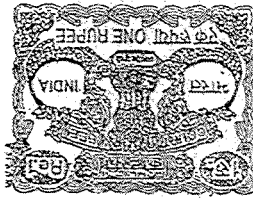
The Seller shall ensure that design, construction and testing of all equipment, facilities, components and systems of the Project shall be in accordance with Indian Standards and Codes issued by Bureau of Indian Standards and/or internationally recognised Standards and Codes, such as:

- i. American National Standards Institute (ANS)
- ii. American Society of Testing and Materials (ASTM)
- iii. American Society of Mechanical Engineers (ASME)
- iv. American Petroleum Institute (API)
- v. Standards of the Hydraulic Institute, USA
- vi. International Organization for Standardization (ISO)
- vii. Japanese Industrial Standards (JIS)
- viii. Tubular Exchanger Manufacturer's Association (TEMA)
- ix. American Welding Society (AWS)
- x. National Electrical Manufacturers Association (NEMA)
- xi. National Fire Protection Association (NFPA)
- xii. International Electro-Technical Commission (IEC)
- xiii. Expansion Joint Manufacturers Association (EJMA)
- xiv. Heat Exchange Institute (HEI)
- xv. American Water Works Association (AWWA)
- xvi. Deutsches Institut für Normung (DIN)

Other international standards, established to be equivalent or superior to the above standards shall also be acceptable. However, in the event of any conflict between the requirements of the international codes and standards and the requirements of the Indian standards/regulations, the latter shall prevail.

5.5 *Consents*

The Seller shall be responsible for obtaining all Consents (other than those required for the Interconnection and Transmission Facilities) and the Initial Consents required for developing, financing, constructing, operating and maintenance of the Project and maintaining/ renewing all such Consents in



order to carry out its obligations under this Agreement in general and this Article 5 in particular and shall supply the Procurer promptly with copies of each application that it submits, and copy/ies of each consent/approval/license which it obtains. For the avoidance of doubt, it is clarified that the Seller shall also be responsible for maintaining/renewing the Initial Consents and for fulfilling all conditions specified therein.

5.6 *Construction Documents*

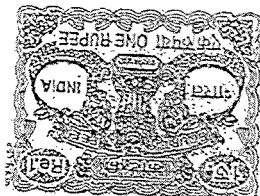
The Seller shall retain at the Site and make available for inspection to the Procurer at all reasonable times copies of the results of all tests specified in Schedule 4 hereof.

5.7 *Co-ordination of Construction Activities*

- 5.7.1 Before the tenth (10th) day of each Month, during the Construction Period:
- (a) the Seller shall prepare and submit to the Procurer a monthly progress report, in the Agreed Form; and
 - (b) The Procurer shall prepare and submit to the Seller a monthly progress report, in the Agreed Form, regarding the Interconnection and Transmission Facilities.

The Seller and the Procurer shall designate from time to time, by giving a written notice to the other Party up to five (5) of its/their employees who shall be responsible for coordinating all construction activities relating to the Project and who shall have access at all reasonable times to the other Party's land for the purpose of apprising the progress of the work being carried on, subject to such designated persons or the Party appointing them giving reasonable notice to the other Party of such visit and subject to their complying with all reasonable safety procedures.

For the avoidance of doubt, it is clarified that the total number of the representatives of the Procurer shall not exceed five (5).



6 ARTICLE 6 : SYNCHRONISATION, COMMISSIONING AND COMMERCIAL OPERATION

6.1 *Synchronization*

- 6.1.1 The Seller shall give the Procurer and RLDC or SLDC at least sixty (60) days advance preliminary written notice and at least thirty (30) days advance final written notice, of the date on which it intends to synchronise a Unit to the Grid System.
- 6.1.2 Subject to Article 6.1.1, a Unit may be synchronised by the Seller to the Grid System when it meets all connection conditions prescribed in any Grid Code then in effect and otherwise meets all other Indian legal requirements for synchronisation to the Grid System

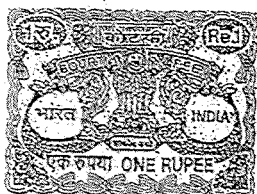
6.2 *Commissioning*

- 6.2.1 The Seller shall be responsible for ensuring that each Unit is Commissioned in accordance with Schedule 4 at its own cost, risk and expense.
- 6.2.2 The Seller shall give the Procurer and the Independent Engineer not less than ten (10) days prior written notice of Commissioning Test of each Unit.
- 6.2.3 The Seller, the Procurer and the Independent Engineer (individually) shall each designate qualified and authorised representatives to witness and monitor Commissioning Test of each Unit.
- 6.2.4 Testing and measuring procedures applied during each Commissioning Test shall be in accordance with the codes, practices and procedures mentioned in Schedule 4 of this Agreement.
- 6.2.5 Within five (5) days of a Commissioning Test, the Seller shall provide the Procurer and the Independent Engineer with copies of the detailed Commissioning Test results. Within five (5) days of receipt of the Commissioning Test results, the Independent Engineer shall provide to the Procurer and the Seller in writing, his findings from the evaluation of Commissioning Test results, either in the form of Final Test Certificate certifying the matters specified in Article 6.3.1 or the reasons for non-issuance of Final Test Certificate.

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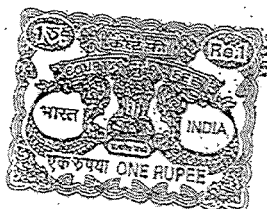
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6.3 Commercial Operation

- 6.3.1 A Unit shall be Commissioned on the day after the date when the Procurer receives a Final Test Certificate of the Independent Engineer stating that:
- a) the Commissioning Tests have been carried out in accordance with Schedule -4 and are acceptable to him; and
 - b) the results of the Performance Test show that the Unit's Tested Capacity, is not less than ninety five (95) percent of its Contracted Capacity, as existing on the Effective Date.
- 6.3.2 If a Unit fails a Commissioning Test, the Seller may retake the relevant test, within a reasonable period after the end of the previous test, with three (3) day's prior written notice to the Procurer and the Independent Engineer. Provided however, the Procurer shall have a right to require deferment of any such re-tests for a period not exceeding fifteen (15) days, without incurring any liability for such deferment, if the Procurer are unable to provide evacuation of power to be generated, due to reasons outside the reasonable control of the Procurer or due to inadequate demand in the Grid.
- 6.3.3 The Seller may retake the Performance Test by giving at least fifteen (15) days advance notice in writing to the Procurer, up to eight (8) times, during a period of one hundred and eighty (180) days ("Initial Performance Retest Period") from a Unit's COD in order to demonstrate an increased Tested Capacity over and above as provided in Article 6.3.1 (b). Provided however, the Procurer shall have a right to require deferment of any such re-tests for a period not exceeding fifteen (15) days, without incurring any liability for such deferment, if the Procurer are unable to provide evacuation of power to be generated, due to reasons outside the reasonable control of the Procurer or due to inadequate demand in the Grid.
- 6.3.4 (i) If a Unit's Tested Capacity after the most recent Performance Test mentioned in Article 6.3.3 has been conducted, is less than its Contracted Capacity as existing on the Effective Date, the Unit shall be de-rated with the following consequences in each case with effect from the date of completion of such most recent test:
- a) the Unit's Contracted Capacity shall be reduced to its Tested Capacity, as existing at the most recent Performance Test referred to in Article 6.3.3



and Capacity Charges shall be paid with respect to such reduced Contracted Capacity;

- b) the Seller shall not be permitted to declare the Available Capacity of the Unit at a level greater than its Tested Capacity;
- c) the Availability Factor of the derated Unit shall be calculated by reference to the reduced Contracted Capacity; and
- d) the Capital Cost and each element of the Capital Structure Schedule shall be reduced in proportion to the reduction in the Contracted Capacity of the Power Station as a result of that derating (taking into account the Contracted Capacity of any Unit which has yet to be Commissioned).

(ii) If at the end of Initial Performance Retest Period or the date of the eighth Performance Test mentioned in Article 6.3.3, whichever is earlier, the Tested Capacity is less than the Contracted Capacity as existing on the Effective Date the consequences mentioned in Article 8.2.2 shall apply for a period of one year. Provided that such consequences shall apply with respect to the Tested Capacity existing at the end of Initial Performance Retest Period or the date of the eighth Performance Test mentioned in Article 6.3.3, whichever is earlier

6.3.5 If a Unit's Tested Capacity as at the end of the Initial Performance Retest Period or the date of the eighth Performance Test mentioned in Article 6.3.3, whichever is earlier, is found to be more than its Contracted Capacity as existing on the Effective Date, the Tested Capacity shall be deemed to be the Unit's Contracted Capacity if the Procurer agrees and intimates the same to the Seller within thirty (30) days of receipt of the results of the last Performance Test to purchase such excess Tested Capacity, and also provide to the Seller additional Letter of Credit and Collateral Arrangement for payments in respect of such excess Tested Capacity agreed to be purchased by the Procurer. In case the Procurer decides not to purchase such excess Tested Capacity, the Seller shall be free to sell such excess Tested Capacity to any third party and the Unit's Contracted Capacity shall remain unchanged, notwithstanding that the Tested Capacity exceeded the Contracted Capacity.

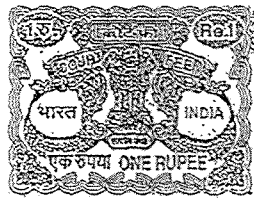
Provided that in all the above events, the Seller shall be liable to obtain/maintain all the necessary consents (including Initial Consents), permits



and approvals including those required under the environmental laws for generation of such excess Tested Capacity.

6.4 *Costs Incurred*

The Seller expressly agrees that all costs incurred by him in synchronising, connecting, Commissioning and / or Testing or Retesting a Unit shall be solely and completely to his account and the Procurer's liability shall not exceed the amount of the Energy Charges payable for such power output, as set out in Schedule 6.



7 ARTICLE 7 : OPERATION AND MAINTENANCE

The Parties shall comply with the provisions of the applicable Law including, in particular, Grid Code as amended form time to time regarding operation and maintenance of the Power Station and all matters incidental thereto. Provided however the Seller shall not schedule the Maintenance Outage of a Unit when another Unit of the project is shut down or expected to be shut down except under Force Majeure or when the operation of Unit is not permissible due to technical considerations.

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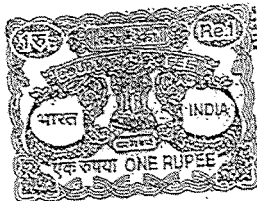
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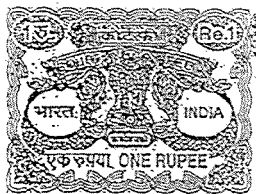
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8 ARTICLE 8: CAPACITY, AVAILABILITY AND DISPATCH

8.1 Repeat Performance Tests

- 8.1.1 The Procurer may from time to time during the Operating Period, but only if the Available Capacity has not been one hundred per cent (100%) of the Contracted Capacity of the commissioned units (excluding the unit(s) under planned outage for capital maintenance in consultation with the Regional Power Committee, if any) even for one continuous period of at least three (3) hours during any three continuous months, require the Seller to demonstrate a Unit's or (if all the Units have been Commissioned, the Power Station's) Tested Capacity by carrying out a further Performance Test (a "Repeat Performance Test") in accordance with this Article 8.1. A Repeat Performance Test shall be carried out in accordance with Schedule 4, save that the test shall last twenty-four (24) hours instead of seventy two (72) hours. Provided that if the Tested Capacity after such test is less than one hundred percent (100%) of the Contracted Capacity as existing on the Effective Date of the Commissioned Units, the Seller shall also have a right to conduct not more than two (2) Repeat Performance Test within a period six (6) months, by giving a notice of not less than fifteen (15) days to the Procurer for each such test. Provided that the Procurer shall have a right to require deferment of each such re-tests for a period not exceeding five (5) days, without incurring any liability for such deferment, if the Procurer are unable to provide evacuation of power to be generated, due to reasons outside the reasonable control of the Procurer or due to inadequate demand in the Grid.
- 8.1.2 The Procurer shall give the Seller not less than seven (7) days' advance written notice of the time when a Repeat Performance Test of a Unit (or if all the Units have been Commissioned, of the Power Station's) is to begin. A Repeat Performance Test may not be scheduled for any period when the Unit to be tested is due to undergo a Scheduled Outage.
- 8.1.3 The Procurer and Seller shall jointly appoint the Independent Engineer to monitor the Repeat Performance Test and to certify the results in accordance with Article 8.2.
- 8.1.4 If the Seller wishes to take any Unit, out of service for repair before a Repeat Performance Test, it shall inform the Procurer in writing before its scheduled start of the repairs and the estimated time required to complete the repairs. The Parties shall then schedule a Maintenance Outage in accordance with the Grid



Code to enable the Seller to carry out those repairs and in such a case, the Procurer, shall defer the Repeat Performance Test until such Unit is returned to service following that Maintenance Outage. Provided however the Seller shall not schedule the Maintenance Outage of a Unit when another Unit of the project is shut down or expected to be shut down except under Force Majeure or when the operation of Unit is not permissible due to technical considerations.

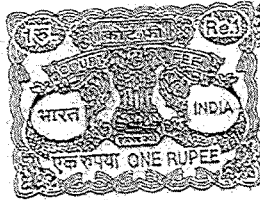
- 8.1.5 The Procurer, may for reasonable cause, defer any Repeat Performance Test for up to fifteen (15) days from the date originally notified to the Seller in accordance with Article 8.1.2 if the Procurer notifies the Seller in writing at least one (1) day before the Repeat Performance Test starts, the reason for the deferral and when the test is to be rescheduled.

Provided that, such deferment shall be permitted only once in respect of each of the Repeat Performance Tests.

- 8.1.6 The Seller, the Procurer and the Independent Engineer individually shall have the right to designate qualified and authorised representatives (but not more than three each) to monitor the Repeat Performance Test.
- 8.1.7 Testing and measurement procedures applied during the Repeat Performance Test shall be in accordance with the codes, practices of procedures as generally/normally applied for the Performance Tests.
- 8.1.8 Within five (5) days of a Repeat Performance Test, the Seller shall provide the Procurer and the Independent Engineer with copies of the detailed test results.
- 8.1.9 Within one (1) Month of the date by which all the Units have been Commissioned, the Seller shall conduct a Performance Test of the Power Station (hereinafter referred to as "Power Station Performance Test") whereafter the provisions of Article 8.2 shall apply. A Power Station Performance Test shall be carried out in accordance with Article 1.1 of Schedule 4, save that the test shall last twenty-four (24) hours instead of seventy two (72) hours.

8.2 Derating

- 8.2.1 A Repeat Performance Test shall be concluded when the Procurer receives the Final Test Certificate of the Independent Engineer stating that the Repeat Performance Test has been carried out satisfactorily in accordance with Schedule 4 and certified the Unit's (or if all the Units have been



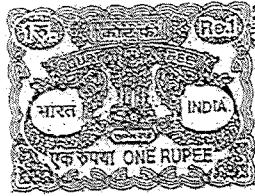
commissioned), the Power Station's) then current Tested Capacity as demonstrated by the results of the Repeat Performance Test.

8.2.2 (i) If a Unit's (or if all the Units have been Commissioned, of the Power Station's) then current Tested Capacity as established by the Repeat Performance Test and the Final Test Certificate issued by the Independent Engineer, is less than its Contracted Capacity as existing on the Effective Date, the Seller shall not be permitted to declare the Available Capacity of the Unit (or if all the Units have been Commissioned, of the Power Station's) at a level greater than its Tested Capacity, in which case:

- a) the Unit's (or if all the Units have been Commissioned, of the Power Station's) Contracted Capacity shall be reduced to its most recent Tested Capacity and Capacity Charges shall be paid with respect to such reduced Contracted Capacity.
- b) the Availability Factor of the derated Unit (or if all the Units have been Commissioned, of the Power Station's) shall be calculated by reference to the reduced Contracted Capacity, and:
- c) the Capital Cost and each element of the Capital Structure Schedule shall be reduced in proportion to the reduction in the Contracted Capacity of the Power Station as a result of that derating (taking into account the Contracted Capacity of any Unit which has yet to be Commissioned);

(ii) The consequences mentioned in sub-Article (i) above shall apply from the completion date of each Repeat Performance Test. If at the end of second Repeat Performance Test conducted by the Seller or the last date of the end of the six month period referred to in Article 8.1.1, whichever is earlier, the Tested Capacity is less than the Contracted Capacity as existing on the Effective Date the consequences mentioned in Article 8.2.2 shall apply for a period of at least one year after which the Seller shall have the right to undertake a Repeat Performance Test. Provided that such consequences shall apply with respect to the Tested Capacity existing at the end of second Repeat Performance Test conducted by the Seller or the last date of the end of the six month period referred to in Article 8.1.1, whichever is earlier

8.2.3 If the Independent Engineer certifies that it is unable to give a Final Test Certificate because events or circumstances beyond the Seller's reasonable control have prevented the Repeat Performance Test from being carried out in accordance with Schedule 4, the Procurer shall reschedule a Repeat Performance Test as soon as reasonably practicable.



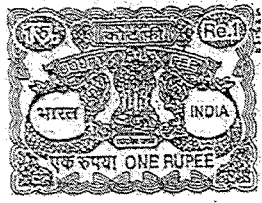
8.2.4 If a Unit's or if all the Units have been Commissioned, of the Power Station's, Tested Capacity is found to be more than it's Contracted Capacity, the provisions of Article 6.3.5 shall apply mutatis mutandis.

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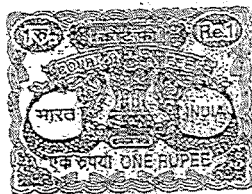
8.3 Availability

The Seller shall comply with the provisions of the applicable Law regarding Availability including, in particular, to the provisions of the ABT and Grid Code relating to intimation of Availability and the matters incidental thereto.

8.4 Dispatch

The Seller shall comply with the provisions of the applicable Law regarding Dispatch Instructions, in particular, to the provisions of the ABT and Grid Code relating to Dispatch and the matters incidental thereto.





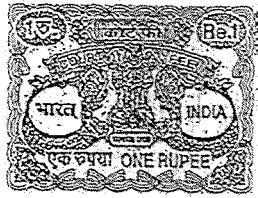
9 ARTICLE 9: METERING AND ENERGY ACCOUNTING

9.1 *Meters*

For installation of Meters, Meter testing, Meter calibration and Meter reading and all matters incidental thereto, the Seller and the Procurer shall follow and be bound by the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, the Grid Code and ABT as amended and revised from time to time. In addition, the Seller shall also allow and facilitate /STU in installation of one set of required main and standby special energy meters for accurate recording of energy supplied by Seller. For these /STU meters (110V, 1A, 4-wire), the Seller shall provide the required connection from EHV current transformers/ bushing CTs/ voltage transformers/ CVTs on EHV side of all generator-transformers, station transformers and outgoing lines, of meter accuracy of 0.2 class or better. The Seller may install any further meters for its own comfort at its own cost.

9.2 *RLDC / SLDC Charges*

All scheduling and RLDC / SLDC charges applicable shall be borne by the Procurer.



10 ARTICLE 10: INSURANCES

10.1 Insurance

The Seller shall effect and maintain or cause to be effected and maintained during the Construction Period and Operating Period , Insurances against such risks, with such deductibles and with such endorsements and co-insured(s), which the Prudent Utility Practices would ordinarily merit maintenance of and as required under the Financing Agreements.

10.2 Application of Insurance Proceeds

Save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Project or any part of the Project shall be first applied to reinstatement, replacement or renewal of such loss or damage.

If a Natural Force Majeure Event renders the Project no longer economically and technically viable and the insurers under the Insurances make payment on a "total loss" or equivalent basis, the Procurer shall have no claim on such proceeds of such Insurance

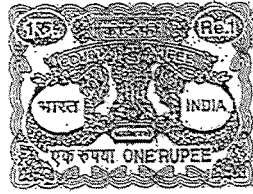
10.3 Effect on liability of the Procurer

Notwithstanding any liability or obligation that may arise under this Agreement, any loss, damage, liability, payment, obligation or expense which is insured or for which the Seller can claim compensation, under any Insurance shall not be charged to or payable by the Procurer.

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11 ARTICLE 11 : BILLING AND PAYMENT

11.1 General

From the COD of the first Unit, the Procurer shall pay the Seller the Monthly Tariff Payment, on or before the Due Date, , determined in accordance with this Article 11 and Schedule 6. All Tariff payments by the Procurer shall be in Indian Rupees.

The Procurer shall pay the seller for any Electrical Output from the Seller prior to the Commercial Operation Date ("Infirm Power") of a Unit the Energy Charges for Infirm Power generated by such Unit. The quantum of Infirm Power generated by Units synchronized but not have been put on COD shall be computed from the energy accounting and audit meters installed at the Power Station as per Central Electricity Authority (installation and operation of meters) Regulations 2006 as amended from time to time.

11.2 Delivery and content of Monthly Bills

11.2.1 The Seller shall issue to the Procurer a signed Monthly Bill for the immediately preceding Month.

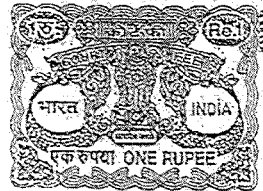
Provided that:

- i. if the COD of the first Unit falls during the period between the first (1st) day and up to and including the fifteenth (15th) day of a Month, the first Monthly Bill shall be issued for the period until the last day of such Month, or
- ii. if the COD of the first Unit falls after the fifteenth (15th) day of a Month, the first Monthly Bill shall be issued for the period commencing from the COD of the first Unit until the last day of the immediately following Month.

Provided further that if a Monthly Bill is received on or before the second (2nd) day of a Month, it shall be deemed to have been received on the second (2nd) Business Day of such Month.

11.2.2 Each Monthly Bill and Provisional Bill shall include:

- i. Availability and energy account for the relevant Month as per REA for



- Monthly Bill and RLDC's daily energy account for Provisional Bill;
- ii. the Seller's computation of the components of the Monthly Tariff Payment in accordance with Schedule 6 and
- iii. supporting data, documents and calculations in accordance with this Agreement.

11.3 Payment of Monthly Bills

11.3.1 The Procurer shall pay the amount payable under Monthly Bill on the Due Date to such account of the Seller, as shall have been previously notified by the Seller to the Procurer in accordance with Article 11.3.3 below.

All payments made by the Procurer shall be appropriated by the Seller in the following order of priority:

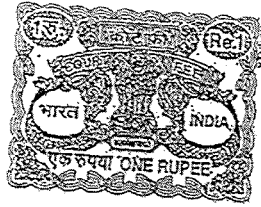
- 1. towards Late Payment Surcharge, payable by the Procurer, if any;
- 2. towards earlier unpaid Monthly Bill, if any; and
- 3. towards the then current Monthly Bill.

11.3.2 All payments required to be made under this Agreement shall only include any deduction or set off for:

- i. deductions required by the Law; and
- ii. amounts claimed by the Procurer from the Seller, through an invoice duly acknowledged by the Seller, to be payable by the Seller, and not disputed by the Seller within thirty (30) days of receipt of the said invoice and such deduction or set-off shall be made to the extent of the amounts not disputed. It is clarified that the Procurer shall be entitled to claim any set off or deduction under this Article, after expiry of the said 30 day period.

Provided further, the maximum amounts that can be deducted or set-off by the Procurer under this Article in a Contract Year shall not exceed Rupees 13.5 crores only, except on account of payments under sub Article (i) above.

11.3.3 The Seller shall open a bank account at Patiala (the "Designated Account") for all Tariff Payments to be made by the Procurer to the Seller, and notify the Procurer of the details of such account at least ninety (90) days before the dispatch of the first Monthly Bill to the Procurer. The Procurer shall instruct its bankers to make all payments under this Agreement to the Designated Account and shall notify the Seller of such instructions on the same day. The Procurer shall also designate a bank account at Patiala for payments to be



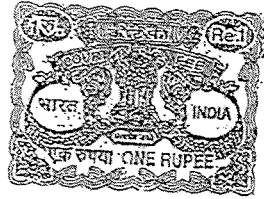
made by the Seller (including Supplementary Bills) to the Procurer and notify the Seller of the details of such account ninety (90) days before the COD of the first Unit.

- 11.3.4 In the event of delay in payment of a Monthly Bill by the Procurer beyond its Due Date month billing, a Late Payment Surcharge shall be payable by the Procurer to the Seller at the rate of two (2) percent in excess of the applicable SBAR per annum, on the amount of outstanding payment, calculated on a day to day basis (and compounded with Monthly rest), for each day of the delay.
- 11.3.5 For payment of any Bill before Due Date, the following rebate shall be paid by the Seller to the Procurer in the following manner.

- a) Provisional Bill will be raised by the Seller on the last Business day of the Month where the Capacity Charges shall be based on the Declared Capacity for the full Month and the Energy Charges shall be based on the final implemented Scheduled Energy upto 25th day of the Month. Rebate shall be payable at the rate of two point two five percent (2.25%) of the amount (which shall be the full amount due under the Provisional Bill) credited to Seller's account on first day of the Month and rebate amount shall reduce at the rate of zero point zero five percent (0.05%) for each day, upto fifth (5th) day of the Month.
- b) Applicable rate of rebate at (a) above shall be based on the date on which payment has been actually credited to the Seller's account. Any delay in transfer of money to the Seller's account, on account of public holiday, bank holiday or any other reasons shall be to the account of the Procurers.
- c) Two percent (2%) rebate for credit to Sellers account made within one (1) Day of the presentation of Monthly Bill for the Month for which the Provisional Bill was raised earlier.
- d) For credit to Seller's account made on other days the rebate on Monthly Bill shall be as under:

Number of days before Due Date of Monthly Bill	Rates of Rebate applicable
29	Two percent (2.00%)
Each day thereafter upto the Due Date	2% less [0.033% x {29 less number of days before Due Date when the payment is made by the Procurers}]

- e) Rebate of two point two five percent (2.25%) to two point zero five percent (2.05%) will be available only if the Procurer credits one hundred



percent (100%) of the Provisional Bill within first five (5) days of the Month to Seller's account/designated account and balance amount, if any, based on Monthly Bill (as per REA) within the Month.

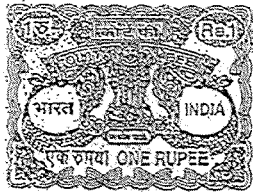
- f) In the event only part amount of Provisional Bill is credited to Seller's account, within first five (5) days and the balance amount is credited to Sellers account during other days of the Month, rebate will be paid on such part amount, at the rate of two percent (2%) plus zero point zero three three percent (0.033%) per day for the number of days earlier than the 6th day when such part amount is credited to Sellers' account;
- g) The above rebate will be allowed only if the Procurer credits to Seller's account the full Monthly Bill.
- h) No rebate shall be payable on the bills raised on account of Change in Law relating to taxes, duties and cess;
- i) If the Provisional Bill has not been paid by the date of receipt of the Monthly Bill then such Provisional Bill shall not be payable, provided in case the Provisional Bill has already been paid, then only the difference between the Monthly Bill and Provisional Bill shall be payable.

11.4 Payment Mechanism

11.4.1 Letter of Credit:

The Procurer shall provide to the Seller, in respect of payment of its Monthly Bills, a monthly unconditional, revolving and irrevocable letter of credit ("Letter of Credit"), opened and maintained by the Procurer, which may be drawn upon by the Seller in accordance with Articles 11.4.1.1 through 11.4.1.5. The Letter of Credit shall be provided from the bank which is appointed as Default Escrow Agent under the Default Escrow Agreement.

11.4.1.1 Not later than one (1) Month prior to the the Scheduled COD of the first Unit, the Procurer shall through a scheduled bank at Patiala open a Letter of Credit in favour of the Seller, to be made operative from a date prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be renewed annually, for an amount equal to:

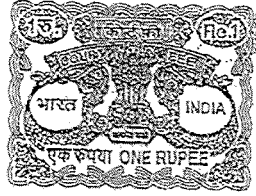


- i) for the first Contract Year, equal to one point one (1.1) times the estimated average monthly billing based on Normative Availability;
- ii) for each subsequent Contract Year, equal to the one point one (1.1) times the average of the Monthly Tariff Payments of the previous Contract Year plus the estimated monthly billing during the current year from any additional Unit(s) expected to be put on COD during the current Contract Year based on Normative Availability.

Provided that the Seller shall not draw upon such Letter of Credit prior to the Due Date of the relevant Monthly Bill, and shall not make more than one drawal in a Month.

Provided further that if at any time, such Letter of Credit amount falls short of the amount specified in Article 11.4.1.1 or 11.4.1.8 otherwise than by reason of drawal of such Letter of Credit by the Seller, the Procurer shall restore such shortfall within seven (7) days.

- 11.4.1.2 The Procurer shall cause the scheduled bank issuing the Letter of Credit to intimate the Seller, in writing regarding establishing of such irrevocable Letter of Credit.
- 11.4.1.3 In case of drawal of the Letter of Credit by the Seller in accordance with the terms of this Article 11.4.1, the amount of the Letter of credit shall be reinstated in the manner stated in Article 11.4.2.3 of this Agreement.
- 11.4.1.4 If the Procurer fails to pay a Monthly Bill or part thereof within and including the Due Date, then, subject to Article 11.6.7, the Seller may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from the Procurer, an amount equal to such Monthly Bill or part thereof plus Late Payment Surcharge, if applicable, in accordance with Article 11.3.4 above, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:
- i) a copy of the Monthly Bill which has remained unpaid by the Procurer;
 - ii) a certificate from the Seller to the effect that the bill at item (i) above, or specified part thereof, is in accordance with the Agreement and has remained unpaid beyond the Due Date; and



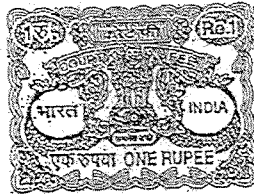
iii) calculations of applicable Late Payment Surcharge, if any.

For the avoidance of doubt it is clarified that the Seller shall not be entitled to drawdown on the Letter of Credit for any failure of the Procurer to pay a Supplementary Bill.

- 11.4.1.5 The Procurer shall ensure that the Letter of Credit shall be renewed not later than forty five (45) days prior to its expiry.
- 11.4.1.6 All costs relating to opening and maintenance of the Letter of Credit shall be borne by the Procurer, however, Letter of Credit negotiation charges shall be borne and paid by the Seller.
- 11.4.1.7 Where necessary, the Letter of Credit may also be substituted by an unconditional and irrevocable bank guarantee or an equivalent instrument as mutually agreed by the Procurer and the Seller.
- 11.4.1.8 Upon fulfilment of the conditions mentioned under Article 11.4.2.2 the Letter of Credit amount as mentioned in Article 11.4.1.1 shall be changed to one (1) time the average of the Monthly Tariff Payments of the previous Contract Year instead of one point one (1.1) times the average of the Monthly Tariff Payments of the previous Contract Year.

11.4.2 Collateral Arrangement

- 11.4.2.1 As further support for the Procurer's obligations, on or prior to the Effective Date, the Procurer and the Seller shall execute Default Escrow Agreement (referred as "Default Escrow Agreement") for the establishment and operation of the Default Escrow Account in favour of the Seller, through which the revenues of the Procurer shall be routed and used as per the terms of the Default Escrow Agreement. The Procurer and the Seller shall contemporaneously with the execution of the Default Escrow Agreement enter into a separate Agreement to Hypothecate Cum Deed of Hypothecation, whereby the Procurer shall agree to hypothecate, to the Seller, effective from forty five (45) days prior to the Scheduled COD the amounts to the extent as required for the Letter of Credit as per Article 11.4.1.1 routed through the Default Escrow Account and the Receivables in accordance with the terms of the Agreement to Hypothecate Cum Deed of Hypothecation. The Default Escrow Agreements and the Agreement to Hypothecate Cum Deed of Hypothecation are collectively referred to as the "Collateral Arrangement". The minimum revenue flow in any Month in the Default Escrow Account shall be at least equal to the amount required for the Letter of Credit as per Article 11.4.1.1.



Provided that the Procurer shall ensure that the Seller has first ranking charge on the revenues routed through the Default Escrow Account and the 'Receivables' in accordance with the terms of the Agreement to Hypothecate Cum Deed of Hypothecation. However, such first ranking charge shall be on the amounts; in excess of amounts, which have already been charged or agreed to be charged prior to the date of the execution of the Default Escrow Agreement.

11.4.2.2 On the occurrence of all of the following events in respect of the Procurer:

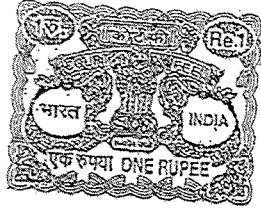
(i) A period of not less than two (2) years from COD of Power Station, has elapsed; and

(ii) The Procurer has achieved, for its ability to honour its Tariff Payment obligations to the Seller under this Agreement, a credit rating of 'A' or better, from a SEBI registered Indian credit rating agency mutually agreed between Seller and the Lender/s, consistently for a period of at least three (3) years; and

(iii) Immediately prior to the three (3) year period mentioned in sub-clause (ii) above, for a period of at least two (2) years there has been no Procurer Event of Default under Article 14 of the PPA, by the Procurer,

the Procurer shall intimate the Seller in writing of the occurrence of the same and its intention to discontinue the Collateral Arrangement. If the Seller desires to continue with the Collateral Arrangement, it shall intimate the same to the Procurer in writing within thirty (30) days of receipt of intimation from the Procurer and in such case the Seller shall be liable to bear the costs of continuation of the Collateral Arrangement with effect from such date. In case the Seller fails to respond or agrees to discontinue, the Collateral Arrangement shall forthwith cease and the Default Escrow Agreement and the routed through the Default Escrow Account and the 'Receivables' in accordance with the terms of the Agreement to Hypothecate Cum Deed of Hypothecation shall stand terminated as per terms thereof.

Provided that in case of any of conditions mentioned under (i), (ii) or (iii) in Article 11.4.2.2 ceases to be true, then within 90 days of the occurrence of such event, the Procurer shall reinstate the Collateral Arrangement, at its own cost.



11.4.2.3 If the Letter of Credit is insufficient to pay for the due payments to the Seller or is not replenished for the drawals made, then within a period of seven (7) days from the date such shortfall in the Letter of Credit occurs, the Letter of Credit shall be reinstated to the requisite amount specified in this Agreement, and in the manner specified in the Default Escrow Agreement.

11.5 Third Party Sales on default

11.5.1 Notwithstanding anything to the contrary contained in this Agreement, upon the occurrence of an event where the Procurer has not made payment by the Due Date of an Invoice through the payment mechanism provided in this Agreement, the Seller shall follow the steps as enumerated in Articles 11.5.2 and 11.5.3.

11.5.2 On the occurrence of the event mentioned in Article 11.5.1 and after giving a notice of at least seven (7) days to the Procurer, the Seller shall have the right to offer twenty five (25) per cent of the Contracted Capacity ("Default Electricity") to third parties.

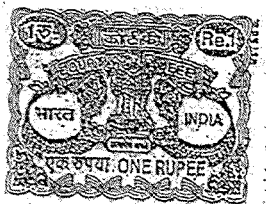
11.5.3 On the occurrence of the event mentioned in Article 11.5.1 and after giving a notice of at least seven (7) days to the Procurer, the Seller shall have the right (but not the obligation) to make available and sell the Default Electricity or a part thereof to a third party, namely:

- (a) any consumer, subject to applicable Law; or
- (b) any licensee under the Electricity Act, 2003;

11.5.4 If the Collateral Arrangement is not fully restored by the Procurer within thirty (30) days of the non-payment of a Invoice by its Due Date, the provisions of Article 11.5.2 and Article 11.5.3 shall apply with respect to one hundred (100) per cent of the Contracted Capacity. Provided that in case the events mentioned in Article 11.4.2.2 (i), (ii) and (iii) are true, then this Article 11.5.4 shall be applicable as per Article 11.4.2.2.

11.5.5 Provided that, in the case of Article 11.5.3 or 11.5.4, the Seller shall ensure that sale of power to the shareholders of the Seller or any direct or indirect affiliate of the Seller/shareholders of the Seller, is not at a price less than the Energy Charges.

11.5.6 In case of third party sales as permitted by this Article 11.5, the adjustment of the surplus revenue over Energy Charge attributable to such electricity sold, shall be adjusted as under :



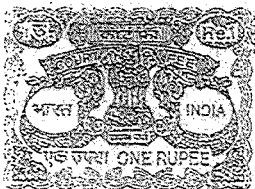
- (a) the surplus upto the Tariff shall be used towards the extinguishment of the subsisting payment liability of the Procurer towards the Seller; and
- (b) the surplus if any above the Tariff shall be retained by the Seller.

The liability of the Procurer towards making Capacity Charge payments to the Seller even for electricity sold to third parties or remaining unsold during such periods will remain unaffected. Provided such Capacity Charge payment liability shall cease on the date which occurs on the Expiry of a period of three (3) years and hundred (100) days from the date of occurrence of the Procurer Event of Default under Article 14.2 (i), provided if prior to such date, the Procurer Event of Default has not ceased and regular supply of electricity for a period of at least ninety (90) continuous days has not occurred.

- 11.5.7 Sales to any person or Party, under Article 11.5, shall cease and regular supply of electricity to the Procurer in accordance with all the provisions of this Agreement shall commence and be restored on the later of the two following dates or any date before this date at the option of Seller:
- (a) the day on which the Procurer pays the amount due to the Seller and renews the Letter of Credit and restores Default Escrow Account (if applicable) as mentioned in Article 11.4.2.1 ; or
 - (b) the date being "x" days from the date on which the defaulting Procurer pays the amount due to the Seller, where "x" days shall be calculated in accordance with Schedule 12.

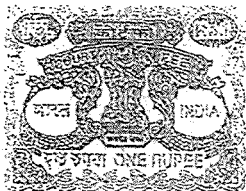
11.6 Disputed Bill

- 11.6.1 If a Party does not dispute a Monthly Bill, Provisional Bill or a Supplementary Bill raised by the other Party within thirty (30) days of receiving it, such bill shall be taken as conclusive.
- 11.6.2 If a Party disputes the amount payable under a Monthly Bill, Provisional Bill or a Supplementary Bill, as the case may be, that Party shall, within thirty (30) days of receiving such bill, issue a notice (the "Bill Dispute Notice") to the invoicing Party setting out:
- i) the details of the disputed amount;
 - ii) its estimate of what the correct amount should be; and
 - iii) all written material in support of its claim.
- 11.6.3 If the invoicing Party agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 11.6.2, the invoicing Party shall revise such bill within seven (7) days of receiving such notice and if the disputing Party has already made the excess payment, refund to the disputing Party such excess amount within fifteen (15) days of receiving such notice. In such a case excess



amount shall be refunded along with interest at the same rate as Late Payment Surcharge which shall be applied from the date on which such excess payment was made to the invoicing Party and upto and including the date on which such payment has been received.

- 11.6.4 If the invoicing Party does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 11.6.2, it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice to the disputing Party providing:
- i) reasons for its disagreement;
 - ii) its estimate of what the correct amount should be; and
 - iii) all written material in support of its counter-claim.
- 11.6.5 Upon receipt of notice of disagreement to the Bill Dispute Notice under Article 11.6.4, authorised representative(s) or a director of the board of directors/member of board of each Party shall meet and make best endeavours to amicably resolve such dispute within fifteen (15) days of receiving such notice of disagreement to the Bill Dispute Notice.
- 11.6.6 If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt of notice of disagreement to the Bill Dispute Notice pursuant to Article 11.6.4, the matter shall be referred to Dispute Resolution in accordance with Article 17.
- 11.6.7 In case of Disputed Bills, it shall be open to the aggrieved party to approach the Appropriate Commission for Dispute Resolution in accordance with Article 17 and also for interim orders protecting its interest including for orders for interim payment pending Dispute Resolution and the Parties shall be bound by the decision of the Appropriate Commission, including in regard to interest or Late Payment Surcharge, if any directed to be paid by the Appropriate Commission.
- 11.6.8 If a Dispute regarding a Monthly Bill, Provisional Bill or a Supplementary Bill is settled pursuant to Article 11.6 or by Dispute resolution mechanism provided in this Agreement in favour of the Party that issues a Bill Dispute Notice, the other Party shall refund the amount, if any incorrectly charged and collected from the disputing Party or pay as required, within five (5) days of the Dispute either being amicably resolved by the Parties pursuant to Article 11.6.5 or settled by Dispute resolution mechanism along with interest at the same rate as Late Payment Surcharge from the date on which such payment had been made to the invoicing Party or the date on which such payment was originally due, as may be applicable.
- 11.6.9 For the avoidance of doubt, it is clarified that despite a Dispute regarding an Invoice, the Procurer shall, without prejudice to its right to Dispute, be under an obligation to make payment, of the lower of (a) an amount equal to simple average of last three (3) Months invoices (being the undisputed portion of such



three Months invoices) and (b) Monthly Invoice which is being disputed, provided such Monthly Bill has been raised based on the REA and in accordance with this Agreement.

11.7 Quarterly and Annual Reconciliation

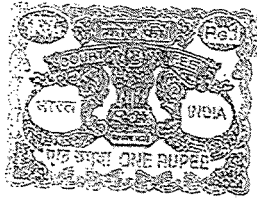
Both Parties acknowledge that all payments made against Monthly Bills, Provisional Bill and Supplementary Bills shall be subject to quarterly reconciliation at the beginning of the following quarter of each Contract Year and annual reconciliation at the end of each Contract Year to take into account REA, Tariff Adjustment Payments, Tariff Rebate Payments, Late Payment Surcharge, or any other reasonable circumstance provided under this Agreement. The Parties, therefore, agree that as soon as all such data in respect of any quarter of a Contract Year or a full Contract Year as the case may be has been finally verified and adjusted, the Seller and the Procurer shall jointly sign such reconciliation statement. Within fifteen (15) days of signing of a reconciliation statement, the Seller or the Procurer, as the case may be, shall raise a Supplementary Bill for the Tariff Adjustment Payments for the relevant quarter/ Contract Year and shall make payment of such Supplementary Bill for the Tariff Adjustment Payments for the relevant quarter/Contract Year. Late Payment Surcharge shall be payable in such a case from the date on which such payment had been made to the invoicing Party or the date on which any payment was originally due, as may be applicable. Any dispute with regard to the above reconciliation shall be dealt with in accordance with the provisions of Article 17.

11.8 Payment of Supplementary Bill

11.8.1 Either Party may raise a bill on the other Party ("Supplementary Bill") for payment on account of:

- i) Adjustments required by the Regional Energy Account (if applicable);
 - ii) Tariff Payment for change in parameters, pursuant to provisions in Schedule 6; or
 - iii) Change in Law as provided in Article 13,
- and such Bill shall be paid by the other Party.

11.8.2 The Procurer shall remit all amounts due under a Supplementary Bill raised by the Seller to the Seller's Designated Account by the Due Date and notify the Seller of such remittance on the same day. Similarly, the Seller shall pay all amounts due under a Supplementary Bill raised by the Procurer by the Due



Date to the Procurer's designated bank account and notify the Procurer of such payment on the same day. For such payments by the Procurer, rebates as applicable to Monthly Bills pursuant to Article 11.3.5 shall equally apply.

11.8.3 In the event of delay in payment of a Supplementary Bill by either Party beyond its Due Date, a Late Payment Surcharge shall be payable at the same terms applicable to the Monthly Bill in Article 11.3.4.

11.9 Payment for Start up Power

The Seller shall be liable to pay, for the power and energy consumed for start-up of the Project and commissioning, to the Procurer at the then prevalent rates payable by such industrial consumers.

11.10 The copies of all notices/offers which are required to be sent as per the provisions of this Article 11, shall be sent by either Party, simultaneously to both Parties.



12 ARTICLE 12 : FORCE MAJEURE

12.1 Definitions

In this Article 12, the following terms shall have the following meanings:

12.2 Affected Party

An affected Party means the Procurer or the Seller whose performance has been affected by an event of Force Majeure.

An event of Force Majeure affecting the CTU/STU or any other agent of the Procurer, which has affected the Interconnection Facilities, shall be deemed to be an event of Force Majeure affecting the Procurer.

Any event of Force Majeure affecting the performance of the Seller's contractors, shall be deemed to be an event of Force Majeure affecting Seller only if the Force Majeure event is affecting and resulting in:

- a. late delivery of plant, machinery, equipment, materials, spare parts, Fuel, water or consumables for the Project; or
- b. a delay in the performance of any of the Seller's contractors.

Similarly, any event of Force Majeure affecting the performance of the Procurer's contractor for the setting up or operating Interconnection Facilities shall be deemed to be an event of Force Majeure affecting Procurer only if the Force Majeure event is resulting in a delay in the Performance of Procurer's contractors.

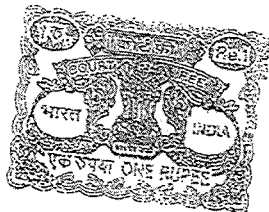
12.3 Force Majeure

A 'Force Majeure' means any event or circumstance or combination of events and circumstances including those stated below that wholly or partly prevents or unavoidably delays an Affected Party in the performance of its obligations under this Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices:

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i. Natural Force Majeure Events:

act of God, including, but not limited to lightning, drought, fire and explosion (to the extent originating from a source external to the Site), earthquake, volcanic eruption, landslide, flood, cyclone, typhoon, tornado, or exceptionally adverse weather conditions which are in excess of the statistical measures for the last hundred (100) years,

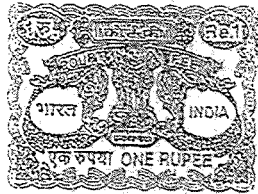
ii. Non-Natural Force Majeure Events:

1. Direct Non - Natural Force Majeure Events

- a) Nationalization or compulsory acquisition by any Indian Governmental Instrumentality of any material assets or rights of the Seller or the Seller's contractors; or
- b) the unlawful, unreasonable or discriminatory revocation of, or refusal to renew, any Consent required by the Seller or any of the Seller's contractors to perform their obligations under the Project Documents or any unlawful, unreasonable or discriminatory refusal to grant any other consent required for the development/ operation of the Project. Provided that an appropriate court of law declares the revocation or refusal to be unlawful, unreasonable and discriminatory and strikes the same down.
- c) any other unlawful, unreasonable or discriminatory action on the part of an Indian Government Instrumentality which is directed against the Project. Provided that an appropriate court of law declares the revocation or refusal to be unlawful, unreasonable and discriminatory and strikes the same down.

2. Indirect Non - Natural Force Majeure Events

- a) any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action; or
- b) Radio active contamination or ionising radiation originating from a source in India or resulting from another Indirect Non Natural Force Majeure Event excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the site by the Affected Party or those employed or engaged by the Affected Party.
- c) Industry wide strikes and labor disturbances having a nationwide impact in India.



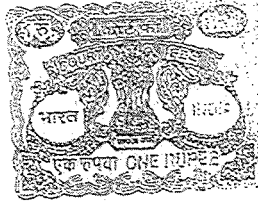
12.4 Force Majeure Exclusions

Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

- a. Unavailability, late delivery, or changes in cost of the plant, machinery, equipment, materials, spare parts, Fuel or consumables for the Project;
- b. Delay in the performance of any contractor, sub-contractors or their agents excluding the conditions as mentioned in Article 12.2;
- c. Non-performance resulting from normal wear and tear typically experienced in power generation materials and equipment;
- d. Strikes or labour disturbance at the facilities of the Affected Party;
- e. Insufficiency of finances or funds or the agreement becoming onerous to perform; and
- f. Non-performance caused by, or connected with, the Affected Party's:
 - i) Negligent or intentional acts, errors or omissions;
 - ii) Failure to comply with an Indian Law; or
 - iii) Breach of, or default under this Agreement or any Project Documents.

12.5 Notification of Force Majeure Event

The Affected Party shall give notice to the other Party of any event of Force Majeure as soon as reasonably practicable, but not later than seven (7) days after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure. If an event of Force Majeure results in a breakdown of communications rendering it unreasonable to give notice within the applicable time limit specified herein, then the Party claiming Force Majeure shall give such notice as soon as reasonably practicable after reinstatement of communications, but not later than one (1) day after such reinstatement. Provided that such notice shall be a pre-condition to the Seller's entitlement to claim relief under this Agreement. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed. The Affected Party shall give the other Party regular (and not less than monthly) reports on the progress of those



remedial measures and such other information as the other Party may reasonably request about the situation.

The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event of Force Majeure on the performance of its rights or obligations under this Agreement, as soon as practicable after becoming aware of each of these cessations.

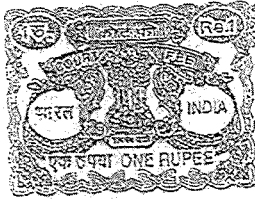
12.6 Duty to perform and duty to mitigate

To the extent not prevented by a Force Majeure event pursuant to Article 12.3, the Affected Party shall continue to perform its obligations pursuant to this Agreement. The Affected Party shall use its reasonable efforts to mitigate the effect of any event of Force Majeure as soon as practicable.

12.7 Available Relief for a Force Majeure Event

Subject to this Article 12:

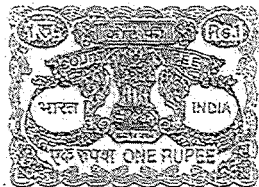
- (a) no Party shall be in breach of its obligations pursuant to this Agreement to the extent that the performance of its obligations was prevented, hindered or delayed due to a Force Majeure Event;
- (b) both the Parties shall be entitled to claim relief in relation to a Force Majeure Event in regard to its obligations, including but not limited to those specified under Article 4.5.
- (c) For the avoidance of doubt, it is clarified that no Tariff shall be paid by the Procurer for the part of Contracted Capacity affected by a Natural Force Majeure Event affecting the Seller, for the duration of such Natural Force Majeure Event. For the balance part of the Contracted Capacity, the Procurer shall pay the Tariff to the Seller, provided during such period of Natural Force Majeure Event, the balance part of the Power Station is declared to be Available for scheduling and dispatch as per ABT for supply of power by the Seller to the Procurer.
- (d) If the average Availability of the Power Station is reduced below sixty (60) percent for over two (2) consecutive months or for any non consecutive period of four (4) months both within any continuous period of sixty (60) months, as a result of an Indirect Non Natural Force Majeure, then, with effect from the end of that period and for so long as the daily average Availability of the Power Station continues to be reduced below sixty (60) percent as a result of an Indirect Non Natural Force Majeure of any kind, the Procurer shall make payments



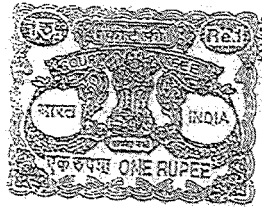
for Debt Service, subject to a maximum of Capacity Charges based on Normative Availability, relating to such Unit, which are due under the Financing Agreements and these amounts shall be paid from the date, being the later of a) the date of cessation of such Indirect Non Natural Force Majeure Event and b) the completion of sixty (60) days from the receipt of the Financing Agreements by the Procurer from the Seller, in the form of an increase in Capacity Charge. Provided such Capacity Charge increase shall be determined by Appropriate Commission on the basis of putting the Seller in the same economic position as the Seller would have been in case the Seller had been paid Debt Service in a situation where the Indirect Non Natural Force Majeure had not occurred.

Provided that the Procurer will have the above obligation to make payment for the Debt Service only (a) after the Unit(s) affected by such Indirect Non Natural Force Majeure Event has been Commissioned, and (b) only if in the absence of such Indirect Non Natural Force Majeure Event, the Availability of such Commissioned Unit(s) would have resulted in Capacity Charges equal to Debt Service.

- e) If the average Availability of the Power Station is reduced below eighty (80) percent for over two (2) consecutive months or for any non consecutive period of four (4) months both within any continuous period of sixty (60) months, as a result of a Direct Non Natural Force Majeure, then, with effect from the end of that period and for so long as the daily average Availability of the Power Station continues to be reduced below eighty (80) percent as a result of a Direct Non Natural Force Majeure of any kind, the Seller may elect in a written notice to the Procurer, to deem the Availability of the Power Station to be eighty (80) percent from the end of such period, regardless of its actual Available Capacity. In such a case, the Procurer shall be liable to make payment to the Seller of Capacity Charges calculated on such deemed Normative Availability, after the cessation of the effects of Direct Non Natural Direct Force Majeure in the form of an increase in Capacity Charge. Provided such Capacity Charge increase shall be determined by Appropriate Commission on the basis of putting the Seller in the same economic position as the Seller would have been in case the Seller had been paid Capacity Charges in a situation where the Direct Non Natural Force Majeure had not occurred.

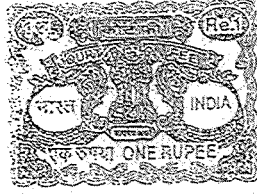


- (f) For so long as the Seller is claiming relief due to any Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer under this Agreement, the Procurer may from time to time on one (1) days notice inspect the Project and the Seller shall provide Procurer's personnel with access to the Project to carry out such inspections, subject to the Procurer's personnel complying with all reasonable safety precautions and standards. Provided further the Procurer shall be entitled at all times to request Repeat Performance Test, as per Article 8.1, of the Unit(s) Commissioned earlier and now affected by Direct or Indirect Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer, where such Testing is possible to be undertaken in spite of the Direct or Indirect Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer), and the Independent Engineer accepts and issues a Final Test Certificate certifying such Unit(s) being capable of delivering the Contracted Capacity and being Available, had there been no such Direct or Indirect Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer). In case, the Available Capacity as established by the said Repeat Performance Test (provided that for such Repeat Performance Test, the limitation imposed by Article 8.1.1 shall not apply) and Final Test Certificate issued by the Independent Engineer is less than the Available Capacity corresponding to which the Seller would have been paid Capacity Charges equal to Debt Service in case of Indirect Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer), then the Procurer shall make pro-rata payment of Debt Service but only with respect to such reduced Availability. For the avoidance of doubt, if Debt Service would have been payable at an Availability of 60% and pursuant to a Repeat Performance Test it is established that the Availability would have been 40%, then the Procurer shall make payment equal to Debt Service multiplied by 40% and divided by 60%. Similarly, the payments in case of Direct Non Natural Force Majeure Event (and Natural Force Majeure Event affecting the Procurer) shall also be adjusted pro-rata for reduction in Available Capacity.
- g) In case of a Natural Force Majeure Event affecting the Procurer which adversely affects the performance obligations of the Seller under this Agreement, the provisions of sub-proviso (d) and (f) shall apply.



12.8 Additional Compensation and Procurer's Subrogation

If the Seller is entitled, whether actually or contingently, to be compensated by any person other than the Procurer as a result of the occurrence of a Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer) for which it has received compensation from the Procurer pursuant to this Article 12, including without limitation, payments made which payments would not have been made in the absence of Article 4.7.1, the Procurer shall be fully subrogated to the Seller's rights against that person to the extent of the compensation paid by the Procurer to the Seller. Provided that in case the Seller has actually received compensation from the any person other than the Procurer as well as the Procurer as a result of the occurrence of a Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer), then the Seller shall forthwith refund the compensation received by it from the Procurer but only to the extent of the compensation received by the Seller from any person other than the Procurer.



13 ARTICLE 13 : CHANGE IN LAW

13.1 Definitions

In this Article 13, the following terms shall have the following meanings:

13.1.1 "Change in Law" means the occurrence of any of the following events

(i) the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal, of any Law or (ii) a change in interpretation of any Law by a Competent Court of law, tribunal or Indian Governmental Instrumentality provided such Court of law, tribunal or Indian Governmental Instrumentality is final authority under law for such interpretation or (iii) change in any consents, approvals or licenses available or obtained for the Project, otherwise than for default of the Seller, which results in any change in any cost of or revenue from the business of selling electricity by the Seller to the Procurer under the terms of this Agreement,

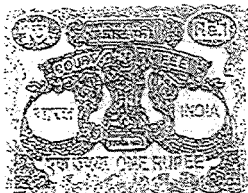
but shall not include (i) any change in any withholding tax on income or dividends distributed to the shareholders of the Seller, or (ii) change in respect of UI Charges or frequency intervals by an Appropriate Commission.

13.1.2 "Competent Court" means:

The Supreme Court or any High Court, or any tribunal or any similar judicial or quasi-judicial body in India that has jurisdiction to adjudicate upon issues relating to the Project.

13.2 *Application and Principles for computing impact of Change in Law*

While determining the consequence of Change in Law under this Article 13, the Parties shall have due regard to the principle that the purpose of compensating the Party affected by such Change in Law, is to restore through Monthly Tariff payments, to the extent contemplated in this Article 13, the affected Party to the same economic position as if such Change in Law has not occurred.



a) **Construction Period**

As a result of any Change in Law, the impact of increase/decrease of Capital Cost of the Project in the Tariff shall be as approved by PSERC:

b) **Operation Period**

As a result of Change in Law, the compensation for any increase/decrease in revenues or cost to the Seller shall be determined and effective from such date, as decided by the Punjab State Electricity Regulatory Commission whose decision shall be final and binding on both the Parties, subject to rights of appeal provided under applicable Law.

Provided that the above mentioned compensation shall be payable only if and for increase/ decrease in revenues or cost to the Seller is in excess of an amount equivalent to 1% of the Letter of Credit in aggregate for a Contract Year.

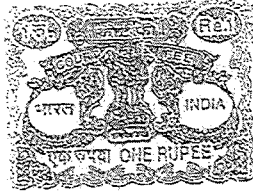
13.3 Notification of Change in Law

13.3.1 If the Seller is affected by a Change in Law in accordance with Article 13.2 and wishes to claim a Change in Law under this Article, it shall give notice to the Procurer of such Change in Law as soon as reasonably practicable after becoming aware of the same or should reasonably have known of the Change in Law.

13.3.2 Notwithstanding Article 13.3.1, the Seller shall be obliged to serve a notice to the Procurer under this Article 13.3.2 if it is beneficially affected by a Change in Law. Without prejudice to the factor of materiality or other provisions contained in this Agreement, the obligation to inform the Procurer contained herein shall be material. Provided that in case the Seller has not provided such notice, the Procurer shall have the right to issue such notice to the Seller.

13.3.3 Any notice served pursuant to this Article 13.3.2 shall provide, amongst other things, precise details of:

- (a) the Change in Law; and
- (b) the effects on the Seller of the matters referred to in Article 13.2.



13.4 Tariff Adjustment Payment on account of Change in Law

13.4.1 Subject to Article 13.2, the adjustment in Monthly Tariff Payment shall be effective from:

- (i) the date of adoption, promulgation, amendment, re-enactment or repeal of the Law or Change in Law; or
- (ii) the date of order/judgment of the Competent Court or tribunal or Indian Governmental Instrumentality, if the Change in Law is on account of a change in interpretation of Law.

13.4.2 The payment for Changes in Law shall be through Supplementary Bill as mentioned in Article 11.8. However, in case of any change in Tariff by reason of Change in Law, as determined in accordance with this Agreement, the Monthly Invoice to be raised by the Seller after such change in Tariff shall appropriately reflect the changed Tariff.

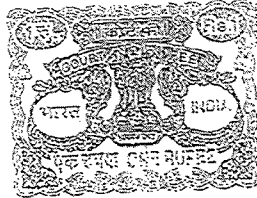


14 ARTICLE 14 : EVENTS OF DEFAULT AND TERMINATION

14.1 Seller Event of Default

The occurrence and continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by the Procurer of their obligations under this Agreement, shall constitute a Seller Event of Default:

- i) the failure to Commission any Unit by the date falling twelve (12) Months after its Scheduled Commercial Operation Date, or
- ii) after the commencement of construction of the Project, the abandonment by the Seller or the Seller's Construction Contractors of the construction of the Project for a continuous period of two (2) Months and such default is not rectified within thirty (30) days from the receipt of first notice from the Procurer in this regard, or
- iii) if at any time following a Unit being Commissioned and during its retest, as per Article 8, such Unit's Tested Capacity is less than ninety two (92) percent of its Contracted Capacity, as existing on the Effective Date, and such Tested Capacity remains below ninety two (92) percent even for a period of three (3) Months thereafter; or
- iv) after Commercial Operation Date of all the Units of the Power Station, the Seller fails to achieve Average Availability of sixty five percent (65%), for a period of twelve (12) consecutive Months or within a non-consecutive period of twelve (12) Months within any continuous aggregate period of thirty six (36) Months, or
- v) the Seller fails to make any payment (a) of an amount exceeding Rupees One (1) Crore required to be made to the Procurer under this Agreement, within three (3) Months after the Due Date of an undisputed invoice /demand raised by the Procurer on the Seller or (b) of an amount upto Rupees One (1) Crore required to be made to the Procurer under this Agreement within six (6) Months after the Due Date of an undisputed invoice/demand, or
- vi) any of the representations and warranties made by the Seller in Schedule 8 of this Agreement; being found to be untrue or inaccurate. Provided however, prior to considering any event specified under this sub-article to be an Event of Default, the Procurer shall give a notice to the Seller in writing of at least thirty (30) days, or
- vii) if the Seller:
 - a) assigns or purports to assign any of its assets or rights in violation of this Agreement; or



- b) transfers or novates any of its rights and/or obligations under this agreement, in violation of this Agreement; or
- viii) if (a) the Seller becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the Seller, or (c) the Seller goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, Provided that a dissolution or liquidation of the Seller will not be an Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company continues to meet the financial and technical requirements of the seller as certified by the lenders till COD of the Power Station, and retains creditworthiness similar to the Seller and expressly assumes all obligations of the Seller under this Agreement and is in a position to perform them; or
- ix) the Seller repudiates this Agreement and does not rectify such breach even within a period of thirty (30) days from a notice from the Procurer in this regard; or
- x) except where due to any Procurer's failure to comply with its material obligations, the Seller is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the Seller within thirty (30) days of receipt of first notice in this regard given by the Procurer to the Seller.
- xi) the Seller fails to complete/fulfill the activities/conditions specified in Article 3.1.2, beyond a period of 8 Months from the specified period in Article 3.1.2 and the right of termination under Article 3.3.2 is invoked by the Procurer; or
- xii) The Seller fails to provide additional bank guarantee to the Procurer in accordance with Article 3.3 of this Agreement, or
- xiii) Occurrence of any other event which is specified in this Agreement to be a material breach/default of the Seller.

14.2 Procurer Event of Default

The occurrence and the continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by the Seller of its obligations under this Agreement, shall constitute the Event of Default on the part of the Procurer:

- i) the Procurer fails to pay (with respect to a Monthly Bill or a Supplementary Bill) an amount exceeding fifteen (15%) of the undisputed part of the most recent Monthly/Supplementary Bill for a period of ninety (90) days after the Due Date and the Seller is unable to

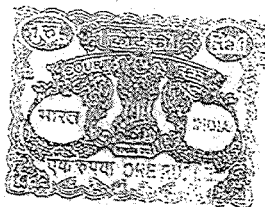


- recover the amount outstanding to the Seller through the Collateral Arrangement and Letter of Credit; or
- ii) the Procurer repudiates this Agreement and does not rectify such breach even within a period of thirty (30) days from a notice from the Seller in this regard; or
 - iii) except where due to any Seller's failure to comply with its obligations, the Procurer is in material breach of any of its obligations pursuant to this Agreement, and such material breach is not rectified by the Procurer within thirty (30) days of receipt of notice in this regard from the Seller to the Procurer;
 - iv) any representation and warranties made by the Procurer in Schedule – 8 of this Agreement, being found to be untrue or inaccurate. Provided however, prior to considering any event specified under this sub-article to be an Event of Default, the Seller shall give a notice to the Procurer in writing of at least thirty (30) days; or
 - v) if (a) the Procurer becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the Procurer, or (c) the Procurer goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, except where such dissolution or liquidation of the Procurer is for the purpose of a merger, consolidation or reorganization and where the resulting entity has the financial standing to perform its obligations under this Agreement and has creditworthiness similar to the Procurer and expressly assumes all obligations of the Procurer under this Agreement and is in a position to perform them; or;
 - vi) occurrence of any other event which is specified in this Agreement to be a material breach or default of the Procurer.

14.3 Procedure for cases of Seller Event of Default

14.3.1 Upon the occurrence and continuation of any Seller Event of Default under Article 14.1, the Procurer shall have the right to deliver to the Seller a Procurer Preliminary Default Notice, which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice.

14.3.2 Following the issue of Procurer Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply.



14.3.3 During the Consultation Period, the Parties shall, save as otherwise provided in this Agreement, continue to perform their respective obligations under this Agreement.

14.3.4 Within a period of seven (7) days following the expiry of the Consultation Period unless the Parties shall have otherwise agreed to the contrary or the Seller Event of Default giving rise to the Consultation Period shall have been remedied, the Lenders may exercise or the Procurer may require the Lenders to exercise their substitution rights and other rights provided to them, if any, under Financing Agreements and the Procurer would have no objection to the Lenders exercising their rights if it is in consonance with provisions of Schedule 10. Alternatively, in case the Lenders do not exercise their rights as mentioned herein above, the Capacity Charge of the Seller shall be reduced by 20% for the period of Seller Event of Default.

14.4 Termination for Procurer Events of Default

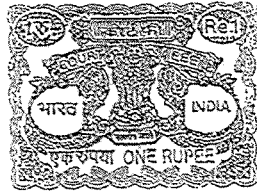
14.4.1 Upon the occurrence and continuation of any Procurer Event of Default pursuant to Article 14.2 (i), the Seller shall follow the remedies provided under Articles 11.5.2

14.4.2 Without in any manner affecting the rights of the Seller under Article 14.4.1, on the occurrence of any Procurer Event of Default specified in Article 14.2 the Seller shall have the right to deliver to the Procurer a Seller Preliminary Default Notice, which notice shall specify in reasonable detail the circumstances giving rise to its issue.

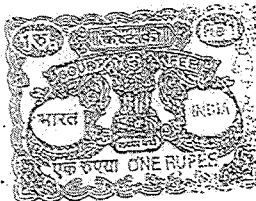
14.4.3 Following the issue of a Seller Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply.

14.4.4 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

14.4.5 (i) After a period of seven (7) days following the expiry of the Consultation Period and unless the Parties shall have otherwise agreed to the contrary or the Procurer Event of Default giving rise to the Consultation Period shall have been remedied, the Seller shall be free to sell the then existing Contracted Capacity to any third party of his choice. Provided the Procurer shall have the liability to make payments for Capacity Charges based on Normative Availability to the Seller for the period three (3) years from the eighth day after the expiry of the Consultation Period. Provided further that in such three



year period, in case the Seller is able to sell electricity to any third party at a price which is in excess of the Energy Charges, then such excess realization will reduce the Capacity Charge payments due from the Procurer. For the avoidance of doubt, the above excess adjustment would be applied on a cumulative basis for the three year period. During such period, the Seller shall use its best effort to sell the Contracted Capacity of the Procurer generated or capable of being generated to such third parties at the most reasonable terms available in the market at such time, having due regard to the circumstances at such time and the pricing of electricity in the market at such time. Provided further, the Seller shall ensure that sale of power to the shareholders of the Seller or any direct or indirect affiliate of the Seller/shareholders of the Seller, is not at a price less than the Tariff, without obtaining the prior written consent of the Procurer. Such request for consent would be responded to within a maximum period of 3 days failing which it would be deemed that the Procurer has given his consent. Provided further that at the end of the three year period, this Agreement shall automatically terminate and thereafter, the Procurer shall have no further Capacity Charge liability towards the Seller. Provided further, the Seller shall have the right to terminate this Agreement with respect to the Procurer even before the expiry of such three year period provided on such termination, the future Capacity Charge liability of the Procurer shall cease immediately.



15 ARTICLE 15 : LIABILITY AND INDEMNIFICATION

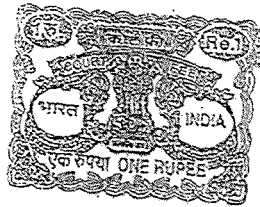
15.1 Indemnity

15.1.1 The Seller shall indemnify, defend and hold the Procurer harmless against:

- (a) any and all third party claims, actions, suits or proceedings against the Procurer for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the Seller of any of its obligations under this Agreement, except to the extent that any such claim, action, suit or proceeding has arisen due to a negligent act or omission, breach of this Agreement or breach of statutory duty on the part of the Procurer, its contractors, servants or agents; and
- (b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest actually suffered or incurred by the Procurer from third party claims arising by reason of (i) breach by the Seller of any of its obligations under this Agreement, (provided that this Article 15 shall not apply to such breaches by the Seller, for which specific remedies have been provided for under this Agreement) except to the extent that any such losses, damages, costs and expenses including legal costs, fines, penalties and interest (together to constitute "Indemnifiable Losses") has arisen due to a negligent act or omission, breach of this Agreement or breach of statutory duty on the part of the Procurer, its contractors, servants or agents or (ii) any of the representations or warranties of the Seller under this Agreement being found to be inaccurate or untrue.

15.1.2 Procurer shall indemnify, defend and hold the Seller harmless against:

- (a) any and all third party claims, actions, suits or proceedings against the Seller, for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the Procurer of any of its obligations under this Agreement except to the extent that any such claim, action, suit or proceeding has arisen due to a negligent act or omission, breach of this Agreement or breach of statutory duty on the part of the Seller, its contractors, servants or agents; and
- (b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest ('Indemnifiable Losses') actually suffered or incurred by the Seller from third party claims arising by reason of (i)



a breach by the Procurer of any of its obligations under this Agreement (Provided that this Article 15 shall not apply to such breaches by the Procurer, for which specific remedies have been provided for under this Agreement.), except to the extent that any such Indemnifiable Losses have arisen due to a negligent act or omission, breach of this Agreement or breach of statutory duty on the part of the Seller, its contractors, servants or agents or (ii) any of the representations or warranties of the Procurer under this Agreement being found to be inaccurate or untrue.

15.2 Monetary Limitation of liability

Each Party shall notify the other Party promptly of its entitlement, and intention, to make any claim for indemnification pursuant to this Article 15.

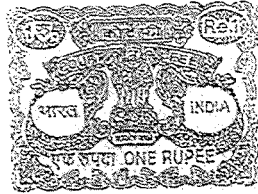
A Party ("Indemnifying Party") shall not be liable to indemnify the other Party ("Indemnified Party") under this Article 15 for any indemnity claims made in a Contract Year until the aggregate of all indemnity claims of the Indemnified Party in a given Contract Year exceeds half a percent (0.5%) of the average annual Tariff Payment for all the Contract Years up to the Contract Year in which the indemnity claim is made

15.3 Procedure for claiming indemnity

15.3.1 Third party claims

(a) Where the Indemnified Party is entitled to indemnification from the Indemnifying Party pursuant to Article 15.1.1(a) or 15.1.2(a), the Indemnified Party shall promptly notify the Indemnifying Party of such claim, proceeding, action or suit referred to in Article 15.1.1(a) or 15.1.2(a) in respect of which it is entitled to be indemnified. Such notice shall be given as soon as reasonably practicable after the Indemnified Party becomes aware of such claim, proceeding, action or suit. The Indemnifying Party shall be liable to settle the indemnification claim within thirty (30) days of receipt of the above notice. Provided however that, if:

- (i) the Parties choose to contest, defend or litigate such claim, action, suit or proceedings in accordance with Article 15.3.1(b) below; and;



(ii) the claim amount is not required to be paid/deposited to such third party pending the resolution of the Dispute,

the Indemnifying Party shall become liable to pay the claim amount to the Indemnified Party or to the third party, as the case may be, promptly following the resolution of the Dispute, if such Dispute is not settled in favour of the Indemnified Party.

(b) The Indemnified Party may contest, defend and litigate a claim, action, suit or proceeding for which it is entitled to be indemnified under Article 15.1.1(a) or 15.1.2(a) and the indemnifying Party shall reimburse to the indemnified Party all reasonable costs and expenses incurred by the indemnified party. However, such indemnified Party shall not settle or compromise such claim, action, suit or proceedings without first getting the consent of the indemnifying Party, which consent shall not be unreasonably withheld or delayed.

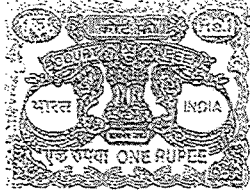
An Indemnifying Party may, at its own expense, assume control of the defence of any proceedings brought against the Indemnified Party if it acknowledges its obligation to indemnify such Indemnified Party, gives such Indemnified Party prompt notice of its intention to assume control of the defence, and employs an independent legal counsel at its own cost that is reasonably satisfactory to the Indemnified Party.

15.4 Indemnifiable Losses

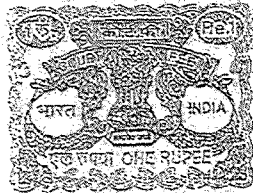
Where an Indemnified Party is entitled to Indemnifiable Losses from the Indemnifying Party pursuant to Article 15.1.1(b) or 15.1.2(b), the Indemnified Party shall promptly notify the Indemnifying Party of the Indemnifiable Losses actually incurred by the Indemnified Party. The Indemnifiable Losses shall be reimbursed by the Indemnifying Party within thirty (30) days of receipt of the notice seeking Indemnifiable Losses by the Indemnified Party. In case of non payment of such losses after a valid notice under this Article 15.4, such event shall constitute a payment default under Article 14.

15.5 Limitation on Liability

Except as expressly provided in this Agreement, neither the Seller nor the Procurer nor their respective officers, directors, agents, employees or Affiliates (or their officers, directors, agents or employees), shall be liable or responsible to the other Party or its Affiliates, officers, directors, agents,



employees, successors or permitted assigns (or their respective insurers) for incidental, indirect or consequential damages, connected with or resulting from performance or non-performance of this Agreement, or anything done in connection herewith, including claims in the nature of lost revenues, income or profits (other than payments expressly required and properly due under this Agreement), any increased expense of, reduction in or loss of power generation production or equipment used therefore, irrespective of whether such claims are based upon breach of warranty, tort (including negligence, whether of the Procurer, the Seller or others), strict liability, contract, breach of statutory duty, operation of law or otherwise. The Procurer shall have no recourse against any officer, director or shareholder of the Seller or any Affiliate of the Seller or any of its officers, directors or shareholders for such claims excluded under this Article. The Seller shall have no recourse against any officer, director or shareholder of the Procurer, or any affiliate of the Procurer or any of its officers, directors or shareholders for such claims excluded under this Article.



16 ARTICLE 16: ASSIGNMENTS AND CHARGES

16.1 Assignments

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns. Subject to Article 16.2, this Agreement shall not be assigned by any Party (and no Party shall create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement) other than by mutual consent between the Parties to be evidenced in writing:

Provided that, such consent shall not be withheld if the Procurer seeks to transfer to any transferee all of its rights and obligations under this Agreement; and

- (a) such transferee is either the owner or operator of all or substantially all of the distribution system of the Procurer and /or such transferee is a successor entity of the Procurer; and
- (b) this Agreement and the other Project Documents shall continue to remain valid and binding on such successor.

Seller shall be entitled to assign its rights and obligations under this Agreement in favor of the Selectee duly appointed pursuant to the terms of Schedule 10 of this Agreement.

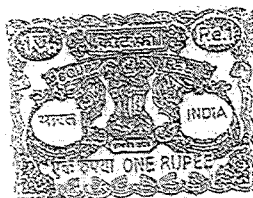
16.2 Permitted Charges

16.2.1 Notwithstanding anything contained in Article 16.1, the Seller may create any encumbrance over all or part of the receivables, Payment Mechanism or the other assets of the Project or the Project Documents in favour of the Lenders or the Lender's Representative on their behalf, as security for:

- (a) amounts payable under the Financing Agreements; and
- (b) any other amounts agreed by the Parties.

Provided that:

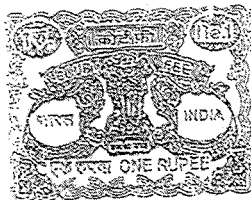
- I the Lenders or the Lender's Representative on their behalf shall have agreed in writing to the provisions of Schedule 10 of this Agreement; and
- II any encumbrances granted by the Seller in accordance with this Article 16.2.1 shall contain provisions pursuant to which the Lenders or the Lender's Representative on their behalf agrees unconditionally with



the Seller acting for itself and as trustee of the Procurer to release from such encumbrances all of the right, title and interest to Additional Compensation so as to enable the Procurer to claim its right of subrogation. For the purposes of this Article, Additional Compensation shall mean the compensation that the Seller is entitled, whether actually or contingently, to receive from the Procurer as well as compensated by any person other than the Procurer for the same event.

16.2.2 Article 16.1 does not apply to:

- (a) liens arising by operation of law (or by an agreement evidencing the same) in the ordinary course of the Seller carrying out the Project;
- (b) pledges of goods, the related documents of title and / or other related documents, arising or created in the ordinary course of the Seller carrying out the Project; or
- (c) security arising out of retention of title provisions in relation to goods acquired in the ordinary course of the Seller carrying out the Project.



17 ARTICLE 17: GOVERNING LAW AND DISPUTE RESOLUTION

17.1 *Governing Law*

This Agreement shall be governed by and construed in accordance with the Laws of India.

17.2 *Amicable Settlement*

17.2.1 Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with this Agreement including its existence or validity or termination (collectively "Dispute") by giving a written notice to the other Party, which shall contain:

- (i) a description of the Dispute;
- (ii) the grounds for such Dispute; and
- (iii) all written material in support of its claim.

17.2.2 The other Party shall, within thirty (30) days of issue of dispute notice issued under Article 17.2.1, furnish:

- (i) counter-claim and defences, if any, regarding the Dispute; and
- (ii) all written material in support of its defences and counter-claim.

17.2.3 Within thirty (30) days of issue of notice by any Party pursuant to Article 17.2.1 or Article 17.2.2, both the Parties to the Dispute shall meet to settle such Dispute amicably. If the Parties fail to resolve the Dispute amicably within thirty (30) days of receipt of the notice referred to in the preceding sentence, the Dispute shall be referred to Dispute Resolution in accordance with Article 17.3.

17.3 *Dispute Resolution*

17.3.1 Where any Dispute arises from a claim made by any Party for any change in or determination of the Tariff or any matter related to Tariff or claims made by any Party which partly or wholly relate to any change in the Tariff or determination of any of such claims could result in change in the Tariff or (ii) relates to any matter agreed to be referred to the Appropriate Commission under Articles 4.7.1, 13.2, 18.1 or clause 10.1.3 of Schedule 10 hereof, such



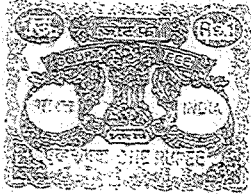
Dispute shall be submitted to adjudication by the Appropriate Commission. Appeal against the decisions of the Appropriate Commission shall be made only as per the provisions of the Electricity Act, 2003, as amended from time to time.

17.3.2 If the Dispute arises out of or in connection with any claims not covered in Article 17.3.1, such Dispute shall be resolved by arbitration under the Indian Arbitration and Conciliation Act, 1996 and the Rules of the Indian Council of Arbitration, in accordance with the process specified in this Article. In the event of such Dispute remaining unresolved as referred to in Article 17.2.3 hereof, any party to such Dispute may refer the matter to registrar under the Rules of the Indian Council of Arbitration.

- (i) The Arbitration tribunal shall consist of three (3) arbitrators to be appointed in accordance with the Indian Council of Arbitration Rules
- (ii) The place of arbitration shall be Chandigarh, India. The language of the arbitration shall be English.
- (iii) The arbitration tribunal's award shall be substantiated in writing. The arbitration tribunal shall also decide on the costs of the arbitration proceedings and the allocation thereof.
- (iv) The award shall be enforceable in any court having jurisdiction, subject to the applicable Laws.
- (v) The provisions of this Clause shall survive the termination of this PPA for any reason whatsoever.

17.4 Parties to Perform Obligations

Notwithstanding the existence of any Dispute and difference referred to the Appropriate Commission or the arbitral tribunal as provided in Article 17.3 and save as the Appropriate Commission or the arbitral tribunal may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in dispute) under this Agreement.



18 ARTICLE 18 : MISCELLANEOUS PROVISIONS

18.1 Amendment

This Agreement may only be amended or supplemented by a written agreement between the Parties and after duly obtaining the approval of the Appropriate Commission, where necessary.

18.2 Third Party Beneficiaries

This Agreement is solely for the benefit of the Parties and their respective successors and permitted assigns and shall not be construed as creating any duty, standard of care or any liability to, any person not a party to this Agreement.

18.3 No Waiver

A valid waiver by a Party shall be in writing and executed by an authorized representative of that Party. Neither the failure by any Party to insist on the performance of the terms, conditions, and provisions of this Agreement nor time or other indulgence granted by any Party to the other Party shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right under this Agreement, which shall remain in full force and effect.

18.4 Entirety

18.4.1 This Agreement and the Schedules are intended by the Parties as the final expression of their agreement and are intended also as a complete and exclusive statement of the terms of their agreement.

18.4.2 Except as provided in this Agreement, all prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement or the sale or purchase of Electrical Output and Contracted Capacity under this Agreement to the Procurer by the Seller shall stand superseded and abrogated.

18.5 Confidentiality

The Parties undertake to hold in confidence this Agreement and Project Documents and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

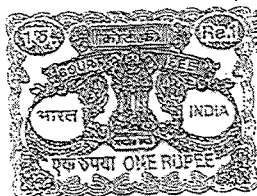
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- (a) to their professional advisors;
- (b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities; or
- (c) disclosures required under Law.

without the prior written consent of the other Party.

Provided that the Seller agrees and acknowledges that the Procurer may at any time, disclose the terms and conditions of the Agreement and the Project Documents to any person, to the extent stipulated under the Law .

18.6 Affirmation

The Seller and the Procurer, each affirm that:

- (i) neither it nor its respective directors, employees, or agents has paid or undertaken to pay or shall in the future pay any unlawful commission, bribe, pay-off or kick-back; and
- (ii) it has not in any other manner paid any sums, whether in Indian currency or foreign currency and whether in India or abroad to the other Party to procure this Agreement, and the Seller and the Procurer hereby undertake not to engage in any similar acts during the Term of Agreement.

18.7 Severability

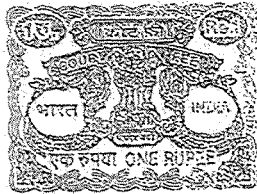
The invalidity or enforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement, unless the part held invalid or unenforceable is fundamental to this Agreement.

18.8 No Partnership

None of the provisions of this Agreement shall constitute a partnership or agency or any such similar relationship between the Seller and the Procurer.

18.9 Survival

Notwithstanding anything to the contrary herein, the provisions of this Agreement, including Article 3.3.2, Article 10.2 (Application of Insurance



Proceeds), Article 12 (Force Majeure), Article 14 (Events of Default and Termination), Article 15 (Liability and Indemnification), Article 17 including Article 17.3.2 (Governing Law and Dispute Resolution), Article 18 (Miscellaneous), and other Articles and Schedules of this Agreement which expressly or by their nature survive the term or termination of this Agreement shall continue and survive any expiry or termination of this Agreement.

18.10 Notices

All notices to be given under this Agreement shall be in writing and in the English Language.

All notices must be delivered personally, by registered or certified mailpost or any method duly acknowledged or facsimile to the addresses below:

Seller :

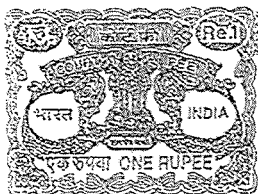
The Managing Director
GVK Power (Goindwal Sahib) Limited
Paigah House, 156-159, S. P. Road
Secunderabad - 500 003
Fax : 040 - 27902665

Procurer :

The Chairman
Punjab State Electricity Board
The Mall
Patiala - 147 001

All notices or communications given by email or facsimile shall be confirmed by sending a copy of the same via post office in an envelope properly addressed to the appropriate Party for delivery by registered mail. All Notices shall be deemed validly delivered upon receipt evidenced by an acknowledgement of the recipient, unless the Party delivering the notice can prove in case of delivery through the registered post that the recipient refused to acknowledge the receipt of the notice despite efforts of the post authorities..

Any Party may by notice of at least fifteen (15) days to the other Parties change the address and / or addresses to which such notices and communications to it are to be delivered or mailed.



18.11 Language

The language of this Agreement and all written communication between the Parties relating to this Agreement shall be in English.

18.12 Breach of Obligations

The Parties acknowledge that a breach of any of the obligations contained herein would result in injuries. The Parties further acknowledge that the amount of the liquidated damages or the method of calculating the liquidated damages specified in this Agreement is a genuine and reasonable pre-estimate of the damages that may be suffered by the non-defaulting party in each case specified under this Agreement.

18.13 Nomination Restriction

Notwithstanding anything contained to the contrary in this Agreement, wherever a reference is made to the right of the Procurer to nominate a third Party to receive benefits under this Agreement, such Third Party shall have a financial standing comparable to that of the Procurer in question.

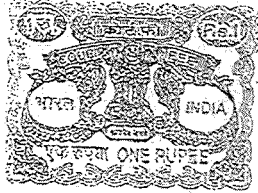
18.14 Commercial Acts

The Procurer and Seller unconditionally and irrevocably agree that the execution, delivery and performance by each of them of this Agreement and those agreements included in the Collateral Arrangement to which it is a Party constitute private and commercial acts rather than public or governmental acts;

18.15 Restriction of Shareholders/Owners Liability

Both Parties expressly agree and acknowledge that none of the shareholders of the Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned party under this Agreement. Further, the financial liabilities of the shareholder/s of each Party to this Agreement, in such Party, shall be restricted to the extent provided in Section 426 of the Indian Companies Act, 1956.

The provisions of this Article shall supercede any other prior agreement or understanding, whether oral or written, that may be existing between the Procurer, Seller, shareholders/ owners of the Seller, shareholders/ owners of



the Procurer before the date of this Agreement, regarding the subject matter of this Agreement.

18.16 No Consequential or Indirect Losses

The liability of the Seller and the Procurer shall be limited to that explicitly provided in this Agreement. Provided that notwithstanding anything contained in this Agreement, under no event shall the Procurer or the Seller claim from one another any indirect or consequential losses or damages.

IN WITNESS WHEREOF the Parties have executed these presents through their authorized representatives at Patiala.

For and on behalf of
Punjab State Electricity Board

Harinder Singh Brar
(Er. H. S. Brar), Chairman
Signature with seal
CHAIRMAN
P.S.E.B. PATIALA

Witness:

[Signature]

1. Er. G.S. Sra
Member/Generation

[Signature]
2. Er. V. K. Singal
Chief Engineer/Hydel Projects

For and on behalf of
GVK Power (Goindwal Sahib) Limited

[Signature]
(S. Madhusudan), Director
Signature with seal

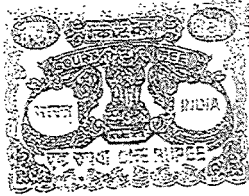


Witness:

[Signature]

1. Debashis Ghosh
General Manager

[Signature]
2. Oliver Tyagi
Dy. G.M. (PD)

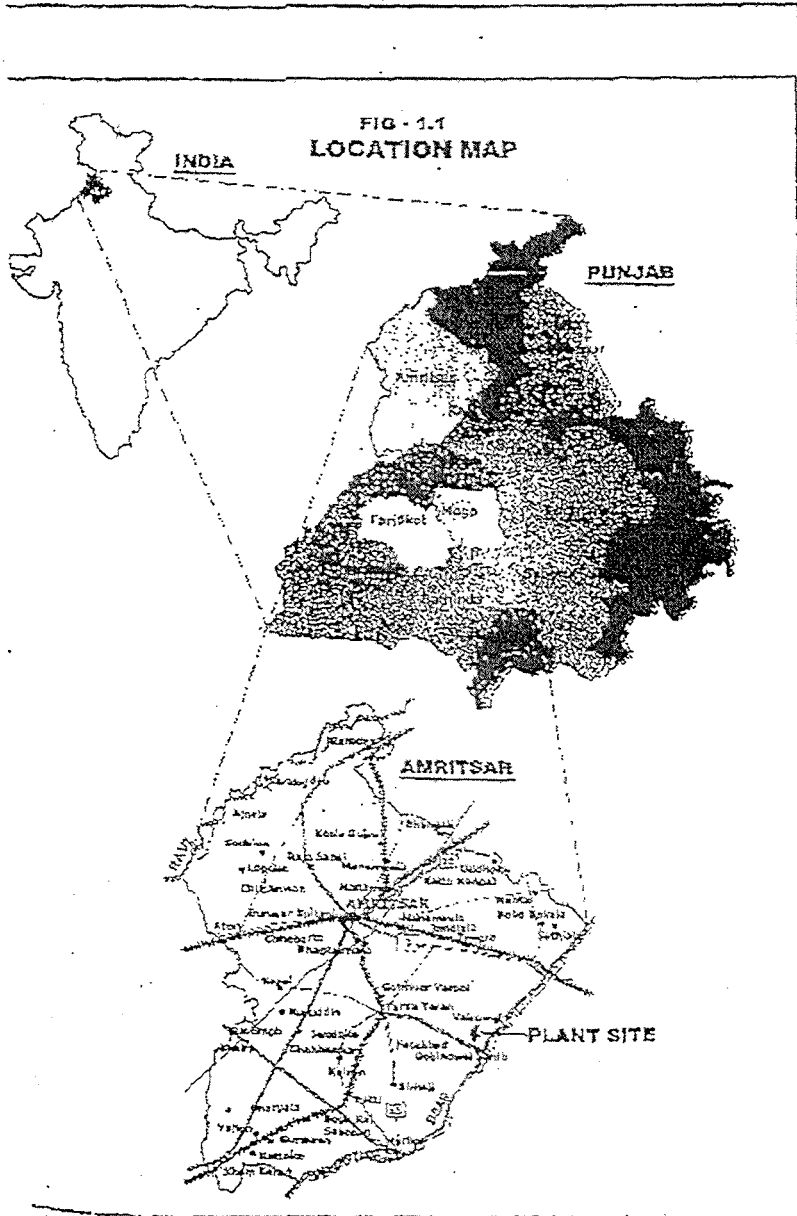
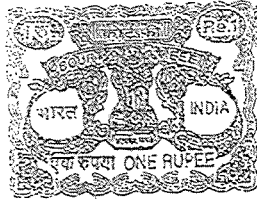


1. **SCHEDULE 1: SITE**

2x270 MW Goindwal Sahib Thermal Power Project:

SITE DESCRIPTION

Sr.No.	Item	Details
1.	Location	About 45 Km from Amritsar, 24 km. from Tarn-Taran and 40 km from Jalandhar, Tarn Taran- Kapurthala Road about 3 km to Amritsar, Punjab (India).
2.	Nearest Railway Station	Khadoor Sahib terminal station .
3.	Nearest air port	Amritsar
4.	Plant Elevation	222.5 m above MSL
5.	Ambient Air temperature	
	a) Maximum	46.7 Degree Centigrade
	b) Minimum	-2.8 Degree Centigrade
	c) Reference Temp. for design of Electrica/I&C equipment.	50 Degree Centigrade
6.	Relative humidity	
	a) Maximum	74%
	b) Minimum	46%
7.	Rainfall	South Westerly summer monsoons
	a) Annual average	649.1 mm
	b) Maximum for one day	169 mm
8.	Wind data	
	a) Prevailing wind direction	North west to south east for nine months and reverse for 3 months.
	b) Mean wind speed	1.3 km/hr to 12.3km/hr
	c) Basic wind speed	47 meters/second
	d) Wind pressure	As per IS 875 (Part-3)-1987
9.	SEISMIC DATA	
	a) Zone	IV as per latest revision of IS:1893
10.	Climate	Generally dry except the brief south westerly monsoon season, a hot summer and a bracing winter.



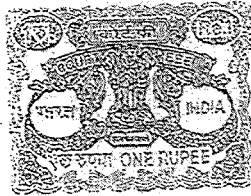
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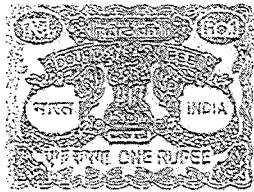
2. SCHEDULE 2: INITIAL CONSENTS

S.No	Name of the Clearance
1	Approval from Government of Punjab
2	No Objection Certificate from Punjab State Pollution Control Board
3	Environmental and Forest Clearance from MOEF, GOI
4	Water Availability from State Government and Water Supply Agreement
5	Civil Aviation Clearance for Chimney height from National Airports Authority
6	NOC from Ministry of Defence
7	Permission to discharge effluents

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3. SCHEDULE 3: FUNCTIONAL SPECIFICATION

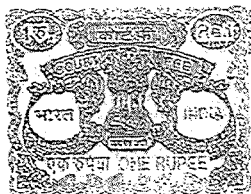
S No.	Description	Unit	Particulars
<i>1.1 Grid Conditions at Interconnection Point</i>			
(i)	Voltage : Nominal	KV	[220]
	Variation $\pm 10\%$	Min.- 200KV Max.-245 KV	
(ii)	Frequency : Nominal	Hz.	[50]
	Variation	%	-3% to +1.5%
(iii)	Combined Voltage and Frequency variation for Contracted Capacity	%	[± 5]
(iv)	Power Factor : Nominal		[.85] lag
	Variation		[0.8] to [0.95] lag lead
(v)	Basic Impulse Level (Peak)	kV	[1050]

1.2 Fault Levels:

- (i) 3 Phase Minimum S.C Current rating and duration for Switchgear- 40kA for 1second
- (ii) Target fault Clearance time Maximum ms 100

1.3 Ramp Rates

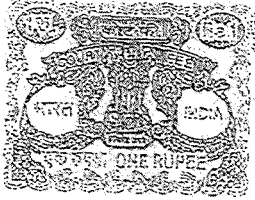
All Units of the Power Station shall be capable of increasing or decreasing their output (generation level) by not less than one percent (1%) per minute. Such capability shall be demonstrated during the Unit load of more than 50%.



4. SCHEDULE 4: COMMISSIONING AND TESTING

1.1 Performance Test

- (i) (a) The Performance Test shall be conducted under any and all ambient conditions (temperature, humidity etc.) and any and all Fuel qualities that may exist during the time of the Performance Test and no corrections in final gross and net output of the Unit will be allowed as a result of prevailing ambient conditions or Fuel quality.
- (b) The correction curves will only be used if the Grid System operation during the Performance Test exceeds electrical system limits.
- (c) The Performance Test shall be deemed to have demonstrated the Contracted Capacity of the Unit under all designed conditions and therefore no adjustments shall be made on account of fuel quality or ambient conditions.
- (d) The Seller shall perform in respect of each Unit a Performance Test, which such Unit shall be deemed to have passed if it operates continuously for seventy two consecutive hours at or above ninety five (95) percent of its Contracted Capacity, as existing on the Effective Date, and within the electrical system limits and the Functional Specifications.
- (ii) For the purposes of any Performance Test pursuant to this sub-article 1.1, the electrical system limits to be achieved shall be as follows:
- (a) **Voltage**
The Unit must operate within the voltage levels described in the Functional Specification for the duration of the Performance Test. If, during the Performance Test, voltage tests cannot be performed due to Grid System, data supplied from tests of the generator step-up transformers and generators supplied by the manufacturers shall be used to establish the ability of the Unit to operate within the specified voltage limits.
- (b) **Grid System Frequency**
The Unit shall operate within the Grid System frequency levels described in the Functional Specification for the duration of the Performance Test.
- (c) **Power Factor**
The Unit shall operate within the power factor range described in the Functional Specification for the duration of the Performance Test. If, during the Performance Test, power factor tests cannot be performed due to the Grid System, data supplied from tests of the generators and the generator step-up transformers supplied by the manufacturers shall



be used to establish the ability of the Unit to operate within the specified power factor range.

(d) **Fuel quality and cooling water temperature**

The Unit must operate to its Contracted Capacity with Fuel quality and water temperature available at the time of Testing and no adjustment shall be allowed for any variation in these parameters.

iii As a part of the Performance Test, the Seller shall demonstrate that the Unit meets the Functional Specifications for Ramping rate as mentioned in Schedule 3 . For this purpose, representative samples of ramp rates shall be taken, by ramping up or down the gross turbine load while maintaining the required temperatures and temperature differences associated with each ramp rate within the turbine while maintaining all other operational parameters within equipment limits.

1.2 Testing and Measurement procedures applied during Performance Test shall be in accordance with codes, practices or procedures as generally/ normally applied for the Performance Tests

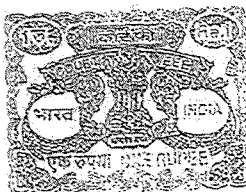
1.3 The Seller shall comply with the prevalent Laws, rules and regulations as applicable to the provisions contained in this Schedule from time to time.



5. SCHEDULE 5 : AVAILABILITY FACTORS

The following matters shall be determined as per the provisions of the Grid Code and ABT:

- a. Availability declaration and calculation of Availability or Availability Factor;
- b. Requirement for Spinning Reserves;
- c. Procedure for revision of Availability;
- d. Consequences of failure to demonstrate capacity or misdeclarations of capacity; and
- e. Other matters which may be related to Availability or Availability Factor.



6 SCHEDULE 6: TARIFF

1.1 General

i. The method of determination of Tariff Payments for any Contract Year during the Term of Agreement shall be in accordance with this Schedule. For the purpose of payments, the Tariff will be determined by the PSERC after the receipt of an application for determination of the Tariff from the Seller

ii. The Tariff shall be paid in two parts comprising of Capacity and Energy Charge.

iii. The full Capacity Charges shall be payable based on the Contracted Capacity at Normative Availability and Incentive shall be provided for Availability beyond 85% as provided in this Schedule. In case of Availability being lower than the Normative Availability, the Capacity Charges shall be payable on proportionate basis in addition to the penalty to be paid by Seller as provided in this Schedule.

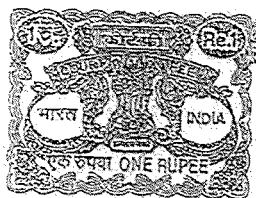
1.2 Monthly Tariff Payment

1.2.1 Components of Monthly Tariff Payment

The Monthly Bill for any Month in a Contract Year shall consist of the following:

- i. Monthly Capacity Charge Payment in accordance with Article 1.2.2 below;
- ii. Monthly Energy Charge for Scheduled Energy in accordance with Article 1.2.3 below;
- iii. Incentive Payment determined in accordance with Article 1.2.4 below (applicable on annual basis and included only in the Monthly Tariff Payment for the first month of the next Contract Year);
- iv. Penalty Payment determined in accordance with Article 1.2.5 below (applicable on annual basis and included only in the Monthly Tariff Payment for the first month of the next Contract Year);
- v. Penalty Payment determined in accordance with Article 1.2.8 below (applicable on annual basis and included only in the Monthly Tariff Payment for the first month of the next Contract Year)

1.2.2 Monthly Capacity Charge Payment - The Monthly Capacity Charges based on the Capital Cost as approved by PSERC shall be paid as per CERC (Terms & Conditions of tariff) Regulations as applicable. Provided, no Capacity Charges shall be paid for the Settlement Period during which the RLDC has not allowed the operation of the Power Station due to Seller's failure to operate the Power Station as per the provisions of Grid Code.



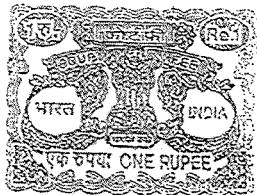
1.2.3 Monthly Energy Charges

1.2.3.1 The Energy Charges shall be calculated and paid as approved by PSERC as per CERC (Terms & Conditions of tariff) Regulations as applicable.

1.2.3.2 Source and Cost of Coal and Secondary Fuel

1.2.3.2.1. The fuel charges linked to Coal cost based on the quantity and quality of coal delivered at the Project Site (Goindwal Sahib) are not to exceed the cost as prevailing in the PSEB's existing Pachhawara Captive Coal Mine. Thus the coal cost of Pachhawara mine will be the maximum price at which coal would be supplied to GSTPS. The Seller in association with the procurer shall resort to a competitive bidding process, preferably international both for developing and operating the captive coal block at Tokisud North subblock and any other block allocated to the project and the lowest cost emanating as a result of this exercise shall not be more than the cost of the existing Pachhawara captive coal block which will form part of the mining agreement and be adopted for the purpose of working out the variable (fuel) charges. However the discount rate for 'F' grade coal will be decided by PSERC.

1.2.3.2.2 If the coal production rate from the Captive Coal Mine and the additional coal block partly allocated for the project is higher than the requirement of the Project such surplus coal production, if any, will be delivered to other thermal projects of the Procurer, as directed by the Procurer. In case the Project is shut down due to Force Majeure, the coal produced by the Captive Coal Mine and the additional coal block shall be supplied to any or all of the existing power projects of Procurer as directed by Procurer. Similarly in case Captive Coal Mine commences the production of coal ahead of the COD of the project, coal so produced shall be supplied to the existing thermal power stations of Procurer as directed by Procurer. The coal shall be supplied to the Procurer's other Projects at the same coal



price as mentioned in the Fuel Supply Agreement for the Project. Sale to the existing projects of the Procurer shall be subject to the approval of Ministry of Coal, Govt. of India. The delivery point for supply of coal to the Procurer's other Projects shall be the premises of the Captive Coal Mine. However the Seller shall arrange for transportation of coal to other projects by diverting the supplies under the fuel transportation agreement with the Railways for which freight charges shall be payable by PSEB.

1.2.3.2.3 The Seller shall purchase the Secondary Fuel from the Public Sector Undertakings like Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd, Hindustan Petroleum Corporation Ltd etc. through Competitive Bidding.

1.2.4 Contract Year Energy Incentive Payment.

If and to the extent the Availability in a Contract Year exceeds eighty five percent (85%), an incentive at the rate of forty (40%) of the Capacity Charges (in Rs./kWh) for such Contract Year subject to a maximum of twenty five (25) paise /kwhr, shall be allowed on the energy (in kwh) corresponding to the Availability in excess of eighty five percent (85%).

1.2.5 Contract Year Penalty for Availability below 75% during the Contract Year

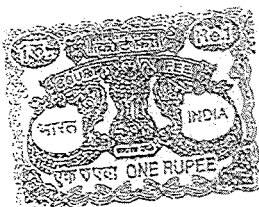
In case the Availability for a Contract Year is less than 75%, the Seller shall pay a penalty at the rate of twenty percent (20%) of the simple average Capacity Charge (in Rs./kWh) for all months in the Contract Year applied on the energy (in kwh) corresponding to the difference between 75% and Availability during such Contract Year.

1.2.6 Deviation from the schedule

Variation between Scheduled Energy and actual energy at the Delivery Point shall be accounted for through Unscheduled Interchange (UI) Charges as detailed in the Grid Code and ABT.

1.2.7 Transmission/Wheeling Charges and Scheduling Charges

The payment of transmission/wheeling charges shall be settled between the CTU/STU and the Procurer. The payment of scheduling charges to the respective nodal agency (RLDC or SLDC) shall be the responsibility of the Procurer.



1.2.8 Penalty and rights relating to minimum guaranteed quantity of fuel

In case Seller has to pay penalty to the Fuel supplier for not purchasing the minimum guaranteed quantity of Fuel mentioned in the Fuel Supply Agreement and if during that Contract Year Availability of the Commissioned Units is greater than the Minimum Offtake Guarantee but the Procurer has not Scheduled Energy corresponding to such Minimum Off-take Guarantee during that Contract Year, then Seller will raise an invoice for the lower of the following amount, (a) penalty paid to the Fuel supplier under the Fuel Supply Agreement in that Contract Year, along with documentary proof for payment of such penalty, or

(b) an amount corresponding to twenty percent (20%) of cumulative Monthly Capacity Charge Payment (in Rs.) by the Procurer made for all the months in that Contract Year multiplied by $(1 - x/y)$ where:

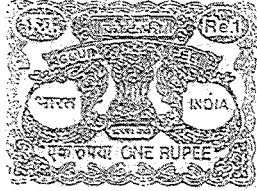
X is the Scheduled Energy during the Contract Year for the Procurer (in kwh); and

Y is the Scheduled Energy corresponding to Minimum Offtake Guarantee for the Procurer during the Contract Year (in kwh).

Provided within ten (10) days of the end of each Month after the COD of the 1st Unit, the Seller shall provide a statement to the Procurer, providing a comparison of the cumulative despatch for all previous months during the Contract Year with the Minimum Offtake Guarantee of the Procurer. Further, such statement shall also list out the deficit, if any, in the Fuel Offtake under the Fuel Supply Agreement, due to Cumulative Despatch being less than the Minimum Offtake Guarantee. In case of a Fuel Offtake Deficit within a period of fifteen (15) days from the date of receipt of the above statement from the Seller and after giving a prior written notice of atleast seven (7) days to the Seller, the Procurer shall have the rights to avail himself such deficit at the same price at which such deficit fuel was available to the Seller under the Fuel Supply Agreement and to sell such deficit to third parties.

1.2.9 Sale of Infirm Power:

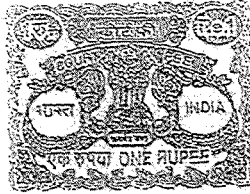
The procurer shall pay only the primary & secondary fuel charges for all infirm power delivered to it by the seller.



1.3 Settlement of Bills:

1. The penalty of actual Availability shortfall during the Contract Year, Deviation from the schedule, Transmission & Scheduling Charges, and Penalty to be paid to fuel supplier will be settled as detailed in Article 1.2.2, Article 1.2.5, Article 1.2.6, Article 1.2.7 and Article 1.2.8 of this Schedule.

2. Notwithstanding anything contained in this agreement, no separate reimbursement shall be allowed for the cost of the secondary fuel.



7 SCHEDULE 7: DETAILS OF INTERCONNECTION POINT AND FACILITIES

1. Supply of Information

The Seller shall within a period of two (2) Month after the date of Financial Closing (or such other date as is mutually agreed between the Parties), provide the Procurer with such information about the design of the Project as it may reasonably require to enable it to design the Interconnection Facilities.

2. Cost of Interconnection Facilities

The Procurer shall be responsible for the financing, design, construction, installation commissioning, operation and maintenance of the Interconnection Facilities and shall bear all costs associated with its rights and obligations under this Schedule 7 in accordance with the terms of this Agreement.

3. Ownership of Interconnection Facilities

The Procurer shall own the Interconnection Facilities.

4. Interconnection Equipment on Seller's side of Interconnection Point

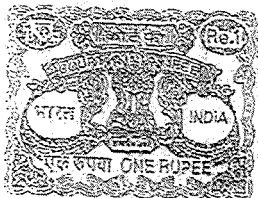
The Seller shall be responsible for designing, constructing, installing and maintaining all auxiliary and interconnecting equipment on the Seller's side of the Interconnection Point and the Seller shall have ownership rights in all such auxiliary and Interconnection Equipment.

5. Protection Devices

Protection devices shall be approved by the Procurer (which devices shall conform to the Procurer's system requirements) on or prior to the date of Financial Closing. After the date of Financial Closing, subject to giving the Seller reasonable notice, the Procurer may require the Seller to modify or expand the requirements for protective devices and the Procurer shall reimburse the Seller for the reasonable costs of such modification or expansion.

6. Power Line Carrier Communication (PLCC)

The Seller and Procurer will liase with each other for design, installation of PLCC equipment on or prior to the date of Financial Closing. The Seller and



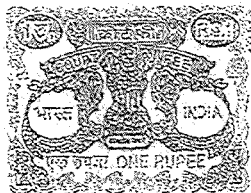
the Procurer will bear the cost of the equipment at their ends of the Interconnection Facility.

7. Changes Affecting Protective Devices

Each Party shall notify the other Party as soon as is reasonably practical any changes to either the Project's or the Procurer's transmission system that may affect the proper co-ordination of protective devices between the two systems.

8. Testing

The Parties shall co-operate in testing the Interconnection Facilities prior to Synchronisation of a Generating Unit and from time to time as either Party may reasonably require. All such testing shall be carried out on a timely basis.



8 SCHEDULE 8: REPRESENTATION AND WARRANTIES

1. *Representations and Warranties by the Procurer*

The Procurer hereby represents and warrants to and agrees with the Seller as follows and acknowledges and confirms that the Seller is relying on such representations and warranties in connection with the transactions described in this Agreement:

1.1 The said Procurer has all requisite powers authorising and has been duly authorised to execute and consummate this Agreement ;

1.2 This Agreement is enforceable against the said Procurer in accordance with its terms;

1.3 The consummation of the transactions contemplated by this Agreement on the part of the said Procurer will not violate any provision of nor constitute a default under, nor give rise to a power to cancel any charter, mortgage, deed of trust or lien, lease, agreement, license, permit, evidence of indebtedness, restriction, or other contract to which the said Procurer is a party or to which said Procurer is bound, which violation, default or power has not been waived;

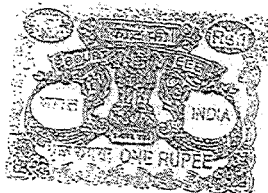
1.4 The said Procurer is not insolvent and no insolvency proceedings have been instituted, nor threatened or pending by or against the said Procurer;

1.5 There are no actions, suits, claims, proceedings or investigations pending or, to the best of the said Procurer's knowledge, threatened in writing against the said Procurer at law, in equity, or otherwise, and whether civil or criminal in nature, before or by, any court, commission, arbitrator or governmental agency or authority, and there are no outstanding judgements, decrees or orders of any such courts, commission, arbitrator or governmental agencies or authorities, which materially adversely affect its ability to comply with its obligations under this Agreement.

1.6 The Procurers makes all the representations and warranties above to be valid as on the date of this Agreement.

2. *Representation and Warranties of the Seller*

The Seller hereby represents and warrants to and agrees with the Procurer as follows and acknowledges and confirms that the Procurer is relying on such representations and warranties in connection with the transactions described in this Agreement:



2.1 The Seller has all requisite power authorising and has been duly authorised to execute and consummate this Agreement;

2.2 This Agreement is enforceable against the Seller in accordance with its terms;

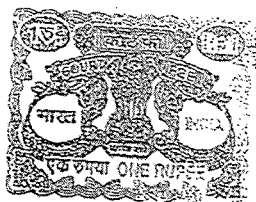
2.3 The consummation of the transactions contemplated by this Agreement on the part of the Seller will not violate any provision of nor constitute a default under, nor give rise to a power to cancel any charter, mortgage, deed of trust or lien, lease, agreement, license, permit, evidence of indebtedness, restriction, or other contract to which the Seller is a party or to which the Seller is bound which violation, default or power has not been waived;

2.4 The Seller is not insolvent and no insolvency proceedings have been instituted, or not threatened or pending by or against the Seller;

2.5 There are no actions, suits, claims, proceedings or investigations pending or, to the best of Seller's knowledge, threatened in writing against the Seller at law, in equity, or otherwise, and whether civil or criminal in nature, before or by, any court, commission, arbitrator or governmental agency or authority, and there are no outstanding judgements, decrees or orders of any such courts, commission, arbitrator or governmental agencies or authorities, which materially adversely affect its ability to execute the Project or to comply with its obligations under this Agreement.

2.6 The Seller has neither made any statement nor provided any information, which was materially inaccurate or misleading at the time when such statement was made or information was provided. Further, all the confirmations, undertakings, declarations and representations made by the Seller are true and accurate and there is no breach of the same.

2.7 The Seller makes all the representations and warranties above to be valid as on the date of this Agreement.



9. SCHEDULE 9: FORMAT OF THE PERFORMANCE GUARANTEE

In consideration of the [Insert name of the Selected Bidder or Selected Bidder on behalf of the Seller] agreeing to undertake the obligations under the PPA and the other Project Documents and [Insert the name of the Procurer], agreeing to execute the PPA and the other Project Documents inter alia with the Seller, regarding setting up the Power Station of the capacity of MW, at [Insert name of the place] for supply of power there from on long term basis, the _____ (insert name of bank) (hereinafter referred to as "Guarantor Bank") hereby agrees unequivocally, irrevocably and unconditionally to pay to [Insert Name of the Procurer] at [insert the Place from the address of the respective Procurer indicated in PPA] forthwith on demand in writing from [Name of the Procurer] or any Officer authorised by it in this behalf, any amount upto and not exceeding Rupees _____ only [Insert the amount of the bank guarantee in respect of the respective Procurer as per the terms of PPA], on behalf of M/s. _____ [Insert name of the Seller or the Selected Bidder on behalf of the Seller].

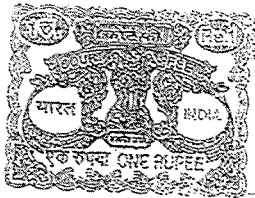
This guarantee shall be valid and binding on this Bank up to and including _____ and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs. _____ (Rs. _____ only). Our Guarantee shall remain in force until _____. The Procurer shall be entitled to invoke this Guarantee till _____ [Insert date which is 30 days after the date in the preceding sentence].

The Guarantor Bank hereby agrees and acknowledges that the Procurer shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by the Procurer, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to the Procurer.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by the Seller and/or any other person. The Guarantor Bank shall not require the Procurer to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against the Procurer in respect of any payment made hereunder



This BANK GUARANTEE shall be interpreted in accordance with the laws of India.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly the Procurer shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Seller, to make any claim against or any demand on the Seller or to give any notice to the Seller or to enforce any security held by the Procurer or to exercise, levy or enforce any distress, diligence or other process against the Seller.

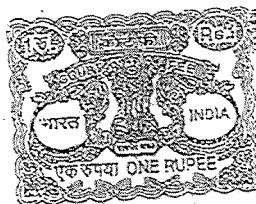
The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to the Procurer and may be assigned, in whole or in part, (whether absolutely or by way of security) by Procurer to any entity to whom the Procurer is entitled to assign its rights and obligations under the PPA.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. _____ (Rs. _____ only) and it shall remain in force until _____ [Date to be inserted on the basis of Article 3.1.1. of PPA] with an additional claim period of thirty (30) days thereafter. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if the Procurer serves upon us a written claim or demand.

Signature _____
 Name _____
 Power of Attorney No _____
 For _____

Banker's Stamp and Full Address.

Dated this ____ day of ____, 20__



10. SCHEDULE 10: SUBSTITUTION RIGHTS OF THE LENDERS

1. Substitution of the Seller

a) Subject to the terms of the PPA, upon occurrence of a Seller Event of Default under the PPA, the Lenders shall, have the right to seek substitution of the Seller by a Selectee for the residual period of the PPA, for the purposes of securing the payments of the Total Debt Amount from the Seller and performing the obligations of the Seller, in accordance with the provisions of this Schedule.

b) The Lenders may seek to exercise right of substitution by an amendment or novation of the PPA and other Project Documents executed between the Procurer and the Seller in favour of the Selectee, the Procurer and the Seller shall cooperate with the Lenders to carry out such substitution.

2. The Procurer Notice of Default

The Procurer shall, simultaneously also issue a copy of the same to the Lenders.

3. Substitution Notice

In the event of failure of the Seller to rectify the Event Of Default giving rise to Preliminary Default Notice, the lenders, upon receipt of a written advice from the procurer confirming such failure, either on their own or through its representative ("the Lenders' Representative") shall be entitled to notify the Procurer and the Seller of the intention of the Lenders to substitute the Seller by the Selectee for the residual period of the PPA (the "Substitution Notice").

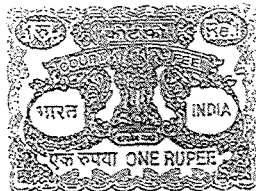
4. Omitted

5. Interim operation of Project

a) On receipt of a Substitution Notice, no further action shall be taken by any Party to terminate the PPA, except under and in accordance with the terms of this Schedule 10 of this Agreement.

b) On issue of a Substitution Notice, the Lenders shall have the right to request the Procurer to enter upon and takeover the Project for the interim and till the substitution of the Selectee is complete and to otherwise take all such steps as are necessary for the continued operation and maintenance of the Project, including levy, collection and appropriation of payments thereunder, subject to, the servicing of monies owed in respect of the Total Debt Amount as per the Financing Agreements and the Seller shall completely cooperate in any such takeover of the Project by the Procurer. If the Procurer, at his sole and exclusive discretion agrees to enter upon and takeover the Project, till substitution of the Selectee in accordance with this Agreement, the Procurer shall be compensated for rendering such services in accordance with clause 10.1.3 herein.

c) If the Procurer refuses to takeover the Project on request by the Lenders in accordance with clause 5(b) above, the Seller shall have the duty and obligation to



continue to operate the Project in accordance with the PPA till such time as the Selectee is finally substituted under clause 8.8 hereof.

d) The Lenders and the Procurer shall, simultaneously have the right to commence the process of substitution of the Seller by the Selectee in accordance with these terms and the Seller hereby irrevocably consents to the same.

6. Process of Substitution of Seller

The Lenders' Representative may, on delivery of a Substitution Notice notify the Procurer and the Seller on behalf of all the Lenders about the Lenders' decision to invite and negotiate, at the cost of the Lenders, offers from third parties to act as Selectee, either through private negotiations or public auction and / or a tender process, for the residual period of the PPA. Subject to and upon approval of the Procurer referred to in clause 8.5, such Selectee shall be entitled to receive all the rights of the Seller and shall undertake all the obligations of the Seller under the PPA and other Project Documents executed between the Seller and the Procurers, in accordance with these terms of substitution.

The Lenders and the Seller shall ensure that, upon the Procurer approving the Selectee, the Seller shall transfer absolutely and irrevocably, the ownership of the Project to such Selectee simultaneously with the amendment or novation of the PPA and other Project Documents executed between the Seller and the Procurers in favour of the Selectee as mentioned in clause 1 (b).

7. Modality for Substitution

7.1 Criteria for selection of the Selectee.

The Lenders and / or the Lenders' Representative shall in addition to any other criteria that they may deem fit and necessary, apply the following criteria in the selection of the Selectee:

- (a) if the Seller is proposed to be substituted during the Construction Period, the Selectee shall possess the technical and financial capability comparable to that of the seller to perform and discharge all the residual duties, obligations and liabilities of the Seller under the PPA. If the Seller is proposed to be substituted during the Operation Period, this criteria shall not be applicable.
- (b) the Selectee shall have the capability and shall unconditionally consent to assume the liability for the payment and discharge of dues, if any, of the Seller to the Procurer under and in accordance with the PPA and also payment of the Total Debt Amount to the Lenders upon terms and conditions as agreed to between the Selectee and the Lenders;

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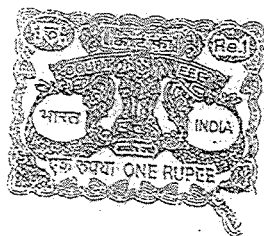


- (c) the Selectee shall have not been in breach of any agreement between the Selectee and any Bank or any Lender or between the Selectee and any of the Procurer, involving sums greater than Rupees twenty (20) crores at any time in the last two (2) years as on the date of the substitution of the Seller.
- (d) any other appropriate criteria, whereby continuity in the performance of the Selectee's obligations under the PPA is maintained and the security in favour of the Lenders under the Financing Agreements is preserved.

8. Modalities

The following modalities shall be applicable to any substitution of the Seller by the Selectee pursuant to this Agreement:

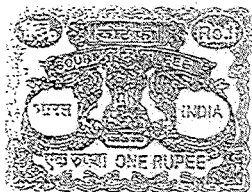
- 8.1 The Lenders' Representative shall on behalf of the Lenders propose to the Procurer (the "Proposal") pursuant to sub-clause 8.2 below, the name of the Selectee for acceptance, seeking:
- (a) grant of all the rights and obligations under the PPA and the other Project Documents executed between the Procurer and the Seller, to the Selectee (as substitute for the Seller);
- (b) amendment of the PPA and the other Project Documents executed between the Procurer and the Seller, to the effect that the aforementioned grant to the Selectee, shall be such that the rights and obligations assumed by the Selectee are on the same terms and conditions for the residual period of the PPA as existed in respect of the Seller under the original PPA and the other Project Documents executed between the Procurer and the Seller; and
- (c) the execution of new agreements as necessary, by the proposed Selectee for the residual period of the PPA on the same terms and conditions as are included in this Agreement.
- 8.2 The Proposal shall contain the particulars and information in respect of the Selectee the data and information as the Procurer may reasonably require. The Procurer may intimate any additional requirement within thirty (30) days of the date of receipt of the Proposal.
- 8.3 The Proposal shall be accompanied by an unconditional undertaking by the Selectee that it shall, upon approval by the Procurer of the Proposal:



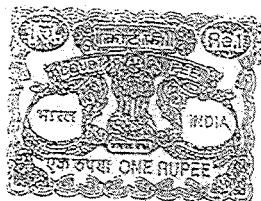
- (a) observe, comply, perform and fulfil the terms, conditions and covenants of the PPA and all Project Documents executed between Seller and the Procurer or a new power purchase agreement or respective Project Document (in the case of the novation thereof), which according to the terms therein are required to be observed, complied with, performed and fulfilled by the Seller, as if such Selectee was the Seller originally named under the PPA; or the respective Project Document; and
- (b) be liable for and shall assume, discharge and pay the Total Debt Amount or then outstanding dues to the Lenders under and in accordance with the Financing Agreements or in any other manner agreed to by the Lenders and the Procurer as if such Selectee was the Seller originally named under such Financing Agreements.
- 8.4 At any time prior to taking a decision in respect of the Proposal received under clause 8.1, the Procurer may require the Lender / Lenders' Representative to satisfy it as to the eligibility of the Selectee. The decision of the Procurer as to acceptance or rejection of the Selectee, shall be made reasonably and when made shall be final, conclusive and binding on the Parties.
- 8.5 The Procurer shall convey his approval or disapproval of such Proposal, to the Lender / Lender's Representative. Such decision shall be made by the Procurer at his reasonably exercised discretion within twenty one (21) days of:
- (a) the date of receipt of the Proposal by the Procurer; or
- (b) the date when the last of further and other information and clarifications in respect of any data, particulars or information included in the Proposal requested by the Procurer under clause 8.2 above is received; whichever is later.

Notwithstanding anything to the contrary mentioned in this Agreement, the approval of the Procurer for the Selectee shall not be withheld in case the Selectee meets the criteria mentioned in Clause 7.1.

- 8.6 Upon approval of the Proposal and the Selectee by the Procurer, the Selectee mentioned in the Proposal shall become the Selectee hereunder.
- 8.7 Following the rejection of a Proposal, the Lenders and/or the Lenders' Representative shall have the right to submit a fresh Proposal, proposing another Selectee (if the rejection was on the grounds of an inappropriate third party proposed as Selectee) within sixty (60) days of receipt of communication



- regarding rejection of the Selectee previously proposed. The provisions of this clause shall apply mutatis mutandis to such fresh Proposal.
- 8.8 The substitution of the Seller by the Selectee shall be deemed to be complete upon the Selectee executing all necessary documents and writings with or in favour of the Seller, the Procurer and the Lenders so as to give full effect to the terms and conditions of the substitution, subject to which the Selectee has been accepted by the Lenders and the Procurer and upon transfer of ownership and complete possession of the Project by the Procurer or the Seller, as the case may be, to the Selectee. The Procurer shall novate all the Project Documents, which they had entered in to with the Seller in order to make the substitution of the Seller by the Selectee effective. The quantum and manner of payment of the consideration payable by the Selectee to the Seller towards purchase of the Project and assumption of all the rights and obligations of the Seller under the PPA and the Project Documents as mentioned in this Agreement shall be entirely between the Seller, Selectee and the Lenders and the Procurer shall in no way be responsible to bear the same.
- 8.9 Upon the substitution becoming effective pursuant to sub-clause 8.8 above, all the rights of the Seller under the PPA shall cease to exist:
Provided that, nothing contained in this sub-clause shall prejudice any pending / subsisting claims of the Seller against the Procurer or any claim of the Procurer against the erstwhile Seller or the Selectee.
- 8.10 The Selectee shall, subject to the terms and conditions of the substitution, have a period of ninety (90) days to rectify any breach and / or default of the Seller subsisting on the date of substitution and required to be rectified and shall incur the liability or consequence on account of any previous breach and / or default of the Seller.
- 8.11 The decision of the Lenders and the Procurers in the selection of the Selectee shall be final and binding on the Seller and shall be deemed to have been made with the concurrence of the Seller. The Seller expressly waives all rights to object or to challenge such selection and appointment of the Selectee on any ground whatsoever.
- 8.12 The Lenders shall be solely and exclusively responsible for obtaining any and all consents/approvals or cooperation, which may be required to be obtained from the Seller under this Agreement and the Procurer shall not be liable for the same.
- 8.13 All actions of the Lenders' Representative hereunder shall be deemed to be on behalf of the Lenders and shall be binding upon them. The Lenders' Representative shall be authorised to receive payment of compensation and any other payments, including the consideration for transfer, if any, in



accordance with the Proposal and the Financing Agreements and shall be bound to give valid discharge on behalf of all the Lenders.

9. Seller's Waiver

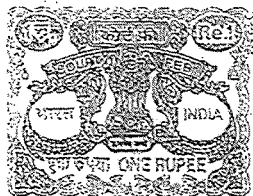
- 9.1 The Seller irrevocably agrees and consents (to the extent to which applicable law may require such consent) to any actions of the Lenders, the Lender's Representative and the Procurer or exercise of their rights under and in accordance with these terms.
- 9.2 The Seller irrevocably agrees and consents (to the extent to which applicable law may require such consents) that from the date specified in clause 8.9, it shall cease to have any rights under the PPA or the Financing Agreements other than those expressly stated therein.
- 9.3 The Seller warrants and covenants that any agreement entered into by the Seller, in relation to the Project, shall include a legally enforceable clause providing for automatic novation of such agreement in favour of the Selectee, at the option of the Lenders or the Procurer. The Seller further warrants and covenants that, in respect of any agreements which have already been executed in relation to the Project and which lack a legally enforceable clause providing for automatic novation of such agreement, the Seller shall procure an amendment in the concluded agreement to incorporate such clause.

10. Interim Protection Of Service And Preservation Of Security

10.1 Appointment of a Receiver

- 10.1.1 In every case of the Lenders issuing a Substitution Notice and the Procurer refusing to takeover the Project and the Seller failing to operate the Project in accordance with Clause 5(c) above and the Procurer not electing to act as Receiver as per sub-clause 10.1.1A hereof, the Lenders may institute protective legal proceedings for appointment of a receiver (the "Receiver") to maintain, preserve and protect the assets held as security by the Lenders if such right is granted under the terms of the Financing Agreements.

- 10.1.1A Provided that in event of the Procurer refusing to take over the Project and the Seller failing to operate the Project in accordance with Clause 5 (c) above, and if the assets of the Project are, in the opinion of the Procurer, necessary and required for the operation and maintenance of the Project, the Procurer shall be entitled to elect to act as the Receiver for the purposes of this Clause and be entitled to maintain, preserve and protect the said assets by engaging an operator/service provider to act on their behalf and the Lenders and Seller



hereby consent and agree to the same. Upon the Procurer so intimating the Seller and the Lender's representative their desire to act as Receiver, the Seller and the Lender's representative shall co-operate with the Procurer to facilitate the same.

10.1.2 Upon appointment of the Court appointed Receiver or the Procurer acting as Receiver, all the Receivables received by such Receiver shall be deposited by the Receiver in the bank account jointly designated by the Procurer and the Lenders. The Receiver shall be responsible for protecting the assets in receivership and shall render a true and proper account of the receivership to the lenders in accordance with the terms of its appointment.

10.1.3 When acting as a Receiver or operator in accordance with this clause 10 or clause 5(b), the Procurer shall be entitled to be remunerated for such services as may be determined by Punjab State Electricity Regulatory Commission. Furthermore, when acting as a Receiver, the Procurer shall not be liable to the Lenders, the Lenders' Representative, Seller or any third party for any default under the PPA, damage or loss to the Power Station or for any other reason whatsoever, except for wilful default of the Procurer.

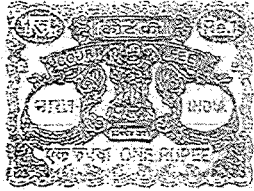
11. Substitution Consideration

11.1 The Lenders and the Procurer shall be entitled to appropriate any consideration received for the substitution of the Seller as hereinabove provided, from the Selectee towards the payment of Lenders' and the Procurer's respective dues, to the exclusion of the Seller.

11.2 The Seller shall be deemed to have nominated, constitutes and appoints the Lenders' Representative as its constituted attorney for doing all acts, deeds and things as may be required to be done for the substitution of the Seller by the Selectee pursuant to these terms.

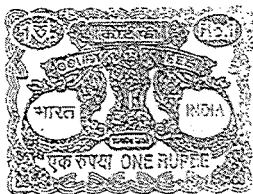
12. Change in Lenders:

The Parties hereto acknowledge that during the subsistence of the PPA, it is possible that any Lender may cease to remain as a Lender by reason of repayment of the debt or otherwise. Further it may possible that any Lender may be substituted or a new Lender may be added. In the event of any Lender ceasing to be a party to the Financing Agreement, the term and conditions as prescribed in this Schedule shall cease to automatically apply to such Lender. Further, upon any entity being added as a Lender and in the event such entity is given the right to substitute the Seller under the Financing Agreement and then the contents of this Schedule shall be applicable to the exercise of such right by the said new entity.



11. SCHEDULE 11: ESTIMATE OF CAPITAL COST AS APPROVED BY PSERC VIDE ORDERS DATED 29.04.2008 & 06.08.2008 AND MODIFIED AS PER APPELLATE TRIBUNAL ORDER DATED 08.04.2009)

Sr. No.	Item	Estimates of Capital Cost accepted by PSERC and modified as per Appellate Tribunal order dated 08.04.2009 (in Rs. Crore)
1	Land	109.35
2	Rehabilitation & Resettlement	5.00
3	Preliminary Expenses	0.25
4	Boiler Turbine Generator Package	1070.58 (See Notes 5a & 5b)
5	Balance Of Plant	955.00 (See Notes 6a & 6b)
6	Engineering , Erection , Civil Works	Included in BTG BOP contracts
7	Taxes and Duties	Included in BTG BOP contracts
8	Recommended spares for BTG and BOP package	39.65
9	Non EPC	86.00
10	Site grading and Ash Pond	49.00
11	Start-up Expenses	15.00
12	Power and Water for Construction	12.00
13	Consultancy and Engineering	7.50
14	Pre-operative Expenses	50.00
15	Operator Training & Mobilisation	5.00
16	Insurance	11.44
17	Capital Cost excluding IDC , Financing Charges & Contingency	2415.77
18	Interest During Construction (IDC)	365.19 (See Notes 3 & 4)
19	Financing Charges	70.00



20	Contingency	66.85
21	Estimated Capital Cost excluding WCM	2917.81
22	Working Capital Margin(WCM)	46.00
23	Estimated Capital Cost	2963.81

Notes :

1. Estimated Costs against Sr. No. 1,2, 3,4,5,9,13,15&16 are as per PSERC orders dated 29.04.2008 & 06.08.2008.

2. Estimated Costs against Sr. No.8,10,11,12,14,18,19,20&22 are as per PSERC orders dated 29.04.2008 & 06.08.2008 and modified as per the Appellate Tribunal order dated 08.04.2009.

3. Interest During Construction will be at actuals, based on phasing of expenditure consistent with the finalized packages with various contractors.

4. IDC at actuals as per Financing Agreements will be considered for completed Capital Cost determination.

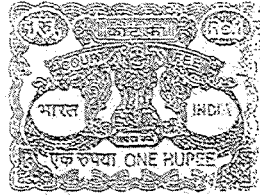
5a. BTG contract price will be subject to price variation formulae for supply price component, freight charges and erection testing & commissioning as indicated in the LOI dated 12 November 2007 issued to M/s BHEL.

5b. Contract price in the order placed with BHEL for the BTG package is payable in Indian Rupee only and the exchange rates for the Euro and US Dollar will be applicable on the date of payment. The BHEL contract price is based on the following exchange rates :

- US \$ = Rs.41.00
- Euro =Rs.57.50

6a. The BOP contract price of Rs.955 Crore is for execution of the contract with 'Induced Draft Cooling Towers'. If Natural Draft Cooling Towers are provided instead of Induced Draft Cooling Towers the increase in the BOP contract price will be Rs 50 crore for both the Units.

6b. BOP contract price will be subject to change as per any variation in cement and steel prices at the time of supply, upto the estimated quantities, as indicated in the LOI dated 14 April 2008 issued to M/s Punj Lloyd Ltd.



SCHEDULE 12: CALCULATION OF 'X' DAYS

(Refer Article 11.5.7)

Percentage of Months (by value) which is the subject of default under Article 11.4 as notified in the Notice (issued under Article 11.5.2) relating to the present occurrence	Number of times a Notice has been issued under Article 11.5.2 to the defaulting Procurer prior to present occurrence			
	1 st time	2 nd time	3 rd time	4 th time and onwards
Less than 10%	x = 20 days	x = 25 days	x = 40 days	x = 60 days
10% to 20%	x = 20 days	x = 30 days	x = 45 days	x = 65 days
More than 20% to 30%	x = 20 days	x = 35 days	x = 50 days	x = 70 days
More than 30% to 40%	x = 20 days	x = 40 days	x = 55 days	x = 75 days
More than 40%	x = 20 days	x = 45 days	x = 60 days	x = 90 days

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CENGRS GEOTECHNICA PVT. LTD.

Job No. 210025

Sheet No. 1

REPORT ON :**GEOTECHNICAL INVESTIGATION FOR
2x270 MW GVK POWER GOINDWAL SAHIB
THERMAL POWER PROJECT, NEAR GOINDWAL
SAHIB VILLAGE, PUNJAB**

- TRIAL AREA
- BOILER UNIT 1 & 2
(POST COMPACTION)

Submitted to:

**M/s. GVK Power (Goindwal Sahib) Ltd.
Paigah House
156-159, Sardar Patel Road
Secunderabad-500 003 (A.P.)**


	CENGRS GEOTECHNICA PVT. LTD.	Job No. 210025	Sheet No. ii
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CENGRS GEOTECHNICA PVT. LTD.

Job No. 210025

Sheet No. iii

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1.0 INTRODUCTION

1.1 Project Description

M/s. GVK Power Ltd. as owner is setting up a 2x270 MW Coal Based Power Plant at Goindwal Sahib, Tarn Taran Distt., Punjab. M/s. TCE Consulting Engineers Limited is the project consultant from the owner side. M/s. Punj Lloyd Ltd. (PLL) is constructing the proposed Coal-Based Thermal Power Plant. M/s Fichtner Consulting Engineers is the Engineering Consultant for PLL. M/s Cengrs Geotechnica Pvt. Ltd. is the Geotechnical Engineering consultant for PLL/GVK.

We had earlier conducted a detailed geotechnical investigation at the site (Refer to our Report No. 209049). Based on the detailed investigations and analysis, it was concluded that the project site is susceptible to liquefaction to about 10.0 m below EGL (RL208.5~209.0 m) in the event of an earthquake.

The clients decided to adopt vibro-compaction technique for the ground improvement at the site for all planned structures to mitigate the liquefaction potential. As per the information provided to us, the vibro-compaction has been carried out on 3x3 m grid pattern for various structures/units.

To confirm the safe bearing capacity for open foundations after ground improvement by vibro compaction; two plate load tests and two boreholes (BH-1&2) were conducted in the trial area. Two boreholes were also conducted in Boiler-1 and Boiler-2 areas. This report presents the results of four (4) boreholes and two (2) plate load tests and our engineering recommendations.

According to the information provided to us, ground levels at the site vary from RL 219.3 m to RL 219.6 m. A layout plan showing the locations of our field investigation is illustrated on Fig. No.'s 1a & 1b.

1.2 Purposes of Study

The overall purpose of this study is to assess the safe bearing capacity for shallow open foundations on the treated ground, based on the results of the plate load tests and boreholes data. To accomplish these purposes, the study was conducted in the following phases:



- a) drilling four (4) boreholes to 10 m depth and conducting standard penetration tests (SPT) at 1.5 m depth intervals, in order to investigate the site stratigraphy and to collect disturbed soil samples for laboratory testing;
- b) performing two (2) plate load tests in the trial area using 30 cm x 30 cm plate at a depth of 1.5 m below EGL so as to assess the load-settlement behavior of the underlying soil after vibro compaction; and
- c) analyzing the plate load test results and borehole data to assess the safe bearing capacity.

1.3 Details of Field Work

The test details are summarized below:

Test Location	Test Designation	Coordinates*	Existing* Ground Level, m
Trial Area	BH-1	S:255.748- W:265.819	219.61
	BH-2	S:279.756- W:297.448	219.61
	PLT-1	S:277.485- W:263.099	219.61
	PLT-2	S:256.672- W:301.219	219.59
Boiler-1	BH-3	N:33.981-W:62.717	219.35
Boiler-2	BH-4	N:135.252- W:66.019	219.35

* as per the information given to us on site

1.4 Related Reports

Details of past investigations carried out in the areas under consideration are presented below for reference:



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Job No. 210025

Sheet No. 3

Trial Area (Refer to Fig. No. 1a):

Test Designation	Co-ordinates*	Surface Elevation (RL), m	Termination Depth, m	Remarks	Report Reference
SCPT-1	244.144 S, 270.181W	219.480	15.0	Pre-compaction	Report No. 209188
SCPT-2	244.144 S, 300.181W	219.485	15.0		
SCPT-3	274.144 S, 300.181W	219.475	15.0		
SCPT-4	274.144 S, 270.181W	219.445	15.0		
SCPT-5	259.144 S, 285.181W	219.505	15.0		
SCPT-1	244.144 S, 270.181W	219.480	15.0		
SCPT-1	244.144 S, 220.181W	219.586	11.0	Post-compaction	Report No. 209188-A
SCPT-2	244.144 S, 300.181W	219.591	7.4		
SCPT-3	274.144 S, 300.181W	219.641	15.0		
SCPT-4	274.144 S, 270.181W	219.616	11.0		
SCPT-5	259.144 S, 285.181W	219.641	9.4		
SCPT-6	281.644 S, 262.681W	219.700	13.6		

Boiler-I and II (Refer to Fig. No. 1b):

Location	Test Designation	Co-ordinates	Surface Elevation (RL); m	Termination Depth, m	Remarks	Report Reference
Boiler Area-1	SCPT-B1	60.238 N, 48.489 W	219.400	15.0	Pre-Compaction	Report No. 209188-B
	SCPT-B2	4.649 N, 74.815 W	219.400	15.0		
Boiler Area-2	SCPT-B3	130.000 N, 50.000 W	219.450	15.0		
	SCPT-B4	160.000 N, 60.000 W	219.450	15.0		



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Job No. 210025

Sheet No. 4

Location	Test Designation	Co-ordinates	Surface Elevation (RL), m	Termination Depth, m	Remarks	Report Reference
ESP-1	SCPT-B5	51.583 N, 148.262 W	219.226	15.0	Pre-Compaction	Report No. 209188-B
ESP-2	SCPT-B6	163.962 N, 154.699 W	219.260	15.0		
Boiler Area-1	SCPT-A1	60.238 N, 48.489 W	219.400	14.2		
	SCPT-A2	18.439 N, 63.588 W	219.500	15.0		
Boiler Area-2	SCPT-A3	130.000 N, 50.000 W	219.500	15.0		
	SCPT-A4	160.000 N, 60.000 W	219.500	14.6		
ESP-1	SCPT-A5	33.50 N, 130.60 W	219.530	15.0		
ESP-2	SCPT-A6	163.962 N, 154.699 W	219.410	15.0		

2.0 FIELD INVESTIGATION

2.1 Soil Borings

The borehole was progressed using a mechanized shell and auger to the specified depth or refusal, whichever is encountered earlier. The borehole diameter was 150 mm. Where caving of the borehole occurred, 150 mm diameter casing was used to keep the borehole stable. The work was in general accordance with IS: 1892-1979.

Standard Penetration Tests (SPT) were conducted in the boreholes at 1.5 m depth intervals upto 10.0 m depth. The test was performed by connecting a split spoon sampler to 'A' rods and driving it by 45 cm using a 63.5 kg hammer falling freely from a height of 75 cm. The tests were conducted in accordance with IS: 2131-1981.

The number of blows for each 15 cm of penetration of the split spoon sampler was recorded. The blows required to penetrate the initial 15 cm of the split spoon for seating the sampler is ignored due to the possible presence of loose materials or cuttings from the drilling operation. The cumulative number of blows required to penetrate the balance 30 cm of the 45 cm of split spoon sampler is termed the SPT value or the 'N' value.



The SPT N-values (field and corrected) are presented in a graphical format on Fig. No's. 3a and 3b.

Disturbed samples were collected from the split spoon after conducting SPT. The samples were preserved in transparent polythene bags. All samples were transported to our NABL accredited laboratory at Delhi for further examination and testing.

2.2 Plate Load Tests

Plate load tests were performed at the site at specified level using a 30 x 30 cm size test plate. The test procedure is in general accordance with IS: 1888-1982.

An anchoring system by earth augers was used to provide the reaction. The plate was loaded by pushing up against the reaction anchors using a 50-ton capacity hydraulic jack.

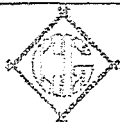
Three dial gauges measured the plate settlement with reference to a stable reference bar. The load is applied in small increments upto a maximum loading intensity of 6.0 kg/cm² or 40 mm settlement of the plate, whichever occurs first.

Each load was held until the time rate of settlement became negligible (less than 0.02 mm per minute). The load was applied in stages about till the maximum applied pressure of 6.0 kg/cm² load was reached or until the total settlement exceeded 40 mm.

Test results are presented on Fig. Nos.4 and 5 as curves of bearing pressure on plate versus the measured settlement on liner and log-log scales.

3.0 LABORATORY TESTS

The laboratory testing has been carried out in our NABL accredited laboratory. The quality procedures in our laboratory conform to ISO/IEC-17025-2005.



The laboratory testing programme was aimed at verifying the field classifications and developing parameters for engineering analysis. All testing was performed in accordance with the current applicable IS specifications.

The following tests were conducted on selected soil samples recovered from the boreholes:

Laboratory Tests	IS : Code Referred
Bulk density	By calculation
Natural moisture content	IS : 2720 (Part-2) -1973
Grain size analysis	IS : 2720 (Part-4) -1985
Atterberg Limits	IS : 2720 (Part-5) -1985

4.0 GENERAL SITE CONDITIONS

4.1 Site Stratigraphy

4.1.1 Trial Area

The surficial soils in the trial area generally consist of fine sand/silty sand from the ground surface to the final explored depth of 10.45 m (RL 208.9 m).

Field SPT values range from 31 to 39 to 3.0 m depth and 18 to 24 to about 4.0 m depth. Below this, field SPT values range from 43 to 50 to 5.0~6.0 m depth, 16 to 32 to 9.0 m depth, and 32 to 42 to the final explored depth of 10.45 m.

Corrected SPT values range from 43 to 54 to 3.0 m depth and 21 to 29 to about 4.0 m depth. Below this, corrected SPT values range from 32 to 36 to 5.0~6.0 m depth, 16 to 18 to 9.0 m depth, and 23 to 28 to the final explored depth of 10.45 m.

There is significant variation in the recorded SPT N-values at BH-1 and BH-2 locations with depth as well as laterally across the site at the same depth.



4.1.2 Boiler-I and II Area

The surficial soils in the Boiler-I and II area generally consist of fine sand/silty sand from the ground surface to the final explored depth of 10.45 m (RL 208.9 m). A discontinuous layer of sandy silt is encountered at BH-3 between 0.5 m and 2.0 m depths.

Field SPT values range from 12 to 15 to 3.0 m depth. Below this, field SPT values at BH-3 range from 21 to 25 to about 5.0 m depth, whereas field SPT values at BH-4 are relatively higher and range from 39 to 62 to about 5.0 m depth. Below this, field SPT values range from 20 to 25 to about 8.0 m depth, about 45 to 10.0 m depth, and 32 to 34 to the final explored depth of 10.45 m.

Corrected SPT values range from 17 to 21 to 3.0 m depth. Below this, corrected SPT values at BH-3 range from 20 to 28 to about 5.0 m depth, whereas corrected SPT values at BH-4 are relatively higher and range from 31 to 43 to about 5.0 m depth. Below this, corrected SPT values range from 18 to 23 to about 8.0 m depth, about 30 to 10.0 m depth, and 23 to 24 to the final explored depth of 10.45 m.

4.1.3 Presentation of Results

The soil profiles (BH-1 to BH-4) with all necessary laboratory results are given on the Tables 1 to 4. Summary of the borehole profiles is illustrated on Fig. No.2. Field and corrected SPT results are plotted on Fig. No's. 3a and 3b.

Plate load test results are plotted on Fig No's 4 and 5. Grain size analysis curves are presented on Fig No's. 6 to 9.

4.2 Groundwater

Groundwater level was measured in the boreholes 24 hours after drilling and sampling was completed. Based on our measurements in the completed boreholes, groundwater was met at 3.2~3.6 m depth (RL 216.0-216.1 m) below EGL at the time of our field investigation (March, 2010).



5.0 EVALUATION OF PLATE LOAD TESTS

5.1 Load-Settlement Data

Two plate load tests have been conducted at specified locations over the treated ground (i.e by vibro compaction). The tests were carried out upto a maximum load intensity of 6.0 kg/cm².

The following table presents the measured settlements of the two plate load tests carried out in the trial area:

Test No.	Test Level, m	Measured Settlement (mm) under Applied Bearing Pressure of				Ultimate Bearing Capacity, T/m ²
		10 T/m ²	12 T/m ²	15 T/m ²	20 T/m ²	
PLT-1	RL 218.116 m	4.4	4.5	4.8	5.2	38.0
PLT-2	RL 218.091 m	5.3	5.8	6.2	7.8	30.0

5.2 Analysis of Test Results

The test results have been extrapolated for open foundations (2.5-3.0 m width) using the following equation:

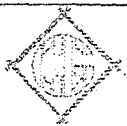
$$\frac{S_f}{S_p} = \left[\frac{B_f(B_p + 0.3)}{B_p(B_f + 0.3)} \right]^2$$

where

S_f = Settlement of footing with width of footing as B_f
 S_p = Settlement of plate with width of plate as B_p

Settlement of isolated square foundations for width of footing 2.5~3.0 m has been extrapolated using the above equation. A suitable multiplying factor has been applied to account for saturation of soils as well as variations in the soil conditions.

Analyzing the test results, the following table presents the extrapolated settlement of the 2.5 - 3.0 m wide square footing:



Location	Test No.	Estimated Settlement (mm) of 2.5 m wide footing under an Applied Bearing Pressure of				Estimated Settlement (mm) of 3.0 m wide footing under an Applied Bearing Pressure of			
		10 T/m ²	12 T/m ²	15 T/m ²	20 T/m ²	10 T/m ²	12 T/m ²	15 T/m ²	20 T/m ²
Trial area	PLT-1	44.0	45.0	48.0	52.0	42.1	43.0	45.9	49.7
	PLT-2	53.0	58.0	62.0	78.0	50.7	55.5	59.3	74.6

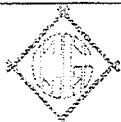
5.3 Discussion of Results

1. The ultimate capacity of 30 cm square plates bearing at RL 218.1 m in the trial area (Refer to Fig. No. 1a) is in the range of 30-38 T/m². Applying a factor of safety of 2.5, the safe bearing capacity is in the range of 12-15 T/m² for 30 cm plate size.
2. The initial settlement of the plate upon application of the first load increment (corresponding to an applied bearing pressure of about 1.1 kg/cm²) was 4.4 mm and 5.3 mm at PLT-1 and PLT-2 locations, respectively. This indicates that the surficial soils below the test level are loose in condition. We suggest that the top layers be properly compacted prior to construction in these areas.
3. From the analysis of plate load test results, the settlement of 2.5~3.0 m wide footings bearing at RL 218.1 m for a net allowable bearing pressure of 10 T/m² works out to be about 44~53 mm. However, we expect that the actual foundation settlements may be lower if the top layers are properly compacted prior to foundation construction.
4. We suggest that the plate load test results be reviewed in conjunction with borehole and SCPT data in the area.

5.4 Limitations of Plate Load Tests

The analysis presented in this report is governed by the inherent limitations of plate load test, some of which are listed below:

- (a) The analysis is applicable only for uniform isotropic formations. Stratified deposits are not modelled effectively by the test.



- (b) The test stresses the soils only to a depth of "2 B_p" below test level (B_p = plate width). Large size foundations will stress the deeper soils also. However, the behavior of the deeper soils cannot be evaluated by the test.
- (c) The settlement measured during the test is primarily immediate settlement. Consolidation or long-term settlement cannot be determined by the test.

6.0 RECOMMENDATIONS

- 1) Trial Area : Based on the results of plate load tests, boreholes and static cone penetration tests (SCPT's) carried out in the Trial area (Refer to Fig. No. 1a); we suggest a net allowable bearing capacity of 10 T/m² for open foundations of minor or lightly-loaded structures bearing on the improved ground at RL 218.0 m. The total settlement of the foundations is expected to be about 40~50 mm. Due to the presence of loose soils at this level in some areas, we suggest that the soil at foundation level be thoroughly compacted using vibratory rollers, prior to laying the foundation.
- 2) Boiler-I and Boiler-II : Based on the results of boreholes and SCPT's carried out in this area; we suggest a net allowable bearing pressure of 10 T/m² for the design of open foundations of minor or lightly-loaded structures bearing on the improved ground at RL 218.0 m. The total settlement of the foundations is expected to be about 40~50 mm. Due to the presence of loose soils at this level in some areas, we suggest that the soil at foundation level be thoroughly compacted using vibratory rollers, prior to laying the foundation.

7.0 CLOSURE














We appreciate the opportunity to perform this investigation for you and have pleasure in submitting this report. Please contact us when we can be of further service to you.

for CENGRS GEOTECHNICA PRIVATE LIMITED

(RAVI SUNDARAM)
DIRECTOR

(SANJAY GUPTA)
MANAGING DIRECTOR

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		SOIL PROFILE			Project : 2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)			BH.No: 1		TERMINATION DEPTH		Table No: 1a		 Certificate No. T-0809					
					Co-ordinates 255.748 S, 265.819 W		Surface Elevation 219.61 m	WATER TABLE: 3.6 m		10.45 m		JOB NO. 210025							
N-Value*	Reduced Level, m.	Depth (m)	Sample No.	Symbol	Location : Trial Area				Grain Size Analysis			Atterberg Limits			Triaxial Test				
					SOIL DESCRIPTION				Gravel %	Sand %	Silt %	Clay %	Liquid %	Plastic %	Plasticity Index %	Specific Gravity	Natural Density gms/cm ³	Dry Density gms/cm ³	Moisture Content %
	219.61	0.00	DS1		Dense grey fine sand (SP)														
	219.11	0.50																	
39	219.11	0.50	DS2		(1.5m)														
	218.61	1.00																	
	218.11	1.50	SPT1		Dense brown silty fine sand (SM)														
	217.66	1.95																	
18	217.36	2.25	UDS1		(3.0m)								1.82	1.56	16.8				
	217.06	2.55																	
43	216.61	3.00	SPT2		Medium dense to dense grey fine sand (SP-SM)														
	216.16	3.45																	
32	215.11	4.50	SPT3		- medium dense, 3.0 to 4.5 m														
	214.66	4.95																	
16	214.36	5.25	DS3		- dense, 4.5 to 7.5 m														
	214.06	5.55																	
39	213.61	6.00	SPT4		- medium dense, 7.5 to 9.0 m														
	213.16	6.45																	
	212.11	7.50	SPT5		- dense, 9.0 to 10.45 m														
	211.66	7.95																	
	211.36	8.25	DS4		- with traces of gravel, 9.0 to 10.45 m														
	211.06	8.55																	
	210.61	9.00	SPT6																
	210.16	9.45																	

(Cont'd on Table No. 1b)

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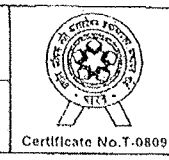
* Outside NABL scope

		<h1>SOIL PROFILE</h1>		Project : 2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)			BH.No: 1		TERMINATION DEPTH		Table No: 1b		 Certificate No. T-0809						
				Co-ordinates 255.748 S, 265.819 W		Surface Elevation 219.61 m		WATER TABLE : 3.6 m		10.45 m		JOB NO. 210025							
N-Value*	Reduced Level, m	Depth (m)	Sample No.	Symbol	Location : Trial Area		Grain Size Analysis			Atterberg Limits			Specific Gravity	Natural Density gms/cm ³	Dry Density gms/cm ³	Moisture Content %	Triaxial Test		
					SOIL DESCRIPTION		Gravel %	Sand %	Silt %	Clay %	Liquid %	Plastic %					Plasticity Index %	Confining Pressure Kg/cm ²	Cohesion Intercept Kg/cm ²
32	209.61 209.16	10.00 10.45	SPT7		Dense grey fine sand with traces of gravel (SP-SM) (10.45m)														

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* Outside NABL scope

N-Value*		Reduced Level, m	Depth (m)	Sample No.	Symbol	SOIL DESCRIPTION	Grain Size Analysis				Atterberg Limits			Specific Gravity	Natural Density gms/cm ³	Dry Density gms/cm ³	Moisture Content %	Triaxial Test			
Location : Trial Area						WATER TABLE :				TERMINATION DEPTH			Table No: 2b			JOB NO.					
Project : 2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)						Co-ordinates 279.756 S, 297.448 W				Surface Elevation 219.61 m			WATER TABLE : 3.55 m			10.45 m			210025		
SOIL PROFILE						Grain Size Analysis				Atterberg Limits			Specific Gravity	Natural Density gms/cm ³	Dry Density gms/cm ³	Moisture Content %	Confining Pressure Kg/cm ²	Cohesion Intercept Kg/cm ²	Angle of Internal Friction		
40	209.61 209.16	10.00 10.45	SPT7		Dense grey fine sand (SP-SM) (10.45m)	Gravel %	Sand %	Silt %	Clay %	Liquid %	Plastic %	Plasticity Index %	Specific Gravity	Natural Density gms/cm ³	Dry Density gms/cm ³	Moisture Content %	Confining Pressure Kg/cm ²	Cohesion Intercept Kg/cm ²	Angle of Internal Friction		





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* Outside NABL scope

		SOIL PROFILE		Project : 2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)			BH.No: 3		TERMINATION DEPTH		Table No: 3a		 Certificate No. T-0809												
				Co-ordinates 33.981 N, 62.717 W		Surface Elevation 219.35 m		WATER TABLE : 3.2 m		10.45 m		JOB NO. 210025													
N-Value*	Reduced Level, m	Depth (m)	Sample No.	Symbol	Location : Boiler-1				Grain Size Analysis			Atterberg Limits			Specific Gravity	Natural Density gms/cm ³	Dry Density gms/cm ³	Moisture Content %	Triaxial Test						
					SOIL DESCRIPTION				Gravel %	Sand %	Silt %	Clay %	Liquid %	Plastic %					Plasticity Index %	Confining Pressure Kg/cm ²	Cohesion Intercept Kg/cm ²	Angle of Internal Friction			
15	219.35	0.00	DS1		Medium dense grey fine sand (SP-SM)				0	90	10	0													
	218.85	0.50			(0.5m)																				
15	218.85	0.50	DS2		Medium dense brown sandy silt, low plastic (CL)				0	33	56	11													
	218.35	1.00			(2.0m)								32.5	20.2	12.3										
15	217.85	1.50	SPT1		Medium dense to dense grey fine sand (SP) - medium dense, 2.0 to 4.5 m																				
	217.40	1.95																							
21	217.10	2.25	UDS1		- medium dense, 2.0 to 4.5 m				0	97	3	0				1.74	1.62	7.38							
	216.80	2.55																							
35	216.35	3.00	SPT2		- dense, 4.5 to 6.0 m																				
	215.90	3.45																							
29	214.85	4.50	SPT3		- dense, 4.5 to 6.0 m																				
	214.40	4.95																							
29	214.10	5.25	UDS2		- medium dense, 6.0 to 8.0 m				0	96	4	0				1.66	1.51	9.85							
	213.80	5.55																							
20	213.35	6.00	SPT4		- medium dense, 6.0 to 8.0 m																				
	212.90	6.45																							
20	211.85	7.50	SPT5		- medium dense, 6.0 to 8.0 m																				
	211.40	7.95							(8.0m)																
45	211.10	8.25	DS3		Dense grey fine sand (SP-SM)				0	91	9	0													
	210.80	8.55																							
45	210.35	9.00	SPT6																						
	209.90	9.45																							

(Cont'd on Table No. 3b)

* Outside NABL scope

		SOIL PROFILE			Project : 2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)				BH.No: 4		TERMINATION DEPTH		Table No: 4a		 Certificate No. T-0809				
		Co-ordinates			Surface Elevation		WATER TABLE :		10.45 m		JOB NO.		210025						
		135.252 N, 66.019 W			219.35 m		3.25 m												
N-Value*	Reduced Level, m	Depth (m)	Sample No.	Symbol	Location : Boiler-2	Grain Size Analysis				Atterberg Limits			Specific Gravity	Natural Density gms/cm ³	Dry Density gms/cm ³	Moisture Content %	Triaxial Test		
						Gravel %	Sand %	Silt %	Clay %	Liquid %	Plastic %	Plasticity Index %					Confining Pressure Kg/cm ²	Cohesion Intercept Kg/cm ²	Angle of Internal Friction
	219.35	0.00	DS1	[Symbol]	Medium dense grey fine sand (SP-SM)														
	218.85	0.50	DS2																
	218.85	0.50	DS2	[Symbol]	(1.5m)	0	90	10	0										
	218.35	1.00																	
12	217.85	1.50	SPT1	[Symbol]	Medium dense to very dense brown silty fine sand (SM) - medium dense, 1.5 to 3.0 m														
	217.40	1.95																	
	217.10	2.25	UDS1	[Symbol]	- dense, 3.0 to 4.5 m	0	79	21	0			1.61	1.41	14.3					
	216.80	2.55																	
39	216.35	3.00	SPT2	[Symbol]	- very dense, 4.5 to 5.0 m														
	215.90	3.45																	
62	214.85	4.50	SPT3	[Symbol]	(5.0m)														
	214.40	4.95																	
	214.10	5.25	UDS2	[Symbol]	Medium dense to dense grey fine sand (SP-SM) - medium dense, 5.0 to 9.0 m	0	94	6	0			2.01	1.61	25.2					
	213.80	5.55																	
22	213.35	6.00	SPT4	[Symbol]															
	212.90	6.45																	
25	211.85	7.50	SPT5	[Symbol]															
	211.40	7.95																	
	211.10	8.25	DS3	[Symbol]		0	93	7	0										
	210.80	8.55																	
45	210.35	9.00	SPT6	[Symbol]	- dense, 9.0 to 10.45 m														
	209.90	9.45																	

(Cont'd on Table No. 4b)

376
170

dm * Outside NABL scope

N-Value*		Reduced Level, m		Depth (m)		Sample No.		Symbol		Location : Boiler-2				Grain Size Analysis			Atterberg Limits			Specific Gravity		Natural Density		Dry Density		Moisture Content %		Triaxial Test		
SOIL DESCRIPTION		Gravel %	Sand %	Silt %	Clay %	Liquid %	Plastic %	Plasticity Index %	Specific Gravity	Natural Density gms/cm ³	Dry Density gms/cm ³	Moisture Content %	Confining Pressure Kg/cm ²	Cohesion Intercept Kg/cm ²	Angle of Internal Friction															
32	209.35 208.90	10.00 10.45	SPT7	Dense grey fine sand with gravel SP) (10.45m)		9	89	2	0																					



SOIL PROFILE

Project : 2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)

BH.No: 4

TERMINATION DEPTH

Table No: 4b

Co-ordinates
135.252 N, 66.019 W

Surface Elevation
219.35 m

WATER TABLE :
3.25 m

10.45 m

JOB NO.

210025



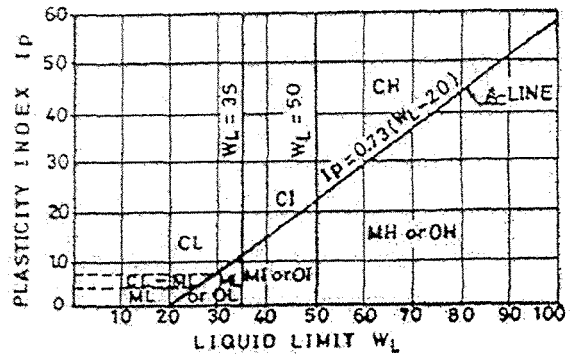
Certificate No. 1-9809

Jm * Outside NABL scope



PLASTICITY OF CLAY

Plasticity	Liquid Limit
Low Plastic	< 35
Medium Plastic	35 to 50
High Plastic	> 50



PLASTICITY CHART

CONSISTENCY OF COHESIVE SOILS

Consistency	Cohesion Intercept, kg/sq.cm	SPT (N) Value
Very Soft	< 0.1	0 to 2
Soft	0.1 to 0.25	2 to 4
Firm/Medium	0.25 to 0.5	4 to 8
Stiff	0.5 to 1.0	8 to 15
Very Stiff	1.0 to 2.0	15 to 30
Hard	> 2.0	> 30

DENSITY CONDITION OF GRANULAR SOILS


Density Descriptor	SPT (N) Value	Static Cone Tip Resistance kg/sq.cm
Very Loose	0 to 4	< 20
Loose	4 to 10	20 to 40
Medium Dense	10 to 30	40 to 120
Dense	30 to 50	120 to 200
Very Dense	> 50	> 200

DEGREE OF EXPANSION OF FINE GRAINED SOILS

Liquid Limit	Plasticity Index	Shrinkage Index	Free Swell Percent	Degree of Expansion	Degree of Severity
20 - 35	< 12	< 15	< 50	Low	Non-critical
35 - 50	12 - 23	15 - 30	50 - 100	Medium	Marginal
50 - 70	23 - 32	30 - 60	100 - 200	High	Critical
70 - 90	> 32	> 60	> 200	Very High	Severe

ENGINEERING DESCRIPTION OF SOILS

[Handwritten signature]

	CENGRS GEOTECHNICA PVT. LTD.	Job No. 210025	Table No. 6
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NABL ACCREDITED LABORATORY

Our laboratory is accredited to National Accreditation Board for Laboratories (NABL), New Delhi. The quality procedures in our laboratory conform to the International Standard ISO/IEC: 17025-2005.

The accreditation assures our clients of work quality in conformance with international norms and practices. It authorizes us to use the NABL logo on test results.

To maintain the necessary level of quality and reliability in all measurements on a continual basis, we indulge in the following:

- Use of calibrated equipment, regular maintenance and good housekeeping are a part of our work culture.
- Inter-laboratory comparison, proficiency testing and replicate testing, continuing education - ensure uniform quality of results.
- Internal Audit of quality procedures is done by our qualified ISO 17025 auditors to maintain the requisite standards. NABL conducts external audit.

UNCERTAINTY

Every measurement entails an uncertainty. It is well known that no measuring instrument can determine the true value of any measurement. The cumulative effect of factors such as sensitivity of equipment, accuracy in calibration, human factors and environmental conditions will determine the overall uncertainty in the parameter determined from these measurements.

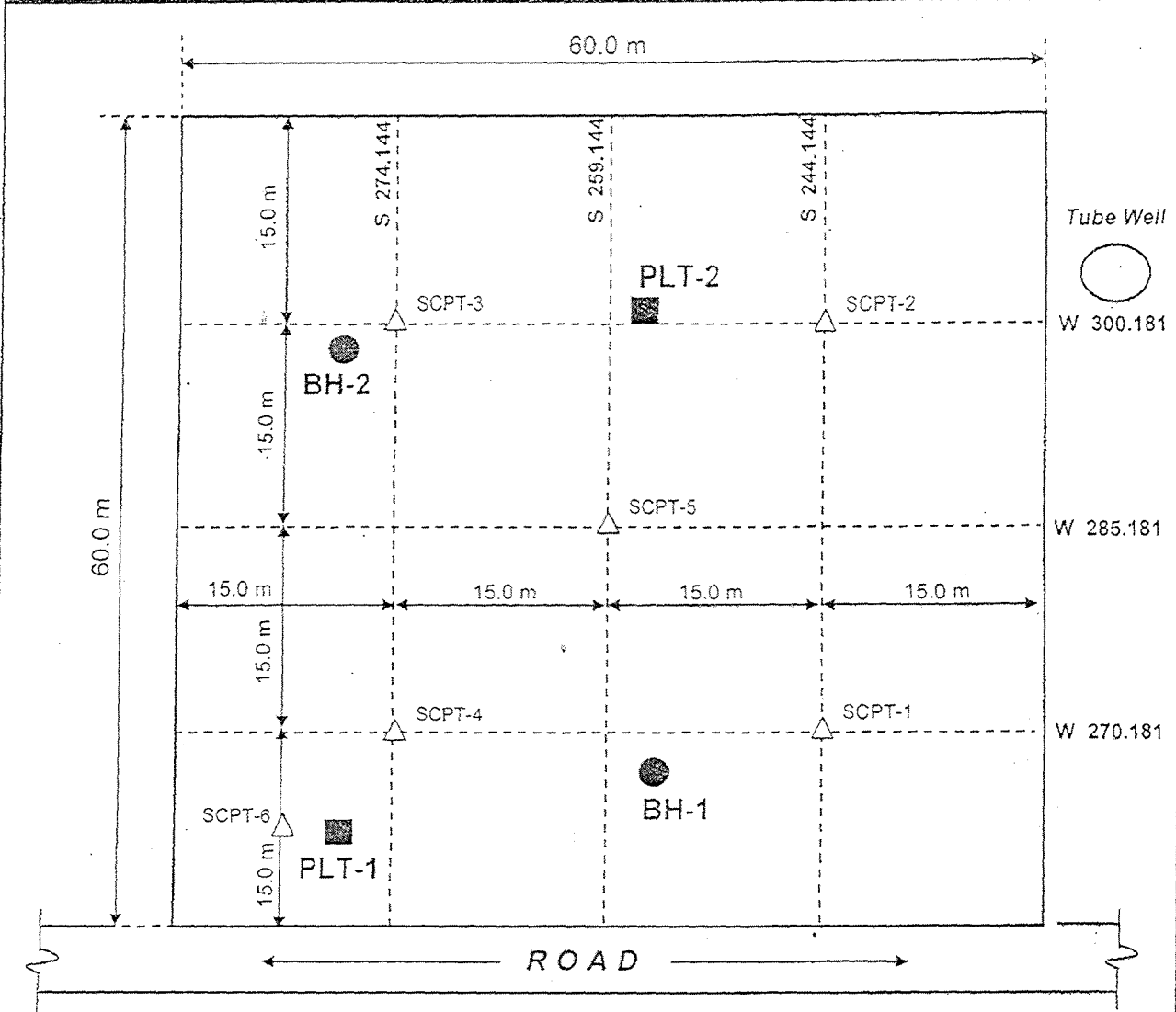
As a part of our commitment to our clients, we have worked out the uncertainty in the parameters reported by our laboratory. Although this does not form a part of our contract agreement, we present below our statistical estimate of uncertainty of various parameters based on our most recent evaluation (March 2009).

Test / Parameter		Uncertainty*	Test / Parameter		Uncertainty*	
Moisture Content, %		± 0.22 %	Free Swell Index, %		± 0.20 %	
Bulk & Dry Density		± 0.003 g/cc	Swell Pressure		± 0.43 kg/cm ²	
Specific Gravity		± 0.02	Consolidation	C _{e1}	± 0.0003	
Liquid Limit		± 0.22 %		C _{e2}	± 0.003	
Plastic Limit		± 0.22 %		m _v	± 0.0003 cm ² /kg	
Shrinkage Limit		± 0.12 %		p _c	± 0.15 kg/cm ²	
Unconfined Compression	c	0.01 kg/cm ²	CD Direct Shear Test		φ	± 0.25°
UU Triaxial Test	c	± 0.07 kg/cm ²	Soil Gradation	Sands & Silty sands	± 0.5% of particle size	
	φ	± 0.2°		Sandy silt / clayey silt	± 1.5% of particle size	
Std/Mod Proctor Compaction	MDD	± 0.03 g/cc	Coefficient of Permeability		± 1.3 % of value	
	OMC	± 0.22 %	Rock	Crushing strength	± 0.80% of value	
Laboratory CBR	± 0.07 %	Point Load strength index		± 2.40% of value		

* at 95 percent confidence level for coverage factor of 2

UNCERTAINTY IN LABORATORY MEASUREMENTS

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Test No.	Co-ordinates		Surface Elevation, m
	S	W	
BH 1	255.748	265.819	219.610
BH 2	279.756	297.448	219.610
PLT 1	277.485	263.099	218.116
PLT 2	256.672	263.099	218.091

Test No.	Co-ordinates		Surface Elevation, m
	S	W	
SCPT1	244.144	270.181	219.585
SCPT2	244.144	300.181	219.591
SCPT3	274.144	300.181	219.641
SCPT4	274.144	270.181	219.616
SCPT5	259.144	285.181	219.641
SCPT6	281.644	262.681	219.700

CURRENT INVESTIGATION

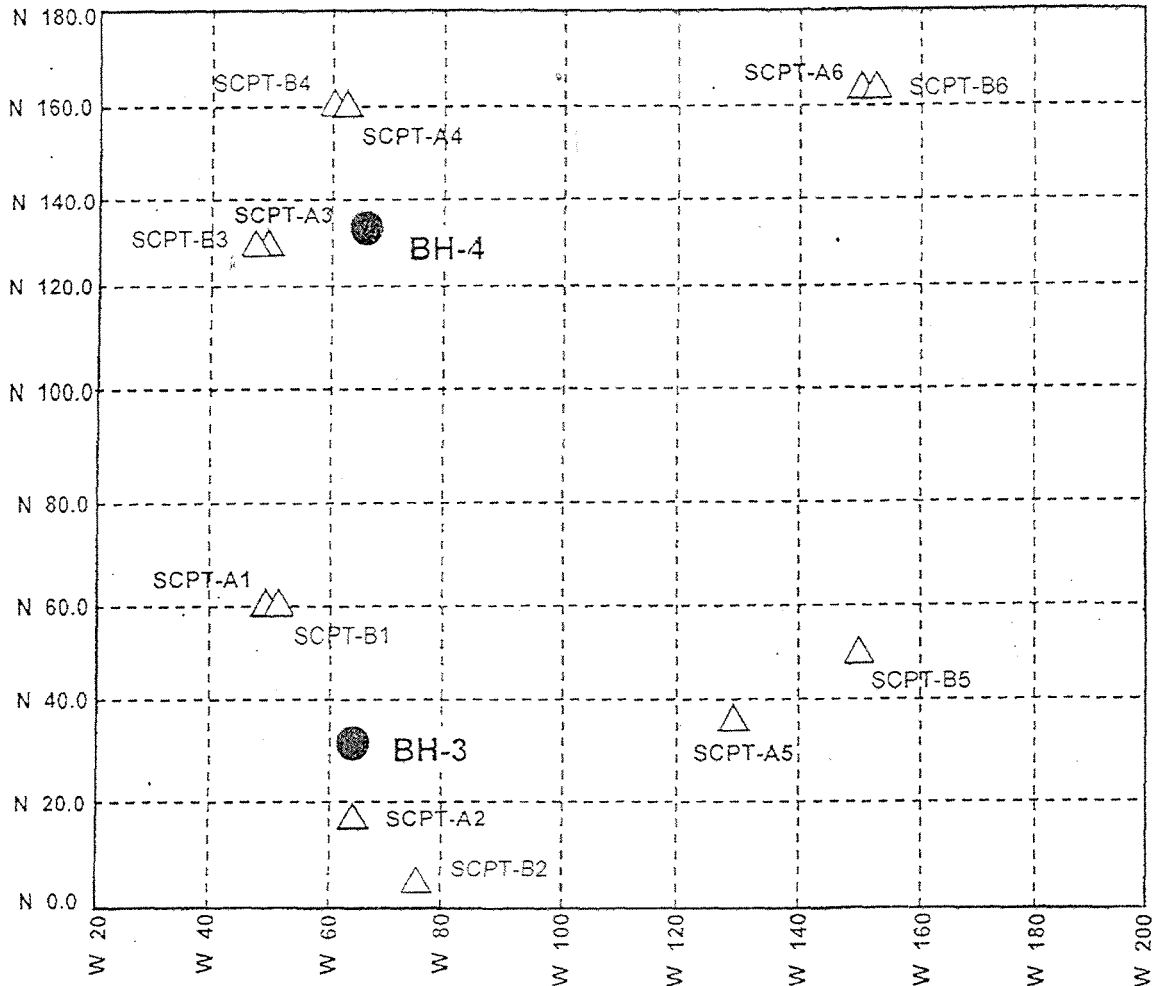
SYMBOL	TYPE OF TEST
●	Borehole (Post Compaction) BH
■	Plate Load Test (Post Compaction) PLT

PREVIOUS INVESTIGATION

SYMBOL	TYPE OF TEST
△	Static Cone Penetration Tests conducted before and after vibro compaction (Refer to report nos. 209188 & 209188-A (SCPT))

PLAN OF FIELD INVESTIGATION (TRIAL AREA)
2 x 270 MW Thermal Power Project Goindwal Sahib, Punjab

Not to Scale



Borehole No.	Co-ordinates		RL, m	Location
	N	W		
BH - 3	33.981	62.717	219.350	Boiler -1
BH - 4	135.252	66.019	219.350	Boiler -2

Test No.	Co-ordinates		RL, m	Location
	N	W		
SCPT-B1	60.238	48.489	219.400	Boiler Area 1
SCPT-B2	4.649	74.815	219.400	
SCPT-B3	130.000	50.000	219.450	Boiler Area 2
SCPT-B4	160.000	60.000	219.450	
SCPT-B5	51.583	148.262	219.226	ESP-1
SCPT-B6	163.962	154.699	219.260	ESP-2
SCPT-A1	60.238	48.489	219.400	Boiler Area 1
SCPT-A2	18.439	63.588	219.500	
SCPT-A3	130.000	50.000	219.500	Boiler Area 2
SCPT-A4	160.000	60.000	219.500	
SCPT-A5	33.500	130.000	219.530	ESP-1
SCPT-A6	163.962	154.000	219.410	ESP-2

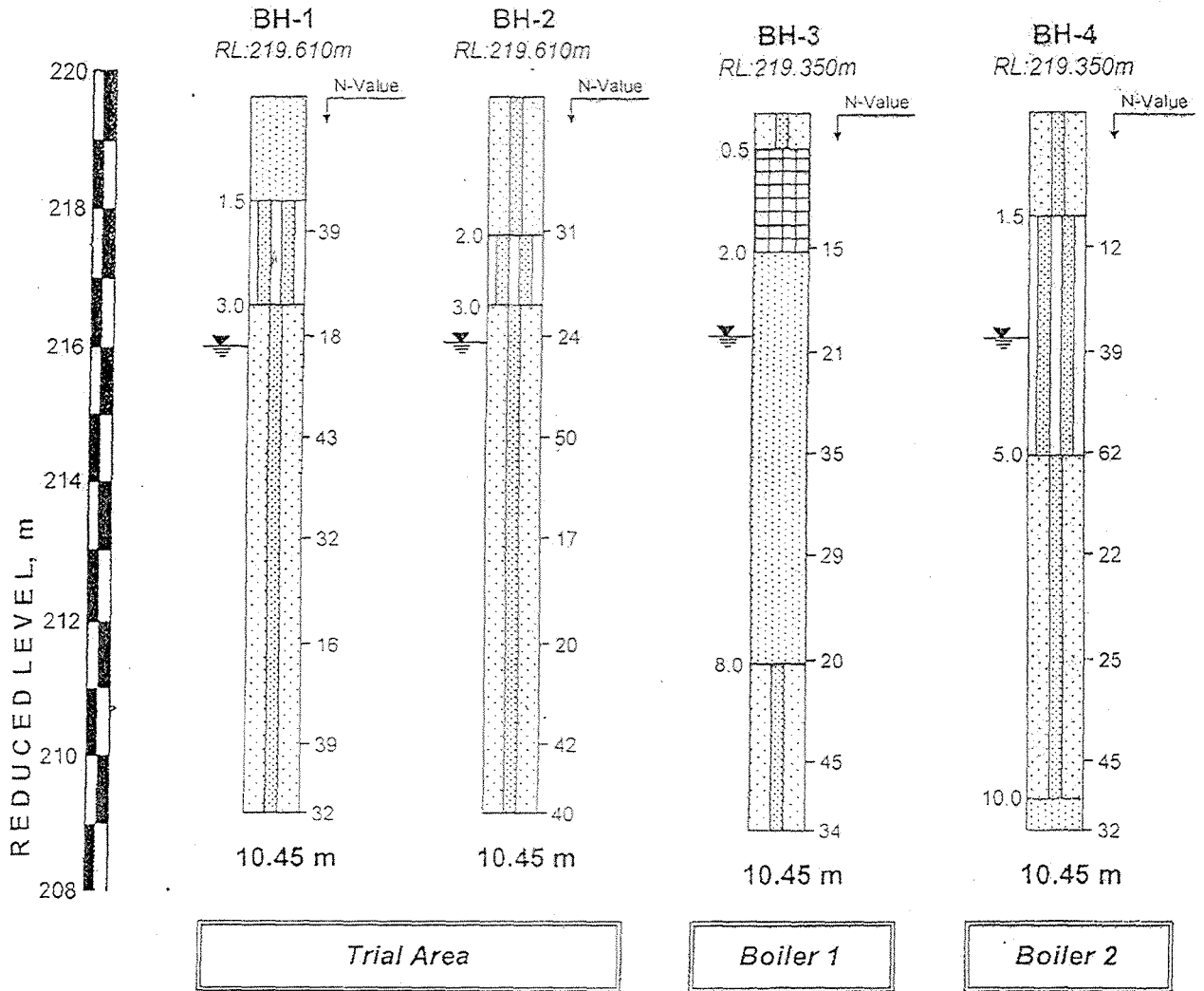
LEGEND

SYMBOL	TYPE OF TEST
●	Borehole (Current Investigation) (BH)
△	Static Cone Penetration Test (Pre Compaction) Job No.209188-B (SCPT)
△	Static Cone Penetration Test (Post Compaction) Job No.209188-B (SCPT)

PLAN OF FIELD INVESTIGATION (Boiler Area -1&2)
2 x 270 MW Thermal Power Project Goindwal Sahib, Punjab

Not to Scale

Jr



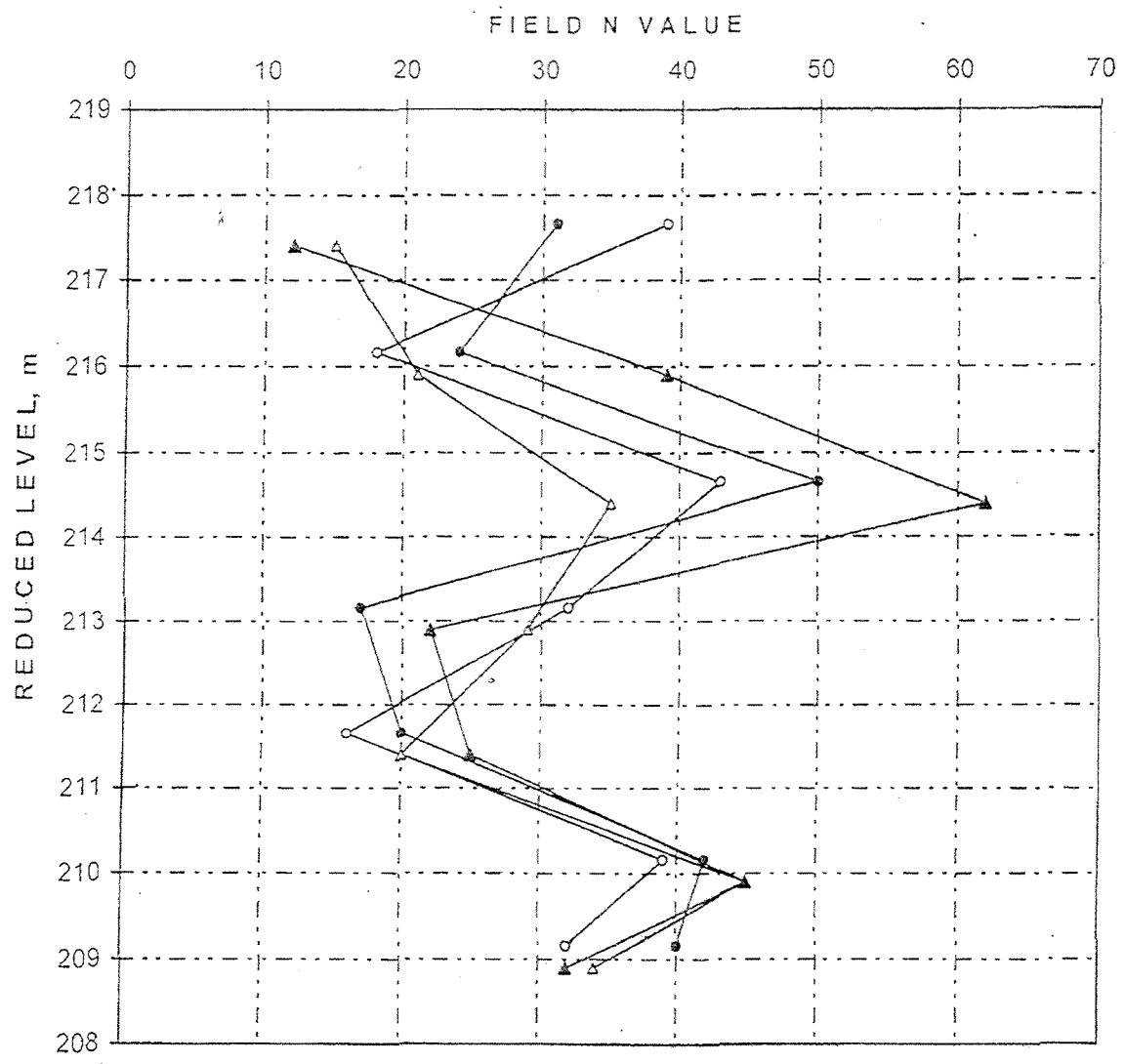
LEGEND	
SYMBOL	DESCRIPTION
	Fine sand (SP)
	Fine sand (SP-SM)
	Silty fine sand (SM)
	Sandy silt (CL)
	Water Table

SUMMARY OF BOREHOLE PROFILE

2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)



STANDARD PENETRATION TEST

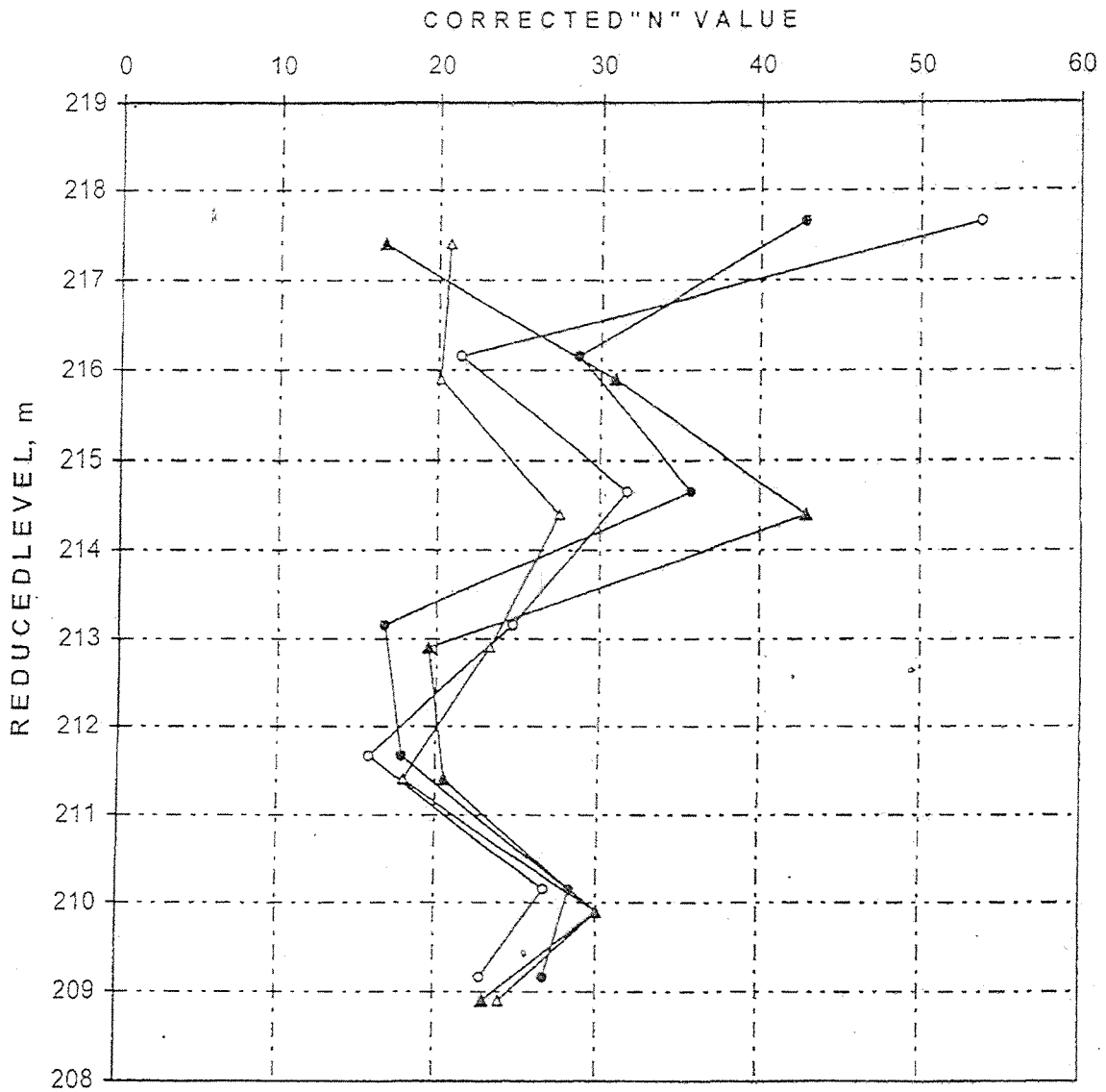


LEGEND			
Symbol	BH.No.	Location	Reduced Level,m
○	1	Trial Area	219.610
●	2		219.610
△	3	Boiler 1	219.350
▲	4	Boiler 2	219.350

2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)



STANDARD PENETRATION TEST

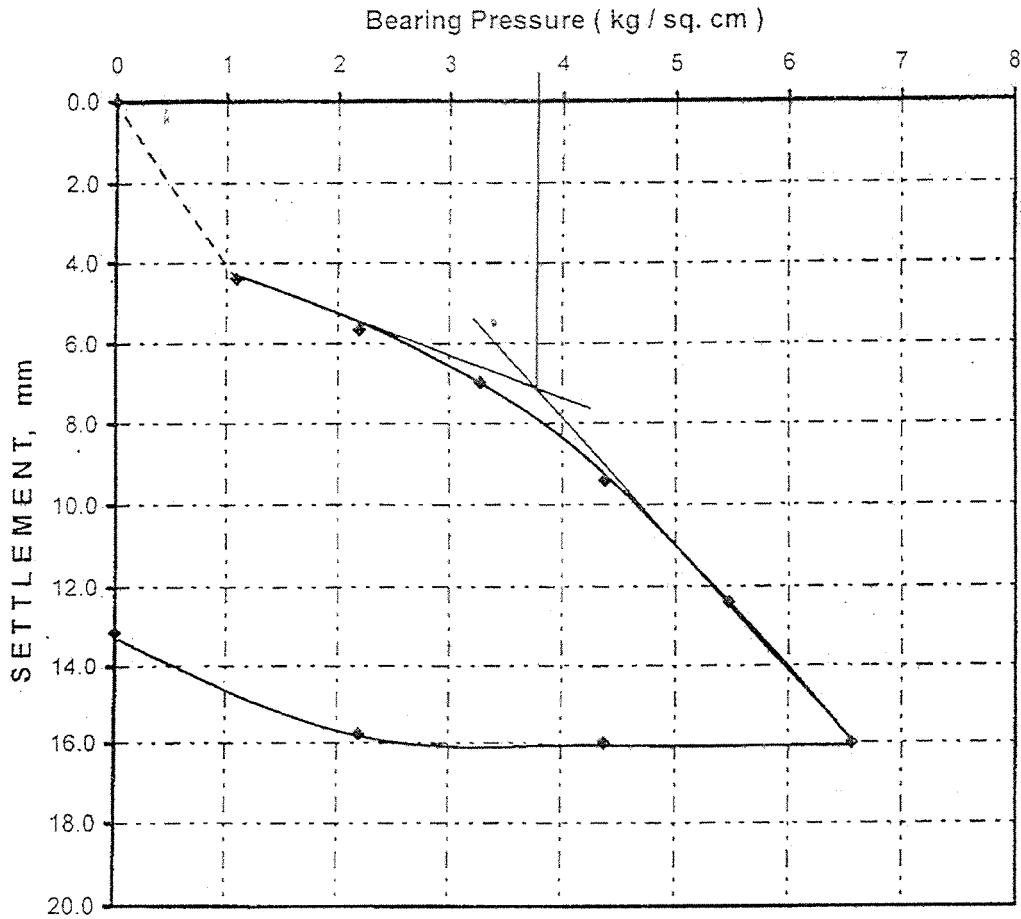


LEGEND			
Symbol	BH.No.	Location	Reduced Level,m
○	219.61	Trial Area	219.610
●	219.61		219.610
△	219.35	Boiler 1	219.350
▲	219.35	Boiler 2	219.350

2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)



PLATE LOAD TEST No.-1

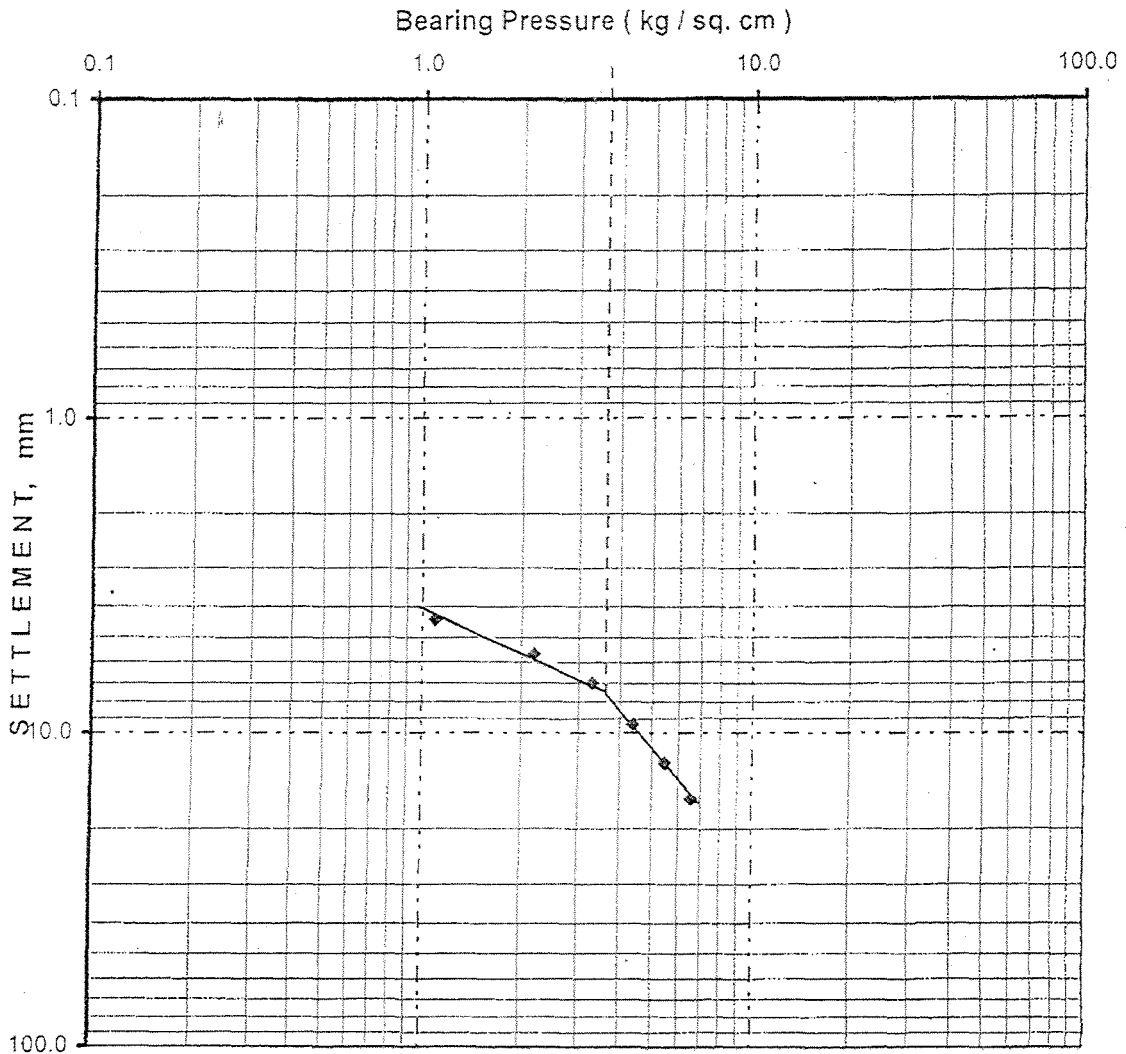


Ultimate Bearing Capacity :	3.8 kg/cm ²
Size of Plate, cm :	30 X 30
Size of Pit, m :	1.5 X 1.5 X 1.5
Co-ordinates :	277.485 S, 263.099 W
Test Level :	218.116 m

Location : Trial Area
 2X270 MW Thermal Power Project Goindwal Sahib, Punjab
 (Post Vibro Compaction)



PLATE LOAD TEST No.-1



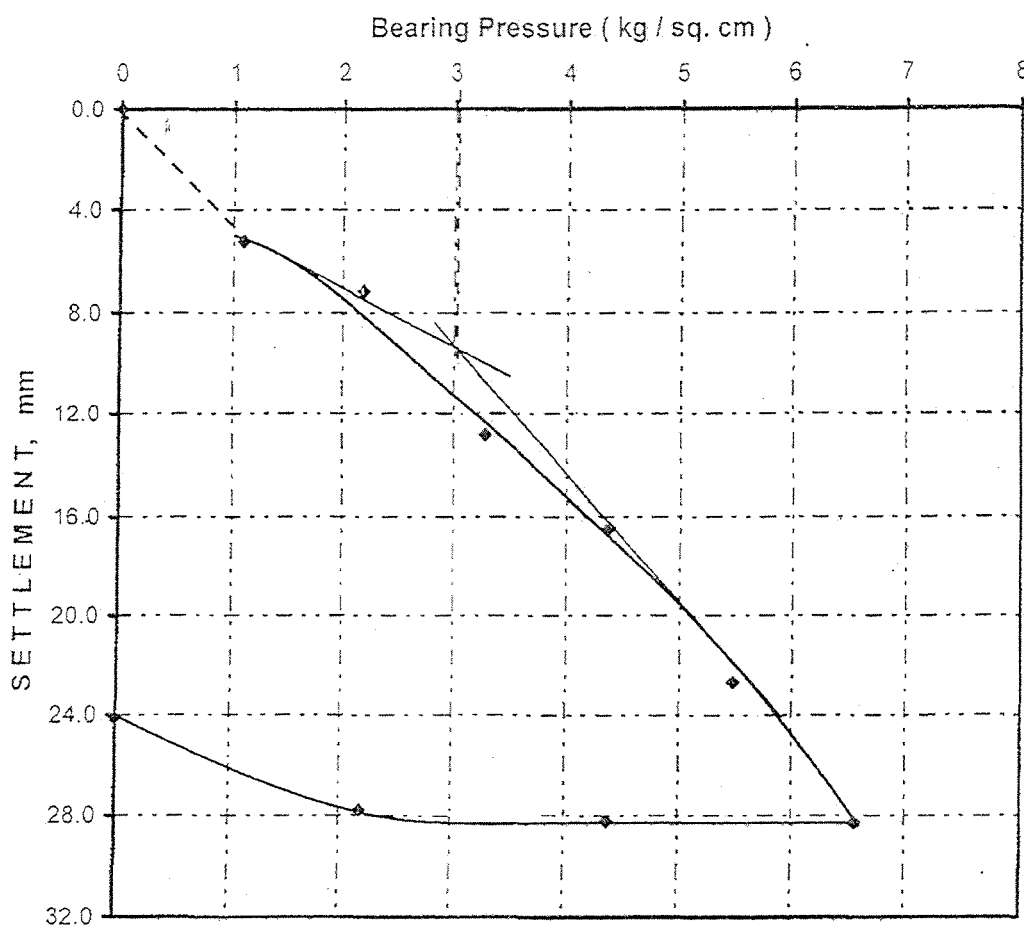
Ultimate Bearing Capacity :	3.8 kg/cm ²
Settlement at q _{ult} :	7.6 mm
Size of Plate, cm :	30 X 30
Co-ordinates :	277.485 S, 263.099 W
Test Level :	218.116 m

Location : Trial Area
 2X270 MW Thermal Power Project Goindwal Sahib, Punjab
 (Post Vibro Compaction)

Jhr



PLATE LOAD TEST No.-2



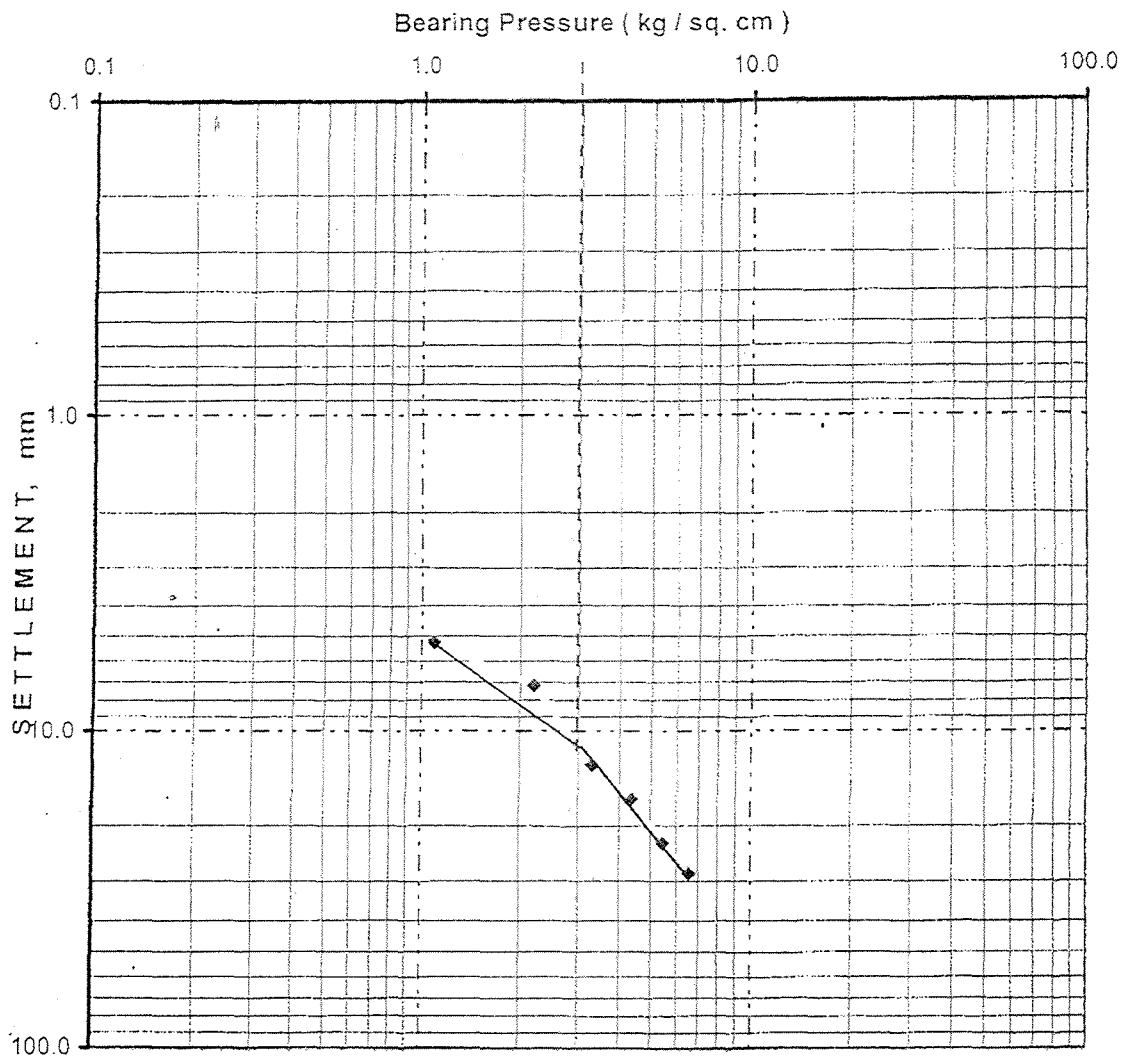
Ultimate Bearing Capacity :	3.0 kg/cm ²
Size of Plate, cm :	30 X 30
Size of Pit, m :	1.5 X 1.5 X 1.5
Co-ordinates :	256.672 S, 301.219 W
Test Level :	218.091 m

Location : Trial Area
2X270 MW Thermal Power Project Goindwal Sahib, Punjab
(Post Vibro Compaction)

Jr



PLATE LOAD TEST No.-2



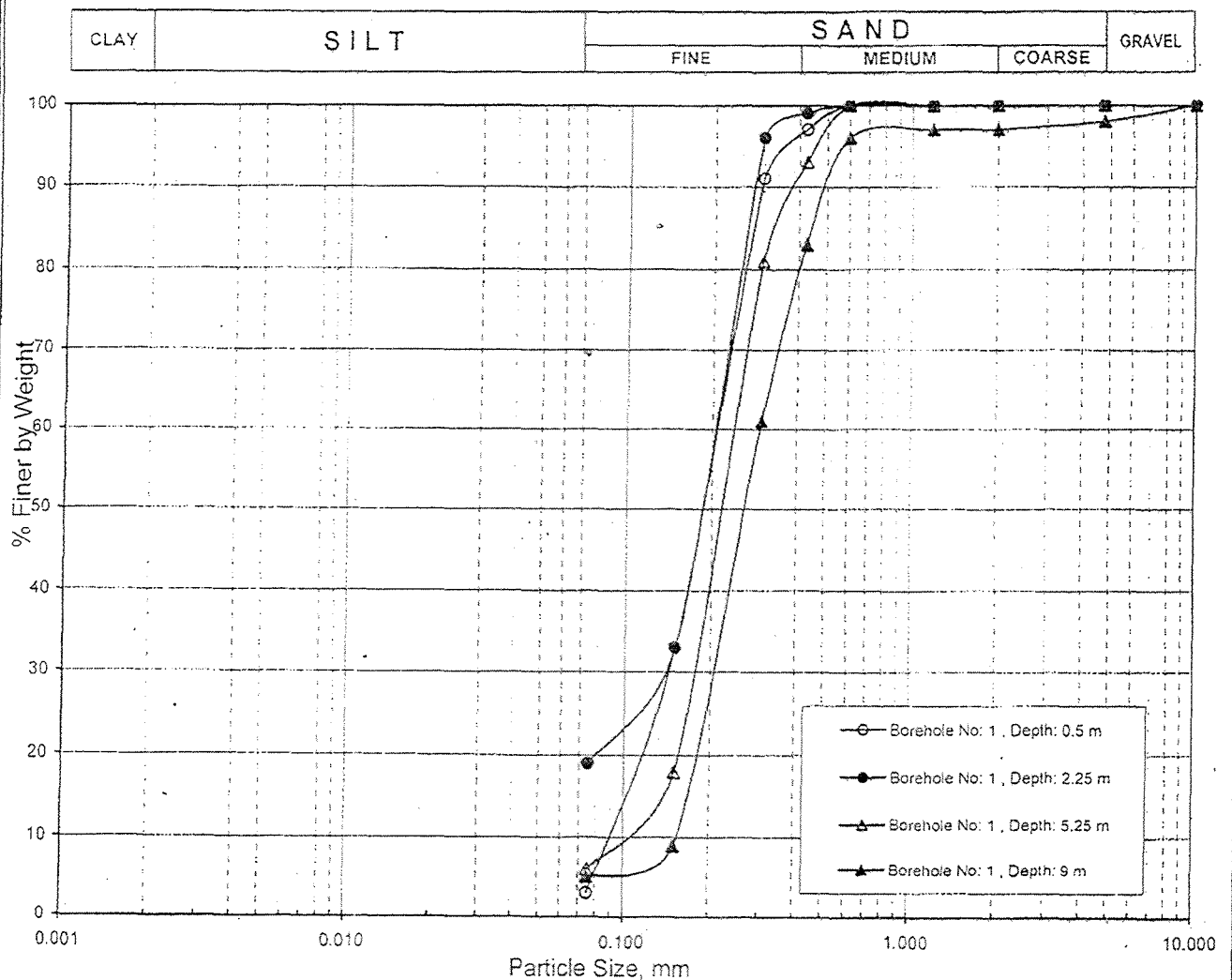
Ultimate Bearing Capacity :	3.0 kg/cm ²
Settlement at q _{ult} :	11.4 mm
Size of Plate, cm :	30 X 30
Co-ordinates :	256.672 S, 301.219 W
Test Level :	218.091 m

Location : Trial Area
2X270 MW Thermal Power Project Goindwal Sahib, Punjab
(Post Vibro Compaction)



Grain Size Analysis

SAMPLE DETAILS			TEST RESULTS						
Borehole Number	Sample Depth, m	Sample Description	% Gravel	% Sand	% Silt	% Clay	D ₆₀	D ₁₀	C _u
BH-1	0.50	Fine sand (SP)	0	97	3	0	0.220	0.093	2.4
BH-1	2.25	Silty fine sand (SM)	0	81	19	0	0.214		
BH-1	5.25	Fine sand (SP-SM)	0	94	6	0	0.250	0.100	2.5
BH-1	9.00	Fine sand with traces of gravel (SP-SM)	2	93	5	0	0.297		



Location: Trial Area

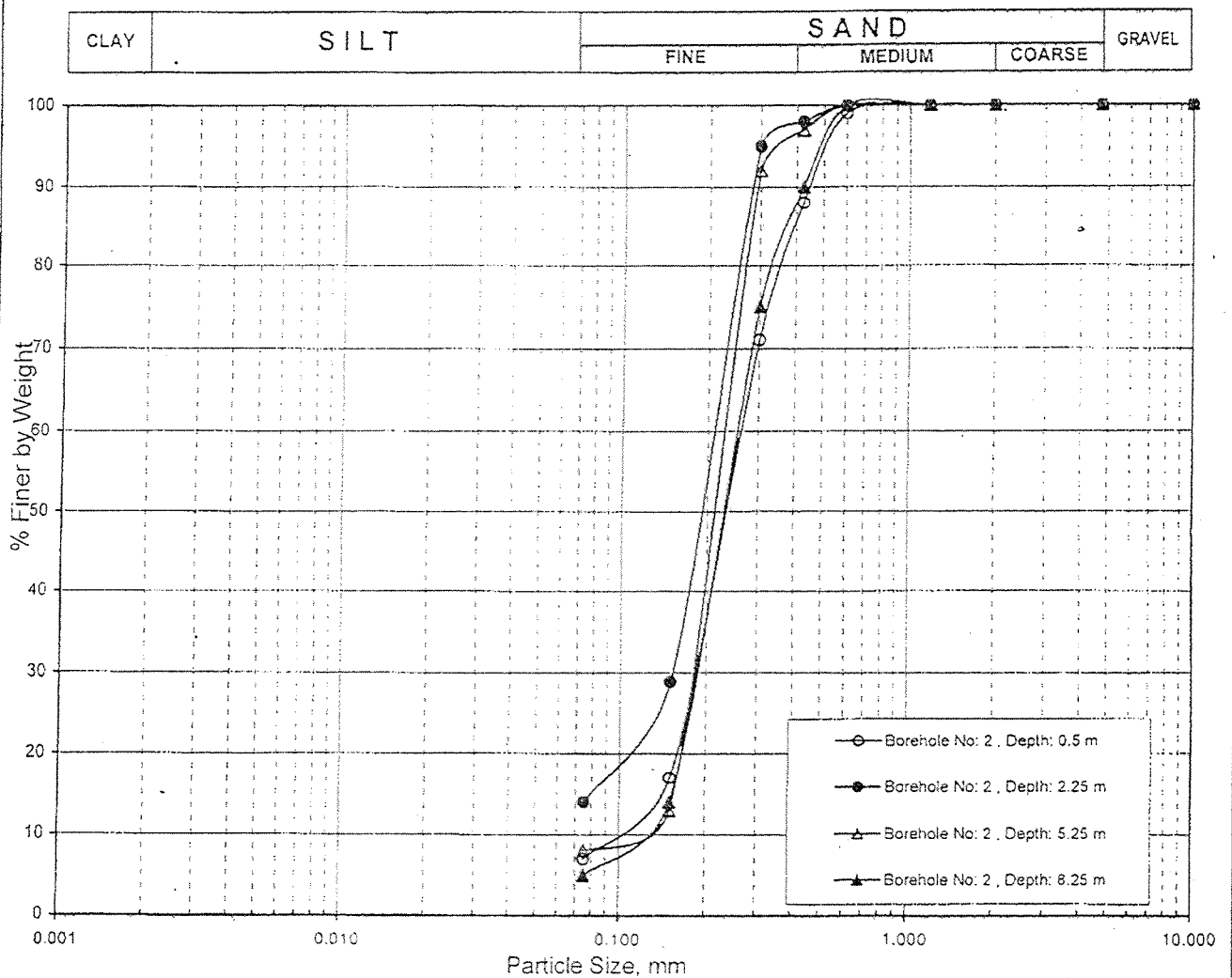
2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)

Jm



Grain Size Analysis

SAMPLE DETAILS			TEST RESULTS						
Borehole Number	Sample Depth, m	Sample Description	% Gravel	% Sand	% Silt	% Clay	D ₆₀	D ₁₀	C _u
BH-2	0.50	Fine sand (SP-SM)	0	93	7	0	0.269	0.098	2.8
BH-2	2.25	Silty fine sand (SM)	0	86	14	0	0.220		
BH-2	5.25	Fine sand (SP-SM)	0	92	8	0	0.239	0.105	2.3
BH-2	8.25	Fine sand (SP-SM)	0	95	5	0	0.263	0.117	2.3



Location: Trial Area

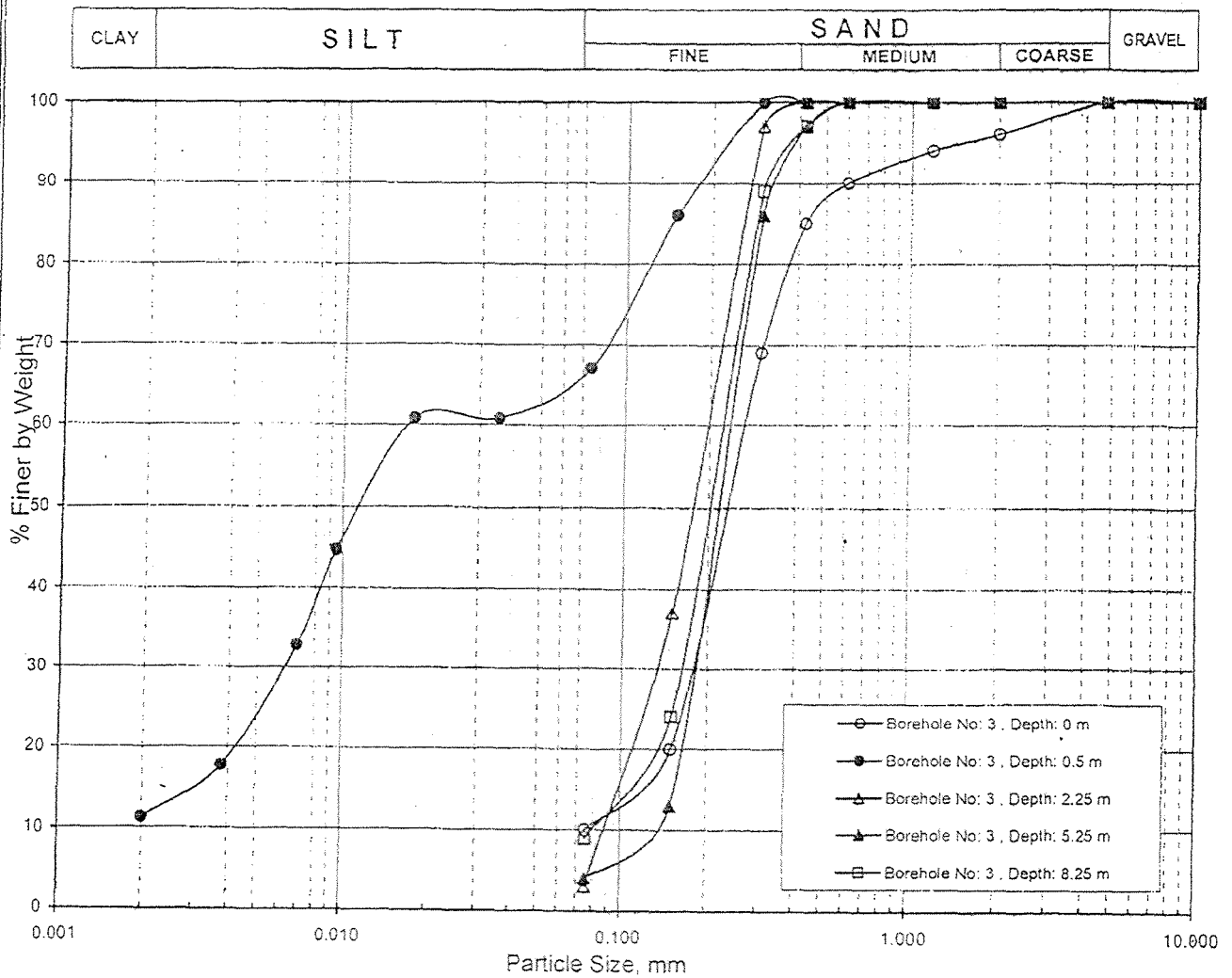
2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)

Jr



Grain Size Analysis

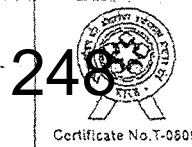
SAMPLE DETAILS			TEST RESULTS						
Borehole Number	Sample Depth, m	Sample Description	% Gravel	% Sand	% Silt	% Clay	D ₆₀	D ₁₀	C _u
BH-3	0.00	Fine sand (SP-SM)	0	90	10	0	0.272		
BH-3	0.50	Sandy silt (CL)	0	33	56	11	0.017		
BH-3	2.25	Fine sand (SP)	0	97	3	0	0.208	0.090	2.3
BH-3	5.25	Fine sand (SP)	0	96	4	0	0.247	0.125	2.0
BH-3	8.25	Fine sand (SP-SM)	0	91	9	0	0.233	0.080	2.9



Location: Boiler-1

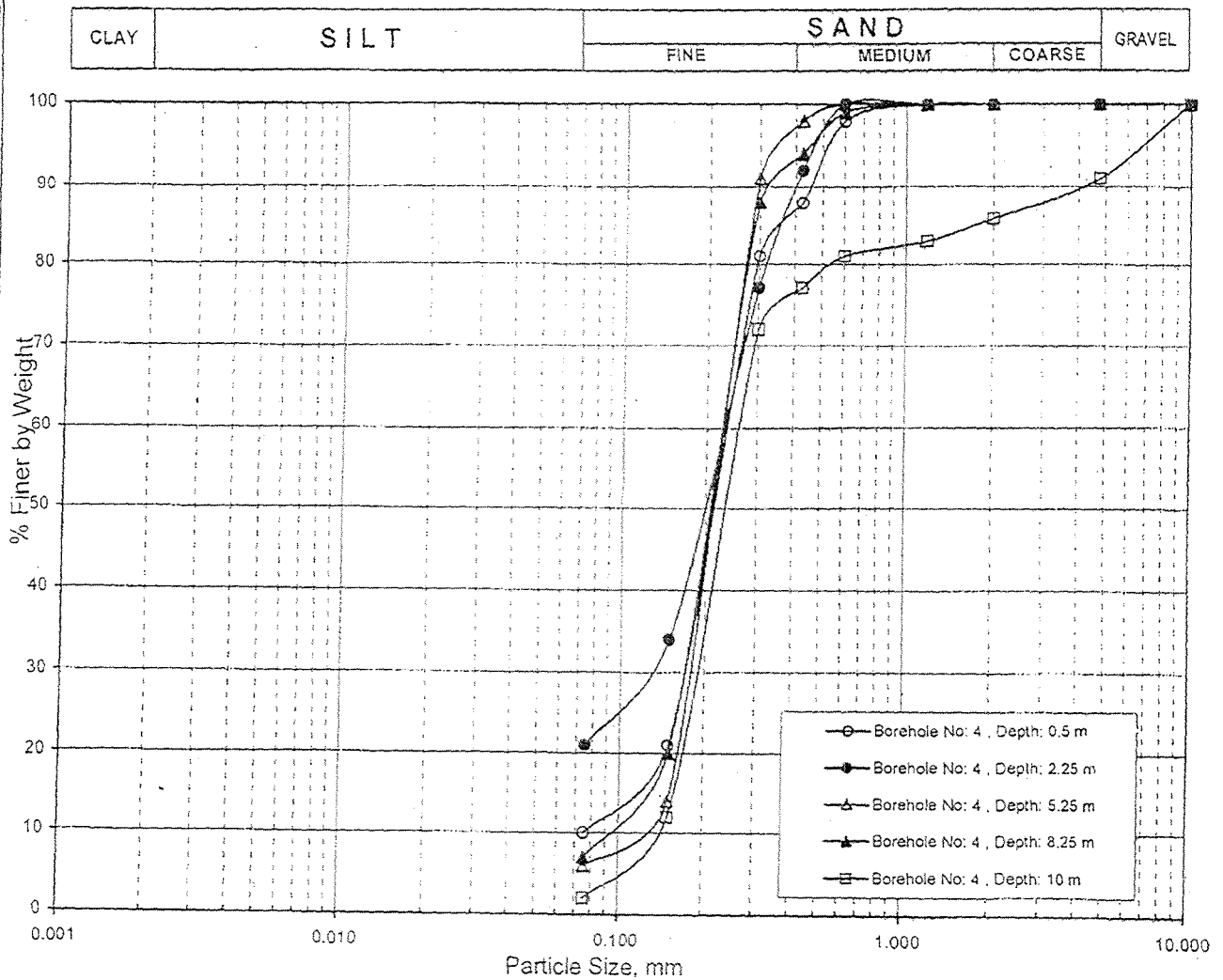
2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)

Jr



Grain Size Analysis

SAMPLE DETAILS			TEST RESULTS						
Borehole Number	Sample Depth, m	Sample Description	% Gravel	% Sand	% Silt	% Clay	D ₆₀	D ₁₀	C _u
BH-4	0.50	Fine sand (SP-SM)	0	90	10	0	0.248		
BH-4	2.25	Silty fine sand (SM)	0	79	21	0	0.241		
BH-4	5.25	Fine sand (SP-SM)	0	94	6	0	0.240	0.113	2.1
BH-4	8.25	Fine sand (SP-SM)	0	93	7	0	0.238	0.092	2.6
BH-4	10.00	Fine sand with gravel (SP)	9	89	2	0	0.270	0.135	2.0



Location: Boiler-2

2X270 MW Thermal Power Project Goindwal Sahib, Punjab (Post Vibro Compaction)

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**PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
SITE NO. 3, BLOCK B, SECTOR 18-A MADHYA MARG, CHANDIGARH**

**Petition No. 69 of 2017
Date of Order: 05.08.2020**

Petition for determination of Tariff for the Control Period (FY 2017-18 to 2019-20) under Section 62 and 86 of the Electricity Act, 2003 read with (a) Punjab State Electricity Regulatory Commission (Terms & Conditions for Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2014; and (b) Amended and Restated Power Purchase Agreement dated 26.05.2009 executed between Petitioner (Goindwal Sahib) Limited and Punjab State Power Corporation Limited (formerly known as Punjab State Electricity Board).

AND

In the matter of: GVK Power (Goindwal Sahib) Limited, Paigah House, 156-159, Sardar Patel Road, Secunderabad-540003.

.. Petitioner

Versus

Punjab State Power Corporation Limited, The Mall, Patiala (Punjab)

.. Respondent

Present: Ms. Kusumjit Sidhu, Chairperson
Sh. S.S. Sarna, Member
Ms. Anjuli Chandra, Member

ORDER

1.1 GVK Power (Goindwal Sahib) Limited (GVK) has developed a 2 X 270 MW Coal Based Thermal Power Project at Goindwal Sahib Village, Tarn Taran District, Punjab and entered into an Amended and Restated Power Purchase Agreement (PPA) on 26.05.2009 with Punjab State Power Corporation Limited (PSPCL) for the supply of power from the said project. The present petition has been filed for determination of Tariff for the Control Period, FY 2017-18 to 2019-20. GVK has prayed to:-

- a) Condone the delay in filing of the instant petition.
- b) Admit the present petition.
- c) Allow the Annual Fixed Cost for the Control Period, Rs. 1053.81 Crore for FY 2017-18, Rs. 1041.75 Crore for FY 2018-19 and Rs. 1023.87 Crore for FY 2019-20.
- d) Allow the annual Energy Charge for the Control Period Rs. 1298.35 Crore for FY 2017-18, Rs. 1298.87 for FY 2018-19 and Rs. 1363.55 Crore for FY 2019-20.

- 1.2 The delay was condoned and the petition was admitted vide order dated 25.01.2018 directing PSPCL to file its reply to the petition, GVK was directed to issue a public notice inviting suggestions/objections from the public. The public notice could not be published as per the timelines given in the order dated 25.01.2018 and GVK was directed vide order dated 12.03.2018 to publish the public notice inviting suggestions/objections from the public and the petition was fixed for hearing as well as public hearing on 25.04.2018. The public notice was published on 15.03.2018 in Daily Post (English), Ajit (Punjabi) and in Ajit Samachar (Hindi) on 16.03.2018. The petition was taken up for hearing on 25.04.2018 wherein the Id. Counsel for PSPCL stated that the petitioner has filed petition no. 54 of 2017 for determination of tariff for FY 2016-17 and the decision of the Commission in that petition will have a bearing in this petition. PSPCL was directed to file a short reply by way of an affidavit and GVK was directed to file on affidavit the details of actual expenses incurred in FY 2017-18.
- 1.3 PSPCL filed its reply vide memo no. 6923, dated 21.05.2018 submitting that the details inter alia regarding approved capital cost, primary and secondary fuel cost and actual financial statements of the petitioner company up till FY 2017-18, are necessary details for the purpose of adjudication of the present petition without which the process of tariff determination under the present petition cannot commence. GVK had filed petition no. 70 of 2017 for approval of Capital Investment Plan and Business Plan for MYT control period in which the Commission vide order dated 01.10.2019 ordered that GVK is required to submit the actual Capital Expenditure alongwith audited accounts of FY 2017-18 and 2018-19 and accordingly ordered that GVK is required to submit a revised petition for determination of AFC etc.
- 1.4 The Commission, vide order dated 07.02.2020, directed GVK to provide details as per annexures enclosed with the order on monthly basis for the Control Period FY 2017-18, 2018-19, and 2019-20 for working fuel cost/energy charges . PSPCL was directed to provide details of the payments made to GVK on monthly basis with regard to energy charges including details of fuel cost of three years of the control period FY 2017-18,2018-19 and 2019-20 clearly segregating the payments made to GVK on the basis of weighted average cost of the coal to PSPCL's generating stations and

payments on the basis of Shakti Coal. In reference to the order dated 07.02.2020, GVK submitted information vide affidavit dated 11.03.2020 and PSPCL submitted information vide memo no. 5291 dated 11.03.2020. Vide order dated 13.03.2020 GVK and PSPCL were directed to file their respective reply to the said information by 16.03.2020. PSPCL has submitted vide memo no. 5321, dated 16.03.2020 that the details submitted by GVK have been tallied and are in order.

- 1.5 The petitioner prayed that pending final adjudication of petition No. 69 of 2017, the tariff determined by the Commission vide order dated 17.01.2020 in petition No. 54 of 2017 be continued. The Commission vide Order dated 20.03.2020 decided that the tariff determined for FY 2016-17 in petition No. 54 of 2017 shall be applicable provisionally for MYT Control Period FY 2017-18 to FY 2019-20 subject to the final Order of the Commission in petition No. 69 of 2017. During the hearing on 24.06.2020 the Ld. Counsel for the parties requested to submit their comprehensive written submissions and the Commission as a last opportunity allowed the same to be filed by 01.07.2020. After hearing the parties order was reserved vide Order dated 26.06.2020. PSPCL submitted additional affidavit vide memo No. 5523 dated 26.06.2020 and GVK submitted its additional submissions dated 01.07.2020.

2.0 Capital Cost for FY 2017-18 to FY 2019-20

- 2.1 GVK has submitted that it has claimed completed capital cost of Rs. 4441 crore as on the Commercial Operation Date i.e. 16.04.2016 for determination of tariff for FY 2016-17 to FY 2018-19. The summary of additional capital expenditure as claimed by GVK for FY 2017-18 to FY 2019-20 is as follows:

Table No. 1: Additional capitalisation during the 1st Control Period (Rs. Crore)

Sr. No.	Head	FY 2017-18	FY 2018-19	FY 2019-20	Total
1	Buildings	57	0	0	57
2	Plant & Machinery				
	- Initial capital spares	66	0	0	66
	- Balance BOP works	53	0	0	53
	-Balance BTG works	4	0	0	4
3	Topping of Roads	50	0	0	50
4	Total :	230	0	0	230

- 2.2 GVK requested the Commission to consider the above amount of Rs.230 Crore towards additional capitalization under various heads and approve the

Capital Investment Plan including the spill-over of Capital expenditure after the date of Commercial Operation Date (“COD”). GVK also submitted that the above estimates are indicative only and actual expenses may vary. GVK further requested the Commission that in the event that it is unable to incur the said additional capital cost of Rs. 230 Crore in FY 2017-18, the same or the balance amount be allowed to be incurred in FY 2018-19.

Commission’s Analysis

- 2.3 The Commission vide its Order dated 17.01.2020 in petition no. 54 of 2017 has approved the capital cost of the project after prudence check as Rs. 3058.37 Crore as on the date of commissioning of the GVK Power Plant i.e. 16.04.2016 (GVK’s appeal against this order is pending in APTEL).
- 2.4 The Commission has provisionally approved Capital Investment of Rs 14.44 Crore vide its Order dated 30.7.2020 in Petition No. 70 of 2017 on the basis of actual expenditure incurred during the Control Period as reflected in their Annual Audited Accounts submitted in the said petition as under:

Table No. 2: Capital Investment provisionally approved by the Commission during each year of the 1st Control Period

(Rs. Crore)					
Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20	Total
1.	BTG Spares	12.90	Nil	Nil	12.90
2.	Coal Testing Laboratory	Nil	0.84	0.70	1.54
3.	Total	12.90	0.84	0.70	14.44

- 2.5 GVK has not claimed any additional capital expenditure from 17.04.2016 to 31.03.2017. Therefore, considering the capital cost of Rs. 3058.37 Crore as on 31.03.2017 and the additional capital expenditure of Rs. 12.90 Crore during FY 2017-18, the total provisional capital cost as on 31.03.2018 works out Rs. 3071.27 crore for FY 2017-18.

Similarly, considering the capital cost of the project as Rs. 3071.27 crore as on 01.04.2018 and additional capital expenditure of Rs. 0.84 crore during FY 2018-19, the total provisional capital cost as on 31.03.2019 works out Rs. 3072.11 crore for FY 2018-19.

Further, considering the capital cost of Rs. 3072.11 crore as on 01.04.2019 and additional capital expenditure of Rs. 0.70 crore during FY 2019-20, the total provisional capital cost as on 31.03.2020 works out to Rs. 3072.81 crore.

Accordingly, the Commission approves the following Capital cost for FY 2017-18 to FY 2019-20:

Table No. 3: Capital cost provisionally approved by the Commission for FY 2017-18 to FY 2019-20

(Rs. Crore)				
Sr.No.	Head	FY 2017-18	FY 2018-19	FY 2019-20
1.	Capital cost as on 1st April of the year	3058.37	3071.27	3072.11
2.	Additional capital expenditure during the year	12.90	0.84	0.70
3.	Capital cost as on 31 st March of the year	3071.27	3072.11	3072.81

The Commission provisionally allows additional capitalization of Rs. 12.90 Crore, Rs. 0.84 Crore and Rs. 0.70 Crore for FY 2017-18, FY2018-19 and FY 2019-20 respectively equal to the capital expenditure allowed provisionally for FY 2017-18, FY2018-19 and FY 2019-20.

3.0 OPERATION & MAINTENANCE EXPENSES:

GVK's Submission

3.1 GVK submitted that Regulation 26 of the PSERC Tariff Regulations, 2014 along with its subsequent amendment vide 03.02.2016 provide for the Operation & Maintenance expenses. Further, Regulation 8.1 and 8.2 of PSERC MYT Regulations, 2014 specifies the baseline values. The baseline values for the Control Period are to be determined by this Commission based on estimates of the expected figures for the relevant year, industry benchmark / norms and other factors etc. However, since, no baseline values were approved by the Commission, GVK has adopted the baseline values for the O&M expenses as provided in the CERC Regulations.

Employee Cost:

3.2 GVK submitted that the employee cost includes salaries payable to employees, allowances and other terminal benefits.

3.3 GVK further submitted that the escalation Index has been computed in terms of the PSERC MYT Regulations, 2014 considering the WPI Index (available till March, 2017) and CPI Index (available till March, 2017), as under:

Table No. 4: Computation of Escalation Index

Period	FY 2015-16	FY 2016-17	Increase / Decrease
CPI Index (April-March)	265.00	275.92	4.119 %
WPI Index (April-March)	176.675	183.20	3.693 %
CPI: WPI Index (50:50)			3.906 %

- 3.4 GVK submitted that the Inflation factor for the Control Period as per PSERC Tariff Regulations, 2014 has been computed as 3.906%. GVK further submitted that the inflation factor is on the lower side considering the average rise in salaries and other expenses. In order to retain employees with experience, GVK has to pay competitive remuneration to employees in order to match industry standards. Considering the fact that Employee Expenses is the most critical component in the overall operational expenditure, a 3.906% hike in Employee Expenses is insufficient to maintain salaries even at industry average for the Control Period.
- 3.5 GVK has estimated the Employee Cost for FY 2017-18 of Rs.15.58 Crore with an annual escalation of 15% in Employee Cost for the next two year of the Control Period. Accordingly, the Employee Cost for the Control Period is as under: -

Table No 5: Employee Cost claimed by GVK for FY 2017-18 to FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	Control period (Projections)		
		FY 2017-18	FY 2018-19	FY 2019-20
1.	Salaries and Wages	11.75	13.51	15.54
2.	Staff Welfare expenses	1.25	1.44	1.65
3.	Apprentice & Other Training Expenses	0.62	0.72	0.83
4.	Sub Total (A)	13.62	15.67	18.02
	Contribution to Terminal Benefits			
1.	Contributions to Provident and other funds	0.94	1.08	1.24
2.	Gratuity	0.39	0.45	0.52
3.	E.L. Encashment	0.62	0.72	0.83
4.	Sub Total (B)	1.95	2.25	2.59
	Total Employee cost (A+B)	15.58	17.92	20.61

Commission's Analysis

- 3.6 The baseline values of O&M expenses are to be determined as per Regulations 8(1) of PSERC MYT Regulation-2014, which states as under:

"8.1 Baseline values

- a) *The baseline values for the control period shall be determined by Commission and the projections for the control period shall be based on these figures.*
- b) *The baseline values shall be inter-alia based on figures approved by the Commission in the past, latest audited accounts, estimates of the expected figures for the relevant year, industry benchmarks/norms and other factors considered appropriate by the Commission.”*

3.7 Regulation 26 of PSERC (Terms and Conditions of Gen. Transmission, wheeling and Retail Supply Tariff) Regulations, 2014 (Amended vide No. PSERC/Reg./111 dated 03.02.2016) provides for determination of O&M expenses and note-9 thereunder provides for the method for determination of unfunded liability. The Commission determines O&M expenses as per Regulation 26 of PSERC MYT Regulations, 2014, as under:

“26.1. The O&M expenses for the n^{th} year of the Control Period shall be approved based on the formula shown below:

$$\mathbf{O\&M_n = (R\&M_n + EMP_n + A\&G_n) \times (1-X_n)}$$

Where,

- *R&M_n – Repair and Maintenance Costs of the Applicant for the n^{th} year;*
- *EMP_n – Employee Cost of the Applicant for the n^{th} year;*
- *A&G_n – Administrative and General Costs of the Applicant for the n^{th} year;*

The above components shall be computed in the manner specified below:

$$\mathbf{(i) R\&M_n + A\&G_n = K * GFA * (WPI_n / WPI_{n-1})}$$

Where,

- *‘K’ is a constant (expressed in %) governing the relationship between R&M and A&G expenses and Gross Fixed Assets (GFA) for the n^{th} year. The value of “K” will be specified by the Commission in the MYT order.*
- *‘GFA’ is the average value of the Gross Fixed Assets of the n^{th} year.*
- *‘WPI_n’ means the average rate (on monthly basis) of Wholesale Price Index (all commodities) over the year for the n^{th} year.*

$$\mathbf{(ii) EMP_n = (EMP_{n-1}) * (INDEX_n / INDEX_{n-1})}$$

- *INDEX_n - Inflation Factor to be used for indexing the Employee Cost.*
- *This will be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) of n^{th} year and shall be calculated as under:-*

$$INDEX_n = 0.50 * CPI_n + 0.50 * WPI_n$$

‘WPI_n’ means the average rate (on monthly basis) of Wholesale Price Index (all commodities) over the year for the nth year.

‘CPI_n’ means the average rate (on monthly basis) of Consumer Price Index (Industrial workers) over the year for the nth year.

.....

(iii) X_n is an efficiency factor for nth year

The value of X_n shall be determined by the Commission in its first MYT order for the Control Period.”

Employee Cost

3.8 The employee cost is considered in two parts -Terminal benefits and other employee cost. In the Petition no 54 of 2017, the Commission has provisionally allowed Employee Cost as per Annual Audited Accounts for FY 2016-17 as under:

Table No.6: Employee Cost of FY 2016-17 provisionally allowed (Rs. Crore)

Sr. No.	Particulars	Actual Cost as per audited annual accounts	Claimed by GVK (Projections)	Approved by the Commission
1.	Terminal Benefits	0.65	1.80	0.65
2	Other Employee cost	8.01	12.58	8.01
3	Total	8.66	14.38	8.66

Employee Cost for FY 2017-18, FY 2018-19 and FY 2019-20

3.9 As per Annual Audited Accounts for FY 2017-18 and FY 2018-19, the actual Terminal benefits paid are Rs 0.73 Crore and Rs 0.99 Crore respectively. The Commission provisionally allows the actual Terminal benefit of Rs 0.73 Crore and Rs. 0.99 Crore for FY 2017-18 and FY 2018-19 respectively. In view of the increasing trend in the actual Terminal benefits in FY 2017-18 and FY 2018-19, over their previous years, terminal benefits for FY 2019-20 have been provisionally worked out to Rs. 1.25 Crore. **Accordingly, terminal benefits provisionally allowed by the Commission for 1st Control Period is as under:**

Table No.7: Terminal Benefits provisionally allowed by the Commission for the 1st Control Period (FY 2017-18 to FY 2019-20)

(Rs. Crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1	Terminal benefits	0.73	0.99	1.25

- 3.10 The actual 'Other Employee Cost' as per annual audited accounts for FY 2017-18 is Rs. 9.26 Crore. Accordingly, the Commission considers Rs. 9.26 Crore as base 'Other Employee Cost' for FY2017-18.
- 3.11 The Commission has considered the actual 'other employee cost' for FY 2017-18 as the provisional base line for determining the other employee cost. Since the plant has achieved only 4% PLF during FY 2016-17 and has run for 349 days in that year, therefore taking FY 2016-17 as the baseline year is not feasible. The Employee Cost is to be determined as per Regulation 26.1 of PSERC MYT Regulations, 2014 (as amended from time to time). Relevant sections of Regulation 26 of MYT Regulations, 2014 are given in Para 3.7.
- 3.12 Accordingly, the INDEX_n for FY 2018-19 and FY 2019-20 has been calculated as under:

Table No. 8: WPI and CPI Increase considered for FY 2018-19

Sr. No.	Particulars	FY 2017-18	FY 2018-19	Increase (%)
1	CPI	284.42	299.92	5.45
2	WPI	114.88	119.79	4.28

$$\text{INDEX } n/\text{INDEX } n-1 = (0.5 \times 5.45) + (0.5 \times 4.28) = 4.86\%$$

Table No. 9: WPI and CPI Increase considered for FY 2019-20

Sr. No.	Particulars	FY 2018-19	FY 2019-20	Increase (%)
1	CPI	299.92	322.50	7.53
2	WPI	119.79	121.78	1.66

$$\text{INDEX } n/\text{INDEX } n-1 = (0.5 \times 7.53) + (0.5 \times 1.66) = 4.5963\%$$

- 3.13 The Commission considers escalation of 4.86% and 4.60% for determining other employee cost for FY 2018-19 and FY 2019-20 respectively. The other employee cost provisionally approved by the Commission for 1st Control Period is as follows:

Table No.10: Employee Expenses of GVK approved provisionally by the Commission for 1st Control Period (Rs. Crore)

Sr. No	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1.	Other Employee Cost of Previous year	9.26	9.26	9.71
2.	Escalation Factor	---	4.86%	4.60%
3.	Other Employee Cost	9.26	9.71	10.16
4.	Terminal Benefits	0.73	0.99	1.25
5.	Total Employee Cost	9.99	10.70	11.41

Repair and Maintenance and A&G Expenses

GVK's Submission

- 3.14 GVK submitted that the R&M and A&G expenses are linked to the K factor and WPI Index, "K" being the constant (expressed in percentage) governing the relationship between R&M and A&G expenses and Gross Fixed Assets. For computing the K factor, GVK has estimated the R&M expenses and A&G expenses by deducting the projected Employee Cost for FY 2017-18 from the total O&M expenses as per the CERC Regulations for FY 2017-18. The details are as under: -

Table No.11: Computation of K for the 1st Control period (Rs. Crore)

Sr. No.	Particulars	FY 2017-18
1.	Total O&M expenses for the FY 2017-18 as per CERC Regulations	154.98
2.	Less : Employee Cost for the FY 2017-18	15.58
3.	R&M and A&G costs	139.40
4.	Opening GFA	4441
5.	Closing GFA	4671
6.	Average GFA	4556
7.	R&M and A&G Exp. as % of GFA	3.06 %
8.	K factor	3.06 %

- 3.15 In view of the above, GVK prayed the Commission to approve the K Factor as mentioned above. GVK has considered the said K factor (as 3.06%) for FY 2017-18.
- 3.16 GVK submitted that the increase in WPI Index works out to 3.69% (available actual till March, 2017) as per the PSERC Tariff Regulations, 2014. Hence, for the purpose of R&M and A&G Expenses, GVK has considered the escalation Index of 3.69% (i.e., average of increase in WPI from FY 2015-16 to FY 2016-17 as per latest data available). Accordingly, GVK has projected combined R&M and A&G expenses as under:

Table No. 12: O&M Expenses projected by GVK (Rs. Crore)

Sr. No.	Particulars	FY2017-18	FY2018-19	FY2019-20
1.	Opening FGA	4441	4671	4671
2.	Additional Capitalization	230	0	0
3.	Closing GFA	4671	4671	4671
4.	Average GFA	4556	4671	4671
5.	K Factor (adjusted for WPI index)	3.06%	3.17%	3.29%
6.	Escalation factor	3.693%	3.693%	3.693%
7.	R&M and A&G Expenses	139.40	148.19	153.67
8.	Employee Cost	15.58	17.92	20.61
9.	O&M Expenses	154.98	166.11	174.28

3.17 GVK submitted that since this is the first Control Period of operation of the Project, it has considered efficiency factor as nil while computing the O&M expenses. GVK prayed the Commission to approve the same. Accordingly, GVK prayed the Commission to determine the K factor and allow the O&M expenses as detailed above in line with the provisions of PSERC Tariff Regulations, 2014.

Commissions' Analysis

3.18 R&M and A&G expenses are part of O&M expenses. The Commission has provisionally approved R&M and A&G expenses as Rs. 23.14 Crore (from 17.4.2016 to 31.3.2017) for FY 2016-17 in Petition no 54 of 2017. The opening value of approved Gross Fixed Assets as on 1.04.2017 is Rs. 3058.37 Crore as determined in the para 25 of Petition no 54 of 2017.

3.19 GVK in their annual audited accounts for FY 2016-17, FY 2017-18 and FY 2018-19 have shown other expenses including R&M and A&G expenses as Rs. 23.42 Crore, Rs.232.63 Crore and Rs.130.67 Crore respectively. It has been observed that expenses relating to R&M and A&G are Rs. 23.42 Crore, Rs. 64.96 Crore and Rs 55.18 Crore for FY 2016-17, FY 2017-18 and FY 2018-19 respectively. On scrutiny, it has been found that certain A&G expenses are abnormally high for FY 2017-18 as compared to FY 2016-17 and FY 2018-19. These are:

- i) Insurance: GVK has incurred expenses of Rs. 6.02 Crore in FY 2017-18 as compared to Rs. 2.68 Crore, and Rs. 2.84 Crore on Insurance in FY 2016-17 and FY 2018-19 respectively.

- ii) Rates and Taxes: GVK has incurred expenses of Rs. 3.63 Crore in FY 2017-18 as compared to Rs. 0.51 Crore and Rs. 1.12 Crore on Rates and taxes in FY 2016-17 and FY 2018-19 respectively.
- iii) Power and Fuel: GVK has incurred expenses of Rs. 13.33 Crore in FY 2017-18 as compared to Rs. 6.93 Crore and Rs. 4.36 Crore on power and fuel in FY 2016-17 and FY 2018-19 respectively.
- iv) Provision for Diminution in value of Investment: In the order dated 17.1.2020 in Petition 54 of 2017, the Commission has noted that GVK had diverted the funds meant for capital expenditure out of the loan taken from financial institutions by investment in Mutual Funds. The Commission has neither considered interest paid on loans used for such other investments nor income earned from such other business/investment as part of the capital expenditure.
- v) Miscellaneous Expenses: GVK has incurred expenditure of Rs. 5.69 Crore in FY 2017-18 as compared to Rs. 1.54 Crore and Rs. 2.12 Crore on miscellaneous expenses in FY 2016-17 and FY 2018-19 respectively.
- vi) Legal and Professional charges: GVK has incurred legal and professional charges of Rs 4.67 Crore and Rs.9.34 Crore during FY 2017-18 and FY 2018-19 respectively as compared to Rs 3.41 Crore in FY 2016-17.
- vii) GVK has achieved PLF of approximate 4%, 32% and 52% during FY 2016-17, FY 2017-18 and Rs 2018-19 respectively. In this regard the following has been observed:
- Contract Manpower: GVK has shown expenses on contract manpower as Rs 5.15 Crore, Rs. 13.48 Crore and Rs 16.63 Crore for FY 2016-17, FY 2017-18 and FY 2018-19 respectively as against employee cost of Rs 8.66 Crore, Rs 9.99 Crore and Rs 12.67 Crore for FY 2016-17, FY 2017-18 and Rs 2018-19 respectively.
 - Consumption of stores: GVK has incurred Rs 10.07 Crore on consumption of stores and spares in FY 2017-18 as against Rs. 1.19 Crore in FY 2016-17 which is abnormally high considering the fact that the plant is new and has only been operational since 16.4.2016.

- Ash Handling Charges: GVK has claimed ash handling charges of Rs 0.77 Crore, Rs.3.12 Crore and Rs.3.10 Crore for FY 2016-17, FY 2017-18 and FY 2018-19 respectively, but has not shown any income from sale of ash. These charges cannot be allowed considering labour, power and water charges are already being allowed separately.

3.20 The Commission observes that, the A&G and R&M expenses of GHTP and GGSSTP (Thermal Plants) of PSPCL are lower than GVK inspite of being older and of higher capacity as shown in the table below:

Table No. 13: Comparison of A&G and R&M expenses of PSPCL owned Thermal Plants and GVK for FY 2017-18 and FY 2018-19

Sr. No.	Particulars	FY 2017-18			FY 2018-19		
		GHTP	GGSSSTP	GVK	GHTP	GGSSSTP	GVK
1	Capacity (MW)	920	840	540	920	840	540
2	A&G and R&M expenses	48.59	61.06	64.96	49.80	62.58	55.18

3.21 The Commission has considered the R&M and A&G expenses based on audited accounts of GVK for FY 2016-17, FY 2017-18 & FY 2018-19 and the industry benchmark for determining the baseline values of R&M and A&G expenses FY 2017-18 as under:

Table No. 14: Determination of Baseline value of the R&M and A&G expenses based on the Annual Audited Accounts for FY 2016-17, 2017-18 and FY 2018-19 (Rs. Crore)

Sr. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19	Provisional Base line value for FY 2017-18
I	A&G Expenses				
1.	Insurance	2.68	6.02	2.84	2.76
2.	Rent	0.03	0.03	0.06	0.05
3.	Rates & Taxes	0.51	3.63	1.12	0.82
4.	Legal & Professional Charges	3.41	4.67	9.34	3.00
5.	Auditor's Remunerations:				
	Statutory Audit	0.02	0.03	0.07	0.03
	Tax Audit	0	0.02	0	0.02
	Other Services	0	0.01	0.01	0.01
6.	Provision for Diminution in value of Investment	0.28	0.12	0.00	0.00
7.	Communication cost	0.22	0.21	0.08	0.08
8.	Travelling expenses	0.28	0.75	0.98	0.63
9.	Miscellaneous expenses	1.54	5.69	2.12	2.12
10.	Inventory Written off	0	0.53	0.00	0.00
11.	Contract Manpower	5.15	13.48	16.63	8.00
12.	Ash Handling Charges	0.77	3.12	3.10	0.00
13.	Water drawl charges	0	1.21	0.00	0.00
14.	Power & Fuel	6.93	13.33	4.36	4.36
15.	Total	21.82	52.85	40.71	21.88
II	R & M Expenses				
1.	Consumption of Stores & Spares	1.19	10.07	11.64	4.00
2.	Repair: Buildings	0	0.27	0.29	0.27
3.	Repair: Plant & Machinery	0.12	1.17	1.48	1.17
4.	Repair: Other Assets	0.29	0.6	1.06	0.60
5.	Total	1.60	12.11	14.47	6.04
	R&M and A&G Expenses	23.42	64.96	55.18	27.92

3.22 The Commission has provisionally approved investment/expenditure of Rs. 12.90 Crore, Rs. 0.84 Crore and Rs. 0.70 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively as per the Capital Investment Plan. Capitalization of assets is considered as an addition to Gross Fixed Assets based on the nature of the capital expenditure. The addition of capitalization/GFA during FY 2017-18, FY 2018-19 and FY 2019-20 is being considered provisionally at Rs. 12.90 Crore, Rs. 0.84 Crore and Rs. 0.70 Crore respectively.

3.23 The Commission considers base R&M and A&G expenses as Rs 27.92 Crore for FY 2017-18 and determines the K factor for the 1st Control Period by as under:

Table No.15: R&M and A&G expenses based on K factor and indexation for FY 2017-18 to FY 2019-20 determined by the Commission

(Rs. Crore)

Sr. No.	Particulars	Amount
1.	Opening GFA as on 1.4.2017	3058.37
2	Addition during the year	12.90
3.	Closing GFA as on 31.3.2018	3071.27
4.	Average GFA	3064.82
5.	R&M and A&G expenses	27.92
6	Less: Audit Fee	0.06
7	Base R&M and A& G expenses	27.86
8.	K factor	0.909%

3.24 Taking the K factor determined above, the Commission determines the R&M and A&G expenses for FY 2017-18 to FY 2019-20

Table No. 16: R&M and A&G determined by the Commission for the 1st Control Period (FY 2017-18 to FY 2019-20)

(Rs. Crore)

Sr. No	Particulars	FY 2017-18	FY 2018-19	FY2019-20
1	Opening GFA	3058.37	3071.27	3072.11
2	Addition during the year	12.90	0.84	0.70
3	Closing GFA	3071.27	3072.11	3072.81
4	Average GFA	3064.82	3071.69	3072.46
5	K factor	0.909%	0.909%	0.909%
6	WPI Index (as per para 3.12)		4.28%	1.66%
7	K factor inflation adjusted (5x6)		0.00948	0.00924
8	R&M and A&G expenses after WPI increase (4x7)	27.86	29.12	28.39
9	Audit Fee	0.06	0.08	0.08
10	Total R&M and A&G expenses	27.92	29.20	28.47

3.25 The O&M expenses consisting of employee cost and R&M and A&G expenses as determined in para 3.13 and 3.24 above are approved as under:

Table No.17: O&M expenses for FY 2017-18 to FY 2019-20

(Rs. Crore)

Sr. No	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
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Sr. No	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1	Employee Cost	9.99	10.70	11.41
2	R&M and A&G Expenses	27.92	29.20	28.47
3	O&M Expenses	37.91	39.90	39.88

4.0 Depreciation

GVK's Submission:

- 4.1 GVK submitted that Regulation 21 of the PSERC Tariff Regulations, 2014, as amended by Notification dated 03.02.2016, provides for calculation of Depreciation in respect of Coal Based Thermal Generating Plants'.
- 4.2 Depreciation for Generation Assets has been calculated annually as per the straight line method over the useful life of the Asset at the rate of depreciation specified by the Central Electricity Regulatory Commission ("CERC") from time to time. Accordingly, GVK has computed the depreciation on the Gross Fixed Assets excluding land. The depreciation charges for the Control Period are given in the following table:

Table No. 18: Depreciation Charges projected by GVK for the 1st Control Period (Rs. Crore)

Sr.No	Particulars	FY 2017-18	FY 2018-19	FY2019-20
1.	Opening Gross Fixed Assets (Excluding Land Cost)	4259	4489	4489
2.	Additional Capitalization (Excluding Land Cost)	230	0	0
3.	Closing Gross Fixed Assets	4489	4489	4489
4.	Average Gross Fixed Assets	4374	4489	4489
5.	Rate of Depreciation	4.95%	4.93%	4.93%
6.	Depreciation Charges	216.31	221.31	221.31

- 4.3 Accordingly, GVK prayed to the Commission to allow Depreciation as detailed above in line with the provisions of the PSERC Tariff Regulations, 2014.

Commission's Analysis

- 4.4 As regards the Depreciation, Regulation 21 of PSERC MYT Regulations, 2014 has been amended vide notification dated 03.02.2016 as under:

"21.1. The value base for the purpose of depreciation shall be the capital cost of the assets admitted by the Commission:

Provided that land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable

asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset;

Provided further that depreciation shall be calculated after deduction of consumer contributions, capital subsidies/ Government grants.

21.2. *The cost of the asset shall include additional capitalization.*

21.3. *The cost shall include foreign currency funding converted to equivalent rupees at the exchange rate prevalent on the date when foreign currency shall actually be availed but not later than the date of commercial operation.*

21.4. *Depreciation for generation and transmission assets shall be calculated annually as per straight line method over the useful life of the asset at the rate of depreciation specified by the Central Electricity Regulatory Commission from time to time.*

21.5. *Depreciation for distribution assets and other assets not specified by CERC shall be at the rates notified by the Commission:*

Provided that the total depreciation during the life of the asset shall not exceed 90% of the original cost;

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation/ put in use of the asset shall be spread over the balance useful life of the assets;

Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site.

21.6. *Depreciation shall be chargeable from the first year of commercial operation/asset is put in use. In case of commercial operation of the asset/put in use of asset for part of the year, depreciation shall be charged on pro rata basis.”*

- 4.5 GVK in Petition no 34 of 2019 has claimed rate of depreciation as 4.80% for true up of FY 2017-18 and FY 2018-19 on the basis of Annual Audited Accounts. The Commission determines Gross Fixed Assets (net of land and land rights) and considers rate of depreciation as 4.80% for depreciation as under: -

Table No. 19: Gross Fixed Assets (net of Land and land Rights) determined by the Commission for FY 2017-18 to FY 2019-20

(Rs. Crore)				
Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY2019-20
1.	Opening GFA	3058.37	3071.27	3072.11
2.	Addition during the year	12.90	0.84	0.70
3.	Closing GFA	3071.27	3072.11	3072.81
4.	Average GFA	3064.82	3071.69	3072.46
5.	Land & Land rights	96.75	96.75	96.75
6.	Average GFA(Net of Land & Land rights)	2968.07	2974.94	2975.71
7.	Rate of depreciation	4.80%	4.80%	4.80%
8.	Depreciation	142.47	142.80	142.83

Accordingly, the Commission approves depreciation charges of Rs.142.47 Crore , Rs.142.80 Crore and Rs. 142.83 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

5.0 Return on Equity

GVK's Submission

- 5.1 GVK submitted that Regulations 19 & 20 of PSERC Tariff Regulations, 2014 provides for Debt Equity Ratio and Return on Equity.
- 5.2 GVK further submitted that it has infused an amount of Rs. 1,251 Crore as Equity. Accordingly, the Return on Equity has been calculated on the said amount for the present Control Period. In terms of the PSERC Tariff Regulations, 2014, the total equity to be considered for the determination of tariff and Return on Equity at the rate of 15.50% for each of the year during the Control Period as under:

Table No. 20: Return on Equity projected by GVK

(Rs. Crore)				
Sr. No	Particulars	FY2017-18	FY 2018-19	FY2019-20
1.	Opening Capital Cost	4441	4773	4773
2.	Add: Margin money for working capital	102	0	0
3.	Additional Capitalization	230	0	0
4.	Closing Capital Cost	4773	4773	4773
5.	Equity (26.20%)	1251	1251	1251
6.	Rate of Return on Equity	15.50%	15.50%	15.50%
7.	Return on Equity	193.91	193.91	193.91

- 5.3 In view of the above, GVK prayed to allow the Return on Equity at the rate of 15.50% in accordance with the PSERC MYT Regulations, 2014.

Commission's Analysis:

- 5.4 Regulation 20 of PSERC MYT Regulations, 2014 provides for recovery of Return on Equity which is reproduced hereunder:

“20. RETURN ON EQUITY

Return on Equity shall be computed at the rate of 15.5% on the paid up equity capital determined in accordance with regulation 19:

Provided that assets funded by consumer contributions, capital subsidies/Govt. grants shall not form part of the capital base for the purpose of calculation of Return on Equity.”

- 5.5 Regulation 19 of PSERC MYT Regulations, 2014 provides for Debt-Equity Ratio which is reproduced hereunder:

“19. DEBT EQUITY RATIO

19.1. Existing Projects - In case of the capital expenditure projects having Commercial Operation Date prior to the effective date, the debt-equity ratio shall be as allowed by the Commission for determination of tariff for the period prior to the effective date:

Provided that the Commission shall not consider the increase in equity as a result of revaluation of assets (including land) for the purpose of computing return on equity.

.....”

19.2. New Projects – For capital expenditure projects declared under commercial operation on or after the effective date:

- a. A Normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff;*
- b. In case the actual equity employed is in excess of 30%, the amount of equity for the purpose of tariff determination shall be limited to 30%, and the balance amount shall be considered as normative loan;*
- c. In case, the actual equity employed is less than 30%, the actual debt-equity ratio shall be considered;*
- d. The premium, if any raised by the Applicant while issuing share capital and investment of internal accruals created out of free reserve, shall also be reckoned as paid up capital for the purpose of computing return on equity subject to the normative debt-equity ratio of 70:30, provided such premium amount and*

internal accruals are actually utilized for meeting capital expenditure of the Applicant's business.

19.3. Renovation and Modernization: Any approved capital expenditure incurred on Renovation and Modernization including the approval in the Capital Investment plan shall be considered to be financed at normative debt-equity ratio of 70:30. If the actual equity employed is less than 30% then the actual debt equity ratio shall be considered."

- 5.6 The equity approved by the Commission in its Order dated 17.01.2020 in Petition no 54 of 2017 is Rs. 917.51 Crore as on 31.03.2017 which is considered as opening balance for FY 2017-18. As per Regulation 20 of PSERC MYT Regulations, 2014, Debt Equity ratio of 70:30 has to be considered. The Commission is provisionally considering this debt equity ratio for working out the equity in the control period. Equity of Rs. 3.87 (30% of Rs.12.90 Crore of assets addition of FY 2017-18) Crore, Rs 0.25 (30% of Rs.0.84 Crore of asset addition of FY 2018-19) Crore and Rs 0.21 (30% of Rs.0.70 Crore of asset addition of FY 2019-20) Crore have been considered for determining return on equity for FY 2017-18, FY 2018-19 and FY 2019 -20 respectively. However, this shall be reviewed based on actual equity infusion in the Capital investment.
- 5.7 Thus, Return on Equity @ 15.50% on the average paid up equity capital is worked out as under:

Table No. 21: Return on Equity for FY 2017-18 to FY 2019-20 determined by the Commission
(Rs. Crore)

Sr. No	Particulars	FY 2017-18	FY 2018-19	FY2019-20
1.	Opening Equity for the year	917.51	921.38	921.63
2.	Addition of Equity during the year	3.87	0.25	0.21
3.	Closing Equity for the year	921.38	921.63	921.84
4.	Average Equity for the year	919.45	921.51	921.74
5.	Rate of Return on Equity (%)	15.50%	15.50%	15.50%
6.	Return on Equity	142.51	142.83	142.87

Accordingly, the Commission approves Return on Equity of Rs. 142.51 Crore , Rs. 142.83 Crore and Rs. 142.87 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

6.0 INTEREST AND FINANCE CHARGES ON LONG TERM LOAN CAPITAL:

GVK's Submissions

- 6.1 GVK submitted that Regulation 24 of the PSERC Tariff Regulations, 2014 provides for Interest and Finance Charges on Loan Capital.
- 6.2 GVK further submitted that the interest payable by it towards Long Term Loans has been calculated on the outstanding loan amounts and prevailing interest rates on the said amounts on the basis of the Completed Capital Cost of the Project as determined by this Commission. In furtherance of the same, GVK has considered the outstanding loan amounts as on 31.03.2017 for the opening balance for FY 2017-18. The loans to be availed during the Control Period, if any, have also been considered in the present Petition. The interest expenses have been computed taking into account repayment towards outstanding loan amounts and applicable interest rates in line with the PSERC Tariff Regulations, 2014.
- 6.3 GVK further submitted that in terms of the PSERC Tariff Regulations, 2014, the computation of interest on term loans is based on the following:
- The opening gross normative loan on the Completed Capital Cost as approved by the Commission.
 - The weighted average rate of interest has been worked on the basis of the actual payment made which works out to 12.84 % p.a. for FY 2017-18, 12.84 % p.a. for FY 2018-19 and 12.84 % p.a. for FY 2019-20. The State Bank of India advance rate as on 01.04.2016 was 14.05% p.a.
 - The repayment for the Control Period i.e., FY 2017-18 to FY 2019-20 has been considered equal to the depreciation allowed for that year.
- 6.4 The calculation of interest on long term loan is as given below:

Table No. 22: Interest on Long Term Loans projected by GVK for the 1st Control Period (FY 2017-18 to FY 2019-20)

(Rs. Crore)				
Sr. No	Particulars	FY 2017-18	FY2018-19	FY2019-20
1.	Opening Capital Cost	4543	4773	4773
2.	Additional Capitalization	230	0	0
3.	Closing Capital Cost	4773	4773	4773
4.	Gross Normative Loan on Opening Capital Cost (73.80%) (A)	3522	3522	3522
5.	Less: Cumulative Repayment (B)	202.59	418.90	640.25

Sr. No	Particulars	FY 2017-18	FY2018-19	FY2019-20
6.	Net Loan Opening(A-B)=C	3319.41	3103.10	2881.75
7.	Less: Repayment during the year (D)	216.31	221.34	221.34
8.	Addition due to additional Capitalization during the year (E)	0	0	0
9.	Closing Loan Balance of Year (C-D+E)	3103.10	2881.75	2660.41
10.	Average Loan	3211.25	2992.42	2771.08
11.	Weighted Average Rate of Interest on Loan (p.a.)	12.84%	12.84%	12.84%
12.	Interest on Loan	412.26	384.16	355.75

- 6.5 Accordingly, GVK has prayed to allow the interest on Loan Capital as detailed above in accordance with the provisions of the PSERC Tariff Regulations, 2014.

Commission's Analysis

- 6.6 Regulation 24 of PSERC MYT Regulations, 2014 provides for Interest on Loan Capital, which is reproduced hereunder:

“24. INTEREST ON LOAN CAPITAL

24.1. *For existing loan capital, interest and finance charges on loan capital shall be computed on the outstanding loans, duly taking into account the actual rate of interest and the schedule of repayment as per the terms and conditions of relevant agreements. The rate of interest shall be the actual rate of interest paid/payable (other than working capital loans) on loans by the licensee or the State Bank of India Advance Rate as on April 1 of the relevant year, whichever is less.*

24.2. *Interest and finance charges on the actual loan capital for new investments shall be computed on the loans, duly taking into account the actual rate of interest and the schedule of repayment as per the terms and conditions of relevant agreements. The rate of interest shall be the actual rate of interest paid/payable (other than working capital loans) on loans by the licensee or the State Bank of India Advance Rate as on April 1 of the relevant year, whichever is less.*

24.3. *The repayment for each year of the tariff period shall be deemed to be equal to the depreciation allowed for the corresponding year. In*

case of de-capitalisation of assets, the repayment shall be adjusted by taking into account cumulative depreciation made to the extent of de-capitalisation.

24.4. The Commission shall allow obligatory taxes on interest, finance charges (including guarantee fee payable to the Government) and any exchange rate difference arising from foreign currency borrowings, as finance cost.

24.5. The interest on excess equity treated as loan shall be serviced at the weighted average interest rate of actual loan taken from the lenders.”

- 6.7 The Closing loan balance of Rs.1999.59 Crore as on 31.3.2017 was provisionally determined by the Commission in FY 2016-17 in Petition no 54 of 2017, which is considered as the opening loan balance for FY 2017-18. Asset addition of Rs.12.90 Crore for FY 2017-18, Rs.0.84 Crore for FY 2018-19 and 0.70 Crore for FY 2019-20 has been approved in Petition no 70 of 2017. 70% of asset addition has been considered to be sourced from debt i.e. Rs.9.03 (12.90*70%) Crore for FY 2017-18, Rs.0.59 (0.84*70%) Crore for FY 2018-19 and Rs.0.49 (0.70*70%) Crore as normative loan. Repayment of loan has been considered equal to depreciation allowed as per Regulation 24.3 of PSERC MYT Regulations, 2014. GVK has claimed the weighted average rate of interest 12.84% for 1st Control period which has been considered by the Commission for calculating interest on long term loan. The State Bank of India advance rate as on 1.04.2017 and 1.04.2018 was 13.85% and 13.45% respectively and since rates at which loan has been taken by GVK are less than SBI advance rate, the same have been considered to calculate the interest. The interest on long term loans is calculated as under:

Table No 23: Interest & Finance charges on Long Term Loans determined by the Commission for FY 2017-18 to FY 2019-20

(Rs. Crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1.	Opening balance of loan	1999.59	1866.15	1723.94
2.	Add: Receipt of loan during the year	9.03	0.59	0.49
3.	Less: Repayment of loan during the year equivalent to the depreciation determined in Table no.19	142.47	142.80	142.83
4.	Closing balance of loan	1866.15	1723.94	1581.60
5.	Average Loan	1932.87	1795.05	1652.77
6.	Rate of interest	12.84%	12.84%	12.84%
7.	Interest Charges	248.18	230.48	212.22

6.8 As per the Annual Audited Accounts of GVK for FY 2017-18 and FY 2018-19 interest has been worked out to Rs. 573.57 Crore and Rs.636.29 Crore respectively on average Loans of Rs. 3567.86 Crore and Rs 3758.93 Crore for FY 2017-18 and FY 2018-19 respectively.

6.9 GVK has a interest liability of Rs. 313.91 Crore and Rs. 852.24 Crore towards interest accrued for FY 2017-18 and FY 2018-19 respectively. The interest actually paid on long term loans is worked out as under:

Table No.24: Interest actually paid by GVK for FY 2017-18 and FY 2018-19

(Rs. Crore)

Sr. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1.	Interest charges as per annual audited accounts	448.37*	573.57	636.29
2.	Interest paid	221.95	259.66	97.96
3.	Closing balance of interest due but not paid as per annual audited accounts	226.42	313.91	852.24

* In the Annual Audited Accounts of GVK for FY 2016-17 interest charges were shown as Rs 451.91 Crore. But in the Annual Audited Accounts of FY 2017-18, the previous year figures of interest charges for FY 2016-17 has been rearranged/regrouped as Rs. 448.37 Crore and Rs 3.54 (451.91 - 448.37) Crore has been shown as Other Finance Charges. The necessary adjustments of Interest charges and Finance charges will be considered during the True up of FY 2016-17.

6.10 The Commission determined interest charges for FY 2017-18, FY 2018-19 and FY 2019-20 as under:

Table No. 25: Interest charges allowed by the Commission for FY 2017-18 to FY 2019-20

(Rs. Crore)

Sr. No	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1	Interest determined as per table 23	248.18	230.48	212.22
2	Interest actually paid by GVK as per table 24	259.66	97.96	0.00
3	Interest Allowed	248.18	97.96	0.00

The balance amount of interest i.e. Rs.132.52 (230.48- 97.96) Crore and Rs. 212.22 Crore of FY 2017-18 and FY 2018-19 respectively will be considered in the year in which they will actually be paid by GVK.

- 6.11 As per the Annual Audited Accounts for FY 2017-18 and FY 2018-19, finance charges amount to Rs. 3.44 Crore and 0.28 Crore on the average loan amount of Rs. 3567.86 Crore and Rs.3758.93 Crore respectively has been shown. Finance charges proportionately works out as Rs. 1.86 Crore and Rs 0.13 Crore on average loan of Rs 1930.65 Crore and Rs.1788.66 Crore for FY 2017-18 and FY 2018-19 respectively and the same are allowed. The Commission considers Finance charges for FY 2019-20 equivalent to the Finance Charges allowed for FY 2018-19 i.e. Rs. 0.13 Crore. This shall be reviewed when the annual audited accounts for FY 2019-20 are available. Thus, total interest and finance charges for FY 2017-18, FY 2018-19 and FY 2019-20 work out to Rs. 250.04 (248.18+1.86) Crore, Rs. 98.09 (97.96+ 0.13) Crore and Rs. 0.13 (0.00+0.13) Crore respectively.

Accordingly, the Commission allows interest and finance charges of Rs. 250.04 Crore, Rs. 98.09 Crore and Rs. 0.13 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

7.0 INTEREST ON WORKING CAPITAL:

GVK's Submissions

- 7.1 GVK submitted that Regulation 34 of the PSERC Tariff Regulations, 2014 provides for components of Interest on Working Capital in respect of Coal Based Thermal Generating Plants.
- 7.2 GVK further submitted that the weighted average rate of interest is computed at 12.25% p.a., for FY 2017-18, 12.25% p.a., for FY 2018-19 and 12.25% p.a., for FY 2019-20. The State Bank of India advance rate as on 01.04.2016 was 14.05% p.a.

- 7.3 GVK has calculated the interest on working capital for MYT Control Period (i.e. FY 2017-18 to FY 2019-20) as per PSERC Tariff Regulations, 2014. Interest on working capital is projected for the Control Period by applying the rates as mentioned above on the components of Working Capital as given in the table below:

Table No. 26: Interest on Working Capital projected by GVK for FY2017-18 to FY 2019-20

(Rs. Crore)				
Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1.	Fuel Cost – Primary Fuel & Secondary Fuel (for 2 months)	216.39	216.48	227.26
2.	O&M expenses for one month	12.92	13.84	14.52
3.	Maintenance spares (15% of O&M expenses)	1.94	2.08	2.18
4.	Receivables (2 months of Fixed and Variable Cost based on Normative Annual Plant Availability Factor)	392.03	390.10	397.90
5.	Total working capital	623.27	622.50	641.86
6.	Rate of interest (p.a.)	12.25%	12.25%	12.25%
7.	Interest on working capital	76.35	76.26	78.63

- 7.4 Accordingly, GVK prayed the Commission to allow the interest on Working Capital as detailed above in line with the provisions of the PSERC Tariff Regulations, 2014.

Commission’s Analysis:

- 7.5 Regulation 34 of PSERC MYT Regulations, 2014 provides for Interest on working Capital which is reproduced hereunder:

“34.1. Components of Working Capital

- a. *Coal-based Thermal Generating Plants: The Working Capital shall cover the following:*
- i. *Fuel Cost for 2 months corresponding to the normative annual plant availability factor;*
 - ii. *Operation and maintenance (O&M) Expenses for 1 month;*
 - iii. *Maintenance spares @ 15% of the O&M expenses;*
 - iv. *Receivables equivalent to two (2) months of fixed and variable charges for sale of electricity calculated on the normative annual plant availability factor.*
- b.
- c.”

7.6 Rate of Interest on Working Capital shall be as per Regulation 25.1(Amended vide No. PSERC/Reg./111 dated 03.02.2016). which is reproduced hereunder:

25.1 The rate of interest on working capital shall be equal to the weighted average rate of interest paid/ payable on loans by the licensee/generating company/SLDC or the State Bank of India Advance Rate as on April 1 of the relevant year, whichever is less. The interest on working capital shall be payable on normative basis notwithstanding that the licensee/generating company/SLDC has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on the normative figures.

7.7 As per PSERC Regulations, the rate of interest on working capital shall be equal to the weighted average rate of interest paid/ payable on loans by the generating company or the State Bank of India Advance rate as on April 1 of the relevant year, whichever is less. The interest on working capital is payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on normative basis.

7.8 The Weighted Average Rate of Interest has been considered for FY 2017-18 to FY 2019-20 @12.25% as claimed by GVK in this petition. The State Bank of India advance rate as on 1.04.2017 and 1.04.2018 was 13.85% and 13.45% respectively.

7.9 Interest on working capital for MYT Control Period has been calculated as per PSERC MYT Regulations 2014. Interest on Working capital is projected for control period from FY 2017-18 to FY 2019-20 by applying the rate of interest of 12.25 % p.a. on components of Working capital i.e. (maintenance spares @ 15% of O&M expenses, O&M expenses for one month and Receivables @ 2 month Annual Fixed Cost) as given in table below.

Table No.27: Interest on Working Capital approved by the Commission for the 1st Control Period (FY 2017-18 to FY 2019-20) (Rs. Crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY2019-20
1.	Fuel Cost for two months	79.18	140.68	73.74
2.	Maintenance spares @15% of	5.69	5.98	5.98

Table No.27: Interest on Working Capital approved by the Commission for the 1st Control Period (FY 2017-18 to FY 2019-20) (Rs. Crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY2019-20
	O&M			
3.	O&M Expenses for one month	3.16	3.32	3.32
4.	Receivables for two months	180.12	242.19	132.42
5.	Total Working Capital	268.15	392.17	215.46
6.	Rate of Interest (%)	12.25%	12.25%	12.25%
7.	Interest on Working Capital	32.85	48.04	26.39

Thus, the Commission approves working capital requirement of Rs. 268.15 Crore for FY 2017-18, Rs. 392.17 Crore for FY 2018-19 and Rs. 215.46 Crore for FY 2019-20 and interest thereon of Rs. 32.85 Crore, Rs. 48.04 Crore and Rs. 26.39 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

8.0 STATUTORY LEVIES AND TAXES

8.1 GVK submitted that Regulation 23 of the PSERC Tariff Regulations, 2014 provides for Income Tax which is reproduced hereunder:

“23.1 Obligatory taxes, if any, on the income of the generating company or the licensee or the SLDC from its core/licensed business shall be computed as an expense and shall be recovered from the customers/consumers:

Provided that tax on any income other than the core/licensed business shall not constitute a pass through component in tariff and tax on such other income shall be payable by the generating company or the licensee or the SLDC.

23.2 Tax on income, if actually liable to be paid, shall be limited to tax on return on equity allowed, excluding incentives.

23.3 Tax on income shall be considered at income tax rate including surcharge, cess etc. as applicable during the relevant year in accordance with the provisions of Income Tax Act, 1961 duly amended from time to time.

23.4 The benefits of tax holiday and the credit for carrying forward losses applicable as per the provisions of the Income Tax Act, 1961 shall be fully passed on to the customers/consumers.

23.5 The penalty, if any, arising on account of delay in deposit of tax or short deposit of tax amount shall not be claimed by the generating company or the licensee or the SLDC, as the case may be.”

8.2 GVK submitted that it is entitled at actuals, as pass through, any cess, duty, tax, government levy and royalty etc., payable by the Petitioner for generation and supply of power to the Respondent from time to time.

Commission's Analysis

- 8.3 The benefits of any tax Holiday has to be passed on to the consumer/customer as per PSERC MYT Regulations. GVK has not submitted the details of tax holiday availed. Actual tax liability, after taking into account tax holidays etc., will be considered during the True up of respective years.

The Commission directs that statutory levies including income tax with requisite documents may be claimed as per Regulations 23 of PSERC MYT Regulations, 2014 during the true-up of the respective years.

9.0 Non-Tariff Income

- 9.1 GVK has not claimed any non tariff income for FY 2017-19 to 2019-20.

Commission's Analysis

- 9.2 The Non-Tariff Income has to be determined as per Regulation-28 of PSERC MYT Regulations-2014(amended from time to time).
- 9.3 The Commission notes that Audited Annual Accounts of GVK for FY 2017-18 and FY 2018-19 has shown "Other income" as Rs.0.61 Crore and Rs 0.27 Crore respectively which includes income from bank deposits Rs 0.47 Crore and Rs 0.22 Crore respectively. As per para 20.3.4 of the Commission order dated 17.1.2020 in Petition no 54 of 2017, GVK had diverted the funds meant for capital expenditure out of the loan taken from financial institutions by investment in Mutual Funds. The Commission has neither considered interest paid on loans used for such other investments nor income earned from such other business/investment as part of the capital expenditure. Other income includes non operating income of Rs. 0.14 Crore and Rs 0.05 Crore for FY 2017-18 and FY 2018-19 respectively on account of credit balance written off and sale of scrap. The Commission notes that Rs.3.12 Crore and Rs 3.10 Crore have been booked under Ash Handling charges during FY 2017-18 and FY 2018-19 respectively but no income from Ash has been booked during FY 2017-18 and FY 2019-20 which will be considered during True up of FY 2017-18 and FY 2018-19. Accordingly, the Commissions determines Non-Tariff Income as Rs. 0.14 Crore and Rs 0.05 Crore as per Audited Annual Accounts of FY2017-18 and FY 2018-19 respectively and Rs 0.05 Crore has been considered for FY 2019-20 on the basis of FY 2018-19.

Accordingly, the Commission approves Non-Tariff Income as Rs. 0.14 Crore, Rs. 0.05 Crore and Rs. 0.05 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

10.0 Annual Fixed Charges (AFC) for FY 2017-18 to FY 2019-20

10.1 The Annual Fixed Charges from FY 2017-18 to FY 2019-20, as projected by GVK and approved by the Commission is summarized in the following table:-

Table No.28: AFC provisionally approved by the Commission for FY 2017-18 to 2019-20

(Rs. Crore)

Sr. No.	Particulars	Submitted by GVK			Approved by the Commission		
		FY 2017-18	FY 2018-19	FY 2019-20	FY 2017-18	FY 2018-19	FY 2019-20
1.	O&M Expenses	154.98	166.11	174.28	37.91	39.90	39.88
2.	Depreciation	216.31	221.31	221.31	142.47	142.80	142.83
3.	Interest charges	412.26	384.16	355.75	250.04	98.09	0.13
4.	Return on Equity	193.91	193.91	193.91	142.51	142.83	142.87
5.	Interest on Working Capital	76.35	76.26	78.63	32.85	48.04	26.39
6.	Income tax	0.00	0.00	0.00	0.00	0.00	0.00
7.	Total Expenses	1,053.81	1,041.75	1,023.88	605.78	471.66	352.10
8.	Less: Non-Tariff Income	0.00	0.00	0.00	0.14	0.05	0.05
9.	Annual Fixed Charges	1,053.81	1,041.75	1,023.88	605.64	471.61	352.05

10.2 GVK shall be entitled for payment of capacity charges in accordance with Regulation 30 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (as amended) where the same is not specified in the PSERC Tariff Regulations.

11.0 Energy charges for FY 2017-18 to FY 2019-20

GVK's Submission

11.1 GVK has submitted the monthly Declared Capacity and Scheduled Generation data for FY 2017-18, FY 2018-19 and FY 2019-20 (upto December, 2019) including the details of fuel cost vide submissions received on 12.03.2020, in response to Commission's interim Order dated 07.02.2020.

The Declared Capacity and Scheduled Generation data as submitted by GVK is as under:

Table No. 29: Declared Capacity and Scheduled Generation data as submitted by GVK for FY 2017-18 to FY 2019-20 (upto Dec,2019)

Sr. No.	Description	FY 2017-18	FY 2018-19	FY 2019-20 (Upto Dec. 2019)
1.	Declared Capacity (MU)	1814.34	2850.62	3201.95
2.	Scheduled Generation (MU)	1387.12	2203.24	1129.19

PSPCL has not submitted any comments/reply on the same.

11.2 GVK in the present petition has submitted the details of components of the Energy Charge as hereunder:

i) Landed Cost of Primary Fuel:

In terms of the Coal Judgment and the Cancellation Order, the allocation of the Captive Coal Blocks to the Petitioner was cancelled. On 11.05.2015, the Petitioner filed the Petition No. 33 of 2015 seeking relief on account of Change in Law and Force Majeure events being the cancellation of the Petitioner's Captive Coal Blocks pursuant to the Coal Judgment and the Cancellation Order. On 12.08.2015, the Commission passed an Order and directed that the disputes raised in the Petition No. 33 of 2015 and Petition No. 65 of 2013 shall be referred to Arbitration. On 02.09.2015, the Commission passed an Order constituting the Arbitral Tribunal for the adjudication of disputes raised in Petition No. 33 of 2015 and Petition No. 65 of 2013. During the pendency of the arbitration proceedings, the Commission passed Order dated 01.02.2016 in Petition 33 of 2015 and Petition 65 of 2013 wherein GVK was permitted to procure coal from alternate sources.

In compliance of the Commission's Order dated 01.02.2016 in Petition 33 of 2015 and Petition 65 of 2013, GVK was successful in securing long term coal linkage under the SHAKTI Scheme for the Project to the extent of 1.706 MTPA from February 2018 onwards. However, the quantity of coal allocated was sufficient to achieve only 63% PLF. The balance coal was being sourced from other sources, including through e-auction and imported coal, to achieve target availability. GVK

submitted that road transportation charges, handling charges related to loading the coal in to the trucks, unloading of the same at the railway siding and loading the same to the railway wagons, coal sampling cost for an analysis to obtain the GCV of coal received and the railway freight, all form part of the Landed Cost of Coal. The coal washery charges are not considered in the present landed cost of coal as given in this petition. However, the coal washery charges, if any, paid by GVK at a future date as charged by the Coal mining company or to abide by the Environmental Norms, the same shall form part of the landed cost of the Fuel. For computation of the Variable Charge, the Petitioner has considered an escalation of 5% p.a. on the price of the Primary Fuel for the Control Period.

ii) Landed cost of secondary fuel:

The Secondary fuel for the Plant is LDO / HFO. This Secondary Fuel is being procured from PSU Oil Marketing companies. This Secondary Fuel is delivered at site and the weighted average cost incurred on the same may be allowed by the Commission. The energy charge in Rupees per kWh is determined to three decimal places as per the following formulae prescribed in Regulation 39.4 of the PSERC Tariff Regulations, 2014.

iii) Normative Auxiliary energy consumption:

As per Regulation 36 of the PSERC Tariff Regulations, 2014, the norms for performance parameters, which includes normative auxiliary energy consumption for Coal-based generating stations, shall be as per the CERC norms. Accordingly, as per Regulation 36(E)(a) of the CERC Tariff Regulations, 2014, auxiliary consumption is 8.5% for a unit of 200 MW series. Further, for thermal generating stations with induced draft cooling towers, additional 0.5% is allowed. Thus, normative auxiliary consumption has been considered at 9% for the computation of energy charge.

iv) Fuel Transit & Handling Losses:

In accordance with Regulation 40 of the PSERC Tariff Regulations 2014, the normative transit and handling loss to be taken @ 1% or

actual whichever is lower and the same are considered @ 1% while computing the energy charge.

v) Station Heat Rate:

As per Regulation 36 of the PSERC Tariff Regulations, 2014, the norms for performance parameters, which includes Station Heat Rate for Coal-based generating stations, the same shall be as per the CERC norms. Regulation 36(C)(b) of the CERC Tariff Regulations 2014, specifies that for tariff calculation, the design station heat rate is to be multiplied by a factor of 1.045 for a new coal based thermal power plant. The Guaranteed Heat Rate for the power plant under the EPC contract is 2221 kcal/kWh. Accordingly, the Station Heat Rate of the Petitioner's plant for tariff calculations comes out to be 2321 kcal/kWh, which has been considered for Energy Charge calculation.

Accordingly, GVK has computed the projected Energy Charges for the Control Period in the petition as under:

Table No. 30: Projected Energy Charges submitted by GVK for FY 2017-18 to FY 2019-20

Sr.No.	Particulars	FY 2017-18	FY2018-19	FY2019-20
1.	Variable Charge per Unit (Rs./ kWh)	3.63	3.64	3.82
2.	Energy sold (MU)	3573	3573	3573
3.	Annual Energy Charge (Rs. Crore)	1298.35	1298.87	1363.55

11.3 GVK vide affidavit dated 11.03.2020, in compliance to the Commission's Interim Order dated 07.02.2020 submitted the details of fuel cost/energy charges and further reiterated its submissions regarding consideration of normative auxiliary consumption @9% for the computation of energy charges. With reference to fuel transit and handling losses, GVK submitted that normative transit and handling loss are considered in accordance with Regulation 40 of the PSERC Tariff Regulations 2014 and Regulation 30(8) of the CERC Tariff Regulations. Further, GVK submitted that SHR as per the Regulations works out to be 2321 kcal/kWh for FY 2017-18 and FY 2018-19 and 2332 kcal/kWh for FY 2019-20. The fuel cost details furnished by GVK are as under:

Table No.31: Fuel cost data furnished by GVK in affidavit dated 11.03.2020

Sr. No.	Item	Unit	Actual FY 2017-18	Actual FY 2018-19	(FY 2019-20)		
					Actual till Dec 2019	Projection Jan. 2020 to March 2020	Total
1	Gross Generation	MU	1536	2436	1244.68	117.936	1362.62
2.	Auxiliary Consumption	%	9.72%	9.55%	9.28%	9.28%	9.28%
3.	Net Generation	MU	1387	2203	1129	107	1236
4.	Station Heat Rate	kcal/kWh	2392	2348	2350	2350	2350
5.	Calorific Value of Coal	kcal/Kg	3730	3396	3349	3349	3349
6.	Coal Transit Loss	%	4.20	2.43	1.60	1.60	1.6
7.	Total Coal Consumption	Tonne	1019703	1660491	851208	82758	933966
8.	Total Oil Consumption	KL	2055	1596	1018.39	96.49	114.88
9.	Specific Oil Consumption	ml/kWh	1.34	0.66	0.82	0.82	0.82
10.	Calorific Value of Oil	kcal/Litre	10368	10396	10387	10387	10387
11.	Price of Coal	Rs./Tonne	6120	6304	5743	5743	5743
12.	Price of Oil	Rs/ KL	34936	45658	45078	45078	45078
13.	Total Coal Cost	Rs. crore	651.44	1072.85	496.79	48.30	545.09
14.	Total Cost of Oil	Rs. crore	7.18	7.29	4.59	0.43	5.02
15.	Total Fuel Cost	Rs. crore	658.62	1080.14	501.38	48.73	550.11

11.4 Further, GVK vide its submissions dated 01.07.2020 stated that PSPCL is currently paying surface transportation costs to GVK at rate of Rs. 8 per ton per km irrespective of the source, quantum and distance transported, on the basis of BCCL Circular dated 29.03.2018. However, in case of NPL, PSPCL is paying surface transportation charges on actual, based on the rates charged by agencies appointed by NPL for surface transportation of coal and there is no benchmarking to CCL or BCCL surface transportation cost.

PSPCL's Submission

11.5 PSPCL vide its Memo No. 6923/TR-5/886 dated 21.05.2018 submitted that as per Regulation 38 and 39 of the PSERC Tariff Regulations 2014, energy charge for generating plants of the generating companies is to be determined on the basis of landed cost of primary as well as secondary fuel which is to be utilized for running the plant up-to its entire contracted capacity. In this regard, GVK has submitted that it has been successful in securing long term linkage of coal for the project, capable of operating the plant at 63% PLF; however, no material details of the same have been given. Further, GVK has stated that the balance coal for achieving the target availability is to be sourced from

other sources, details of which have also not been provided in the present Petition. The fuel availability for GVK has been mired in uncertainty as placed before the Commission in earlier proceedings between the parties. Therefore, GVK without furnishing the particulars of required material but based on mere assumption that it would get full coal linkage before the end of March 2018, has prayed that the Commission may consider the price of coal arrived for the FY- 2018-19 and FY-2019-20 and that too, by factoring in a 5% escalation per annum.

- 11.6 As per clause 6.1.1 of the Amended and Restated PPA dated 26.5.2009, the tariff payable shall be a two-part tariff being capacity charges and energy charges and shall be payable based on the contracted capacity at normative availability. Without there being any firm coal linkage for the entire contracted capacity and there also being no material particularly available for the fuel actually being used for power generation, the landed fuel cost of primary fuel cannot be computed and thus tariff determination cannot take place. Even though GVK admits that the available fuel with them is sufficient only to run the plant at 63% PLF, the tariff proposal has been prepared on the basis of the plant achieving 83% PLF which is not only contradictory to GVK's own stand, but also factually incorrect.
- 11.7 PSPCL vide Memo No. 5291/TR-5/886 dated 11.03.2020 has submitted the details of Energy Charges for FY 2017-18, FY 2018-19 and FY 2019-20 (till December 2019) as directed by the Commission vide Interim Order dated 07.02.2020.
- 11.8 PSPCL vide Memo No. 5321/TR-5/886 dated 16.03.2020 submitted that details of energy charges given by GVK to the Commission vide affidavit dated 11.03.2020 have been tallied and are found in order.
- 11.9 PSPCL vide letter 5533/TR-5/886 dated 26.06.2020, submitted the details of Energy charges paid to GVK for the whole of FY 2019-20.

Commission's Analysis

- 11.10 **The energy charges for FY 2017-18 to FY 2019-20 are payable by PSPCL to GVK in terms of the PPA, Order dated 01.02.2016 common to petition no. 65 of 2013 & 33 of 2015, Order dated 06.03.2019 in petition no. 68 of 2017 and Order dated 27.05.2019 in Petition No. 01 of 2018 as applicable.**
- 12.0 **Interest on under-recovered or over-recovered fixed charges:**
- 12.1 The Commission notes that the applicability of Regulation 9 of PSERC

Regulations, 2005 would be on the distribution companies or generating cum distribution companies and cannot be applied, as it is, to standalone generating companies.

- 12.2 The Regulation 8 (13) of CERC (Terms and Conditions of Tariff) Regulation, 2014 is re-produced below for reference: -

“The amount under-recovered or over-recovered, along with simple interest at the rate equal to the bank rate on 1st April of the respective year, shall be recovered or refunded by the generating company or the transmission licensee, as the case may be, in six equal monthly instalments starting within three months from the date of the tariff order issued by the Commission”.

The Commission observes that Regulation 8 (13) of CERC (Terms and Conditions of Tariff) Regulation, 2014 is squarely applicable to under recovery or over recovery of fixed charges in case of generating companies.

- 12.3 The Commission decides to adopt the CERC Regulations for determining interest equivalent to bank rate on under recovery or over recovery of fixed charges.

Commission’s Analysis

Accordingly, interest shall be allowable or recoverable as per Regulation 8 (13) of CERC (Terms and Conditions of Tariff) Regulation, 2014 on under-recovered or over-recovered Annual Fixed Charges (AFC) determined by the Commission.

The Petition is disposed of accordingly.

**Sd/-
(Anjuli Chandra)
Member**

**Sd/-
(S.S. Sarna)
Member**

**Sd/-
(Kusumjit Sidhu)
Chairperson**

**Chandigarh
Dated: 05.08.2020**

PUNJAB STATE ELECTRICITY REGULATORY COMMISSION

Site No.3, Block B, Madhya Marg, Sector 18-A, CHANDIGARH

Petition No. 32 of 2019
Date of Order: 07.09.2020

Petition for True up of Tariff for FY 2016-17 under Sections 62 and 86 of the Electricity Act, 2003 read with (a) Punjab State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2005; (b) the Central Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2014; and (c) Amended and Restated Power Purchase Agreement dated 26.05.2009 executed between Petitioner (GVK) Limited and Punjab State Power Corporation Limited (formerly known as Punjab State Electricity Board)

AND

In the matter of: GVK Power (Goindwal Sahib) Limited, Paigah House, 156-159, Sardar Patel Road, Secunderabad-540003.

....Petitioner

Versus

Punjab State Power Corporation Limited, The Mall Patiala

.....Respondent

Present: Ms. Kusumjit Sidhu, Chairperson
Shri S.S.Sarna, Member
Ms. Anjali Chandra, Member

ORDER

1.1 GVK Power (Goindwal Sahib) Limited (GVK) has filed the present petition for True Up of Tariff for FY 2016-17 for its 540

MW Coal Based Thermal Power Station located at Goindwal Sahib in the State of Punjab. GVK had submitted estimated and actual Annual Revenue Requirement of Rs. 2192.63 Crore and Rs. 1056.81 Crore respectively under different heads considering a capital cost of Rs 4267.30 Crore. GVK has prayed to:

- a) Admit the present petition seeking approval of True up for FY 2016-17.
- b) Approve the True-up petition for 2016-17.
- c) To pass such order(s) as the Commission may deem fit in the circumstances and facts of the present petition.

1.2 The deficiencies observed by the Commission were conveyed to GVK vide letter no. PSERC/Reg/2618-2619 dated 21.01.2020, directing GVK to file its reply to the deficiencies before 29.01.2020. Notice was also issued to PSPCL. The petition was taken up for hearing on admission on 06.02.2020. Some more deficiencies were observed in the petition and the same were conveyed to GVK alongwith the Order dated 07.02.2020.

1.3 GVK replied to the deficiencies vide affidavit dated 11.03.2020. The petition was admitted vide order dated 13.03.2020 further directing PSPCL to file its reply to the petition by 26.03.2020 and rejoinder, if any, by GVK by 03.04.2020.

1.4 PSPCL filed its reply to the petition vide memo No. 5415 dated 27.05.2020. The Commission vide order dated 16.06.2020

directed GVK to issue a public notice inviting objections/suggestions from the general public/stakeholders within 10 days of the publication of the notice. PSPCL filed its reply vide memo No. 5516 dated 23.06.2020. The Commission vide order dated 26.06.2020 allowed GVK to file the revised figures according to the Order of the Commission in petition No. 54 of 2017. PSPCL was allowed to submit its sur-rejoinder, if any, to the rejoinder filed by GVK. The Commission directed GVK to submit the draft public notice by 03.07.2020 failing which GVK will be liable to action under Section 142 of the Electricity Act, 2003 and the petition was fixed for hearing on 29.07.2020.

1.5 The public notice was published in Times of India (English), Daily Ajit (Punjabi) and Ajit Samachar (Hindi) on 10.07.2020. GVK, in pursuance to the Order dated 26.06.2020, submitted the revised figures vide affidavit dated 16.07.2020 alongwith the reply to deficiencies raised by the Commission in its notice dated 21.01.2020. PSPCL vide memo no. 5466 dated 28.07.2020 filed its amended reply to the revised true-up proposal submitted by GVK. The petition was taken up for hearing as well as public hearing on 29.07.2020, however, nobody appeared from the public in public hearing. After hearing the parties, the Order was reserved vide Order dated 30.07.2020 while allowing the parties to file their written submissions as per their request.

1.6 GVK Power (Goindwal Sahib) Limited (GVK), the Petitioner, filed the instant Petition for True-up of FY 2016-17 of its 2 x 270 MW Coal Based Thermal Power Project under Section 63

of the Electricity Act, 2003 read with Regulation 62 of Punjab State Electricity Regulatory Commission (Terms and conditions for determination of Generation, Transmission, wheeling and retail supply Tariff) Regulations, 2014.

- 1.7 The commercial operation of this project was declared on 16.04.2016. The Commission vide its order dated 17.01.2020 in Petition No.54 of 2017, approved the capital cost of the project as Rs 3058.37 Crore and determined the provisional Annual Fixed Cost of Rs 545.42 Crore for FY 2016-17. GVK in its original petition has claimed Annual Revenue Requirement of Rs. 1056.81 Crore which was further revised on 21.07.2020 and 21.08.2020 to Rs. 649.44 Crore as given below:

Table No.1: Annual Revenue Requirement submitted by GVK for FY 2016-17
(Rs. Crores)

Sr. No.	Particulars	Estimated	Approved by the Commission	Actual
1	Fuel Cost			
a)	Primary Fuel Cost	1180.95	52.07	65.34
b)	Secondary Fuel Cost	5.00		1.12
2	SLDC Fees & Charges			
3	O&M expenses	139.81	30.41	30.78
	a) R&M Expenses			
	b) Employee Expenses			
	c) A&G Expenses			
4	Depreciation	202.59	141.27	139.41
5	Interest on Loans	404.72	225.51	261.81
6	Interest on Working Capital	73.62	12.25	15.50
7	Prior Period Expense			
8	Extraordinary Items			
9	Other Debts and Write-offs			
10	Income Tax	0.00		0.00
11	Less: Expenses capitalised			
	a) Interest Charges Capitalized			
	b) R&M Expenses Capitalized			
	c) A&G Expense Capitalized			
	d) Employee Expenses Capitalized			

Sr. No.	Particulars	Estimated	Approved by the Commission	Actual
	Subtotal (a+b+c+d)	0.00		0.00
	Subtotal Expenditure (1+2+3+4+5+6+7+8+9+10-11)	2006.69	461.51	513.96
C	Return on Equity	185.94	135.98	135.98
D	Non Tariff and other Income	0.00	0.00	0.50
E	Annual Revenue Requirement (B+C-D)	2192.63	597.49	649.44

Notes:

1. Depreciation, Interest on Loan, Interest on working Capital and Return on Equity have been claimed in accordance with PSERC Tariff Regulations 2005.
2. O&M Expenses have been claimed as actual O&M expenses as per books of accounts

2.0 Capital Cost for FY 2016-17**GVK's submission:**

2.1 GVK in the petition has claimed capital expenditure of Rs. 4383.46 Crore as on the Commercial Operation Date i.e. 16.04.2016 (including un-discharged liabilities of Rs. 116.16 Crore). The Un-discharged liabilities of the project, as submitted by GVK are as follows:

- (a) Retention money payable to BHEL of Rs. 111.11 Crore.
- (b) Bills outstanding against BTG Contracts of Rs. 3.54 Crore.
- (c) Amount outstanding against spares of Rs. 1.51 Crore.

The capital expenditure (excluding un-discharged liabilities) is Rs. 4267.30 Crore. Further, GVK has not claimed any additional capital cost during the period from COD to 31.03.2017.

2.2 Further, GVK in its revised submission received on 21.07.2020 submitted that Capital Cost incurred till COD of the Project i.e. 16.04.2016 is Rs. 4376.41 Crore. The financial closure of the Project was achieved in 2010 considering a capital cost of Rs. 3200 Crores and a debt equity ratio of 75:25. However, due to

events of Force Majeure and Change in Law, i.e. cancellation of the Captive Coal Blocks, actual COD took place on 16.04.2016, resulting in time overrun of approximately 39 months from SCOD as per financial closure and cost overrun of Rs. 1176.41 Crore. The overall debt to equity ratio at the stage of project completion stood at 73:27. However, the Commission vide order dated 17.01.2020 in Petition no. 54 of 2017 approved a capital cost of Rs.3058.37 Crore.

PSPCL's submission:

- 2.3 PSPCL vide its submissions dated 27.05.2020 stated that the Commission vide its Order dated 17.01.2020 passed in the petition no. 54 of 2017 has determined the capital cost of the GVK's project as Rs. 3058.37 Crore as on the date of commissioning of the project.

Commission's Analysis

- 2.4 **The Commission vide its Order dated 17.01.2020 in petition no. 54 of 2017 has determined the capital cost of the project after prudence check at Rs. 3058.37 Crore as on the date of commissioning of the GVK Power Plant i.e. 16.04.2016.**

As, GVK has not claimed any additional capital expenditure from 17.04.2016 to 31.03.2017 in the true-up petition for FY 2016-17, thus, the Commission approves capital cost of Rs. 3058.37 Crore for the FY 2016-17 as on 31.03.2017.

3.0 Operation and Maintenance Expenses

GVK's Submission

- 3.1 GVK submitted that the Project being a coal-based power plant

is governed by Regulation 29 of the CERC Tariff Regulations.

The CERC Tariff Regulations prescribes Operation and Maintenance expenses for 200/210/250 MW sets for FY 2016-2017 at the rate of Rs. 27.00 Lakhs per MW. The O&M expenses has been considered at Rs. 139.81 Crores on normative basis.

- 3.2 GVK in its revised submission received on 21.07.2020 and 21.08.2020, submitted that in terms of Regulation 28(2) of the PSERC Tariff Regulation 2005, O&M Expenses allowable to GVK is to be computed as under:

“28. 2 [OPERATION AND MAINTENANCE EXPENSES

- (1) ‘Operation & Maintenance expenses’ or ‘O&M expenses’ shall mean repair and maintenance (R&M) expenses, employee expenses and administrative & general expenses (A&G) including insurance.*
- (2) O&M expenses for distribution licensee (s) shall be determined by the Commission as follows :*
 - (a) O&M expenses as approved by the Commission for the year 2011-12 (true up) shall be considered as base O&M expenses for determination of O&M expenses for subsequent years.*
 - (b) Base O&M expenses (except employee cost) as above shall be adjusted according to variation in the average rate (on monthly basis) of Wholesale Price Index (all commodities) over the year to determine the O&M expenses for subsequent years.*
 - (c) In case of a new distribution licensee (s), the Commission shall make suitable assessment of base O&M expenses of the new licensee (s) and allow O&M expenses for subsequent years for the new licensee (s) on the basis of such estimation and principle as given in clause (b) above. However, for employee cost the principle specified in clause (3) below will be followed.*

- (3) *The employee cost for a distribution licensee (s) shall be determined as follows:*
- (a) *The employee cost as claimed by the distribution licensee (s) shall be considered in two parts:*
- (i) *Terminal benefits such as Death-cum-Retirement Gratuity, Pension, Commuted Pension, Leave Encashment, LTC, Medical reimbursement including fixed medical allowance in respect of pensioners and share of BBMB employee expenses and*
- (ii) *all other expenses accounted for under different sub-heads of employee cost taken together.*

The cost component of terminal benefits and BBMB expenses shall be allowed on actual basis and increase in all other expenses under different sub-heads shall be limited to the increase in Wholesale Price Index (all commodities) as per clause (2) (b) above.

- (b) *Exceptional increase in employee cost on account of pay revision etc. shall be considered separately by the Commission.*
- (c) *The additional employee cost in case of New installations/Network for the year of installation shall be considered separately by the Commission on case to case basis keeping in view the principles and methodologies enunciated in these regulations.*

....

- (5)(a) *For the determination of O&M expenses (except employee cost) for generating company, the Commission shall allow O & M expenses (except employee cost) in accordance with Clause (2). The employee cost will, however, be determined keeping in view the provisions contained in Clause (3).*
- (b) *In case of a new generating company (s), the Commission shall make suitable assessment of base O&M expenses of the new licensee (s) and allow O&M expenses for subsequent years for the*

new licensee (s) on the basis of such estimation and principle as given in Clause (2)(b) above. However, for employee cost the principle specified in Clause (3) above will be followed.”

3.3 The actual O&M Expenditure incurred by GVK in FY 2016-17 is as under:

Table No. 2: O& M Expenses claimed by GVK for FY 2016-17
(Rs. Crore)

Sr. No	Particulars	Estimated	Approved by the Commission	Actuals
1	Plant Capacity	540MW	540 MW	540 MW
2	O&M Expenses	145.80	31.80	32.08
3	Pro rata O&M Expenses for FY 2016-17	139.41	30.41	30.78

3.4 In reply to the deficiencies raised by the Commission, GVK submitted proof of payment of employee contributions alongwith the requisite details of employees for FY 2016-17.

PSPCL’s Submission

3.5 PSPCL vide Memo No. 5516 TR-5/952 dated 23.06.2020 submitted that the O&M expenses are required to be recomputed by the Petitioner strictly in accordance with the methodology prescribed under Regulations 28 of the PSERC Tariff Regulations 2014.

3.6 PSPCL vide its submission dated 28.07.2020 and 10.08.2020 stated that this Commissions in its Order dated 17.01.2020 while approving O&M expenses for the Petitioner at Rs.30.41. Crores has held as under:

“26.1.1

...

As per the above sub regulation(5)(b), the Commission has to make suitable assessment of base O&M expenses in case of new generating company. This exercise will be taken up during true-up of FY 2016-17.

..... An expenditure Rs. 0.28 Crore depicted in 'other operating expenses' in Annual Audited Accounts relates to provision for diminution in value of investment and the same is not allowable as O&M expenses. Thus, O&M expenses are allowed at Rs.31.80 (32.08-0.28) Crore for FY 2016-17."

Thus, while agreeing to take up the true up exercise for O&M expenses at the appropriate stage, this Commission had declined to allow Rs. 0.28 Crore shown as other operating expenses" by GVK in its accounts, GVK is now seeking the said amount in the present true-up Petition. However, yet again no details of the same have been furnished by GVK. As such the same is liable to strict scrutiny and prudence check by the Commission.

Commission's Analysis

- 3.7 The Commission had provisionally approved O& M expenses of Rs. 30.41 Crore for GVK for the period 17.04.2016 to 31.03.2017 in the order dated 17.01.2020 in Petition no 54 of 2017.
- 3.8 The O&M expenses are to be determined as per provisions of Regulation 28 of PSERC (Terms and Conditions for determination of Tariff), Regulation 2005 as mentioned in para 3.2 above.
- 3.9 As per the above sub regulation(5)(b), the Commission has to make a reasonable assessment of the base O&M expenses in case of a new generating company. The Annual Audited Accounts of GVK for FY 2016-17 reveals Employee benefit expenses of Rs 8.66 Crores which includes Terminal Benefits of Rs 0.65 Crore. The Commission allows the terminal benefits for FY 2016-17 as claimed by GVK in the petition. The Commission

allows the claim of the Employee cost as under:

Table No.3: Employee cost allowed by the Commission for the period 17.04.2016 to 31.03.2017.

(Rs. Crore)		
Sr.no	Particulars	Amount
1	Terminal benefits	0.65
2	Other Employee cost	8.01
3	Total Employee Cost for FY 2016-17	8.66
4	Total Employee Cost (8.66*349/365)	8.28

3.10 The other operating expenses (A&G and R&M expenses) are Rs.23.42 (10.48+12.94) Crore as per the Annual Audited Accounts of GVK for FY 2016-17. An expenditure of Rs.0.28 Crore depicted as "other operating expenses" in the Annual Audited Accounts relates to provision for diminution in value of investment and the same is not allowable as O&M expenses. Thus, the Commission approves R&M and A&G expenses as per under:

Table No.4: R&M and A&G expenses approves by the Commission for the period 17.04.2016 to 31.03.2017.

(Rs. Crore)		
Sr. No.	Particulars	Amount
1.	R & M expenses	12.94
2.	A & G expenses	10.48
3.	R&M and A&G expenses	23.42
4.	Less Diminution in value of investment	0.28
5.	R & M and A & G expenses for FY 2016-17	23.14
6.	R&M and A&G expenses (23.14*349/365)	22.13

3.11 Accordingly, the Commission approves O&M expenses for the period 17.04.2016 to 31.03.2017 as under:

Table No. 5: O&M expenses approved by the Commission for the period 17.04.2016 to 31.03.2017.

(Rs. Crore)

Sr. No	Particulars	FY 2016-17	17.04.2016 to 31.03.2017
1.	Employee Cost	8.66	8.28
2.	R&M expenses	23.14	22.13
3.	O & M expenses	31.80	30.41

4.0 Depreciation

GVK's Submission:

- 4.1 GVK submitted that depreciation has been computed for FY 2016-17 in accordance with Regulation 27 of the CERC Tariff Regulations.

"27. Depreciation:

- (1) *Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.*

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

- (2) *The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.*
- (3) *The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*

Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

- (4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*
- (5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system:*

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.”

4.2 GVK in its petition has submitted that the weighted average rate of depreciation of 4.80% based on the actual capital cost as on Station COD and the applicable depreciation rates for the different categories of assets as per Appendix-II (Depreciation Schedule) of the CERC Tariff Regulations. Further, GVK has worked out depreciation of Rs. 196.24 Crore at the weighted average rate of depreciation of 4.80% based on the Capital cost of Rs 4267.30 Crore.

- 4.3 GVK in its revised submission received on 21.07.2020 and 21.08.2020 has submitted that in terms of Regulation 27(1) (d) of the PSERC Tariff Regulations 2005 depreciation up to 90% of capital cost of the power plant using the straight line method is allowed over the useful life of the Project at the rate of depreciation specified by the Central Electricity Regulatory Commission.
- 4.4 GVK submitted that the gross fixed asset of the Project for the purpose of depreciation is Rs. 3058.37 Crore in its revised submission dated 21.07.2020. The category-wise gross fixed asset value and the corresponding depreciation rates as submitted by GVK in accordance to the Appendix-II (Depreciation schedule) of the CERC Tariff Regulations, 2014 is as under:

Table No. 6: Rates of Depreciation submitted by GVK for FY 2016-17.

Sr. No	Particulars	Asset value as on Station COD	Rate of depreciation (as per CERC 2014-19 Tariff Regulations)
1.	Land and land rights	96.75	0.00%
2.	Buildings	486.29	3.34%
3.	Plant and machinery	2447.66	5.28%
4.	Vehicles	0.63	9.50%
5.	Furniture and fixtures	1.23	6.33%
6.	Office equipment	1.12	6.33%
7.	Computers	0.63	15.00%
8.	Computer software	0.12	15.00%
9.	Right to Use Railway Line	23.94	0.00%
10.	Total	3058.37	Weighted avg. rate of depreciation: 4.77%

- 4.5 GVK has further submitted that the depreciation for the year has been computed based on the Capital cost approved by the

Commission in Order dated 17.01.2020 in Petition no 54 of 2017 and the rate of depreciation derived in the above table. Depreciation thus derived has been pro-rated based on Project COD i.e. 16.04.2016 as shown under:

Table No. 7: Depreciation expenses submitted by GVK

(Rs. Crore)

Particulars		Estimated	Approved by the Commission	Truing Up
Opening Capital Cost as on Station COD	A		3058.37	3058.37
Less: Undischarged liabilities included in above	B			
Opening Capital Cost excluding undischarged liabilities	$c = a - b$		3058.37	3058.37
Additional capitalization during the year	D			-
Less: Undischarged liabilities included in additional capitalization	E			-
Add: Liabilities discharged during the year	F			-
Closing Capital Cost	$g = d - e + f$		3058.37	3058.37
Average Capital Cost	$h = (c + g)/2$		3058.37	3058.37
Freehold land	I		96.75	96.75
Weighted Average Rate of depreciation	J		4.77%	4.77%
Remaining depreciable value	$k = 90\% \times (h - i)$			2665.46
Depreciation (annualised)	$l = \text{Min} (j \times h, k)$	202.59	141.27	145.80
Depreciation (for the period)	$m = l \times (349/365)$	202.59	141.27	139.41
Cumulative depreciation at the beginning of the period	N			-
Cumulative depreciation at the end of the period	$o = m + n$	202.59	141.27	139.41

4.6 In reply to the deficiencies raised by the Commission, GVK submitted the fixed asset register prepared for the assets created on 16.04.2016 and as on 31.03.2017 for which depreciation has been claimed during FY 2016-17. GVK further submitted that that the fixed asset register has been prepared

as per the actual cost incurred by GVK for each asset.

PSPCL's Submission

- 4.7 PSPCL vide Memo No. 5516 dated 23.06.2020 submitted that since the base figures for calculation of depreciation based on the capital cost of the project, the same has been considered as the amounts claimed by GVK and not the amounts approved by the Commission in its Final Tariff Order, the same are inadmissible.
- 4.8 PSPCL vide its submission dated 28.07.2020 and 10.8.2020 submitted that the Commission in its Order dated 17.01.2020 had considered a weighted average rate of 4.77% based upon the depreciation of Rs. 201.37 Crore for FY 2016-17 depicted by GVK in its annual audited accounts and had determined sum of Rs.141.27 Crore as permissible depreciation for GVK's project. However, GVK in the present Petition has submitted a sum of Rs.139.41 Crore as depreciation of its gross fixed assets, excluding freehold land as described under Format 12 annexed to the present petition. Since, the determined deprecation amount of the gross fixed assets forms the basis of calculation of interest on loan capital which is also the provision under Regulation 26(5) of the PSERC Tariff Regulations, 2005, the Commission may subject the same to strict scrutiny and prudence check before allowing true-up of the same.
- 4.9 PSPCL further submitted that it has observed certain abnormal expenditures while checking the said fixed asset register furnished by GVK and requested the Commission for prudence check of the same.

Commission's Analysis

- 4.10 The Commission has in Petition no.54 of 2017 already carried out a detailed prudence check of the Capital Cost of the project. Depreciation is allowable on the approved Capital cost.
- 4.11 The Commission had provisionally approved Depreciation of Rs. 141.27 Crore for GVK for the period 17.04.2016 to 31.03.2017 in the order dated 17.01.2020.
- 4.12 Depreciation is to be determined as per provisions of Regulations 27 of PSERC (Terms and Conditions for determination of Tariff), Regulation 2005 which is as under:

27. DEPRECIATION

(1) For the purpose of tariff, depreciation shall be computed in the following manner:

(a) The value base for the purpose of depreciation shall be the capital cost of the assets admitted by the Commission: Provided that land is not a depreciable asset and its cost shall be excluded from the capital cost while computing depreciation: Provided further that depreciation has been calculated after deduction of consumer contributions, capital subsidies/Government grants.

(b) The historical cost of the asset shall include additional capitalisation.

(c) The historical cost shall include foreign currency funding converted to equivalent rupees at the exchange rate prevalent on the date when foreign currency was actually availed but not later than the date of commercial operation.

(d) Depreciation for generation and transmission assets shall be calculated annually as per straight-line method over the useful life of the asset at the rate of depreciation specified by the Central Electricity Regulatory Commission from time to time. Provided that the total

depreciation during the life of the asset shall not exceed 90% of the original cost.

(e) Depreciation for distribution assets and other assets not specified by CERC shall be at the rates notified by the Commission. Provided that the total depreciation during the life of the asset shall not exceed 90% of the original cost.

(2) The generating company and the licensees shall make all efforts for aligning the tenure of long term debt with permissible rate of depreciation to reduce front loading of tariffs. In case of inadequacy of cash for repayment of debt, only in extreme cases, the Commission may allow Advance Against Depreciation (AAD) in addition to the allowable Depreciation in the following manner:

AAD = Loan repayment amount as per the schedule of repayment subject to a ceiling of 1/10th of loan amount as per Regulation 24 minus depreciation as per schedule. Provided that Advance Against Depreciation shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year, Provided further that Advance Against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.

(3) On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.

(4) Depreciation shall be chargeable from the first year of operation. In case of operation of the asset for part of the year, depreciation shall be charged on pro-rata basis.

4.13 As per the Annual Audited Accounts of GVK for FY 2016-17, depreciation of Rs. 201.37 Crore has been shown on Gross Fixed Asset of Rs. 4224.02 Crore (excluding land value). There has been no addition of assets from 17.04.2016 to 31.03.2017. As per table no 6 GVK has claimed weighted average rate of depreciation as 4.77% which is considered by the Commission

for computing the depreciation for the period from 17.04.2016 to 31.03.2017.

- 4.14 The Commission has determined Gross Fixed Assets (GFA) of Rs. 3058.37 Crore vide its Order dated 17.01.2020. The Commission allows the depreciation for the period from 17.04.2016 to 31.03.2017 as under:

Table No.8: Depreciation allowed by the Commission for the period 17.04.2016 to 31.03.2017.

(Rs. Crore)

Sr. No.	Particulars	Amount
1.	Opening value of GFA as on 17.04.2016	3058.37
2.	Value of Land	96.75
3.	Opening value of GFA (net of Land)	2961.62
4.	Addition /disposal during the year	0.00
5.	Closing value of GFA	2961.62
6.	Average value of GFA	2961.62
7.	Weighted Average Rate of Depreciation	4.77%
8.	Depreciation for FY 2016-17 (6 x 7)	141.27
9.	Depreciation (141.27 x 349/365)	135.08

Accordingly, the Commission allows the depreciation of Rs. 135.08 Crore for the period 17.04.2016 to 31.03.2017.

5.0 Return on equity

GVK's Submission

- 5.1 GVK had originally computed the Return on Equity for 2016-17 as Rs.171.25 Crore in accordance with Regulation 24 of the CERC Tariff Regulations, 2014, as under:

“24. Return on Equity:

(1) *Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*

(2) *Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations*

including pumped storage hydro generating stations and run of river generating station with pondage...”

- 5.2 GVK has submitted that for computation of the base equity, the opening debt-equity ratio as on Station COD has been considered at 73:27 as stated earlier in this petition, and the opening capital cost as on Station COD has been considered net of undischarged liabilities. ROE thus derived has been pro-rated based on Station COD.
- 5.3 GVK in its revised submission on 21.08.2020 has submitted that it has funded the claimed capital cost of Rs 4267.38 Crore in the ratio of 73.8 :26.2 and in terms of Regulation 24 of PSERC Tariff Regulations 2005, the total hard cost of the project ought to be considered as per actual debt equity ratio. However, in Order dated 17.01.2020, this Commission subtracted the entire equity infused by GVK from the hard cost (~50%) and considered the balance amount as outstanding loan amounts of GVK.
- 5.4 GVK in its revised submission (received on 21.07.2020) has calculated Return on Equity @ 15.50% as per Regulation 25 of PSERC Tariff Regulations, 2005 on the paid up equity capital determined in terms of Order dated 17.01.2020. GVK has submitted that for the computation of the base equity, the opening debt-equity ratio as on Station COD has been considered at 70:30 as stated earlier in this petition, and the opening capital cost as on Station COD has been considered. Return on Equity thus derived has been pro-rated based on Station COD. Computation of ROE is shown in the following table:

Table No. 9: Return on Equity submitted by GVK for FY 2016-17
(Rs. Crore)

Particulars		Estimated	Approved by the Commission	Truing Up
Opening Capital Cost as on Station COD	(a)		3058.37	3058.37
Equity percentage as on COD	(b)		30%	30%
Normative Opening Equity considered for ROE computation (= a x b)	(c)		917.51	917.51
Equity addition due to additional capitalization during the year	(d)			
Normative Closing Equity (= c + d)	(e)		917.51	917.51
Average Equity (Average of 'c' and 'e')	(f)		917.51	917.51
Normative Rate of ROE as per PSERC Tariff Regulations 2005	(g)		15.50%	15.50%
Return on Equity - Annualized (= f x g)	(h)		142.21	142.21
Return on Equity - Pro-rata (= h x 349 / 365) (w.e.f 16.04.2016)	(i)	185.94	135.98	135.98

PSPCL's Submission

- 5.5 PSPCL vide Memo No. 5516 dated 23.06.2020 submitted that since the base figures for calculation of Return on Equity, being the capital cost of the project, the equity infused by GVK has been considered as the amounts claimed by GVK and not the amounts approved by this the Commission in its Final Tariff Order, the same are inadmissible.
- 5.6 PSPCL vide its submission dated 28.07.2020 and 10.08.2020 submitted that based on Regulation 24 of the PSERC Tariff Regulation, 2005, GVK has submitted that since the actual equity invested by it is in excess of 30% of the capital cost, the equity component for the purpose of tariff is considered as 30% of the approved capital cost of Rs. 3058.57 Crore. As per Regulation 24, in case equity invested by a generating station is in excess of 30% of the completed capital cost, the said equity in excess of 30% is to be considered as normative loan. In its

Order dated 17.01.2020, the Commission has observed that since the actual equity infused by GVK in the project was Rs.1118.06 Crore and 30% of the completed capital cost of Rs. 3058.37 Crore comes to Rs. 917.51 Crore, the remaining Rs. 200.55 Crore may be deemed as normative loan. As such, the total loan component for GVK's project as approved by the Commission is Rs.1940.31 Crore (Rs. 3058.37 Crore - Rs. 1118.06 Crore) and in addition thereto Rs. 200.55 Crore has been approved as normative loan. The debt-equity ratio for GVK's project for FY 2016-17 is liable to be viewed accordingly by the Commission.

- 5.7 PSPCL further submitted that as per the submissions of GVK, there is no element of any true-up under the present head. As such, no response to the same is required from the PSPCL.

Commission's Analysis

- 5.8 The Commission had provisionally approved Return on equity of Rs.135.98 Crore for GVK for the period 17.04.2016 to 31.03.2017 in the order dated 17.01.2020.
- 5.9 As per Regulation 24 of PSERC (Terms and Conditions for determination of Tariff), Regulation 2005 which is as under:

24. DEBT-EQUITY RATIO

(1) For the purpose of determination of tariff, debt-equity ratio in case of a new project commencing after the date of notification of these Regulations shall be 70:30. Where equity employed is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as loan. Where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff.

Provided that the Commission may, in appropriate cases, consider equity higher than 30% for the purpose of

determination of tariff, where the generating company or the licensee is able to establish to the satisfaction of the Commission that deployment of equity more than 30% is in the interest of the general public;

(2) In case of existing and ongoing projects, the actual debt-equity ratio shall be considered for determination of tariff. However, any expansion shall be governed as per clause (1) above.

(3) The debt and equity amounts arrived at in accordance with clause (1) and (2) shall be used for all purposes including for determining interest on loan, return on equity, Advance against Depreciation and Foreign Exchange Rate Variation.

5.10 The Regulations state that Debt-equity ratio in case of new projects shall be 70:30 for the purpose of determination of tariff.

Where equity employed is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as loan. The Commission has considered the equity of Rs. 1118.06 Crore in the capital cost of Rs. 3058.37 Crore which is more than the 30% of the approved capital cost. Accordingly, equity works out to be Rs. 917.51 (30% of 3058.37) Crore and the balance of Rs. 200.55 (1118.06-917.51) Crore is considered as normative loan as per the above referred Regulation.

5.11 Return on equity shall be computed @15.5% as per Regulation 25 of PSERC (Terms and Conditions for determination of Tariff), Regulation 2005 on equity determined in accordance with Regulation 24. The relevant Sub Regulation 25 of PSERC (Terms and Conditions for determination of Tariff), Regulation 2005 is reproduced below:

(1) Return on Equity shall be computed @ 15.5% on the paid up

equity capital determined in accordance with Regulation 24.

5.12 Thus, Commission works out return on equity for FY 2016-17 as under:-

Table No.10: Return on equity allowed by the Commission for the period 17.04.2016 to 31.03.2017.

(Rs. Crore)

Sr. No.	Particulars	Amount
1.	Capital Cost as on 17.04.2016	3058.37
2.	Equity as on 17.4.2016	1118.06
3.	Equity - 30% of Capital Cost	917.51
4.	Normative Loan (2-3)	200.55
5.	Addition during the year	0.00
6.	Closing Equity as on 31.03.2017	917.51
7.	Average Equity	917.51
8.	Rate of Return on Equity	15.50%
9.	Return on Equity for FY 2016-17 (7 x 8)	142.21
10.	Return on Equity (142.21x349/365)	135.98

Accordingly, the Commission allows the return on equity of Rs. 135.98 Crore for the period 17.04.2016 to 31.03.2017.

6.0 Interest & Finance charges

GVK's Submission

6.1 GVK has computed Interest on Loan Capital for FY 2016-2017 as per Regulation 26 of CERC Tariff Regulations, 2014, as under:

“26. Interest on loan capital:

- (1) *The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*
- (2) *The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*
- (3) *The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding*

year/period. In case of decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalisation of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-

financing.

- (9) *In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute: Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.*

6.2 In terms of the foregoing, the interest on loan capital for FY 2016-17 has been computed as follows:

- (a) Gross normative opening loan as on Station COD has been computed as the difference between the Opening capital cost as on Station COD (excluding undischarged liabilities) and the Normative opening equity considered for ROE computation.
- (b) Loan repayment has been considered at normative basis being equal to depreciation.
- (c) Actual Weighted Average Interest rate has been computed as ratio of the actual interest paid to the actual average loan as per annual accounts for FY 2016-17.

6.3 GVK in its petition has stated that the weighted average rate of interest has been calculated on the basis of average balance of actual individual loans at 13.96% (Including penal interest). Based on the same GVK had worked out interest on normative loan (pro-rata) of Rs. 403.92 Crore on average normative loan of Rs. 3017.01 Crore.

6.4 GVK in its revised submission received on 21.07.2020 has computed Interest on loan capital as per Regulation 26 of PSERC Regulations, 2005 and has submitted that the weighted

average rate of interest has been calculated on the basis of average balance of actual individual loans at 13.22% (Including penal interest).

- 6.5 GVK in reply to the deficiencies, submitted the loan wise details of actual term loans availed from the commercial Banks/ Financial institutions, depicting opening balance of loan as on 17.04.2016, addition during the year, repayment of loan, closing balance as on 31.03.2017, interest rate, interest due and paid there- against on long term loans and working capital loans.

Accordingly, the revised computation of interest on loan for FY 2016-17 is as under:

Table No. 11: Interest on Loan submitted by GVK for FY 2016-17
(Rs. Crore)

Sr. No	Particulars	Estimated	Approved by the Commission	True-up
1.	Normative Loan – Opening		2140.86	2140.86
2.	Addition of loan due to Additional Capitalization during the period from COD to year end			-
3.	Less: Repayment of Loan during the Period (Normative; equal to Depreciation claimed for the year)		141.27	139.41
4.	Net Closing loan		1999.59	2001.45
5.	Average Normative Loan		2070.22	2071.15
6.	Actual Weighted Average Rate of Interest on Loan		13.25%	13.22%
7.	Interest on Normative Loan (Annualized)		274.30	273.82
8.	Interest on Normative Loan (pro rata)	404.72	225.51	261.81

- 6.6 GVK in its revised submission dated 21.08.2020 has submitted that in the petition no. 54 of 2017 it had originally claimed interest of Rs 451.91 Crore on actual average loan of Rs 3307.63 Crore as per Annual Audited Accounts. However, this

Commission in Order dated 17.01.2020 has worked out average long term loan as Rs. 2070.22 Crore based on normative parameters in terms of PSERC Tariff Regulations 2005. GVK further submitted that once normative approach has been adopted by the Commission there cannot be any further adjustments on the basis of actual expenses on account of it being less, the said position of law has been upheld by the Hon'ble Tribunal in Haryana Power Generation Co. Ltd v. Haryana Electricity Regulatory Commission judgement dated 31.07.2009 in Appeal no.42 & 43 of 2008.

- 6.7 GVK prayed that in the present case also, this Commission may be allow interest on normative loan as claimed (Rs.261.81 Crore) in terms of the PSERC Tariff Regulations 2005.

PSPCL's Submission

- 6.8 PSPCL vide Memo No. 5516 dated 23.06.2020 submitted that since the base figures for calculation of Interest on loan, being the capital cost of the project, the term loans for the project has been considered as the amounts claimed by GVK and not the amounts approved by this the Commission in its Final Tariff Order, the same are inadmissible.
- 6.9 PSPCL vide its submission dated 28.07.2020 and 10.08.2020 stated that GVK under the present head has submitted actual figures of interest on loan to be Rs. 273.82 Crore as against Rs. 274.30 Crore allowed by the Commission in its order dated 17.01.2020. However, GVK has also submitted an amount of Rs. 261.81 Crore as 'Interest on normative loan (Pro rata)' as against Rs. 225.51 Crore as approved by this Commission. As regards this difference of Rs. 36.3 Crore the Commission in its

Order dated 17.01.2020 has held as under:

“As per the Annual Audited Accounts of GVK the average loans for FY 2016-17 have been worked out to Rs.3307.63 Crore and the interest on this has been depicted as Rs. 451.91 Crore. However, GVK has a liability of Rs. 226.42 Crore towards interest accrued. The interest actually paid on long term loans is Rs. 225.49 (451.91-226.42) Crore.

Accordingly, the Commission considers the interest of Rs. 225.49 Crore which has been Actually paid by GVK during this year. The balance amount of interest i.e. Rs. 36.79 (262.28-225.49) Crore will be considered in the year in which year it will be paid by GVK.”

Thus, the Commission held that this sum of Rs. 36.79 Crore (inclusive of finance charges) would be considered in the year in which the same is actually paid by GVK. However, in the present Petition, GVK has not provided any details whether the said amount has actually been paid or not in FY 2016-17. In the absence of such information, GVK's true-up claim under this head is inadmissible to that extent.

Commission's Analysis

- 6.10 The Commission had provisionally approved Interest and finance charges of Rs. 225.51 Crore for GVK for the period 17.04.2016 to 31.03.2017 in the order dated 17.01.2020.
- 6.11 Interest on long term loans is to be allowed as per Regulation 26 of PSERC (Terms and Conditions for determination of Tariff), Regulation 2005, which is as under:

26. INTEREST AND FINANCE CHARGES ON LOAN

(1) For Existing Loan Capital, Interest & finance charges shall be computed on the outstanding Loans, duly taking into account the rate of interest & schedule of repayment as per the Terms & Conditions of relevant agreements. The rate of interest shall be the actual rate of interest paid/payable by the Licensee(s) or the State Bank of India Advance rate as on April, 1 of the relevant year, wherever is lower.

(2) For New investments, Interest & finance charges shall be computed on the loans, duly taking into account the rate of interest & schedule of repayment as per the Terms & Conditions of relevant agreements. The rate of interest shall be the actual rate of interest paid/payable by the Licensee(s) or the State Bank of India Advance rate as on April, 1 of the relevant year, wherever is lower.

(3) The interest rate on the amount of equity above 30% treated as loan shall be the weighted average rate of interest on loan capital of the generating company / licensee

Provided that interest and finance charges of renegotiated loan agreements shall not be considered, if they result in higher charges. Provided further that interest and finance charges on works in progress shall be excluded and shall be considered as part of the capital cost.

(4) Interest charges on security deposits, if any, made by the consumers with a generating company/licensee, shall be considered at the rate specified by the Commission from time to time.

(5) In case any moratorium period is availed of, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

(6) The Commission shall allow obligatory taxes on interest, commitment charges, finance charges (including guarantee fee payable to the Govt.) and any exchange

rate difference arising from foreign currency borrowings, as finance cost.

(7) Any saving in costs on account of subsequent restructuring of debt shall be shared between the consumers and the generating company / licensee in such ratio as may be decided by the Commission.

6.12 The Commission in its order dated 17.01.2020 has determined capital cost of the GVK's project as Rs. 3058.37 Crore and equity as Rs. 1118.06 Crore. Long term loans of Rs.1940.31 (3058.37–1118.06) Crore have been considered. The Commission has further considered additional loan of Rs. 200.55 Crore (equity in excess of 30%) as part of normative long term loans as per Regulation 24 of PSERC (Terms and Conditions for determination of Tariff), Regulation 2005 for the purpose of allowing interest. As such, the long term loans allowed for interest purpose workout to Rs. 2140.86 (1940.31+200.55) Crore. The depreciation for FY 2016-17 which has been worked out as Rs. 141.27 Crore in this Order is considered as re-payment of the long term loans as per Regulation 26(5) considering that there would be moratorium period in the 1st year of operation.

6.13 In the Annual Audited Accounts of GVK for FY 2016-17 interest charges were shown as Rs. 451.91 Crore. But in the Annual Audited Accounts of FY 2017-18, the previous year figures of interest charges for FY 2016-17 has been rearranged/regrouped as Rs. 448.37 Crore and Rs 3.54 (451.91 - 448.37) Crore has been shown as Other Finance Charges.

6.14 As per the Regulation, 26 (2) of PSERC (Terms and Conditions for determination of Tariff), Regulation 2005, the rate of interest

is to be considered at the actual rate of interest paid /payable by the licensee or the State bank of India advance rate as on April, 01 on the relevant year, whichever is lower. The State Bank of India Advance Rate (SBAR) as on 01.04.2016 was 14.05%. GVK in its revised submission dated 21.07.2020 has claimed weighted average rate of interest of 13.22% (including penal interest). During hearing on 29.07.2020, GVK was asked to submit the rate of penal interest included in 13.22%. GVK stated that weighted average rate of interest is only 13.22% and is exclusive of penal interest. The Commission considers the weighted average rate of interest of 13.22% for long term loans as claimed by the GVK in the revised submission dated 21.07.2020. Therefore, the Commission determines the interest on long term loans as under:

Table No.12: Interest on Long Term Loans determined by the Commission for the period 17.04.2016 to 31.03.2017 (Rs. Crore)

Sr. No.	Particulars	Amount
1.	Opening Long term Loans as on 17.04.2016	1940.31
2.	Add: Normative Loan	200.55
3.	Opening Long Term Loans	2140.86
4.	Addition during the year	0.00
5.	Re-payment of Loans (equal to depreciation)	141.27
6.	Closing Long Term Loans	1999.59
7.	Average Long Term Loans	2070.22
8.	Rate of Interest	13.22%
9.	Interest (7 x 8) for FY 2016-17	273.68
10.	Interest (273.68 x 349/365)	261.69

6.15 As per the Annual Audited Accounts of GVK for FY 2016-17 interest has been worked out to Rs. 448.37 Crore but GVK has a liability of Rs. 226.42 Crore towards interest accrued. The interest actually paid on long term loans is only Rs. 221.95 (448.37-226.42) Crore.

Accordingly, the Commission approves the interest of Rs. 221.95 Crore which has been actually paid by GVK during FY 2016-17. The balance amount of interest i.e. Rs. 39.74 (261.69 – 221.95) Crore will be considered in the year in which it will be paid by GVK.

6.16 Finance Charges:

GVK has not claimed any finance charges for FY 2016-17 but Rs. 3.54 Crore has been shown as other finance charges in the Annual Audited Accounts for FY 2016-17 on loan amount of Rs. 3366.49 Crore. Finance charges works out as Rs. 2.05 Crore for FY 2016-17 on a loan of Rs. 1940.31 Crore and Rs 1.96 (2.05x349/365) Crore is allowed proportionately for the period 17.04.2016 to 31.03.2017. Thus, the total interest and finance charges for FY 2016-17 work out to Rs. 224.00(221.95+2.05) Crore.

Accordingly, the Commission allows interest and finance charges of Rs. 223.91(221.95+1.96) Crore for the period 17.04.2016 to 31.03.2017.

7.0 Interest on Working Capital

GVK's Submission

7.1 GVK has computed Interest on Working Capital in terms of Regulation 28 of CERC Tariff Regulations, 2014. GVK submitted that in terms of Regulation 28 of the CERC Tariff Regulations, 2014 the Working Capital Interest rate applicable to GVK is 12.80% based on which Interest on Working Capital works out to Rs. 79.63 Crore.

7.2 In its revised submission dated 21.07.2020 and 21.08.2020 GVK has computed Working Capital and Interest on Working Capital as per Regulation 30(3) of PSERC Tariff Regulations

2005. GVK has submitted computation of receivables for working capital requirement as under:

Table No.13: Computation of receivables for working capital requirement by GVK

(Rs. Crore)

Sr.No	Particular	Amount
1	Fuel Cost	66.45
2	O&M Expenses	30.78
3	Depreciation	139.41
4	Return on Equity	135.98
5	Interest of finance charges/Loan	261.81
6	Interest on working capital loan	15.50
7	Total (Receivables)	649.93

7.3 GVK in its revised submission on 21.08.2020 has submitted the computation of Interest on Working Capital for true-up of FY 2016-17 as shown in the following table:

Table No.14: Interest on Working Capital claimed by GVK for FY 2016-17

(Rs Crore)

Sr. No.	Particulars	Approved by the Commission	Amount
1	Maintenance Spares @ 15% of O&M Expenses	4.56	4.62
2	Fuel Cost for two months	8.68	11.08
3	O&M Expenses for one month	2.53	2.57
4	Receivable for two months	99.58	108.24
5	Total	115.35	126.50
6	Rate of Interest	10.62%	12.25%
7	Interest on Working Capital	12.25	15.50

PSPCL's Submission

7.4 PSPCL vide its submission dated 28.07.2020 and 10.08.2020 submitted that as per Regulation 30 of the PSERC Tariff Regulations, 2005 working capital for a generating company and interest on working capital is required to be calculated as under:

“30. WORKING CAPITAL AND INTEREST RATE ON WORKING CAPITAL

(3) working capital for a generating company shall be the sum of the following:

(i) Fuel Cost for two months

(ii) operation and Maintenance expenses for one month

(iii) Receivables equivalent to two months

(iv) Maintenance spares @15% of O&M expenses,

In its order dated 17.01.2020, the Commission has observed that as per the Annual Audited Accounts of GVK for FY 2016-17, the fuel cost is Rs. 66.45 Crore. However, as per the information available with the Commission in Petition No.68/2017 filed by GVK regarding billing disputes, the fuel cost for the period 16.04.2016 to 31.03.2017 given by PSPCL to GVK is Rs. 52.07 Crore. As such, fuel cost of Rs. 52.07 Crore have been considered by the Commission for determination of receivables. As regards the O&M Expenses, of the Commission has approved a pro-rata sum of Rs. 30.41 Crore for the period 17.4.2016 to 31.03.2017, depreciation was considered as Rs.141.27 Crore, return on equity at Rs.135.98 Crore and interest and finance charge at Rs.225.51 Crore. PSPCL submitted that GVK's claim in the true up petition is subject to the Commission allowing the said true-up figures after consideration of the objections of the Respondent in the present Reply and after due prudence check. As regards the cost of fuel for 2 months, GVK has claimed a revision of Rs. 2.40 Crore without providing any justification thereto. As per the Annual Audited Accounts for FY 2016-17 and GVK's own admission during the proceedings in Petition No.68/2017, the annual fuel cost of GVK is Rs. 52.07 Crore, based on which fuel cost for 2 months works out to Rs. 8.68 Crore. Thus, GVK cannot be

permitted to deviate from the said settled and accepted fuel cost. It may also be mentioned here that billing of the energy charges (which includes in itself the fuel costs) for GVK's project is being done on the basis of energy scheduled by PSPCL. The Energy charge rate is calculated on the basis of normative parameters instead of actual and in accordance with directions of the Commission in its the Order dated 6.03.2019.

Commission's Analysis

- 7.5 The Commission had provisionally approved Interest on working capital of Rs.12.25 Crore for GVK for the period 17.04.2016 to 31.03.2017 in the order dated 17.01.2020.
- 7.6 As per the Annual Audited Accounts of GVK for FY 2016-17 the fuel cost was Rs 66.45 Crore. The energy charges paid by PSPCL during FY 2016-17 were originally Rs. 52.07 Crore which were later revised in terms of the Commission's Order dated 06.03.2019 to Rs. 55.12 Crore including Rs. 3.05 Crore as arrears. Thus, fuel cost of Rs. 55.12 Crore has been considered for determination of receivables for FY 2016-17.
- 7.7 The Working Capital and Interest rate on Working capital has been determined as per Regulation 30 of PSERC (Terms and Conditions for determination of Tariff), Regulation 2005, which is as under:

30. WORKING CAPITAL AND INTEREST RATE ON WORKING CAPITAL

(3) Working capital for a generating company shall be the sum of the following:

- (i) Fuel Cost for two months*
- (ii) Operation and Maintenance expenses for one month*
- (iii) Receivables equivalent to two months*

(iv) Maintenance spares @15% of O&M expenses

(5) The rate of interest on working capital shall be equal to the actual rate of interest paid/ payable on loans by the licensee (s) or the State Bank of India Advance Rate as on April 1 of the relevant year, whichever is lower. The interest on working capital shall be payable on normative basis notwithstanding that the licensee (s) has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on the normative figures.

7.8 The Commission considers the weighted average rate of interest of 12.25% for working capital loans as claimed by the GVK in the revised submission dated 21.07.2020. The State Bank of India advance rate as on 01.04.2016 was 14.05%.

7.9 The details of Working Capital requirement and allowable interest thereon is depicted in the following table:

Table No.15: Working Capital and interest thereon allowed by the Commission for the period 17.04.2016 to 31.03.2017.

(Rs. Crore)

Sr. No.	Particulars	Amount
1.	Maintenance spares @ 15% of O&M (15% of 30.41)	4.56
2.	Fuel Cost for 2 months (55.12*60/349)	9.48
3.	O & M expenses for 1 month (30.41*30/349)	2.61
4.	Receivables for 2 months	102.24
5.	Total Working capital	118.89
6.	Weighted Average Rate of Interest	12.25%
7.	Interest on working capital for 17.04.2016 to 31.03.2017	14.56

Accordingly, the Commission allows interest on Working Capital of Rs. 14.56 Crore for the period 17.04.2016 to 31.03.2017.

8.0 Tax on Income:

GVK's Submission

8.1 GVK submitted that Regulation 32 of the PSERC Tariff Regulations provides that taxes on the income of a generating company shall be computed as an expense and shall be

recovered from consumers.

- 8.2 GVK submitted that tax on income liable to be paid for FY 2016-2017 is Nil.

PSPCL's Submission:

- 8.3 PSPCL vide its submission dated 10.08.2020 submitted that the claim of GVK as regards Tax on Income may be allowed by the Commission in accordance with applicable Regulations framed by the Commission after due prudence check.

Commission's Analysis:

- 8.4 Tax on income is allowable as per Regulation 32 of PSERC (Terms and Condition for Determination of Tariff Regulations, 2005) (amended from time to time). It is stipulated that tax on income shall be limited to tax on return on equity allowed, as under:

"32. TAX ON INCOME

(1) Obligatory taxes, if any, on the income of the generating company or the licensee from its core/licensed business shall be computed as an expense and shall be recovered from the customers/consumers.

Provided that tax on any income other than the core / licensed business shall not constitute a pass through component in tariff and tax on such other income shall be payable by the generating company or the licensee.

(2) Tax on income, if actually liable to be paid, shall be limited to tax on return on equity allowed, excluding incentives.

(3) The Tax on income shall be considered at income tax rate including surcharge, cess, etc as applicable during the relevant year in accordance with the provisions of Income Tax Act, 1961 duly amended from time to time.

(4) The benefits of tax holiday and the credit for carrying forward losses applicable as per the provisions of the Income Tax Act, 1961 shall be fully passed on to the customers/consumers."

The Commission allows income tax paid as Nil for the period 17.04.2016 to 31.03.2017 based on the Annual Audited Accounts .

9.0 Non-Tariff Income

GVK's Submission

9.1 GVK submitted that Regulation 37 of the PSERC Tariff Regulations provides components of income, which shall be treated as non-tariff income. In terms thereof the following components of income shall be treated as non-tariff income:

9.2 The non-tariff income of GVK for FY 2016-2017 is as under:

Table No. 16: Non-tariff income claimed by GVK. (Rs. Crore)

Sr. No.	Particulars	Amount
1.	Interest on FDR	0.18
2.	Sale of Fly Ash	0.32
3.	Total	0.50

PSPCL's Submission

9.3 PSPCL vide its submission dated 10.08.2020 submitted that the claim of GVK as regards Non-Tariff Income may be allowed by the Commission in accordance with applicable Regulations framed by the Commission after due prudence check.

Commission's Analysis

9.4 The Non-Tariff Income has been determined as per Regulation-34 of PSERC (Terms and Condition for Determination of Tariff Regulations, 2005) (amended from time to time).

9.5 The Commission notes that Audited Annual Accounts of GVK for FY 2016-17 has shown "Other income" which includes income from bank deposits and fly ash of Rs 0.18 Crore and Rs. 0.32 Crore respectively. As per para 20.3.4 of the Commission's Order dated 17.01.2020 in Petition no. 54 of

2017, GVK had diverted the funds meant for capital expenditure out of the loan taken from financial institutions by investment in Mutual Funds. The Commission has neither considered interest paid on loans used for such other investments nor income earned from such other business/ investment as part of the capital expenditure. Accordingly, the Commission determines Non-Tariff Income as Rs. 0.32 Crore (sale of fly ash) for FY2016-17 and allows Non-tariff income as Rs. 0.32 Crore.

Accordingly, the Commission approves Non-Tariff Income as Rs. 0.32 Crore for the period 17.04.2016 to 31.03.2017.

10.0 Capacity charges for FY 2016-17

10.1 The Commission had provisionally approved Capacity charges of Rs. 545.42 Crore for GVK for the period 17.04.2016 to 31.03.2017 in the order dated 17.01.2020.

10.2 The Annual Fixed Charges (AFC) for the period 17.04.2016 to 31.03.2017, as projected by GVK in the Petition, revised in its additional submission received on 21.07.2020 & 21.08.2020 and approved by the Commission is summarized in the following table:-

Table No.17: Annual fixed charges approved by the Commission for the period 17.04.2016 to 31.03.2017

(Rs Crore)

Sr. No.	Particulars	Allowed by Order dated 17.1.2020	Claimed by GVK in original Petition	Claimed by GVK in revised submission received on 21.08.2020	Approved by the Commission
1.	O&M Expenses	30.41	139.81	30.78	30.41
2.	Depreciation	141.27	196.24	139.41	135.08
3.	Interest charges	225.51	403.92	261.81	223.91
4.	Return on Equity	135.98	171.25	135.98	135.98
5.	Interest on Working Capital	12.25	79.63	15.50	14.56
6.	Income Tax	0.00	0.00	0.00	0.00
7.	Total Expenses	545.42	990.85	583.48	539.94
8.	Less: Non-Tariff Income	0.00	0.50	0.50	0.32
9.	Annual Fixed Cost	545.42	990.35	582.98	539.62

10.3 GVK shall be entitled for payment of capacity charges in accordance with Regulation 30 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2005 (as amended) where the same is not specified in the PSERC Tariff Regulations.

11.0 Generation for FY 2016-17

GVK's submission:

11.1 GVK has submitted the generation data for FY 2016-17 in the petition and its submissions dated 12.03.2020 in response to the Commission's interim Order dated 07.02.2020 as hereunder:

Table No. 18: Generation data submitted by GVK for FY 2016-17

Sr. No.	Description	April 2016	July 2016	August 2016	Total for FY 2016-17
1.	Gross Generation in MU	31.05	83.68	82.36	197.09
2.	Actual Generation in MU	26	79	87	192
3.	Plant Availability Factor (%)	13.17	22.89	22.53	4.71 (Cumulative)
4.	Declared Capacity in MU	31	84	82	197
5.	Scheduled Generation in MU	23.96	71.12	80.24	175.32

11.2 GVK vide its revised submissions received on 21.07.2020 submitted that the project is operating as part of the interconnected grid and abides by the Rules and Regulations framed by the CERC and the Commission to ensure grid safety and interconnected grid operations. However, GVK suffered loss of generation on account of backing down instructions received from Punjab State Load Despatch Centre (SLDC), even though the Project was available for generation. The revised Gross Generation (MU) and Scheduled Generation (MU), submitted by GVK is as under:

Table No. 19: Generation data submitted by GVK for FY 2016-17.

Sr. No.	Description	April 2016	July 2016	August 2016	Total for FY 2016-17
1.	Gross Generation in MU	26	79	87	192
2.	Scheduled Generation in MU	23.96	71.12	80.24	175.32

11.3 GVK further submitted that Regulation 36 (A) of CERC Tariff Regulations provide the norms of operation and in turn provide that Normative Annual Plant Availability Factor (NAPAF) for thermal generating stations shall be 85% and 83% in case of shortage of coal and uncertainty of coal supply on sustained basis. While normative PAF is 83%, the PAF has been impacted on account of force majeure event being cancellation of the captive coal block. In terms of Article 12.3(ii) read with Article 12.7 (a) and (b) of the Amended and Restated PPA, GVK is excused from performance and is entitled to compensation on account of unavailability of coal. In terms of the foregoing, PAF ought to be considered corresponding to actual coal available. Actual cumulative PAF for FY 2016-17 was 4.707%.

GVK vide its submission dated 21.08.2020 in reply to PSPCL's averment that the Gross Generation stated by GVK is in fact the Declared Capacity of the project as per the State Energy Accounts (SEA) issued by SLDC submitted that for the purposes of payment of tariff, capacity charges are payable as per the declared capacity of GVK and the said charges are to be paid irrespective of scheduling/dispatch by PSPCL. Further in terms of Article 4.3.1 of the Amended and Restated PPA, PSPCL is bound to pay capacity charges based on capacity declared available by GVK.

PSPCL's submission:

11.4 PSPCL vide its submissions dated 27.05.2020, 23.06.2020, 28.07.2020 and 10.08.2020 submitted as under:

The payment of fixed charges is based on the quantum of energy declared available as certified by SLDC. The quantum must be certified by the SLDC, which is a statutory authority. The certification of SLDC is on ex-bus basis, and on this GVK is entitled to the fixed charges at tariff determined by the Commission. As per the provisions in the Regulations, the payment of monthly fixed charges is based on the AFC, the Cumulative Plant Availability Factor and Normative PAF. The cumulative PAF and Normative PAF must be certified by the SLDC which is a statutory authority.

Under the head 'Installed Capacity & Generation', GVK has submitted gross generation during FY 2016-17 as 197.09 MU which has been revised to 192 MU. However, this is not the Gross Generation but is rather the Declared Capacity (DC) of the project, which is as per the State Energy Accounts (SEA) issued by SLDC. The Commission was requested to rely upon month-wise DC of GVK's project on which the billing had been done in respect of capacity charges for FY 2016-17. The payment of energy charges to GVK is being done as per the month wise energy scheduled by PSPCL and the billing had been done as per State Energy Accounts issued by the SLDC for FY 2016-17.

Commission's Analysis

11.5 The issue raised by GVK on the force majeure due to non availability of coal has already been decided by the

Commission in its Order dated 01.02.2016 common to Petition no. 65 of 2013 & 33 of 2015, Order dated 21.05.2018 in Petition no. 45 of 2017 and Order dated 06.03.2019 in Petition no. 68 of 2017.

11.6 As checked up from the SLDC's website, in terms of the Final State Energy Accounts for FY 2016-17 containing the data on the declared capacity, plant availability factor and the scheduled energy for FY 2016-17, the details are as under:

Table No. 20: Declared Capacity and Scheduled Generation as per SLDC for FY 2016-17

Sr. No.	Description	April 2016	July 2016	August 2016	Total for FY 2016-17
1.	Declared Capacity in MU	31.059	83.686	82.360	197.105
2.	Scheduled Generation in MU	23.955	71.124	80.241	175.320

12.0 Energy Charges for FY 2016-17

GVK's submission:

12.1 GVK has submitted the details of components of the Energy Charge in the petition as hereunder:

Table No. 21: Details of components of the Energy Charge submitted by GVK

Sr. No	Description	April 2016	July 2016	August 2016
1.	Aux Consumption (%)	8.02	8.46	8.57
2.	Station Heat Rate (kCal/kWh)	2715	2687	2521
3.	Fuel Oil Consumption (HDO/LDO) (KL)	159.31	429.34	422.57
4.	GCV of Coal (kCal/kg)	3686	4537	4006
5.	Landed Price of Coal (Rs./MT)	6211	5701	5429

12.2 Further, the fuel cost details as furnished by GVK in response to the information sought by the Commission vide its Order dated 07.02.2020 are as under:

**Table No. 22: Details of fuel cost submitted by GVK
for FY 2016-17**

Sr. No.	Item	Unit	Actual
1.	Generation	MU	192
2.	Auxiliary Consumption	%	8.85
3.	Net Generation	MU	175
4.	Station Heat Rate	Kcal/kwh	2621
5.	Specific Oil Consumption	ml/kwh	3.21
6.	Calorific Value of Oil	Kcal/Litre	10410
7.	Calorific Value of Coal (Weighted Average)	Kcal/Kg	3944
8.	Overall Heat (1*4)	Gcal	503232
9.	Heat from Oil (1*5*6/1000)	Gcal	6416
10.	Heat From Coal (8-9)	Gcal	496816
11.	Total Oil Consumption	KL	615.40
12.	Transit Loss of Coal	%	5.4
13.	Total Coal Consumption excluding transit and other losses	Tonnes	1,11,084
14.	Quantity of imported / captive coal priced on FOR basis	Tonnes	-
15.	Quantity of coal not priced on FOR basis	Tonnes	-
16.	Total Quantity of Coal required (Including Transit Loss and other losses) - As per Books of Account	Tonnes	1,17,083
17.	Price of Oil	Rs/ KL	18050
18.	Price of Coal	Rs. / Tonne	5581
19.	Total Cost of Oil (As per Audited Financial)	Rs. Crores	1.11
20.	Total Coal Cost (As per Audited Financial)	Rs. Crores	65.34
21.	Total Fuel Cost	Rs. Crores	66.45

12.3 GVK vide its revised submissions received on 21.07.2020 and 21.08.2020 stated that since, GVK's Project was commissioned on 16.04.2016 and accordingly the CERC Tariff Regulations 2014 would be applicable to GVK's Project for determination of energy charges. GVK further submitted that in terms of the formula mentioned in Regulation 30(6)(a) of the CERC Tariff Regulations, 2014, energy charges are to be determined taking into account the weighted average landed cost of fuel. GVK further submitted details of components of the Energy Charge as hereunder:

i) Auxiliary Consumption:

The normative auxiliary energy consumption for Coal-based generating stations as per Regulation 36(E)(a) of the CERC Tariff Regulations, 2014 is 8.5% for a unit of 200 MW series. Further, for thermal generating stations with induced draft cooling towers, additional 0.5% is allowed. Thus, the normative auxiliary consumption has been considered at 9% for the computation of energy charge. On 21.08.2020, while reiterating its earlier submissions, GVK submitted that While PSPCL has agreed that for the purposes of billing, normative auxiliary consumption of 9% shall be considered, PSPCL is yet to make payments towards the same. It is submitted that from FY 2016-17 to January 2020, PSPCL has not paid any amounts towards auxiliary consumption claimed by GVK.

GVK further submitted that the Declared Capacity data on ex-bus basis considered by PSPCL as energy declared during bill period ought to be grossed up by 9% in order to arrive at the total available capacity at the generator terminal so as to include auxiliary consumption in the total amounts payable to GVK. Auxiliary consumption is a legitimate head which ought to be included in the available energy for payment of capacity charges. In this context, it is pertinent to note that in terms of Regulation 3(44) and 3(45) read with 30(3) and 30 (6) of CERC Tariff Regulations 2014, 'Normative Annual Plant Availability' and 'Plant Availability Factor' are to be calculated by grossing up the Declared Capacity with the normative auxiliary energy consumption.

It is submitted that capacity of the Project utilized for Auxiliary Consumption is critical for operations of the Project and GVK ought to be paid fixed charges for the same so as to continue to operate the Project. It is pertinent to note that for the month of January 2020, PSPCL has paid GVK auxiliary consumption at 9% as part of the fixed charges. Accordingly, PSPCL ought to pay fixed charges taking into account auxiliary consumption for FY 2016-17.

The Commission in Order dated 06.03.2019 in Petition No. 68 of 2017 has held that once the capital cost of the Project is determined in petition No. 54 of 2017, PAFM/PAFY would be worked out to determine capacity charges payable by it. However, in Order dated 17.01.2020 in Petition No. 54 of 2017, the Commission did not return any findings on auxiliary consumption. GVK has filed Appeal No. 189 of 2019 against Order dated 06.03.2019 and Appeal No. 41 of 2020 against Order dated 17.01.2020 and the same are pending. GVK reserves its rights in this regard

ii) Design Heat Rate:

The Design Heat Rate for the Project under the EPC contract is 2221 Kcal/kWh. Regulation 36(C)(b) of the CERC Tariff Regulations specifies that for tariff calculation, the design station heat rate is to be multiplied by a factor of 1.045 for a new coal based thermal power plant. Accordingly, the gross station heat rate of the Project for tariff calculation purpose comes out to be 2321 kcal/kWh, which has been considered for Energy Charge calculation.

iii) Specific Fuel Oil Consumption:

Regulation 36 (D) of the CERC Tariff Regulations, 2014 stipulates specific oil consumption of 0.5 ml/kWh for a coal-based generating station.

iv) GCV of Coal:

For Energy Charge Rate calculation, the GCV of coal has been computed as the weighted average GCV of coal on as received basis.

v) Landed Price of Coal:

In terms of the Regulation 23 of the CERC Tariff Regulations, GVK is entitled to the landed fuel cost of the primary fuel. The landed price of coal is computed as the weighted average landed price of coal, blending ratio and calorific value for the purposes of computation of energy charges. The landed price of coal also includes the price incurred by GVK towards surface transportation from mining point/extraction point till point of delivery within the mine (internal surface transport) and price of surface transportation from delivery point in the mine till the railway siding (external surface transportation).

GVK vide its submission dated 21.08.2020 submitted that Regulations framed under Section 178 or 181 of the Electricity Act override power purchase agreements as held by Constitutional Bench of the Hon'ble Supreme Court in the PTC Judgment. The said position has been upheld by the Hon'ble Tribunal in Odisha Power Generation Corporation Ltd. vs Odisha Electricity Regulatory Commission: (2017 ELR (APTEL) 0538) (Para 28, 30 & 32) wherein it was held that PPA, even

though approved by the regulatory commission, cannot override the tariff regulations and tariff for supply of power has to be determined in terms of applicable regulations. GVK has further submitted that the present case is a cost plus project, in terms of Section 62 of Electricity Act, hence the issue of capping transportation charges does not arise. As per submissions of GVK, the cancellation of the Captive Coal Blocks is an event of force majeure and change in law event and therefore, GVK is entitled to compensation for the consequential impact for the same.

GVK has submitted that as regards surface transportation costs, PSPCL has contended that the same is to be limited to the rates prescribed by BCCL for upto 20 km and GVK is required to submit separate bills in order to claim in consonance with rates prescribed by BCCL, as decided by the Commission in Order dated 06.03.2020 in Petition No. 68 of 2017. GVK submitted that it has challenged the directions of the Commission in Order dated 06.03.2020 including limiting surface transportation charges claimed by GVK to the rates prescribed by BCCL vide Appeal no. 189 of 2019 and the same is pending adjudication. GVK has further submitted that PSPCL's contention that the Commission has already granted relief to GVK for change in law and force majeure events i.e. cancellation of the captive coal blocks by allowing pass through of coal cost procured under Shakti Scheme is misplaced and denied. GVK has submitted that coal supply under Shakti Scheme is not subject matter of the present petition as Shakti Scheme supply commenced in March 2018 whereas the

present Petition pertains to FY 2016-17. Order dated 06.03.2019 has been challenged by GVK by way of Appeal No. 189 of 2019 before the Hon'ble Appellate Tribunal for Electricity and GVK reserves its rights in this regard.

GVK has submitted that in this context, it may be noted that for FY 2016-17, GVK has procured coal from e-auction sources and imported coal and did not source any coal from BCCL. Therefore, comparison of GVK's surface transportation costs with that of BCCL is not tenable. The rates paid by GVK for surface transportation have to be discovered by way of a competitive bidding process and ought to be allowed on the basis of actuals. Furthermore, the surface transportation charges paid by GVK does not depend solely on the distance between the railway siding and the mine. GVK pays different rates to the contractors for transportation of coal by road which is dependent on uncontrollable factors such as:

- Geographical location of the mine and accessibility to the mine and railway siding.
- Law and order problems and restrictions on movement of trucks

The above factors have a bearing on the rates charged by contractors (discovered by way of transparent bidding process) operating in that area, which are beyond the control of GVK. Therefore, the normative approach of limiting surface transportation charges to BCCL rates result in under-recovery of costs incurred by GVK, contrary to the PSERC and CERC Tariff Regulations.

The Hon'ble Supreme Court in the Nabha Power Ltd vs PSPCL: (2018) 11 SCC 508 (Para 63, 64) had held that:

- The mode of transportation of coal is irrelevant and the cost incurred from point to point transportation of coal has to be reimbursed to the generator.
- All cost of coal incurred up to the Project site must be reimbursed to the generator on actual.

Further, the said directions were reiterated by the Hon'ble Supreme Court by Order dated 07.08.2019 in a contempt Petition filed by Nabha Power Ltd. against PSPCL for non-compliance of directions and directed PSPCL to pay the same on actuals. In the present case PSERC Tariff Regulations and CERC Tariff Regulations allow landed cost of fuel on actuals, which includes recovery of cost of coal, cost of surface transportation and cost of railway transportation as incurred by GVK on actuals. However, the Commission has limited surface transportation charges payable to GVK to BCCL rates, contrary to the extant Regulations. While doing so the Commission has neither held that GVK has acted imprudently, nor is there any allegation of profiteering or related party transaction on GVK. More importantly, neither GVK nor PSPCL asked for limiting surface transportation charges payable to GVK.

GVK has submitted that it has come to the knowledge of GVK that PSPCL is paying Nabha Power Ltd. Surface transportation charges on actuals based on the rates being charged by the agencies appointed by Nabha Power for surface transportation. These charges vary by location and distance of the coal mine and PSPCL pays Nabha Power based on actual distance travelled and rates charged. In case of Nabha Power there is no benchmarking to CCL or BCCL surface transportation cost. As

per information available with GVK, the distance and the cost of surface transportation varies from Rs 445 per MT to Rs 1400 per MT. However, PSPCL has not raised any objection to such distances (to the best of GVK's knowledge) and pays Nabha Power based on distances and rates actually charged. In fact, PSPCL, in Appeal No. 192 of 2019 (filed by PSPCL challenging Order dated 06.03.2019), has admitted that it is paying Nabha Power Ltd. at actual rates and in any event following a methodology different from that of GVK. It is submitted that PSPCL is paying Nabha Power Ltd. tariff which has been discovered by way of competitive bidding process in terms of Section 63 of the Electricity Act, 2003. In GVK's case, the tariff is to be determined on the basis of the PSERC Tariff Regulations which allow for recovery of energy charges on actuals.

GVK submitted that if benchmarking of the surface transportation charge was permissible, Nabha Power Ltd should also have been limited to actuals surface transportation charges or rates charged by BCCL. However, Nabha Power Ltd. is able to recover the cost on actuals whereas surface transportation charges payable to GVK are limited the rates charged by BCCL.

12.4 The revised parameters submitted by GVK on actual basis are summarized as under:

Table No. 23: Revised parameters on actual basis submitted by GVK.

Sr. No.	Month	Apr-16	Jul-16	Aug-16
1.	Coal Consumption in MT	20,378.70	51,633.98	45071*
2.	Auxiliary Consumption in MU	2	8	7
3.	Heat Rate (Kcal/Kwh)	2,715	2,687	2,521
4.	HFO/LDO Consumption(KL)	83	253	279
5.	GCV (Kcal/Kg)	3,686	4,537	4,006
6.	Landed price of Coal (Rs./MT)	5836	5670	5363

**On pointing out by PSPCL, GVK in the revised submission received on 21.07.2020 has included the coal consumption of 3163 MT originally shown for the month March 2017, in the coal consumption for August, 2016, which originally was submitted as 41908 MT.*

Based on the above aspects, the energy charge computed for the tariff period of FY 2016-17, on actual costs incurred by GVK is as under:

Table No.24: Energy charges computed for FY 2016-17 on actual cost by GVK

Sr. No.	Month	Apr-16	Jul-16	Aug-16
1.	Energy Charges (Rs./Unit)	4.46	3.36	3.47

GVK submitted that one of the submissions of GVK before the Commission in Petition No. 65 of 2013 and Petition No.33 of 2015 was that it was not possible to compute energy charges due to cancellation of the Tokisud and Pachwara captive coal blocks. The Arbitral Tribunal having taken note of the same, held that the Commission will determine the tariff payable to GVK. This understanding is also consistent with Order dated 11.06.2018 passed by the Commission in Petition No. 68 of 2017. In view of the foregoing, it is submitted that Order dated 01.02.2016 was an interim order, which ceased to operate as Arbitral Tribunal held that the cancellation of the captive coal blocks is an event of force majeure and change in law. The assertion that GVK has accepted the Order dated 01.02.2016 as final determination of fuel charges is incorrect. In the proceedings before the Arbitral Tribunal, GVK has specifically sought relief against the capping of the coal as evident from prayer (e) below:

- (a) Declare that the Cancellation of the Coal Blocks pursuant to the judgment of the Hon'ble Supreme Court dated 25.08.2014 and Order dated 24.09.2014 is Change in Law Event in terms of Article 13 of the PPA.

- (b) Declare that the Promulgation of the Ordinance is a Change in Law event in terms of Article 13 of the PPA.
- (c) Declare that the Cancellation of the Coal Blocks pursuant to the judgment of the Hon'ble Supreme Court dated 25.08.2014 and Order dated 24.09.2014 is Force Majeure Event in terms of Article 12 of the PPA.
- (d) Declare that the Promulgation of the Ordinance is a Force Majeure Event in terms of Article 12 of the PPA.
- (e) Devise an alternate mechanism for the sourcing of Fuel in terms of the suggestions provided by the Claimant in Paragraph 109 to 115 of the Statement of Claim including necessary amendments to the Amended and Restated PPA;
- (f) Grant consequential extension of SCOD till the issue of procurement of fuel is decided by this Hon'ble Commission.

Therefore, GVK has always proceeded on the basis that Order dated 01.02.2016 was an interim order and fuel cost has to be on the basis of actuals since cancellation of the captive coal block is an event of change in law and force majeure.

GVK further submitted that the Hon'ble Tribunal's judgment dated 21.12.2017 in Appeal No. 193 of 2017 titled GMR Kamalanga Energy Limited v CERC (Para 59, 62 – 64), has upheld that cancellation of captive coal blocks is a change in law event and accordingly GMR Kamalanga Energy Ltd was entitled to compensation for expenditure incurred in procuring coal from alternate sources to meet the shortfall of coal from its assured sources. GVK is entitled to compensation for the

change in law event i.e. cancellation of the captive coal blocks such that GVK is restored to the same economic position as if change in law event did not take place in terms of Article 13 of the Amended and Restated PPA. The said compensation would include recovery of cost of coal procured from sources such as e-auction of coal and imported coal on actuals including reimbursing GVK, for the cost of fuel including transportation charges. Further, energy charges are payable on actuals.

PSPCL's submission:

12.5 PSPCL vide letter dated 27.05.2020, 23.06.2020, 28.07.2020 and 10.08.2020 submitted as under:

- a) PSPCL submitted that Regulation 36 of the CERC Tariff Regulations, 2014 provide for a normative PAF of 85% for all thermal generating plants and 83% in case of any shortage of fuel. GVK's has contented that it is entitled to compensation due to unavailability of coal thereby entitling its plant to have PAF corresponding to actual coal availability. The actual cumulative PAF of GVK's plant for FY 2016-17 has been 4.707%. CERC Tariff Regulations while making the normative PAF of 83% instead of 85% itself contemplate a relief when there is shortage of supply of coal. Thus, GVK cannot be allowed to seek a dispensation more that what has already been provided under the Regulations. Secondly, at the time of declaration of COD, GVK had undertaken that it had sufficient fuel to run the plant for 2 to 2½ years at its full capacity i.e. GVK had sufficient fuel to deliver the entire contracted capacity in FY 2016-17. However, GVK could achieve a PAF of only 4.707% during FY 2016-17. Therefore, GVK is not entitled for any

further relief on its alleged claim of force-majeure as regards PAF when the Regulations are clear. The Commission while passing its Order dated 27.05.2019 in Petition No. 01/ 2018, specifically took strict note of the fact that despite directions from the Commission to procure the balance coal at the earliest, GVK has still not been able to procure the same. As such, GVK has not taken any reasonable steps to mitigate the consequential impact of the force majeure on its coal availability, thereby dis-entitling it from any dispensation as regards change in PAF and the same ought to be as prescribed under the Regulations which is 85%.

- b) With regard to Design Heat Rate and specific oil consumption, PSPCL submitted that computation of energy charges is required to be done strictly in terms of the formula as per Regulation 30(6) of the CERC Tariff Regulations, 2014 as per Order dated 06.03.2019 passed in Petition No. 68/2017. Thus, the norms as prescribed under the said Regulations may be applied to GVK's project as well.
- c) With regard to surface transportation cost in the landed price of coal, PSPCL submitted that GVK has considered weighted average landed cost of coal inclusive of the price of surface transportation from the delivery point in the mine till the railway siding (external STC). The Commission in its Order dated 06.03.2019, has categorically held that in case of any surface transportation cost incurred by GVK beyond the pick-up point within the mine (external STC), the payment of the same would be limited to the cost incurred to carry the coal to the nearest railway siding and would be as per the rates prescribed by M/s

Bharat Coking Coal Ltd. (BCCL) upto 20KM and the said charges would be charged by the Coal Company with separate bills for cost of coal and STC. Since, no stay has been granted by the Hon'ble APTEL in favour of GVK in Appeal No.189/2019, as such, the above findings of the Commission are binding upon GVK. Therefore, in order to claim charges for any external STC, GVK is required to submit separate bills in consonance with the rates prescribed by M/s BCCL as decided by the Commission in the above said Order.

- d) PSPCL has pointed out that GVK has submitted that total coal consumed by GVK during the month of March,2017 was 3163.04 MT of coal. However, as per the state energy account issued by SLDC for the month of March-2017, both the Declared Capacity (DC) of the plant and scheduled energy (SE) by PSPCL were NIL. PSPCL submitted that it is incomprehensible as to how coal can be consumed by GVK without there being any generation during the month of March 2017. GVK is required to provide justification for the same.
- e) Responding to GVK submission that normative auxiliary consumption for billing purpose by PSPCL has been considered as 9% in line with Regulation 36(E)(a) of CERC Tariff Regulations, 2014 for FY 2016-17 instead of taking actual auxiliary consumption, PSPCL submitted that the computation of energy charges is required to be done strictly in terms of the formula prescribed in Regulation 30(6) of the CERC Tariff Regulations, 2014 in terms of the Commission's Order dated 06.03.2019 in Petition No. 68/2017. In the said formula, the auxiliary consumption is to be considered in the denominator,

which has in fact been considered. The declaration of availability by the generator is on ex-bus basis. The ex-bus energy declared to be available is the quantum of energy for which the fixed charges are payable. Thus, the plea of GVK in the said Petition that PAF should be determined by grossing up the declared capacity with the normative auxiliary consumption of 9% has been considered and rejected by the Commission in its Order dated 06.03.2019. GVK has challenged the said Order before the Hon'ble Tribunal in Appeal No.189/2019 which is presently pending adjudication wherein no stay has been granted to GVK. As such, the findings of the Commission are binding on GVK.

- f) PSPCL has stated that GVK has submitted that the Station heat rate for FY 2016-17 has been calculated on the basis of CERC Tariff Regulation 36(C)(b) 2014. The station heat rate has been calculated by multiplying the Design Heat Rate (2221Kcal/kwh) with a factor 1.045. Accordingly, the station heat rate (SHR) of the plant comes out 2321 kcal/kWh which has also been considered for the purpose of billing by PSPCL during FY 2016-17 instead of the actual Design Heat Rate. Similarly, for billing purposes, the specific fuel oil consumption considered by PSPCL is based on normative basis i.e. 0.5 ml/kwh for FY 2016-17 which is as per CERC Tariff Regulations 2014.
- g) PSPCL submitted that GVK has considered the GCV for the purpose of billing in compliance of the Commission's Order dated 06.03.2019 in Petition No. 68/2017. In compliance of the above Order, the GCV considered by PSPCL for the purpose of billing is based on a comparison of coal cost per GCV of its own

thermal power plants i.e. GNDTP/GHTP/GGSSTP with that of the GVK whichever is lower. However, findings of the Commission as regards GCV in the said Order have been challenged by PSPCL before the Hon'ble Appellate Tribunal in Appeal No. 192/2019 and the same is pending adjudication. As such, any true up on the said aspect would be subject to the outcome of the said Appeal.

- h) PSPCL stated that GVK has claimed an amount of Rs. 6211/MT for April 2016, Rs. 5701/MT for July 2016 and Rs. 5429/MT for the month of August 2016. However, the landed price of coal considered by PSPCL for billing purpose for FY 2016-17 is based on the landed price of coal procured by GVK, Railway Transportation charges thereof and Road Transportation charges based on the Commission's Order dated 06.03.2019 in Petition No. 68/2017. The bills submitted by GVK differ from the Landed Price of Coal submitted by GVK. PSPCL requested the Commission to refer to and rely upon the details provided by PSPCL.
- i) While working out the energy charges, fuel transit & handling loss has been considered by PSPCL as per the Commission's Order dated 06.03.2019 in Petition no.68/2017 i.e. 1% or actual transit loss whichever is less.
- j) PSPCL stated that GVK has submitted the total fuel cost of Rs. 66.45 Crore for FY 2016-17. It is submitted that the billing of the energy charges for the GVK's project is done on the basis of energy scheduled by PSPCL. The energy charge rate is calculated on the basis of normative parameters instead of actual. PSPCL made the payment of energy bills submitted by

GVK to PSPCL for the months of April-2016, July-2016 & Aug-2016. The energy charges paid during FY 2016-17 were originally Rs. 52.07 Crore which were later revised in terms of the Commission's Order dated 06.03.2019 to Rs. 55.12 Crore including Rs. 3.05 Crore as arrears. In addition Rs. 0.51 Crore was paid as interest.

Commission's Analysis

12.6 As GVK has referred to the previous Orders of the Commission in its various submissions, it is pertinent to bring out the following:

GVK had filed petition no. 65 of 2013 and 33 of 2015 with the following prayers:

Petition no. 65 of 2013

- (a) direct the extension of the SCOD for completion and commercial operation of the project for a period of 9 months in the case of unit #1 and for a further period of 6 months for unit #2 to be calculated from the closure of the Force Majeure events namely, approval of railway drawings both in regard to Power project and in regard to coal mine siding and the availability of the land to enter upon and commence mining operations; and**
- (b) pass any such further order or orders as this Commission may deem just and proper in the circumstances of the case.**

Petition no. 33 of 2015

- (a) Declare that the Cancellation of the Coal Blocks pursuant to the judgment of the Hon'ble Supreme Court dated**

25.08.2014 and Order dated 24.09.2014 is Change in Law Event in terms of Article 13 of the PPA.

- (b) Declare that the Promulgation of the Ordinance is a Change in Law event in terms of Article 13 of the PPA.**
- (c) Declare that the Cancellation of the Coal Blocks pursuant to the judgment of the Hon'ble Supreme Court dated 25.08.2014 and Order dated 24.09.2014 is Force Majeure Event in terms of Article 12 of the PPA.**
- (d) Declare that the Promulgation of the Ordinance is a Force Majeure Event in terms of Article 12 of the PPA.**
- (e) Devise an alternate mechanism for the sourcing of Fuel including necessary amendments to the Amended and Restated PPA;**
- (f) Grant consequential extension of SCOD till the issue of procurement of fuel is decided by this Hon'ble Commission.**

Vide interim Order dated 12.08.2015, the Commission decided to refer all issues for arbitration except prayer (e) of the petition no. 33 of 2015, considering it was urgent in nature and needed to be decided by the Commission forthwith in the interest of the project. The Commission decided the said issue vide final Order dated 01.02.2016 common to petition no. 65 of 2013 & 33 of 2015. The common Order dated 01.02.2016 was challenged by PSPCL before Hon'ble Appellate Tribunal for Electricity in Appeal No. 68 of 2016 (petition no. 33 of 2015) and Appeal No. 69 of 2016 (petition no. 65 of 2013).

Further, the findings of the Commission in Order dated 06.03.2019 in petition no. 68 of 2017 filed by GVK on the various issues i.e auxiliary consumption, cost of coal, surface transport at mine end and handling charges, GCV, transit and handling loss besides some other issues has been challenged by GVK in Appeal No. 189 of 2019.

The Order of the Commission dated 21.05.2018 in petition no. 45 of 2017, where the availability of plant in FY 2016-17 was an issue, has also been challenged by GVK in Appeal No. 218 of 2018.

Also the Order of the Commission dated 17.01.2020 in petition no. 54 of 2017, wherein the Commission has determined the capital cost of the project and determined the AFC/capacity charges and the energy charges for FY 2016-17, has been challenged by GVK in Appeal No. 41 of 2020. In this petition, GVK has raised some of the issues already decided in the aforementioned Orders e.g. coal cost, surface transportation, auxiliary consumption etc. This is not permissible as the issues already decided in these Orders cannot be taken again wherever GVK has tried to do so. Furthermore, there is no stay on these Orders by Hon'ble APTEL. Accordingly, the energy charges for FY 2016-17 are payable/paid by PSPCL to GVK in terms of the PPA, Order dated 01.02.2016 common to petition no. 65 of 2013 & 33 of 2015 and Order dated 06.03.2019 in petition no. 68 of 2017 filed by GVK.

13.0 Interest on under-recovered or over-recovered fixed charges

13.1 The Commission notes that the applicability of Regulation 9 of PSERC Regulations, 2005 would be on the distribution companies or generating cum distribution companies and cannot be applied as it is to the standalone generating companies. The Commission observes that Regulation 8 (13) of CERC (Terms and Conditions of Tariff) Regulation, 2014 are squarely applicable to under recovery or over recovery of fixed charges in case of generating companies.

13.2 The Regulation 8 (13) of CERC (Terms and Conditions of Tariff) Regulation, 2014 is re-produced below for reference: -

“The amount under-recovered or over-recovered, along with simple interest at the rate equal to the bank rate on 1st April of the respective year, shall be recovered or refunded by the generating company or the transmission licensee, as the case may be, in six equal monthly instalments starting within three months from the date of the tariff order issued by the Commission”.

13.3 The Commission decides to adopt the CERC Regulations for determining interest equivalent to bank rate on under recovery or over recovery of fixed charges.

Accordingly, interest shall be allowable or recoverable as per Regulation 8 (13) of CERC (Terms and Conditions of Tariff) Regulation, 2014 on under-recovered or over-recovered Annual Fixed Charges (AFC) determined by the Commission.

This Petition stands disposed off accordingly.

Sd/-

(Anjuli Chandra)
Member

Sd/-

(S.S. Sarna)
Member

Sd/-

(Kusumjit Sidhu)
Chairperson

Chandigarh

Dated: 07.09.2020

ANNEXURE P - 5 (Colly)

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THE GAZETTE OF INDIA

EXTRAORDINARY

PART II -- Section 3 -- Sub-section (ii)

MINISTRY OF ENVIRONMENT AND FORESTS

NOTIFICATION

New Delhi, the 14th September, 1999

8.0.763(E).- Whereas a draft notification containing certain directions was published, as required by subrule (3) of rule 5 of the Environment (Protection) Rules, 1986 under the notification of the Government of India in the Ministry of Environment and Forests number S.O. 453(E) dated 22nd May, 1998 inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of the period of sixty days from the date on which the copies of the Gazette of India containing the said notification are made available to the public;

And, whereas, copies of the said Gazette were made available to the public on the same date;

And, whereas, the objections and suggestions received from the public in respect of the said draft notification have been duly considered by the Central Government;

Where as it is necessary to protect the environment, conserve top soil and prevent the dumping and disposal of fly ash discharged from coal or lignite based thermal power plants on land;

And, whereas, there is a need for restricting the excavation of top soil for manufacture of bricks and promoting the utilisation of fly ash in the manufacture of building materials and in construction activity within a specified radius of fifty kilometers from coal or lignite based thermal power plants;

And, Whereas, the Hon'ble High Court of Judicature, Delhi vide its order dated 25th August, 1999 in CWP No. 2145/99 Centre for Public Interest Litigation, Delhi v/s Union of India directed that the Central Government to publish the final notification in respect of fly ash on or before 26th October, 1999;

Now, therefore, in exercise of the powers conferred by sub-section (1), read with clause (v) of sub-section (2) of section 3 and section 5 of the Environment (Protection) Act, 1986 (29 of 1986); and in pursuance of the orders of the Hon'ble High Court, Delhi stated above, the Central Government hereby issues the following directions which shall come into force on the date of the publication of this notification, namely:-

1. Use of fly ash, bottom ash or pond ash in the manufacture of bricks and other construction activities.-

(1) No person shall within a radius of fifty kilometers from coal or lignite based thermal power plants, manufacture clay bricks or tiles or blocks for use in construction activities

without mixing at least 25 per cent of ash (fly ash, bottom ash or pond ash) with soil on weight to weight basis. '

(2) The authority for ensuring the use of specified quantity of ash as per para (1) above shall be the concerned Regional Officer of the State Pollution Control Board or the Pollution Control Committee as the case may be. In case of non-compliance, the said authority, in addition to cancellation of consent order issued to establish the brick kiln, shall move the district administration for cancellation of mining lease. The cancellation of mining lease shall be decided after due hearing. To enable the said authority to verify the actual use of ash, the thermal power plant shall maintain month-wise records of ash made available to each brick kiln.

(3) In case of non-availability of ash from thermal power plant in sufficient quantities as certified by the said power plant, the stipulation under para (1) shall be suitably modified (waived/ relaxed) by the concerned State/Union Territory Government.

(4) Each coal or lignite based thermal power plant shall constitute a dispute settlement committee which shall include the General Manager of the thermal power plant and a representative of All India Brick and Tile Manufacture's Federation (AIBTMF). Such a committee shall ensure unhindered loading and transport of ash without any undue loss of time. Any unresolved dispute shall be dealt with by a State/Union Territory level committee to be set up by State/Union Territory Government comprising Member Secretary of the State Pollution Control Board/Pollution Control Committee, representatives of Ministry of Power in the State/Union Territory Government and a representative of AIBTMF.

2. Utilisation of ash by Thermal Power Plants.

All coal or lignite based thermal power plants shall utilise the ash generated in the power plants as follows: -

(1) Every coal or lignite based thermal power plant shall make available ash, for at least ten years from the date of publication of this notification, without any payment or any other consideration, for the purpose of manufacturing ash-based products such as cement, concrete blocks, bricks, panels or any other material or for construction of roads, embankments, dams, dykes or for any other construction activity.

(2) Every coal or lignite based thermal power plant commissioned subject to environmental clearance conditions stipulating the submission of an action plan for full utilisation of fly ash shall, within a period of nine years from the publication of this notification, phase out the dumping and disposal of fly ash on land in accordance with the plan. Such an action plan shall provide for thirty per cent of the fly ash utilisation, within three years from the publication of this notification with further increase in utilisation by at least ten per cent points every year progressively for the next six years to enable utilisation of the entire fly ash generated in the power plant at least by the end of ninth year. Progress in this regard shall be reviewed after five years.

(3) Every coal or lignite based thermal power plant not covered by para (2) above shall, within a period of fifteen years from the date of publication of this notification, phase out the utilisation of fly ash in accordance with an action plan to be drawn up by the power plants. Such action plan shall provide for twenty per cent of fly ash utilisation within three years from the date of publication of this notification, with further increase in utilisation every year progressively for the next twelve years to enable utilisation of the entire fly ash generated in the power plant.

(4) All action plans prepared by coal or lignite based thermal power plants in accordance with sub-para (2) and (3) of para 2 of this notification, shall be submitted to the Central Pollution Control Board/Committee and concerned, State Pollution Control Board/Committee and concerned regional office of the Ministry of Environment and Forests within a period of six months from the date of publication of this notification.

(5) The Central and State Government Agencies, the State Electricity Boards, the National Thermal Power Corporation and the management of the thermal power plants shall facilitate in making available land, electricity and water for manufacturing activities and provide access to the ash lifting area for promoting and setting up of ash-based production units in the proximity of the area where ash is generated by the power plant.

(6) Annual implementation report providing information about the compliance of provisions in this notification shall be submitted by the 30th day of April every year to the Central Pollution Control Board, concerned State Pollution Control Board/Committee and the concerned Regional Office of the Ministry of Environment and Forests by the coal or lignite based thermal power plants.

3. Specifications for use of ash-based products.-

(1) Manufacture of ash-based products such as cement, concrete blocks, bricks, panels or any other material or the use of ash in construction activity such as in road laying, embankments or use as landfill to reclaim low lying areas including back filling in abandoned mines or pitheads or for any other use shall be carried out in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Bureau of Mines, Indian Road Congress, Central Building Research institute, Roorkee, Central Road Research Institute, New Delhi, Building Materials and Technology Promotion Council, New Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government agencies.

(2) The Central Public Works Department, Public Works Departments in the State/Union Territory Governments, Development Authorities, Housing Boards, National Highway Authority of India and other construction agencies including those in the private sector shall also prescribe the use of ash and ash-based products in their respective schedules of specifications and construction applications, including appropriate standards and codes of practice, within a period of four months from the publication of this notification.

(3) All local authorities shall specify in their respective building bye-laws and regulations the use of ash and ash-based products and construction techniques in building materials, roads, embankments or for any other use within a period of four months from the date of publication of this notification.

[F. No. 16-2/95-HSMD]

V RAJAGOPALAN, Jt.. Secy.

MINISTRY OF ENVIRONMENT AND FORESTS

NOTIFICATION

New Delhi, the 3rd November, 2009

S.O. 2804(E).—WHEREAS, by notification of the Government of India in the Ministry of Environment and Forests number S.O. 763(E), dated the 14th September, 1999 (hereinafter referred to as the said notification) issued under sub-section (1), clause (v) of sub-section (2) of section 3 and section 5 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government, issued directions for restricting the excavation of top soil for manufacture of bricks and promoting the utilisation of fly ash in the manufacture of building materials and in construction activity within a specified radius of one hundred kilometers from coal or lignite based thermal power plants;

AND WHEREAS, the term “fly ash” means and includes all categories or groups of coal or lignite ash generated at the thermal power plant and collected by Electrostatic Precipitator (ESP) or bag filters or other similar suitable equipments; bottom ash is the ash collected separately at the bottom of the boiler; pond ash is the mixture of ESP Fly ash and bottom ash, but, for the purpose of this notification, the term “fly ash” means and includes all ash generated such as Electrostatic Precipitator (ESP) ash, dry fly ash, bottom ash, pond ash and mound ash as the objective is to utilise all the ashes;

AND WHEREAS, there is a need for restricting the excavation of top soil for manufacture of bricks and for other works which involve use of top soil and promoting utilisation of fly ash produced by coal or lignite based thermal power plants including captive power plants and co-generation plants in the manufacture of building materials and construction activity;

AND WHEREAS, it was observed that there was a gradual increase in the use of fly ash in the manufacture of fly ash bricks or products from about 1.5 million tonne in 2002-2003 to 3.19 million tonne in 2006-2007 which needs to be further encouraged for achieving the ultimate objective of conservation of top soil and minimise environmental pollution caused due to fly ash;

AND WHEREAS, it is observed that construction agencies are yet to achieve their targets of utilization of fly ash based products even after the 31st August, 2007, the date prescribed for 100% utilisation of fly ash based products in the said notification of 1999 and it is also observed that many thermal power stations or plants are also yet to achieve the targets drawn up in their action plans;

AND WHEREAS, the representations of the brick kiln owners were considered with regard to transporting of fly ash over a long distance and also the logistics involved including the energy cost;

AND, WHEREAS, the issue has been examined by the Government of India in the Ministry of Environment and Forests;

AND WHEREAS, the Central Government is of the opinion that the said notification should be amended;

AND WHEREAS, clause (a) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 provides that whenever the Central Government considers that prohibition or restrictions of any industry or carrying on any processes or operation in any area should be imposed, it shall give notice of its intention to do so;

AND WHEREAS, a draft of amendment to the Government of India, Ministry of Environment and Forests notification no. S.O.763 (E), dated the 14th September, 1999 duly amended vide notification No. S.O. 979 (E), dated the 27th August, 2003 (hereinafter referred to as the said notification) which the Central Government proposes to make under subsection (1) clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii) dated the 6th November, 2008 *vide* S.O. 2623 (E), inviting objections and suggestions from all persons likely to be affected thereby before the expiry of sixty days from the date on which copies of the Gazette containing the said draft amendments were made available to the public.

AND WHEREAS, copies of the said Gazette were made available to the public on the day of 6th November 2008;

AND WHEREAS, the objections and suggestions received from various persons or agencies likely to be affected thereby in respect of the said draft notification have been duly considered by the Central Government in the Ministry of Environment and Forests;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following amendments to the said notification, namely:—

AMENDMENTS

1. Throughout the said notification, save as otherwise expressly provided and unless the context otherwise requires, for the word “ash” wherever it occurs, the words “fly ash” shall be substituted.

2. In the said notification, in paragraph 1,—

(a) for sub-paragraph (1), the following shall be substituted, namely:—

“(i) use of fly ash based products in construction activities”;

(b) for sub-paragraphs (1A) and (1B), the following sub-paragraphs shall respectively be substituted, namely:—

“(1A) Every construction agency engaged in the construction of buildings within a radius of hundred kilometers from a coal or lignite based thermal power plant shall use only fly ash based products for construction, such as: cement or concrete, fly ash bricks or blocks or tiles or clay fly ash bricks, blocks or tiles or cement fly ash bricks or bricks or blocks or similar products or a combination or aggregate of them, in every construction project.

(1B) The provisions of sub-paragraph (1A) shall be applicable to all construction agencies of Central or State or Local Government and private or public sector and it shall be the responsibility of the agencies either undertaking construction or approving the design or both to ensure compliance of the provisions of sub-paragraph (1A) and to submit annual returns to the concerned State Pollution Control Board or Pollution Control Committee, as applicable”;

(c) after sub-paragraph (1B), the following sub-paragraph shall be inserted, namely:—

“(1C) Minimum fly ash content for building materials or products to qualify as “fly ash based products” category shall be as given in the Table I below:

Table I

Serial Number	Building Materials or Products	Minimum % of fly ash by weight
(1)	(2)	(3)
1.	Fly ash bricks, blocks, tiles, etc. made with fly ash, lime, gypsum, sand, stone dust etc. (without clay).	50% of total input materials
2.	Paving blocks, paving tiles, checker tiles, mosaic tiles, roofing sheets, pre-cast elements, etc. wherein cement is used as binder.	Usage of PPC (IS-1489: Part-1) or PSC (IS-455) or 15% of OPC (IS-269/8112/12269) content.
3.	Cement.	15% of total raw materials
4.	Clay based building materials such as bricks, blocks, tiles, etc.	25% of total raw materials.
5.	Concrete, mortar and plaster.	Usage of PPC (IS-1489: Part-1) or PSC (IS-455) or 15% of OPC (IS-269/8112/12269) content.

(d) in sub-paragraph (2), for the brackets and number “(1)”, the brackets, number and letter “(1C)” shall be substituted and the number of sub-paragraph (2) shall be substituted by 1(D);

(e) in paragraph (2A), the paragraph 1(A) shall be substituted by 1(A) and 1(B) and the amended paragraph 2(A) is to be numbered as 1(E);

(f) for sub-paragraphs (3) and (3A), the following sub-paragraphs shall respectively be substituted, namely:—

“(3) In case of non-availability of fly ash from thermal power plants in sufficient quantities as certified by the said power plants, within 100 km of the site, the stipulation under sub-paragraph (1A) shall be suitably modified (waived or relaxed) by the concerned State Government or Union territory Government level monitoring committee mentioned elsewhere in this notification.

(3A) A decision on the application for manufacture of fly ash bricks, blocks and tiles and similar other fly ash based products shall be taken within thirty days from the date of receipt of the application by the concerned State Pollution Control Board or Pollution Control Committee.”;

(g) sub-paragraphs (3B), (3C) and (3D) shall be omitted;

(h) for sub-paragraphs (4) and (5), the following sub-paragraphs shall be substituted, namely:-

“(4) Each coal or lignite based thermal power plant shall constitute a dispute settlement committee which shall include the General Manager of the thermal power plant and a representative of the relevant Construction and fly ash Brick Manufacturing Industry Association or Body, as the case may be and such a Committee shall ensure unhindered loading and transport of fly ash in an environmentally sound manner without any undue loss of time. Any unresolved dispute shall be dealt with by the concerned State or Union territory Government level monitoring committee mentioned elsewhere in this notification.

(5) No agency, person or organization shall, within a radius of hundred kilometers of a thermal power plant undertake construction or approve design for construction of roads or flyover embankments with top soil; the guidelines or specifications issued by the Indian Road Congress (IRC) as contained in IRC specification No. SP: 58 of 2001 as amended from time to time, regarding use of fly ash shall be followed and any deviation from this direction can only be agreed to on technical reasons if the same is approved by Chief Engineer (Design) or Engineer-in-Chief of the concerned agency or organisation or on production of a certificate of “fly ash not available” from the thermal power plant(s) (TPPs) located within hundred kilometers of the site of construction and this certificate shall be provided by the TPP within two working days from the date of receipt of a request for fly ash, if fly ash is not available”;

(i) in sub-paragraph (6), for the words “Voids created due to soil borrow area shall be filled up with ash with proper compaction and covered with topsoil kept separately as above and this would be done as an integral part of embankment project within the time schedule of the project”, the words “Voids created at soil borrow area shall be filled up with fly ash with proper compaction and covered with topsoil kept separately as above and this would be done as an integral part of embankment project” shall be substituted;

(j) for sub-paragraph (7), the following sub-paragraphs shall be substituted, namely:—

“(7) No agency, person or organisation shall within a radius of hundred kilometers of a coal or lignite based thermal power plant undertake or approve or allow reclamation and compaction of low-lying areas with soil; only fly ash shall be used for compaction and reclamation and they shall also ensure that such reclamation and compaction is done in accordance with the specifications and guidelines laid down by the authorities mentioned in sub-paragraph (1) of paragraph 3.

(8)(i) No person or agency shall within fifty kilometers (by road) from coal or lignite based thermal power plants, undertake or approve stowing of mine without using at least 25% of fly ash on weight to weight basis, of the total stowing materials used and this shall be done under the guidance of the Director General of Mines Safety (DGMS);

Provided that such thermal power stations shall facilitate the availability of required quality and quantity of fly ash as may be decided by the expert committee referred in sub-paragraph (10) for this purpose.

(ii) No person or agency shall within fifty kilometers (by road) from coal or lignite based thermal power plants, undertake or approve without using at least 25% of fly ash on volume to volume basis of the total materials used for external dump of overburden and same percentage in upper benches of back filling of opencast mines and this shall be done under the guidance of the Director General of Mines Safety (DGMS);

Provided that such thermal power stations shall facilitate the availability of required quality and quantity of fly ash as may be decided by the expert committee referred in sub-paragraph (10) for this purpose.

(9) The provisions contained in clauses (i) and (ii) of sub-paragraph (8) shall be applicable to all mine agencies under Government, public and private sector and to mines of all minerals or metals or items and it shall be the responsibility of agencies either undertaking or approving the external dump of overburden, backfilling or stowing of mine or all these activities to ensure compliance of provisions contained in clauses (i) and (ii) of sub-paragraph (8) and to submit annual returns to the concerned State Pollution Control Board or Pollution Control Committee as applicable.

(10) The Ministry of Coal for this purpose shall constitute an expert committee comprising of representatives from Fly Ash Unit, Department of Science and Technology, Ministry of Science and Technology, Director General of Mines Safety (DGMS), Central Mine Planning and Design Institute Limited (CMPDIL), Ministry of Environment and Forests, Ministry of Power, Ministry of Mines and the Central Institute of Mining and Fuel Research (CIMFR), Dhanbad; the Committee shall also guide and advise the back filling or stowing in accordance with the provisions contained in sub-paragraphs (8) (i), 8 (ii) and (9), and specifications and guidelines laid down by the concerned authorities as mentioned in sub-paragraph (1) of paragraph 3.

(11) The concerned State Government or Union territory Government shall be the enforcing and monitoring authority for ensuring compliance of the provisions of sub-paragraphs (8) (i) and (8) (ii);

3. in the said notification, paragraph 2,—

(a) for sub-paragraphs (1), (2) and (3), the following sub-paragraphs shall be substituted, namely:—

(1) All coal or lignite based thermal power stations would be free to sell fly ash to the user agencies subject to the following conditions, namely:—

(i) the pond ash should be made available free of any charge on “as is where is basis” to manufacturers of bricks, blocks or tiles including clay fly ash product manufacturing unit(s), farmers, the Central and the State road construction agencies, Public Works Department, and to agencies engaged in backfilling or stowing of mines.

(ii) at least 20% of dry ESP fly ash shall be made available free of charge to units manufacturing fly ash or clay-fly ash bricks, blocks and tiles on a priority basis over other users and if the demand from such agencies falls short of 20% of quantity, the balance quantity can be sold or disposed of by the power station as may be possible;

Provided that the fly ash obtained from the thermal power station should be utilized only for the purpose for which it was obtained from the thermal power station or plant failing which no fly ash shall be made available to the defaulting users.

(2) All coal and, or lignite based thermal power stations and, or expansion units in operation before the date of this notification are to achieve the target of fly ash utilization as per the Table II given below:

Table II

Serial Number	Percentage Utilization of Fly Ash	Target Date
(1)	(2)	(3)
1.	At least 50% of fly ash generation	One year from the date of issue of this notification.
2.	At least 60% of fly ash generation	Two years from the date of issue of this notification.
3.	At least 75% of fly ash generation	Three years from the date of issue of this notification.

4.	At least 90% of fly ash generation	Four years from the date of issue of this notification.
5.	100% fly ash generation	Five years from the date of issue of this notification.

The unutilised fly ash in relation to the target during a year, if any, shall be utilized within next two years in addition to the targets stipulated for those years and the balance unutilized fly ash accumulated during first five years (the difference between the generation and the utilization target) shall be utilized progressively over next five years in addition to 100% utilization of current generation of fly ash.

(3) New coal and, or lignite based thermal power stations and, or expansion units commissioned after this notification to achieve the target of fly ash utilization as per Table III given below:

Table III

Serial Number	Fly ash utilization level	Target date
(1)	(2)	(3)
1.	At least 50% of fly ash generation	One year from the date of commissioning.
2.	At least 70% of fly ash generation	Two years from the date of commissioning.
3.	90% of fly ash generation	Three years from the date of commissioning.
4.	100% of fly ash generation	Four years from the date of commissioning.

The unutilised fly ash in relation to the target during a year, if any, shall be utilized within next two years in addition to the targets stipulated for these years and the balance unutilized fly ash accumulated during first four years (the difference between the generation and utilization target) shall be utilized progressively over next five years in addition to 100% utilization of current generation of fly ash.”;

(b) in sub-paragraph (4), for the words “six months”, the words “four months” shall be substituted;

(c) for sub-paragraph (6), the following sub-paragraphs shall be substituted, namely:—

“(6) The amount collected from sale of fly ash and fly ash based products by coal and/or lignite based thermal power stations or their subsidiary or sister concern unit, as applicable should be kept in a separate account head and shall be utilized only for development of infrastructure or facilities, promotion and facilitation activities for use of fly ash until 100 percent

fly ash utilization level is achieved; thereafter as long as 100% fly ash utilization levels are maintained, the thermal power station would be free to utilize the amount collected for other development programmes also and in case, there is a reduction in the fly ash utilization levels in the subsequent year(s), the use of financial return from fly ash shall get restricted to development of infrastructure or facilities and promotion or facilitation activities for fly ash utilization until 100 percent fly ash utilisation level is again achieved and maintained.

(7) Annual implementation report (for the period 1st April to 31st March) providing information about the compliance of provisions in this notification shall be submitted by the 30th day of April, every year to the Central Pollution Control Board, concerned State Pollution Control Board or Committee and the concerned Regional Office of the Ministry of Environment and Forests by the coal or lignite based thermal power plants, and also be made a part of the annual report of the thermal power plant as well as thermal power plant wise information be provided in the annual report of thermal power producing agency owning more than one thermal power plant.”;

4. in the said notification, in paragraph 3,—

(a) in sub-paragraph (2), for the words “schedules of specifications and construction applications, including appropriate standards and codes of practice, within a period of four months from the publication of this notification”, the words “tender documents, schedules of specifications and construction applications including appropriate standards and codes of practice within a period of four months from the publication of this notification” shall be substituted;

(b) for sub-paragraph (2A), the following sub-paragraph shall be substituted, namely:—

“(2A) Building construction agencies both in public and private shall prescribe the use of fly ash and fly ash-based products in their respective tender documents, schedules of specifications and construction applications, including appropriate standards and codes of practice and make provisions for the use of fly ash and fly ash based bricks, blocks or tiles or aggregates of them in the schedule of approved materials and rates within a period of four months from the publication of this notification.”;

(c) for sub-paragraphs (2B) and (3), the following sub-paragraphs shall be substituted, namely:—

“(2B) All agencies undertaking construction of roads or fly over bridges and reclamation and compaction of low lying areas, including Department of Road Transport and Highways (DORTH), National Highways Authority of India (NHAI), Central Public Works Department (CPWD), State Public Works Departments and other State Government Agencies, shall within a period of four months from the publication of this notification:-

- (a) make provisions in their tender documents, schedules of approved materials and rates as well as technical documents for implementation of this notification, including those relating to soil borrow area or pit as per sub-paragraph (6) of paragraph 1; and
 - (b) make necessary specifications or guidelines for road or fly over embankments that are not covered by the specifications laid down by the Indian Road Congress (IRC).
- (3) All local authorities shall specify in their respective tender documents, building bye-laws and regulations, the use of fly ash and fly ash-based products and construction techniques in building materials, roads embankments or for any usage with immediate effect.
- (4) The Central Electricity Authority and other approving agencies may permit the land area for emergency ash pond or fly ash storage area up to 50 hectares for a 500 MW unit, based on 45% ash content coal, or in the same proportion for units in other capacities taking into account the ash content in coal or lignite to be used.
- (5) All Financial institutions and agencies which fund construction activities shall include a clause in their loan or grant document for compliance of the provisions of this notification.
- (6) A Monitoring committee shall be constituted by the Central Government with Members from Ministry of Coal, Ministry of Mines, Ministry of Power, Central Pollution Control Board, Central Electricity Authority, Head Fly Ash Unit of Department of Science and Technology and Building Material Technology Promotion Council to monitor the implementation of the provisions of the notification and submit its recommendations or observations at least once in every six months to the Secretary, Ministry of Environment and Forests. Concerned Advisor or Joint Secretary in the Ministry of Environment and Forests will be the convener of this committee.

(7) For the purpose of monitoring the implementation of the provisions of this notification the State Governments or Union territory Government shall constitute a Monitoring Committee within three months from the date of issue of this notification under the Chairmanship of Secretary, Department of Environment with representatives from Department of Power, Department of Mining, Road and Building Construction Department and State Pollution Control Board and this Committee would deal with any unresolved issue by Dispute Settlement Committee as prescribed in sub-paragraph (4) of paragraph 1, in addition to monitoring and facilitating implementation of this notification at the respective State Government or Union territory level and this Committee would also be empowered to suitably modify (waive or relax) the stipulation under sub-paragraph (1) in case of non-availability of fly ash in sufficient quantities from thermal power plant as certified by the said power plants and the Committee will meet at least once in every quarter.

[F. No. 9-8/2005-HSMD]

G. V. SUBRAHMANYAM, Scientist 'G'

Foot Note :—The principal notification was published in the Gazette of India, Part II, Section 3, Sub-section (ii) *vide* notification number S.O. 763(E), dated the 14th September, 1999 and was amended *vide* notification number S.O. 979(E), dated the 27th August, 2003.



WORK ORDER

WO No: GVKPGSL/SITE/WO/254

May 31st 2017

M/s. Globus Engineers
406-407, D-Wing, Neelkanth Business Park
VIDYAVIHAR WEST
Mumbai 400 086
Tel: 022-25101616

ATTN: Mr. DINESH (M): 09892110304
Mr. A. VASANTHA

Dear Sir,

Sub: 2x270 MW GVK Power (Goindwal Sahib) Thermal Power Project, Kapurthala, Tarn-Taran District, Punjab - Job order for Operation and Maintenance of Complete Ash Handling Plant (AHP) System-reg.

Ref: a) Our Letter of Intent ref No. GVKPGSL/LOI/Globus Engineers/17-18, dated 31.05.17
b) Your Final Offer ref No. O&M/24517/Rev2, dated 24.05.17 and subsequent discussions at our office dated 24.05.17.

With reference to our Letter of Intent dated 31.05.17, and based on your offer and subsequent discussions, we are pleased to place a Job Order for providing Complete Operation & Maintenance Services including Housekeeping for Ash Handling System (AHP) at our 2x270MW GVK Power (Goindwal Sahib) Ltd, Kapurthala, Tarn-Taran District, Punjab.

The detailed BOQ/Scope of Work is appended as per Annexures enclosed.

As the contract is purely on Job Performance basis, it shall be your responsibility to deploy the required manpower with appropriate skill sets to operate and Maintain AHP 24X7 and achieve plant availability as per the performance matrix index attached vide Annexure 7.

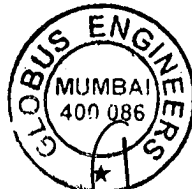
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GVK Power (Goindwal Sahib) Limited
Goindwal Sahib Kapurthala Road,
Goindwal Sahib,
Dist : Taran Taran - 143 422. Punjab - India.

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Telangana, India.

Page 1 of 02
ENERGY
RESOURCES
AIRPORTS
TRANSPORTATION
HOSPITALITY
LIFE SCIENCES



Santhana
26.8.2017



Based on demand, the Company would be operating either one unit or both the units at any given point of time for which M/s. Globus Engineers has to be prepared for complying with the terms of this Contract, subject to one month prior notice period to demobilize the manpower of both Units & subject to one & half months prior notice period to demobilize the manpower of single Unit and 15 days for mobilize the same according to the condition..

In case of demobilization of manpower against any one unit and the same will be remobilized within four months as per requirement then only 50% (fifty percentages) of the differential amount of O&M price of Unit #1 & 2 shall be paid as compensation per month, to meet the statutory requirement against discontinuing any one of the units but if the same will not be remobilized within four months then GVK will not pay differential amount against discontinuing any one of the unit.

1. COMMENCEMENT OF SERVICES WILL FROM 1ST JUNE , 2017

CONTRACT PRICE FOR 1ST YEAR :

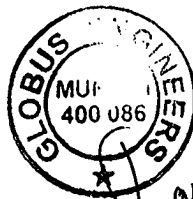
For One

- a) [^] Unit-is **Rs.22,55,000/- Per Month**(Rupees Twenty Two lakhs Fifty Five thousand only ~~For One~~) + Rs.85000 for provision of tractor with diesel & driver for Duct hopper unloading.
- b) For Two Units-is **Rs.25,10,000/- Per Month** (Rupees Twenty five Lakhs ten Thousands only) +Rs.1,70,000 for provision of tractor with diesel & driver for Duct hopper unloading.

Further, the above Contract price is inclusive of the following:

- a) All your Service charges & expenses. However, GST will be extra as applicable.
- b) Salaries and all relevant employee benefits as per your Company Policy.
- c) All regulatory fees that need to be paid for engaging the services.
- d) Accident Insurance to your personnel including your assets
- e) All relevant statutory payments as applicable as per law.
- f) Safety appliances, PPEs including Uniforms.
- g) Tools & Tackles
- h) Conveyance vehicle for the deployed manpower
- i) Accommodation for staff & workers
- j) All relevant Consumables required for your day to day operations. Such as cutting gasses , general purpose welding electrodes, grinding & cutting wheels, cotton waste, Teflon tape, PVC Tape

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2. CONTRACT PERIOD:

- a) Duration of the contract: 12 Months (One Year) from the date of commencement of services on Job basis
- b) The price will remain firm for a period of One Year. The renewal of this Contract can be considered, subject to a maximum of 6% price increase over the present contract price, subject to satisfactory performance and due certification and recommendation of the Plant head. However, GVK reserves the unquestionable right to terminate this contract with 1 month written notice period without assigning any reasons.

3) List of deployment plan for smooth Operation & Maintenance:

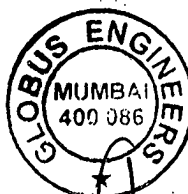
As the Contract is purely on Job and Performance basis, the Deployment Plan rests with the Agency based on his experience for bringing adequate technical –Skilled and Semi-skilled personnel suitable to operate and maintain the AHP on a 3 shift basis to run both the Units to achieve the performance as per performance matrix vide Annexure 7. However if the job demands more manpower to fulfill the scope of work as specified above and detailed Job Area-wise Activities, you shall deploy the required additional manpower at no extra cost, for completion of the AHP. The deployment should be made available on all Days (Round the clock) including Sundays and General Holidays during the period of contract. Minimum manpower to be deployed is as per Annexure 6

3a) Penalty based on performance matrix will be applicable from 01st September 2017.

4) Minimum Qualification of Staff Required for Operation and Maintenance:

1. The Deployment Plan as agreed upon for Skilled, Semi-Skilled & Un-skilled Personnel has to be adhered to, based on the area of activities as per the BOQ on a 3 shift basis.
2. Diploma (Elect/Mech.) Engineers with 1-2 years of experience in operation of High concentration ash slurry disposal system and dry ash handling from PLC.
3. For other works in Ash Handling system, ITI/12th passed Operators/Technicians with relevant experience of 2-3 years may be considered.
4. The Site In charge should be Diploma Engineers with 7-8 years of relevant Experience in Thermal power plant (O&M).
5. He should be physically fit in all respects.

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Sanjay



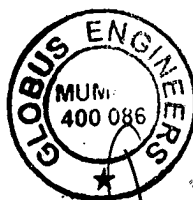
5) Special Conditions of the Contract:

1. The agency shall be responsible for timely arrangement of manpower to complete the required activities. A supervisor shall always man the location.
2. The Contractor shall ensure availability of a torch light in working condition in all the manned locations.
3. Lubricating oil for bearings and grease shall be provided by GVKGPL.
4. The agency shall be responsible for safety of all equipment and fixtures in the pump house. For any loss or damage due to the contractor's negligence or pilferage, the contractor shall immediately replace the damaged component(s) failing which GVK will debit the cost plus a penal charge of 15% of the cost and recover the same from the next payment from any of the contracts being executed by the agency in GVK."
5. The induction of new Technicians/Diploma Engineers shall be interviewed & certified by the Plant Head-GVK to maintain quality at the Job.
6. Plant Head has the right to reject any manpower provided by the agency if found not suitable at any point of time during execution of the contract, & the agency shall arrange for suitable replacement immediately.

6) GENERAL TERMS & CONDITIONS:

1. State Entry Tax for all contractors' equipment, consumable spares, tools or any other contractor material is the responsibility of the contractor.
2. No child labor should be engaged for the entrusted work.
3. Work shall be carried out 24hrs on all days including Sundays and holidays.
4. Supervisor and his sub staff shall, in every shift take guidelines and requirement of work from GVK - Shift charge Engineer or his representative and arrange for timely completion of the jobs assigned.
5. All manpower should be deployed in 8 hours Shift and working more than 8 hours is not allowed. (All staff should have weekly off. Shift schedule for the month to be produced to GVK by 1st day of every month.)

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6. The Contractor shall also ensure that no chemical/material is wasted during carrying out operation under this agreement by the contractor. Wastage of material if found any, shall be recovered from the Contractor.
7. The Contractor shall strictly follow all the rules specified by GVK while carrying out operations under the work contract.
8. The Contractor shall have all valid licenses and permits to carry on the work taken up. GVK shall be indemnified from all liabilities, claims and damages by the contractor in case of any failure on the part of the contractor in fulfilling these requirements.
9. Contractor has to make his own transport & accommodation arrangement for his Staff.
10. Contractor shall submit medical fitness Certificate of all his staff to GVK before joining at the site and subsequently as per statutory requirement.

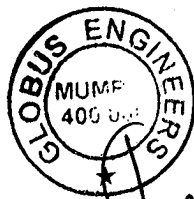
7) Tools & Tackles:

The contractor shall arrange general T & P as per the requirement from time to time and as per the site requirement. The agency shall submit a list of T&P which are proposed to be brought to site. Special T&P – if any shall be provided by owner. For such T&Ps the agency shall be responsible for safe custody and repair of damages due to mishandling / negligence shall be the responsibility of the agency. Mobile material handling equipment like hydra/ crane shall be provided by owner free of cost for reasonable duration for the assigned work, Tractor trolley and pick up vans for shifting of materials shall be in the scope of agency.

8) Spares and Consumable:

All the required spares and consumables other than what is mentioned under Clause 1k shall be provided by the owner free of cost. The agency shall be responsible for safe and proper custody of such materials issued for execution of the job. Proper accounts for materials issued shall be submitted to the owner's representative along with the monthly bills. Any shortage shall be debited from the monthly bills. Scrap shall be returned to the stores and in the monthly bills owners representative shall certify that all the relevant scrap and other materials which are not further required are returned to the store/ scrapyard. On completion of the contract the final bill shall be processed only after the agency has returned to stores all the owner's spares, consumables, scrap and T&Ps in good condition.

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9) FACILITIES TO BE PROVIDED BY THE AGENCY:

Agency should make their own arrangements for providing accommodation & conveyance for their staff. Also the following facilities shall be provided.

- a. **Communication:** The agency shall identify a site in Charge from amongst his staff who shall coordinate the daily activities with GVK Engineer In Charge.
- b. **Arrangements for providing food, drinking water etc.** to their staff engaged is in the scope of agency.

10) LOSS / LIABILITIES:

In case of theft of any property belonging to the Company inside premises, the agency shall depute its investigators at its cost to conduct inquiry and shall submit the report accordingly and similarly investigation shall be initiated from the Company & if required the matter shall be reported to Police and other Authorities. The agency shall subject the staff for police interrogation / investigation and shall assist in the follow-up of the investigation by the police. If it is proved by the joint enquiry police interrogation that the theft is directly due to negligence of the staff, the loss shall be recovered at the rate of, entire cost of lost material / maximum previous month billing whichever is less. The recovery shall be affected as per the instructions of Plant Head in one or more installments.

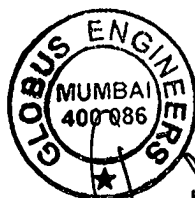
11) DISCIPLINE:

The Agency shall ensure that he and his employees maintain proper discipline and decorum at GVK while dealing and executing the contract so that there should not be any hindrance for the smooth running of the power plant. If any of the employees of the Agency is found unsuitable by the Engineer-in-Charge, then on demand by GVK, such employee shall be removed and the Agency shall depute another employee in his place immediately.

12) DAMAGES TO THE PROPERTY:

The Agency shall be liable to pay damages caused to the property of GVK, on account of negligence or defective working on the part of the agency and his employees. Such amount of damages shall be recovered from the bills of the Agency and the Agency shall be liable to pay such damages to the GVK.

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13) SAFETY AND SECURITY:

- A. The plant activities such as plant operation and maintenance services are covered under factory act 1948 and Punjab factory rules. The agency should adhere to all safety norms as per the requirement of factory act guidelines. Agency shall provide personnel protective equipment, prepare working platforms, make safety risk analysis, supervise all safety norms of workers, safety precautions, ensure safety in all respect while execution of work. In the event of any injuries / accidents agency shall report to the concerned Engineer in charge / safety officer /GM. The agency shall take all the responsibilities for arranging treatment to the injured persons. In case of any major/fatal accidents agency shall adhere to all the statutory guidelines such as payment of workmen compensation, submission of compliance and explanation to the statutory authority and take over all the legal responsibilities as per the guidelines of the factory act.
- B. All safety equipment such as safety shoes, helmet, belt, hand gloves, facemask, goggles etc. shall be purchased by the agency. The agency shall furnish acknowledgement for receipt of safety equipment by their workmen duly certified by concerned Engineer, before commencement of work. If the agency fails to furnish the same, Safety gadget will be arranged by GVK and one and half time of the cost will be deducted in the next forthcoming Bill. If the agency feels, additional safety devices are required to carry out the contract, the same can be provided by the agency free of cost.

No personnel should be allowed to work without safety gadgets.

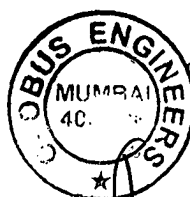
- C. Essential Conditions for Compliance with Safety Standards are attached as per Annexure -4
- D. Environmental key points to be adhered by Contractor are attached as per Annexure-5

14) RIGHTS OF GVK:

- A. To reserves its right to modify, change, cancel the BOQ /Terms of the Contract without giving any reason thereof.
- B. The GVK authorized Officers shall have the power, from time to time, in the execution of the work, to issue notice in writing and to instruct/direct the Agency to make alterations / variations in the work.
- C. If the Agency fails to carryout the assigned works satisfactorily during the currency of the Contract, the Company shall have the power to enter upon and take possession of the works and to engage any other person, firm or agency to complete the work. Twice the cost incurred by the company due to such failure shall be recovered from the agency.

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- D. To prevent disputes and litigations, it shall be accepted as an inseparable part of this contract that in matters regarding work, interpretation of contract, mode of procedure and carrying out the work, the decision of Plant Head)-GVK shall be final and binding on the Agency.
- E. GVK reserves the right to extend or short close the contract depending upon the satisfactory execution of the work or otherwise by the Agency, as the case may be, and the Agency shall carry out works on the same terms and conditions of the contract during the extended period subject to a maximum of six months in the event of any extension given.
- F. Any loss or damages caused to the Company by noncompliance of obligation under this agreement by the agency, the agency is liable to make good such losses and the corporation shall be entitled to recover the same from the agency.

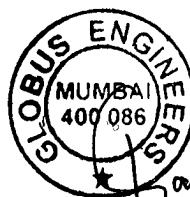
15) TERMINATION OF CONTRACT:

- A. If the agency neglects to execute the work with due diligence and expedition or does not comply with the instruction given, the Company reserves the right to terminate the contract by giving one and half month notice.
- B. If the agency fails to carry-out Operation, Preventive Maintenance, routine / break down maintenance works to the satisfaction of the Company,, the Company reserves the right to terminate the contract without notice and recover damages beside forfeiting security deposit in full and also from the other amounts, bills etc., payable to the agency. The decision of Company is final.
- C. If the services of the Agency in GVK found not satisfactory and if any of the conditions are violated, the Plant Head reserves the right to terminate the contract prematurely without any compensation on any kind of loss.
- D. Misbehavior on the part of labourer / workmen / technician, rash and negligent driving by the operator deployed by the agency shall be reviewed very seriously and the contract may be terminated if the same attitude is continued in spite of three notices issued by the GVK.

16) PRICES, TAXES AND DUTIES INCLUDES:

- A. Wages and allowances includes insurance, PF, HRA, conveyance, medical facility, Administration, transportation, and communication etc to your personnel.
- B. Providing vehicles, communications, uniforms, safety gadgets other unforeseen items.

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- C. The price is exclusive of GST as applicable. The GST shall be reimbursed as per actual on production of documentary proof.
- D. Operation and maintenance of AHP works as stated under scope of work item wise and Job area-wise Activities.
- E. The price is inclusive of all requirement of Licenses wherever required, statutory taxes and duties for the above components.

17) PRICE VARIATION:

No price variation is admissible. The agreed rate of the contract holds good for entire 12 months period of the contract.

18) BILLING AND PAYMENT:

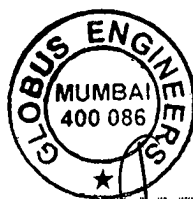
- A. Preceding month's bill shall be submitted by 5th of every month, the agency should furnish the bills along with requisites such as, proof of salary disbursement, PF remittance statement, GST tax statement and other related information along with bill.
- B. On receipt of bills, certified bills will be forwarded to Accounts for releasing the payment.
- C. Payment shall be released within thirty (30) days by the company after effecting statutory deductions such as, IT and GST, Cess, SD and penalty if any be made as applicable.
- D. Payments are made through account payee cheque / RTGS. All the bank charges to agencies account.
- E. Deduction of Income Tax, and Other Applicable Taxes and Duties & Etc.: Agency shall provide PAN/GIR Number to GVK. Income-tax and other applicable taxes if any shall be deducted at source at the prescribed rates from the monthly Bills of Agency as per the statutory levies / taxes in force at the time of payment of the bills. Necessary certificates of tax deducted at source shall be issued / furnished by GVK to the agency.

19) PENALTY & LIQUIDATED DAMAGES:

GVKPGSL has represented to the Contractor to provide continuous availability, timely performance & quality of work which is essence of this contract. The Contractor is aware that in case of non-performance, the GVKPGSL reserves the rights to make deductions as per the performance evaluation matrix named as KPI (Annexure 7) as

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implemented by GVKPGSL. GVKPGSL reserve the right to impose all the above penalties simultaneously.

20) BONUS:

As indicated in Performance Matrix named as KPI (Annexure 7)

21) PERFORMANCE GUARANTEE / SECURITY DEPOSIT:

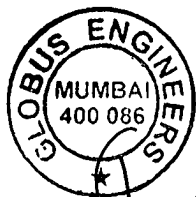
- A. The Agency shall furnish a non interest bearing Security Deposit for equivalent to one month contract value of Rs.25, 10,000/- in the form of Bank Guarantee. The Bank guarantee shall be valid till the completion of contract period. Alternatively, the Agency may opt for recovery of Security Deposit from their 1st month bill.
- B. The Security Deposit shall be refunded only on completion and closure of the contract to the satisfaction of the GVK. If GVK incur any loss or damage on account of non-fulfillment of obligations under this contract, then such losses / damages incurred by GVK shall be deducted from the Security Deposit. The amount so deducted / adjusted shall not be refunded to the Agency.
- C. In the event of any upward revision in the value of the contract arising on account of increase in the quantity handled or increase in the rates the GVK reserves the right to call for Additional Security deposit amount and Agency shall, on receiving intimation from the GVK, increase the Security Deposit suitably as may be directed by the GVK within 30 days.

22) STATUTORY RULES AND REGULATIONS:

- A. The Contractor shall register under the Contract Labour Act or any other Labour Acts as may be applicable from time to time. The Contractor shall follow all the provisions of Labour laws and other laws including the Payment of Wages Act, Minimum Wages Act, Factory act, Child labour act, Workman Compensation Act and other Local Laws and rules framed there under from time to time. Any amount payable to the employees of the Contractor under any of the law by the Contractor, if demanded from the Corporation being a Principal Employer, same shall be recovered from the Bills of the Contractor. The Contractor shall maintain all registers and records as required under the various laws and regulations made there under from time to time. The Contractor shall make arrangements for the engagement of labors according to the provisions of Indian Labour Laws, and the local acts and for the payment thereof. The Contractor shall pay rates of wages and observe conditions as defined in the Contracted Labour Law of State of Punjab. On

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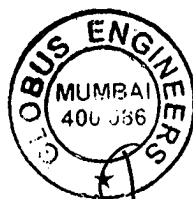
receipt of the order, the Contractor shall furnish copies of all relevant documents to this contract to GVK Power (Goindwal Sahib) Ltd. The Contractor and his employee shall observe all the statutory rules and regulations of the power stations limited to the extent of their scope of work and the provisions of the other labour laws and regulations made there under which are applicable to the power stations.

- B. In the event of any accident / injury / fatal to the Contractor employee during the course of his employment in pursuance of the present contract, the Contractor shall be responsible to pay the compensation or any sum payable to such employee under the provisions of Law or Regulations made there under including the provisions of Workman Compensation Act. The Contractor shall arrange for treatment, medical facility and dealing with statutory /legal other all responsibility are rest upon Contractor
- C. The Contractor shall comply with all relevant acts, rules by-laws, regulations and all other statutory requirements of local or other authorities, having jurisdiction over the areas and shall be responsible for the payment of all fees and other charges limited to the extent to their scope of work only and giving and receiving of all necessary notices and keep the Plant Head informed of the said compliance with such acts, rules, by-laws, regulations, statutory requirements, payments made, notice issued and received.
- D. The Contractor shall also be responsible and fulfillment of all the statutory obligations under the statutory provisions such as Provident Fund etc. in respect of his personnel posted under this contract. The Contractor shall arrange to deposit the contribution towards the PF (both employees and employers) to the concerned Authorities at the notified rates promptly.
- E. The Contractor shall cover the personnel under personal risk Insurance Scheme. The copy of the Policy should be produced, as a proof for having insured/ PF remittance. The deductions towards PF shall be at the rate as prescribed by the Government from time to time.

23) INDEMNITY:

- i) Furthermore, the Agent hereby shall undertake to indemnify and keep harmless forever, the Owner /Principal Employer from and against all losses, claims, demands, actions, liabilities and expenses under any labour enactment in respect of the labour involved in the said Services, for the period of the Contract, which might arise during the subsistence of the contract or at any future point of time. The above said indemnity would include compliance under the Minimum Wages Act, 1948, The Employees' State Insurance Act 1948, if applicable, The Employees

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Provident Fund and Miscellaneous Provisions Act, 1952 and any other extant Act or any other Act, which might become applicable or which might come into force during the tenure of the contract.

- ii) In case of any manner of action initiated by the Authorities implementing or enforcing labour laws against the Owner in respect of the employees of the Sub-contractors, notwithstanding and without prejudice to the other civil remedies for damages available to the Owner, by virtue of the indemnity clause herein contained, the Owner shall, in addition, be entitled to implead the Contractor as a necessary party to the proceedings before such authority.

24) ARBITRATION:

In case of any dispute or differences, breach and violation relating to the terms of this Job order, the said dispute or difference shall be referred to mutually agreed sole arbitrator - who will be the Managing Director of the Company GVKGPL, and that the award of the arbitrator shall be final and binding on both the parties. The adjudication of such arbitrator shall be governed by the provision of the 'ARBITRATION and CONCILIATION Act, 1996' or any statutory modification or reenactment thereof or any rules made thereof.

25) FORCE MEJEURE:

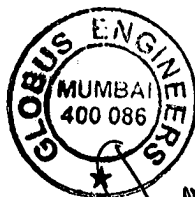
At any time during the continuance of this contract, if the performance in whole or in part of any obligation under this contract shall be prevented or delayed by reasons of any war, hostility, acts of public enemy, acts of civil commotion, strikes, lockouts, sabotage fires, floods, explosions, epidemics, quarantine restrictions or other acts of God (hereinafter referred to as eventualities) then, provided notices of the happening of any such eventuality is given by Agency to the Company within 15 days from the date of occurrence thereof, neither party shall, by reasons of such eventuality, be entitled to terminate this contract, nor shall have any claim for damages against the other in respect of such non-performance or delay in performance, and deliveries under this contract shall be resumed as soon as practicable after such eventuality has come to an end or ceased to exist. Provided that if the performance in whole or part by Agency or any obligation under this contract is prevented or delayed by reasons of any eventuality for a period exceeding 60 days, both parties to the contract may at their option terminate this contract by a notice in writing.

26) OTHER TERMS AND CONDITIONS:

- A. The agency shall not employ child labour. The agency shall not engage any workmen without the permission of the Engineer in charge.
- B. Employees thus employed by the agency in the Carrying out Operation and routine/Breakdown I Maintenance works of Ash Handling System limited for a period of one year shall regularly undergo medical checkups on the direction of

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authorized representatives of management whenever felt necessary and fitness certificates obtained from the Hospital should be produced to the management.

- C. The above premises are the property of the GVK and the agency is only permitted to enter into this property for carrying out contractual obligation only. Whenever the contract is terminated or the contract comes to an end or GVK decides that the agency should not be allowed to run the same, in that event, GVK will be entitled to restrain the agency from entering Goindwal Sahib premises.
- D. The antecedents of the staff engaged by the Agency for the work should be verified through local police or by any other Government Agencies and only suitable persons with clean record should be engaged. The Agency shall be responsible for the good conduct of his staff while on duty as well as off duty in Company premises and the staff shall present themselves as responsible persons at all times.
- E. This contract shall not grant any claims to the labour engaged by the agency for any appointment in GVK either during the currency of the contract or any time at a future

Yours faithfully

for GVK POWER (GOINDWAL SAHIB) LIMITED

Order Accepted

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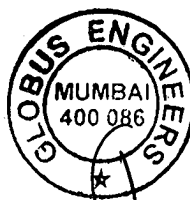
AUTHORISED SIGNATORY

for GLOBUS ENGINEERS

Enclosures:

- i. Annexure 1A – Maintenance of Ash handling plant
- ii. Annexure 1B – Operation of Ash handling Plant
- iii. Annexure 1C – Exclusions
- iv. Annexure 1D – Facilities by GVKPGSL
- v. Annexure 2–C&I job list
- vi. Annexure 3 – Electrical job list
- vii. Annexure 4 –Compliance with Safety Standards
- viii. Annexure 5 - Environmental key points to be adhered by Contractor -
- ix. Annexure 6 - Deployment plan
- x. Annexure 7 - Performance Matrix (KPI)

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Annexure - 1A

Scope of work includes Day to day Operation and Maintenance of Mechanical, C&I, Electrical equipment and associated PLC systems for the following: -

- Bottom ash and bottom ash overflow system.
- Economizer system
- Fly ash pressure conveying system below ESP to silo.
- Ash slurry disposal system up to Ash dyke.
- Instrument and Transport air compressor system
- Ash water pumping system.
- Seal water Pumping system.
- Silo Unloading system.
- ESP Hopper and silo fluidizing system.
- Ash handling below boiler hopper.
- High Concentration Slurry Disposal system up to Ash dyke.
- ESP inlet Duct hopper unloading
- Cleaning of Equipment.
- Transportation of spares and materials from plant's stores to work site and scrap materials from work site to plant's store.
- Preparation and implementation of preventive maintenance program.
- Facilitate smooth coordination with GVK Officials for trouble free O&M.
- Supply of Consumables such as, welding rod, cutting gas, emery paper, cotton waste etc.
- Periodic Housekeeping of whole concerned area including ESP, Switchgear room and AHP Control room, Ash slurry pump house, HCSD pump house, Silo area, Ash related area below the boilers.(i.e. APH hopper & BA hopper area)
- Any maintenance working in ASH slurry & HCSD disposal piping up to Ash dyke. (This will exclude the pending project works (balance garlanding of ash disposal piping)
- In case of any welding in ash disposal piping, if electricity is available will be provided by GVK. Otherwise agency shall get it done at his own cost, arrange DG set with diesel etc. For that if hydra needed, the agency shall arrange & mobilize the same as and when required at their own cost.
- Engaging a tractor trolley with diesel and an operator around the clock for unloading of fly ash from duct hoppers and for housekeeping shall be in the Agency's scope.
- Operation and maintenance of AHP weighbridge shall be in the scope of the Agency. If required OEM expert shall be called by GVK. The work assistance shall be provided by the Agency.

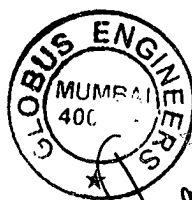
A) Preventive / Online Maintenance – Mechanical:

1) Bottom Ash system:

- Gland leakage checking and replacement
- CG bearing checking.
- Feed gate Roller adjustment etc.
- CG chain greasing and Oil level checking in Gear box and fluid coupling.

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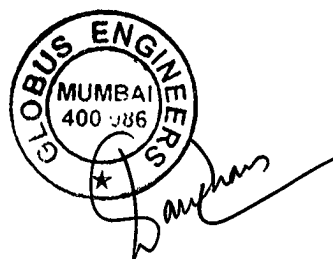
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- Air oil tank oil checking.
 - 3) Blowers – ESP & Silo**
 - Oil topping / changing.
 - Belt tension adjustment.
 - 4) ESP Area.**
 - Maintenance of KGV, Expansion Bellows, Dome Valve, Master Vessel, Slave Vessel and associated valves.
 - Cleaning of ESP area.
 - 5) Pneumatic Conveying System.**
 - Fly ash conveying changeover valves (Switch Valves).
 - Fly ash conveying line from ESP to Silo with associated fittings, couplings, gaskets etc;
 - 6) Ash Water Pumps.**
 - Replacement of gland packing / Greasing
 - Water line Valves
 - 7) LP Water Pumps.**
 - Replacement of gland packing / Greasing
 - Water line Valves
 - 8) Silo Equipments.**
 - Bag filter cleaning / replacement of Bags.
 - Purge Valve cleaning & replacements of damaged solenoids, seats, gaskets etc;
 - Safety valve adjustment.
 - Vent fan belt adjustment.
 - Telescopic spout.
 - Knife gate valve.
 - Dust Conditioner.
 - 9) General :-**All grease lubrication / topping of oil in gear boxes etc; for all geared equipments.
- B) Preventive / Online Maintenance – C&I & Electrical**
- Troubleshooting / Corrective Maintenance of PLC Control System & Field Instruments.
 - Cleaning of all Local Field Instruments, Instrumentation Equipment, Local Junction Boxes and Cable Trays.
 - Checking & Calibration of Level Instruments.
- C) Any other area not mentioned in the BOQ, for smooth Operations and Maintenance pertaining to AHP not mentioned above.**

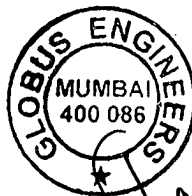
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Annexure 1 B**OPERATION OF ASH HANDLING SYSTEM:**

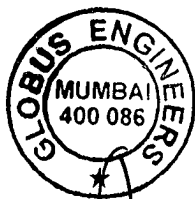
1. Taking charge of Ash Handling Control room, Operating dry ash & wet ash slurry system from PLC as well as from local, Operation and de-ashing of Bottom ash hoppers & Ash Silos as per Standard operating procedures & instructions of Shift charge Engineer (SCE) or his representative.
2. Routine check-up of healthiness of ash handling equipment. If anything found abnormal, inform the same to SCE.
3. Isolations and normalizations of different systems are to be done during issue/discharge of Work permits for maintenance works or during leakages of ash conveying pipes/ cooling water lines/ air lines as per instructions of SCE.
4. Local Line-up, starting & stopping of ash transport compressors, compressors driers, ash slurry system, etc. are to be carried out as per standard operating procedures. Any vibration, abnormalities, leakages should be brought to the notice of SCE or control room Engineer immediately. Any oil leakage shall be informed to SCE and isolate immediately and area is to be cleaned by spreading sand over it.
5. Ensure proper running of ash evacuation system (Both dry and wet).
6. Evacuate bottom ash hopper at least once in every shift and ensure there shall not be any ash build in Bottom ash hopper and if so, corrective action is to be taken.
7. Check, monitor & record ash evacuation system and inform the same to SCE.
8. Routine Check-up and monitoring of transport air Compressors, Slurry Pumps and all balance rotary equipment from local and record the same in the Log Book.
9. Operate Ash Silos and unload moist/dry ash in the Trucks/Bulkers as per instructions of SCE/ his representative.
10. Ensure Zero dust emissions & spillage during unloading of ash in Trucks/ Bulkers at Silos.
11. Ensure all ESP ash collecting hoppers are maintained below its high level alarm.
12. Ensure Economizer & APH ash collecting hoppers should be evacuated frequently.
13. Ensure Ash silo level shall not reach high level. Maintain the silo level as per the instruction of SCE.
14. Ensure continuous running of ash evacuation system of Economiser hoppers.
15. Ensure minimum make-up water requirement for wet ash handling system.
16. Any line leakage/dome valve problem/ C&I problem in the Ash evacuation system (dry ash/wet ash) due to which ash handling system suffers, should be attended without delay. For this, the AHP control room Technician/Engineer should co-ordinate with the maintenance department to get the job done..If, problem persists for more than 3 hours, inform SCE to expedite the work.
17. Topping up of bearing oil, greasing of motor bearings. Minor and routine maintenance like attending gland leakage, replacement of small valves etc. shall be part of this job. Bearing oil greases and spares shall be provided by GVK Power ltd.
18. Electrical isolation of equipment like racking out of circuit breakers, switching off power supply and removal of power and control fuses for carrying out maintenance on the equipment & subsequent restoration of all the isolations are to be carried out.
19. De choking of Ash Conveying line shall be done by the field Operator.
20. De choking of ash silo discharge chute shall be done by ash silo Operator.

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- 21. Ensure ash slurry discharge point at ash Pond is proper and if found any abnormality, inform to SCE.
- 22. Ensure good house-keeping in Ash Silo area, ESP and Bottom ash hoppers area.

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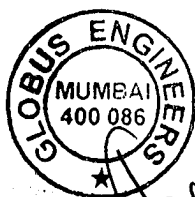
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Annexure- 1CExclusions

The following works shall be excluded from the above scope of work:

2. All lubricants such as oil and special grease
3. Extension / major modification of wet ash disposal pipeline.
4. Supply of spares, Hardware, Paints, Gaskets, any special sealant & special welding rods etc.
5. Repair and maintenance of civil and structural works.
6. Maintenance of air conditioning, ventilation system and painting.
7. Dismantling and re erection of major equipment for replacement.
8. Providing of power supply if available for attending Ash disposal lines.

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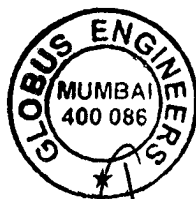
Annexure- 1D

Services / Facilities to be provided by GVKPGSL

The following service / facilities shall be provided by GVKPGSL:

1. All lubricants and spare parts as required.
2. Required shut down permit for carrying out maintenance work as required.
3. Compressed air, electricity, water and lighting.
4. "First Aid facility shall be provided by GVK on need basis".

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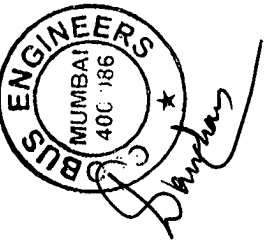


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Annexure-2

**Scope of Work for C & I Maintenance Activities for 2 x 270 MW GVK Power
(Goindwal sahib) Limited - Area: Complete AHP Area**

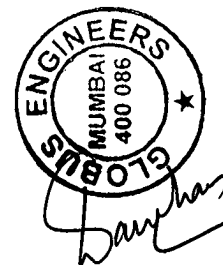
Sr. No	Area / System	FUNCTIONAL LOCATION	Nature of Activities	REMARKS
1	AHP	IN MNT OF ASH SLURRY SERIES PUMP	Pressure Guage Cleaning & Inspection	
			Pr. Guage Calibration; If Required	
			Pr. Switch Cleaning & Inspection	
			Pr. Switch Cable Termination Tightness	
			Pr. Switch Calibration; If Required	
			SOV Inspection & Cleaning (If Required)	
			SOV Cable Termination Tightness	
			Pneumatic Tubing & Fittings Leak Check	
			PU Tubing/Fitting Replacement (If Req)	
			Limit Switch Cleaning & Inspection	
			Limit Switch Cable Termination Tightness	
			Limit Switch Setting (If Required)	
			LT Cleaning & Inspection	
			LT Cable Termination Tightness	
			LT Calibration/ Setting (If Required)	
Cable Termination Tightness at Elec Bkr				
Cable Termination Tightness at RIO				
JB Cleaning, Cable Termination Tightness				
Health Check of Signals at PLC/SCADA/HMI				



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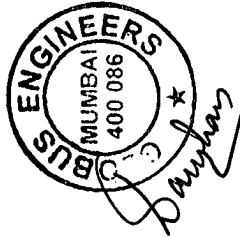
2	AHP	IN MINT OF HP WATER PUMP	Pressure Guage Cleaning & Inspection
			Pr. Guage Calibration; if Required
			Pr. Switch Cleaning & Inspection
			Pr. Switch Cable Termination Tightness
			Pr. Switch Calibration; if Required
			SOV Inspection & Cleaning (if Required)
			SOV Cable Termination Tightness
			Pnematic Tubing & Fittings Leak Check
			PU Tubing/Fitting Replacement (if Req)
			Limit Switch Cleaning & Inspection
			Limit Switch Cable Termination Tightness
			Limit Switch Setting (if Required)
			LI Cleaning & Inspection
			LI Cable Termination Tightness
			LI Calibration/ Setting (if Required)
			Vibration Sensor Cleaning & Inspection
			Vibration Sensor Tightness
			Vibration Module Cable Termination Tight
			Cable Termination Tightness at Elec Bkr
			Cable Termination Tightness at RIO
			JB Cleaning, Cable Termination Tightness
			Health Check of Signals at PLC/SCADA/HMI
			Pressure Guage Cleaning & Inspection
			Pr. Guage Calibration; if Required
			Pr. Switch Cleaning & Inspection
			Pr. Switch Cable Termination Tightness
			Pr. Switch Calibration; if Required
			SOV Inspection & Cleaning (if Required)
			SOV Cable Termination Tightness
3	AHP	IN MINT OF LP WATER PUMP	



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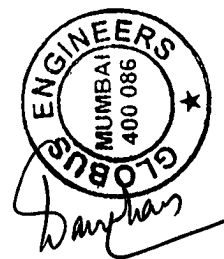
		Pneumatic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) LT Cleaning & Inspection LT Cable Termination Tightness LT Calibration/ Setting (If Required) Cable Termination Tightness at Elec Bkr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI Pressure Guage Cleaning & Inspection Pr. Guage Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI Pressure Guage Cleaning & Inspection Pr. Guage Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required Temp. Guage Cleaning & Inspection Temp. Guage Calibration; If Required Temp. Switch Cleaning & Inspection
4	AHP	IN MNT OF SEAL WATER PUMP
5	AHP	IN MNT OF FLUID COUPLING



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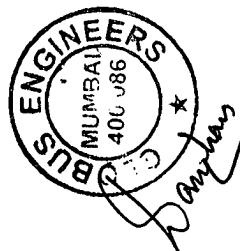
			Temp. Switch Cable Termination Tightness
			Temp. Switch Calibration; if Required
			SOV Inspection & Cleaning (if Required)
			SOV Cable Termination Tightness
			Cable Termination Tightness at Elec Fdr
			Cable Termination Tightness at RIO
			JB Cleaning, Cable Termination Tightness
			Health Check of Signals at PLC/SCADA/HMI
			Pressure Guage Cleaning & Inspection
			Pr. Guage Calibration; if Required
			Pr. Switch Cleaning & Inspection
			Pr. Switch Cable Termination Tightness
			Pr. Switch Calibration; if Required
			Level Switch Cleaning & Inspection
			Level Switch Cable Termination Tightness
			Level Switch Setting (if Required)
			SOV Inspection & Cleaning (if Required)
			SOV Cable Termination Tightness
			Cable Termination Tightness at Elec Fdr
			Cable Termination Tightness at RIO
			JB Cleaning, Cable Termination Tightness
			Health Check of Signals at PLC/SCADA/HMI
			Pressure Guage Cleaning & Inspection
			Pr. Guage Calibration; if Required
			Pr. Switch Cleaning & Inspection
			Pr. Switch Cable Termination Tightness
			Pr. Switch Calibration; if Required
			Level Switch Cleaning & Inspection
6	AHP	IN MNT OF DRAIN SUMP PUMP (AWAS AREA)	
7	AHP	IN MNT OF DRAIN SUMP PUMP (SILO AREA)	



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		Level Switch Cable Termination Tightness
		Level Switch Setting (if Required)
		SOV Inspection & Cleaning (if Required)
		SOV Cable Termination Tightness
		Cable Termination Tightness at Elec Fdr
		Cable Termination Tightness at RIO
		JB Cleaning, Cable Termination Tightness
		Health Check of Signals at PLC/SCADA/HMI
		Pressure Gauge Cleaning & Inspection
		Pr. Gauge Calibration; if Required
		Pr. Switch Cleaning & Inspection
		Pr. Switch Cable Termination Tightness
		Pr. Switch Calibration; if Required
		Temp. Gauge Cleaning & Inspection
		Temp. Gauge Calibration; if Required
		Temp. Switch Cleaning & Inspection
		Temp. Switch Cable Termination Tightness
		Temp. Switch Calibration; if Required
		PT Cleaning & Inspection
		PT Cable Termination Tightness
		PT Flushing/ Line Cleaning (if Required)
		PT Calibration/ Setting (if Required)
		SFT Cleaning & Inspection
		SFT Cable Termination Tightness
		SFT Line Cleaning (if Required)
		SFT Calibration/ Setting (if Required)
		DM Cleaning & Inspection
		DM Cable Termination Tightness
		DM Line Cleaning (if Required)
8	AHP	IN MINT OF HSCD PUMP



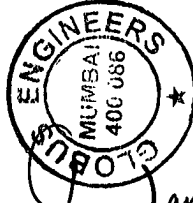
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			DM Calibration/ Setting (If Required)
			SOV Inspection & Cleaning (If Required)
			SOV Cable Termination Tightness
			AFR Cleaning & Checking
			Pneumatic Tubing & Fittings Leak Check
			PU Tubing/Fitting Replacement (If Req)
			Cable Termination Tightness at VFD
			Cable Termination Tightness at RIO
			LCP Checking & Cleaning
			LCP Cable Termination Tightness
			Health Check of Signals at PLC/SCADA/HMI
			Pressure Gauge Cleaning & Inspection
			Pr. Gauge Calibration; If Required
			Pr. Switch Cleaning & Inspection
			Pr. Switch Cable Termination Tightness
			Pr. Switch Calibration; If Required
			SOV Inspection & Cleaning (If Required)
			SOV Cable Termination Tightness
			Pneumatic Tubing & Fittings Leak Check
			PU Tubing/Fitting Replacement (If Req)
			Limit Switch Cleaning & Inspection
			Limit Switch Cable Termination Tightness
			Limit Switch Setting (If Required)
			PT Cleaning & Inspection
			PT Cable Termination Tightness
			PT Flushing/ Line Cleaning (If Required)
			PT Calibration/ Setting (If Required)
			Cable Termination Tightness at Elec Fdr
			Cable Termination Tightness at RIO
9	AHP	IN MNT OF CHARGE PUMP	

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			JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI LT Cleaning & Inspection LT Cable Termination Tightness LT Calibration/ Setting (if Required) FT Cleaning & Inspection FT Line Flushing FT Cable Termination Tightness FT Calibration/ Setting (if Required) Control VLV Cleaning & Checking CV I/P, PFT Cable Termination Tightness CV Pneumatic Tubing & Fittings Leak Check CV Part Replacement (if Req) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO Health Check of Signals at PLC/SCADA/HMI Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; if Required DP Gauge Cleaning & Inspection DP Gauge Calibration DP Switch Cleaning & Inspection DP Switch Cable Termination Tightness DP Switch Calibration SOV Inspection & Cleaning (if Required) SOV Cable Termination Tightness
10	AHP	IN MNT OF ART AGITATOR & MIXING TANK	
11	AHP	IN MNT OF SCAVANGER FAN	
12	AHP	IN MNT OF VENT FAN & PURGING SYSTEM	

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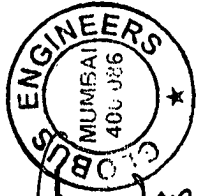


			Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI Pressure Guage Cleaning & Inspection Pr. Guage Calibration; if Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; if Required Temp. Guage Cleaning & Inspection Temp. Guage Calibration; if Required Temp. Switch Cleaning & Inspection Temp. Switch Cable Termination Tightness Temp. Switch Calibration; if Required Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI Pressure Guage Cleaning & Inspection Pr. Guage Calibration; if Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; if Required Temp. Guage Cleaning & Inspection Temp. Guage Calibration; if Required Temp. Switch Cleaning & Inspection Temp. Switch Cable Termination Tightness Temp. Switch Calibration; if Required SOV Inspection & Cleaning (if Required) SOV Cable Termination Tightness
13	AHP	IN MNT OF SILO AERATION BLOWER & HEATER	
14	AHP	IN MNT OF ESP AERATION BLOWER & HEATER	

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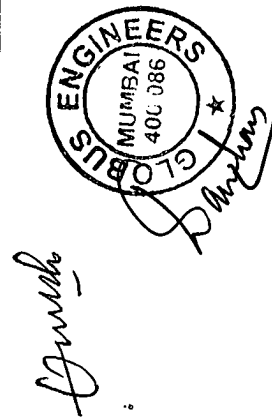
			Limit Switch Setting (If Required) LT Cleaning & Inspection LT Cable Termination Tightness LT Calibration/ Setting (If Required) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; if Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; if Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; if Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; if Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required)
17	AHP	IN MNT OF FEED GATE	
18	AHP	IN MNT OF CLINKER GRINDER	



Sanjay



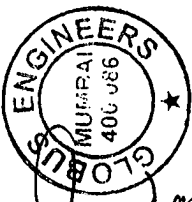
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19	AHP	IN MNT OF ROTARY FEEDER FOR HCSD (VFD)
20	AHP	IN MNT OF ROTARY FEEDER FOR TS (C Truck)





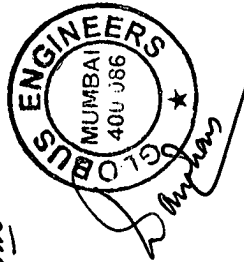
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		Cable Termination Tightness at Elec Fdr
		Cable Termination Tightness at RIO
		JB Cleaning, Cable Termination Tightness
		Health Check of Signals at PLC/SCADA/HMI
		SOV Inspection & Cleaning (If Required)
		SOV Cable Termination Tightness
		Pneumatic Tubing & Fittings Leak Check
		PU Tubing/Fitting Replacement (If Req)
		Limit Switch Cleaning & Inspection
		Limit Switch Cable Termination Tightness
		Limit Switch Setting (If Required)
		Cable Termination Tightness at Elec Fdr
		Cable Termination Tightness at RIO
		JB Cleaning, Cable Termination Tightness
		Health Check of Signals at PLC/SCADA/HMI
		Pressure Gauge Cleaning & Inspection
		Pr. Gauge Calibration; If Required
		Pr. Switch Cleaning & Inspection
		Pr. Switch Cable Termination Tightness
		Pr. Switch Calibration; If Required
		SOV Inspection & Cleaning (If Required)
		SOV Cable Termination Tightness
		Pneumatic Tubing & Fittings Leak Check
		PU Tubing/Fitting Replacement (If Req)
		Limit Switch Cleaning & Inspection
		Limit Switch Cable Termination Tightness
		Limit Switch Setting (If Required)
21	AHP	IN MNT OF ROTARY FEEDER FOR OPEN TRUCK
22	AHP	IN MNT OF DUST CONDITIONER FOR HCSD

Amish Dayhan





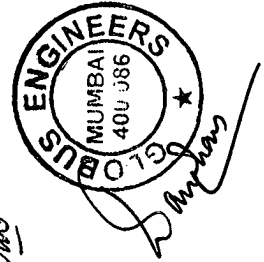
23	AHP	IN MNT OF TELESCOPIC SPOUT	Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness MFM Cleaning & Inspection MFM Cable Termination Tightness MFM Calibration/ Setting (If Required) Health Check of Signals at PLC/SCADA/HMI Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness LCP Checking & Cleaning LCP Cable Termination Tightness LCP Equip. Checking & Setting (If Req) Health Check of Signals at PLC/SCADA/HMI Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pneumatic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required)
24	AHP	IN MNT OF DUST CONDITIONER OPEN TRUCK	Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness MFM Cleaning & Inspection MFM Cable Termination Tightness MFM Calibration/ Setting (If Required) Health Check of Signals at PLC/SCADA/HMI Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness LCP Checking & Cleaning LCP Cable Termination Tightness LCP Equip. Checking & Setting (If Req) Health Check of Signals at PLC/SCADA/HMI Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pneumatic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required)



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		Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness MFM Cleaning & Inspection MFM Cable Termination Tightness MFM Calibration/ Setting (If Required) Health Check of Signals at PLC/SCADA/HMI Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness LCP Checking & Cleaning LCP Cable Termination Tightness LCP Equip. Checking & Setting (If Req) Health Check of Signals at PLC/SCADA/HMI Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; if Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; if Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pneumatic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required)
23	AHP	IN MNT OF TELESCOPIC SPOUT
24	AHP	IN MNT OF DUST CONDITIONER OPEN TRUCK



Signature



	Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI ESP HOPPER LS Cleaning & Inspection ESP HOPPER LS Setting (If Required) ESP HOPPER LS Cable Termination Tight PT Cleaning & Inspection PT Cable Termination Tightness PT Flushing & Impulse Line Tightness PT Calibration/ Setting (If Required) Pressure Guage Cleaning & Inspection Pr. Guage Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pneumatic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) AFR Cleaning & Checking Quick Exhaust Valve Checking & Cleaning Air Limit Switch Checking & Cleaning Cable Termination Tightness at RIO Instrument Panel Checking & Cleaning Instr. Panel Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI		
25	AHP	IN MNT FOR FLY ASH CONVEYING SYSTEM	

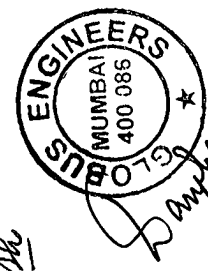
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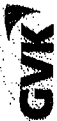
Sanjay



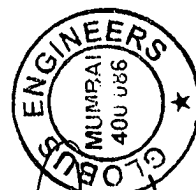
26	AHP	IN MNT AT FLY ASH SILO	LT Inspection & Cleaning (If Required) LT Cable Termination Tightness LT Calibration/ Setting (If Required) Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pneumatic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) AFR Cleaning & Checking Quick Exhaust Valve Checking & Cleaning Air Limit Switch Checking & Cleaning Cable Termination Tightness at RIO Instrument Panel Checking & Cleaning Instr. Panel Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required PT Cleaning & Cable Tightness PDT Cleaning & Cable Tightness TT Cleaning & Cable Tightness LS Cleaning & Cable Tightness SOV Cleaning & Cable Tightness
27	AHP	IN MNT FOR TAC SYSTEM	LT Inspection & Cleaning (If Required) LT Cable Termination Tightness LT Calibration/ Setting (If Required) Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required PT Cleaning & Cable Tightness PDT Cleaning & Cable Tightness TT Cleaning & Cable Tightness LS Cleaning & Cable Tightness SOV Cleaning & Cable Tightness

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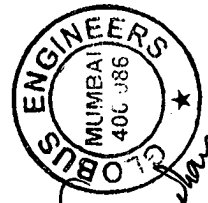
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28	AHP	IN MNT FOR INSTRUMENT AIR COMP (AHP)	



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		Drain Test (if Required) Cable Termination Tightness at Elec Bkr Cable Termination Tightness at RIO Local Panel Checking & Cleaning Elec Contr Cable Termination Tightness Healthiness Checking at Electronicon Health Check of Signals at PLC/SCADA/HMI Pressure Guage Cleaning & Inspection Pr. Guage Calibration; if Required FS Cleaning & Inspection FS Cable Termination Tightness Temp. Guage Cleaning & Inspection Temp. Guage Calibration; if Required RTD Cleaning & Inspection RTD Cable Termination Tightness Temp. Controller Checking Electronic Controller Checking SOV Cleaning & Inspection SOV Cable Termination Tightness Pneumatic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (if Req) FRL Cleaning & Checking Cable Termination Tightness (LCP) Health Check of Signals at Local Panel PLC/RIO Panel Blowering/ Cleaning PLC/RIO Panel Cable Termination Tight Healthiness Checking of PLC Healthiness Checking of Networking Cards Healthiness Checking of I/O Modules
29	AHP	IN MNT FOR INSTRUMENT AIR DRYER (AHP)
30	AHP	IN MNT FOR PLC/ RIO/ LCP PANEL (AHP)

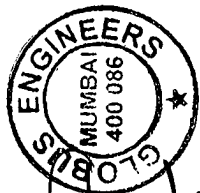


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Damodar

			Healthiness Checking of Ethernet Switch Healthiness Checking of PSU's Tightness Check of Communication Cables Parameter Checking at TB (If Required) Fuse Checking & Replacement (If Req) MCB & Relay Board Checking Fan, Lamp Checking & Cleaning Panel Dust Filter Cleaning Panel Door Hinges & Lock Checking Panel Hole Covering (If Required) Engg/Opr Desk Checking & Cleaning Earth Pit & Resistance Checking (If Req) LCP Checking & Cleaning LCP Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI Cable Termination Tightness at Elec Bkr Cable Termination Tightness at PLC RIO Parameter Measurement & Checking Health Check of Signals at PLC/SCADA/HMI Cable Termination Tightness at Elec Bkr Cable Termination Tightness at PLC RIO Parameter Measurement & Checking Health Check of Signals at PLC/SCADA/HMI Removal & Installation of new MOV Tight looseness at all end of MOV Inspection of Internals of MOV Check O-rings healthiness of MOV Check MOV O-rings properly positioned	The job includes the complete C & I, Electrical & Mechanical work of the Actuator
31	AHP	IN MNT IC/ BC/BPT HT ELECT BKR (AHP)		
32	AHP	IN MNT IC/ BC/BPT/ TRAFOLT BKR (AHP)		
33	AHP	Preventive, predictive & corrective maintenance of all types of Motorized Operated Valves used in Gate/Damper and Pipe line (make: Auma,		

Gurubh

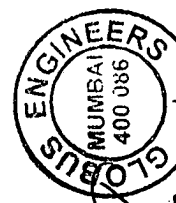
Sayhan





	<p>Rotork, Limitorque, Marsh, Cair)</p>	<p>Check for gland tightness of MOV Check field cable dress of MOV Check insulation damage of MOV Check MOV lubricant leakage & attend Check phy damage and replace MOV Ensure proper stroking of MOV Check MOV Signal Healthiness in DCS Ensure proper Cleaning of MOV Ensure for monsoon protection of MOV Ensure for field KKS tag of MOV Ensure for properly mounting of MOV Installation of new LCP Tight looseness in LCP & JB Check phy damage in LCP & JB Cleaning of inst of LCP & JB Check closing of Door of LCP & JB Proper gland tightness of LCP & JB Field cable dressing of LCP & JB Cable Ins damage of LCP & JB Seal gland Holes of LCP & JB Proper lighting in LCP & JB Monsoon protection of LCP & JB Proper Earthing of LCP & JB Installation of new JB Tight looseness in LCP & JB Check phy damage in LCP & JB Cleaning of inst of LCP & JB Check closing of Door of LCP & JB Proper gland tightness of LCP & JB</p>
34	AHP	<p>Preventive maintenance of Different types of Field LCP</p>
35	AHP	<p>Preventive maintenance of Different Sizes Junction Box</p>

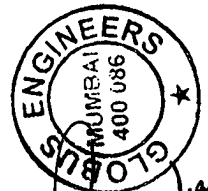
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			<p>Field cable dressing of LCP & JB</p> <p>Cable ins damage of LCP & JB</p> <p>Seal gland Holes of LCP & JB</p> <p>Proper lighting in LCP & JB</p> <p>Monsoon protection of LCP & JB</p> <p>Proper Earthing of LCP & JB</p> <p>Tight loose components of UPS/ACDB</p> <p>Check phy damage of UPS/ACDB internals</p> <p>Ensure proper cooling of UPS room</p> <p>Cleaning of Door Filters of UPS/ACDB</p> <p>Check proper closing of Door of UPS/ACDB</p> <p>Proper gland Holes sealing of UPS/ACDB</p> <p>Check for the lighting of UPS/ACDB</p> <p>Check all Cooling Fans of UPS/ACDB</p> <p>Remove dust of UPS/ACDB</p> <p>Ensure proper Earthing of UPS/ACDB</p> <p>Record alarm present of the UPS system.</p> <p>Check for gland tightness of UPS/ACDB</p> <p>Check for cable dressing of UPS/ACDB</p> <p>Check for insulation damage of UPS/ACDB</p> <p>Ensure for field KKS tag for UPS/ACDB</p> <p>Installation of new workstation</p> <p>Check phy damage of PC internals</p> <p>Cleaning of all the parts of Work Stn</p> <p>Proper dressing of cables of Work Stn</p> <p>Check for gland tightness of Work Stn</p> <p>Check for cable dressing of Work Stn</p> <p>Check for cable insu damage of Work Stn</p>
35	AHP	<p>Preventive, predictive & corrective maintenance of Different Capacity UPS (Hi-REL, DB Power, Emerson) with Battery bank and ACDB</p>	
37	AHP	<p>Preventive and Corrective maintenance of Work Stations/CCR PC's</p>	

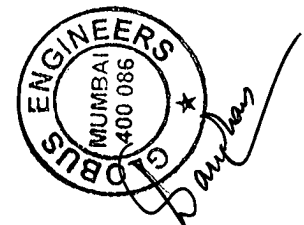
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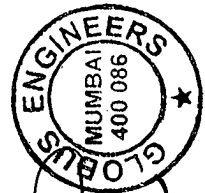
			Ensure Work Stn cooling Fans are healthy Remove dust of Work Stn Ensure for field KKS tag of Work Stn Installation of new Printer Check phy damage of Printer Proper dressing of cables of Printer Remove dust of Printer Check for gland tightness of Printer Check for cable dressing of Printer Check for cable insu damage of Printer Replaced the cartridge if required Ensure for field KKS tag of Printer Removal & Installation of new SOV Arrest the leakages if any of SOV Tight looseness in SOV Cable connections Check phy damage in SOV Gland tightness of SOV Cables Cable dressing of SOV Cable Insu damage of EWL Proper Cleaning of SOV Ensure for monsoon protection of SOV Check O-rings healthiness of SOV Check SOV O-rings properly positioned Ensure for field KKS tag of SOV Ensure for proper mounting of SOV New Fabrication Erection Repair Cleaning
38	AHP	Preventive and Corrective maintenance of Printer	
39	AHP	Preventive, predictive & corrective maintenance of Different types of Solenoid Valves	
40	AHP	Fabrication of Cable Tray Perforated (50 mm to 300 mm)	



Amish



41	AHP	Laying of Control Cable from 2 core to 6 Core including Glanding & Termination	Laying Dressing Glanding Ferruling Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement	
42	AHP	Laying of Control Cable from 6 core to 12 Core including glanding & termination	Laying Dressing Glanding Ferruling Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement	
43	AHP	Laying of Control Cable from 14 core to 24 Core including glanding & termination	Laying Dressing Glanding Ferruling Lugging	

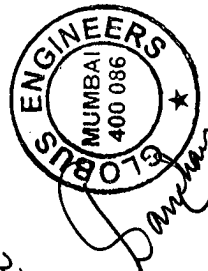


Darshay

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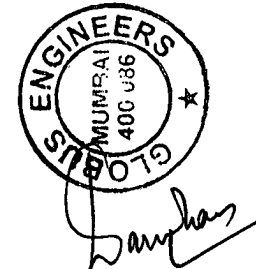
			Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement
			Laying Dressing Glandding Ferruling Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement
44	AHP	Laying of Signal Cable from Single pair to 4 pair including glandding & termination	Laying Dressing Glandding Ferruling Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement
45	AHP	Laying of Signal Cable from Six pair to 12 pair including glandding & termination	Laying Dressing Glandding Ferruling Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement



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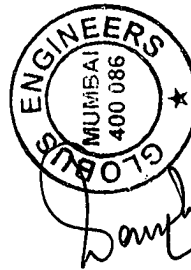
46	AHP	Laying of different types of Thermocouple Cable upto 7 Pair including glanding & termination	Laying Dressing Glanding Ferruling Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement	
47	AHP	Laying of different size Earthing cable including glanding & termination	Laying Dressing Glanding Ferruling Lugging Tagging Termination Damage Inspection Damage Replacement Loop Testing Healthiness Checking	
48	AHP	Laying of CAT-5 / 6 Cable	Laying Dressing Glanding Ferruling Crimping Tagging Damage Inspection	



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		Polythene	
63	AHP	Marking of Instrument / JB	
64	AHP	Material Shifting	
65	AHP	Cooper Tube 1/4 " laying with necessary fitting	
66	AHP	Preventive, predictive & corrective maintenance of Loop indicators	Removal & Installation of indicator. Removal & Installation of existing indicator. Tight looseness at all end of indicator. Check for gland tightness of indicator. Check field cable dress of indicator. Check insulation damage of indicator. Check phy damage and replace indicator. Check indicator Signal Healthiness in DCS Ensure for monsoon prot of indicator. Removal & Installation of sensor/transmitter. Removal & Installation of existing sensor/transmitter. Tight looseness. Cleaning of sensor. Check for gland tightness. Check field cable dressing. Check insulation damage of cable. Check phy damage and replace sensor. Check indicator Signal Healthiness in DCS/PLC Ensure for monsoon prot of sensor/transmitter.
67	AHP	Preventive, predictive & corrective maintenance Dew point measuring system.	



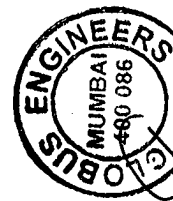
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Annexure 3

Scope of Work for Electrical maintenance Activities for 2x 270 MW GVK Power (Goindwal Sahib) Limited -Area :Complete AHP area	
Sr. No.	Details of work to be Carried Out
1	Preventive, predictive & corrective maintenance of battery banks & Chargers. (each bank having 110 Cell)
2	Preventive, predictive & corrective maintenance of HT motors.
3	Preventive, predictive & corrective maintenance of LT motors.
4	Preventive, predictive & corrective maintenance of HT Switchgears.
5	Preventive, predictive & corrective maintenance of LT switchgears.
6	Preventive, predictive & corrective maintenance of Oil filled Distribution transformers.
7	Preventive, predictive & corrective maintenance of Dry type transformers
8	Preventive, predictive & corrective maintenance of Electrical Panels.

Amudh



Danubay



9	Preventive, predictive & corrective maintenance of Lighting system (Indoor, Outdoor, High mast, Street Lights & Security) restricted to AHP area.	The Work will include Preventive schedule Maintenance of Lighting Systems, testing, repairing, handling as & when require.
10	Preventive, predictive & corrective maintenance of Hoist & cranes	The Work will include Preventive schedule Maintenance of Hoist & Cranes, testing, repairing, handling as & when require.
11	Preventive, predictive & corrective maintenance of Bus duct.	The Work will include Preventive Maintenance of Bus duct & LAVT, testing, repairing, handling as & when require.
12	Preventive, predictive & corrective maintenance of HT & LT Cables. (In meters)	The Work will include corrective Maintenance of HT & LT Cables, testing, repairing, handling, termination as & when require.
13	Preventive, predictive & corrective maintenance of Earthing & Lightning Protections.	The Work will include Preventive schedule Maintenance of Earthing & Lightning protection, testing, repairing as & when require.
14	Preventive, predictive & corrective maintenance of VFDs & Softstarter.	The Work will include Preventive schedule Maintenance of VFD, testing, repairing, handling as & when require.
15	Preventive, predictive & corrective maintenance of Other Small battery.	

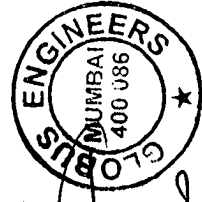
Exclusion

- 1) Rewinding of Motors
- 2) All Statutory Charges

Note: Work to be carried out by engaging all tools & tackles, test instruments, PPE required to carry out above maintenance of electrical systems

Owners Shall only Provide all spares & consumables, special tools if any.

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Darshan

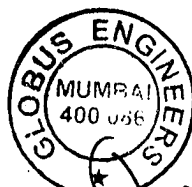
GVK

Annexure 4Essential Conditions For WOs on Compliance with Safety Standards:

- The contractor shall establish and implement an effective safety management system in line with the company policy and as per the directions of the engineer in charge and maintain a high level of safety performance.
- To maintain good safety performance, it is mandatory on the contractor's part that they shall follow safe working practices, laid down procedures of GVK and maintain safe and healthy working conditions for all the jobs in their scope of work, for the entire tenure of the contract.
- The contractor shall ensure to provide recommended & safe working tools / tackles to the workers under their control; immediately before the execution of work.
- The contractor shall ensure to provide all the recommended & required PPEs like safety shoes, safety helmet, adequate hand gloves, dust masks, full body harness (safety belt), apron, ear plugs and goggle etc. of recommended / standard quality before execution of any work. Preferably brands should be M/S Karam, M/s Honeywell, M/s Liberty, M/s Udyogi, M/S 3M, M/s MSA, M/s Tiger)
- All other specific safety gears & gadgets like ELCB, NRV etc. will be arranged by the contractor.
- Contractor shall ensure to carry out the Job safety analysis (JSA), Tool box talk before execution of work.
- Contractor shall ensure that work area is to be cleared of all encumbrances like debris and scrap material which may poses a safety risk to other persons on job in the plant; after the work is completed.
- As the House keeping is very vital component of safety ; hence contractor shall ensure to maintain all house-keeping standard at par to GMP standards.
- The company shall not be responsible for any injury, fatal or otherwise that may be suffered by Contractor's employees at any time during the course of providing services or otherwise, and Contractor shall take due precautions to cover his employees against all such risks at his sole costs.
- In the event of an accident, Contractor shall ensure that timely, proper and adequate medical care is provided to his employees/injured person. Contractor shall ensure that their casuals / employees shall be medically fit.
- Contractor shall ensure to maintain all the safety training records and submit to the safety department of GVK on monthly basis.
- The contractor shall always endeavour and continuously strive to further improve and maintain the overall safety performance of the company by effectively implementing the safety management projects as per the directions given by EICs.
- Contractor shall abide by & ensure compliance with all laid down safety rules. In case of any violation of safety rule, the concerned EICs or safety Official of GVK shall have the power to impose penalty as per the company's GVK safety policy. The prescribed penalty amount shall be debited from respective monthly bills.

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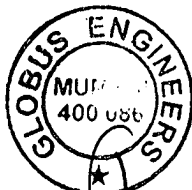
Annexure 5

GVK Power (Goindwal Sahib) Ltd., is committed to protect and improve the Environment and comply with the law & regulations, governing environment protection and conservation. The company strives to provide safe & healthy workplace for its work force and positively contribute towards protection of the environment and conserving energy and natural resources.

As per guiding principles to adhere to **Health, Safety & Environment Policy** adopted by **GVK Power (Goindwal Sahib) Ltd.**, it is also expected that the following points may please be strictly followed by our service providers:

- The prevalent Health, Safety & Environment (HSE) policy as approved & revised from time to time shall be adopted & communicated to their employees by all our associates, to ensure working in an environmentally responsible manner.
- Necessary drives, class room sessions & campaigns etc. shall be undertaken by the associates for spreading awareness among their employees/workers about the GVK's policies and all the related aspects & impacts of our activities / operations on the environment at periodical intervals to encourage desired eco-friendly behavior.
- Contractor shall ensure safe and proper storage & use of all the materials and proper disposal of all the wastes generated by the processes & activities involved with the plant operations, as per the instructions & standard procedures, laid down by the concerned authorized representatives of the management. They will also, always strive to minimizing the generation of waste to prevent pollution.
- Strict compliance shall be ensured by all employees of our associates to the directions regarding maintaining & promoting healthy & hygienic environment and to avoid all factors or nuisance at work place caused for example due to indiscreet spitting on the walls / equipment's, leaving left over foods / containers / plastic wrappers and other waste etc. littering within & around the plant premises.
- Associates will co-operate with the GVK management in our endeavors to promote greenery in and around the plant, for tree plantations and promote preservation of the bio-diversities in the area of the company's operations.

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Annexure 6

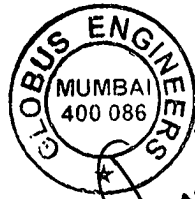
Deployment plan

1. OPERATION

SI No	Description	Qty	
		Unit #1	Additional deployment for both Units
A	Operation Staff :		
1	Site In -charge	1	0
2	Shift In-charge	3	0
3	Desk Operator	3	0
4	ESP Field Operator	3	3
5	Electrical Operator	3	0
6	BA Field Operator	3	0
7	Pump House Operator	3	0
8	HCSD & SILO Operator	6	3
9	ESP Field -Helper	3	3
10	BA Field -Helper	3	0
	TOTAL A	31	9

Note: All manpower is excluding relievers.

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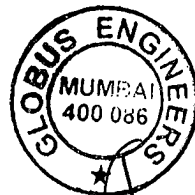
GVK

2. MAINTENANCE

SI No	Description	Qty	
		Unit #1	Additional deployment for both Units
B	Maintenance Staff :		
1	Manager Maintenance	1	0
2	Maintenance Supervisor	3	1
3	MW Fitter	1	1
4	General Fitter	4	1
5	Helper	12	3
6	Welder	2	0
7	Electrical Engineer	1	0
8	Electrician	3	0
9	Electrical helper	3	1
10	C & I/PLC Engineer	1	0
11	C & I Technician	2	0
12	C & I Technician, Shift	3	1
13	C & I Helper	3	1
14	Accounts Officer	1	0
15	Store Keeper/Office Assistant	1	0
	TOTAL B	41	9
	TOTAL A + B	72	18

Note: All manpower is excluding relievers.

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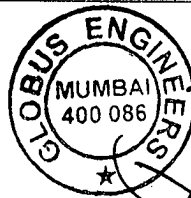
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GVK

Annexure-7

PERFORMANCE MATRIX-KPI											
1.0 EQUIP AVAILABILITY						CONTRACT VALUE					
S No	DESCRIPTION	WEIGHTAGE (MARKS)	KPI % age	TOTAL SCORE (%) FROM DEPARTMENT	TARGET AMOUNT	Penalty	Incentive	Net Amount obtained	Penalty in case of non compliance	Incentive in case of Compliance more than KPI %age	Remarks
1.1	MECHANICAL	35	92% - 95%		878500				1% for every 1% of non compliance to the maxm. Of 10% of target amount indicated below 92%	1% for every 1% of compliance to the maxm. Of 10% of target amount indicated above 95%	*Availability will be done individual department basis on binary System logic of daily equipment availability monitoring.
1.2	ELECTRICAL	12	92% - 95%		301200						
1.3	C & I	12	92% - 95%		301200						
		59			1,480,900						
2.0 MANPOWER DEPLOYEMENT											
S No	TOTAL MANPOWER IN CONTRACT	WEIGHTAGE (MARKS)	KPI % age	TOTAL SCORE (%) FROM DEPARTMENT	Target amount	PENALTY	INCENTIVE	Net Amount obtained	Penalty in case of non compliance	Incentive in case of Compliance more than KPI %age	Remarks
2.1	OPERATION	10	95		251000				1% for every 1% of non compliance to the maxm. Of 10% of target amount indicated.	1% for every 1% of compliance to the maxm. Of 10% of target amount indicated.	Excluding General Holidays i.e 11/ year.
2.2	MECHANICAL	5	95		125500						
2.3	ELECTRICAL	3	95		75300						
2.4	C & I	3	95		75300						
		21			527,100.00						

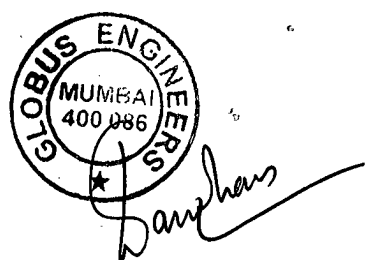
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3.0 PM SCHEDULE COMPLETION											
S No	Description	Weightage	KPI % age	TOTAL SCORE (%) FROM DEPARTMENT	Target Amount	PENALTY	INCENTIVE	Net Amount obtained	Penalty in case of non compliance	Incentive in case of Compliance more than KPI %age	Remarks
3.1	MECHANICAL	8	90%		200800.00				1% for every 1% of non compliance to the maxm. Of 10% of target amount indicated.	1% for every 1% of compliance to the maxm. Of 10 % of target amount indicated above 95%	The contractor is not accountable if the permits and the work fronts are not made.
3.2	ELECTRICAL	3	90%		75300.00						
3.3	C & I	2	90%		50200.00						
		13			326,300.00						
4.0 SAFETY COMPLIANCE											
S No	Description	Weightage	KPI % age	TOTAL SCORE (%) FROM DEPARTMENT	Target Amount	PENALTY	INCENTIVE	Net Amount obtained	Penalty in case of non compliance	Incentive in case of Compliance more than KPI %age	Remarks
4.1	PPE Compl	2	100 %		50200.00				1% for every 1% of non compliance to the maxm. Of 5% of target amount indicated.		
4.2	Lifting tools and tackles	1	100 %		25100.00						
		3			75,300.00						
5.0 HOUSE KEEPING											
S No	Description	Weightage	KPI % age	TOTAL SCORE (%) FROM DEPARTMENT	Target Amount	PENALTY	INCENTIVE	Net Amount obtained	Penalty in case of non compliance	Incentive in case of Compliance more than KPI %age	Remarks
5.10	Bottom ash Area	1	92%		25100.00				1% for every 1% of non compliance to the maxm. Of 10% of target amount indicated.	1% for every 1% of compliance to the maxm. Of 10 % of target amount indicated above 95%	
5.20	ESP area	1	92%		25100.00						

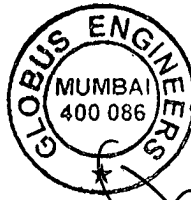
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GVK

5.3 0	Silo Area & HCS D Pump House	1	92%		25100.00						
5.4 0	ASA WPII & Compressor house	1	92%		25100.00						
		4			100400						
		100			2510000						

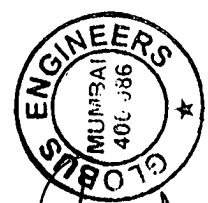
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MECHANICAL EQUIPMENT AVAILABILITY

Sr.no.	List of equipment	Weightage	1/Jul/17	2/Jul/17	3/Jul/17	4/Jul/17	5/Jul/17	6/Jul/17	7/Jul/17	8/Jul/17	9/Jul/17	10/Jul/17	11/Jul/17	12/Jul/17	13/Jul/17	14/Jul/17	15/Jul/17	16/Jul/17	17/Jul/17	18/Jul/17	19/Jul/17	20/Jul/17	21/Jul/17	22/Jul/17	23/Jul/17	24/Jul/17	25/Jul/17	26/Jul/17	27/Jul/17	28/Jul/17	29/Jul/17	30/Jul/17	31/Jul/17	Average Availability		
1	Slurry pump series 1 stage 1, Series 1 stage 2	3																																		
2	Slurry pump series 2 stage 1, Series 2 stage 2	3																																		
3	LP Ash Water Pump #1,2,3	4																																		
4	HP Ash water Pump # 1,2	4																																		
5	Seal water Pump # 1,2	4																																		
6	Clinker Grinder Unit#1, A1,A2,B1,B2	2																																		
7	Clinker Grinder Unit#2, A1,A2,B1,B2	2																																		
8	Feed gate Unit#1, A1,A2,B1,B2	2																																		
9	Feed gate Unit#2, A1,A2,B1,B2	2																																		
10	Economise - Water Pump #1, 2	2																																		
11	BA Overflow Pump U#1, 1,2	2																																		
12	BA Overflow Pump U#2, 1,2	2																																		
13	IAC#1,2	5																																		
14	TAC#1,2 & 3	5																																		
15	Air Drier #1 & 2	3																																		
16	ESP hopper Fluidising Blower #1,2 & 3	2																																		
17	ESP U#1, Pass A 1st,2nd & 3rd field dome valves /double disc valves	4																																		
18	ESP U#1, Pass B 1st,2nd & 3rd field dome valves /double disc valves	4																																		
19	ESP U#1, Pass A 4,5,6 & 7th field dome valves	2																																		
20	ESP U#1, Pass B 4,5,6 & 7th field dome valves	2																																		
21	ESP U#2, Pass A 1st,2nd & 3rd field dome valves /double disc valves	4																																		
22	ESP U#2, Pass B 1st,2nd & 3rd field dome valves /double disc valves	4																																		

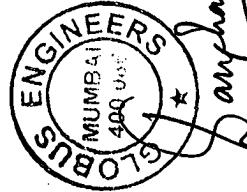


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CGI EQUIPMENT AVAILABILITY

Sr.no	List of Equipment	Weightage	1/5/17	2/5/17	3/5/17	4/5/17	5/5/17	6/5/17	7/5/17	8/5/17	9/5/17	10/5/17	11/5/17	12/5/17	13/5/17	14/5/17	15/5/17	16/5/17	17/5/17	18/5/17	19/5/17	20/5/17	21/5/17	22/5/17	23/5/17	24/5/17	25/5/17	26/5/17	27/5/17	28/5/17	29/5/17	30/5/17	31/5/17	Average Availability	
1	Air compressors & instruments	20																																	
2	bottom ash instruments	20																																	
3	fly ash handling system instruments	20																																	
4	silos instruments	5																																	
5	hosed instruments	5																																	
6	AHP PLC	20																																	
7	AHP UPS	10																																	

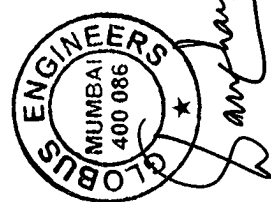


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SAFETY SCHEDULE COMPLIANCE

SN.	Activity	Weightage	1st week of Aug 2017	2nd week of Aug 2017	3rd week of Aug 2017	4th week of Aug 2017	Average Availability	Remarks
1	Use of PPE,s	20					0.0	% of sample
2	Quality of PPE,s	10					0.0	% of sample
3	Housekeeping at work place (After comp. of job)	10					0.0	% of sample
	Use of safety gears	20					0.0	% of sample
5	TPI of lifting tools & tackles	10					0.0	% of sample
6	Accident statistics	16					0.0	% of sample
7	Tool box talk & its record	14					0.0	FA=3, FF=3, LIT=10 2 /day
		100					0.0	



Amal

30th May 2018

To,

M/s. Globus Engineers
 406-407, D-Wing, Neelkanth Business Park
 VIDYAVIHAR WEST
 Mumbai 400 086
 Tel: 022-25101616

ATTN: Mr. DINESH (M): +91 9892110304
Mr. A. VASANTHA

Sub: 2x270 MW GVK Power (Goindwal Sahib) Thermal Power Project, Kapurthala, Tarn-Taran District, Punjab – Extension of Job order for Operation and Maintenance of Complete Ash Handling Plant (AHP) System-reg.

Ref:

1. Work Order No: GVKPGSL/SITE/VO/254
2. Our Letter of Intent ref No. GVKPGSL/LOI/Globus Engineers/17-18, dated 31.05.17
3. Your Final Offer ref No. O&M/24517/Rev2, dated 24.05.17 and subsequent discussions at our office dated 24.05.17.

Dear Sir,

With reference to our work Order No: **GVKPGSL/SITE/VO/254** and based on your acceptance mail received on Thu 31-08-2017 11:17, your order No. GVKPGSL/SITE/VO/254 is being extended for the period of **1st June 2018 to 31st August 2018** with the same terms and conditions against the job order for providing Complete Operation and Maintenance Services of Ash Handling Plant (AHP) System.

Further if the order may be extended for another one year for the period from 1st Sep'2018 to 31st Aug'2019 then some other clauses are to be added (details will be provided to you shortly) in your extended order with the same terms & conditions for improving the quality of services.

Accepted
D. Vasanthan

Subject to
mutual
agreement



GVK Power (Goindwal Sahib) Limited
 Goindwal Sahib Kapurthala Road,
 Goindwal Sahib,
 Dist : Taran Taran - 143 422, Punjab - India.

T +91 01859 225113 F +91 01859 223332
 www.gvk.com
 CIN : U40109TG1997PLC028483

Page 1 of 2

Registered Office
 Raigah House, 156-159, Sardar Patel Road
 Secunderabad 500 003,
 Telangana, India.

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 LIFE SCIENCES

D. Vasanthan

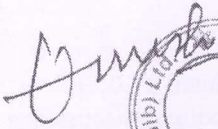





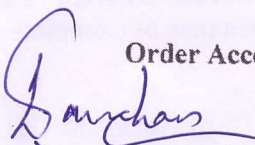

Kindly acknowledge receipt of this extension of job order and confirm your acceptance of the same by signing and returning one copy with in same day.

Yours faithfully

for GVK POWER (GOINDWAL SAHIB) LIMITED



AUTHORISED SIGNATORY

Order Accepted


DINESH KACHHAR
PARTNER
for GLOBUS ENGINEERS


31st Aug 2018

To,

M/s. Globus Engineers
 406-407, D-Wing, Neelkanth Business Park
 VIDYAVIHAR WEST
 Mumbai 400 086
 Tel: 022-25101616

ATTN: Mr. DINESH (M): +91 9892110304
Mr. A. VASANTHA

Sub: 2x270 MW GVK Power (Goindwal Sahib) Thermal Power Project, Kapurthala, Tarn-Taran District, Punjab – Extension of Job order for Operation and Maintenance of Complete Ash Handling Plant (AHP) System-reg.

Ref:

1. Work Order No: GVKPGSL/SITE/WO/254
2. Our Letter of Intent ref No. GVKPGSL/LOI/Globus Engineers/17-18, dated 31.05.17
3. Your Final Offer ref No. O&M/24517/Rev2, dated 24.05.17 and subsequent discussions at our office dated 24.05.17.
4. Your acceptance mail against “Extension of your order No. GVKPGSL/SITE/WO/254 for the period of 1st June 2018 to 31st August 2018 with the same terms and conditions” dated on 30 May 2018 18:09

Dear Sir,

With reference to our work Order No: **GVKPGSL/SITE/WO/254** and based on your acceptance mail received on Thu 31-08-2017 11:17, your order No. GVKPGSL/SITE/WO/254 is being extended for the period of **1st September 2018 to 30th September 2018** with the same terms and conditions against the job order for providing Complete Operation and Maintenance Services of Ash Handling Plant (AHP) System.

Further if the order may be extended for another one year for the period from 1st Oct’2018 to 30th Sept’2019 then some other clauses are to be added (details will be provided to you shortly) in your extended order with the same terms & conditions for improving the quality of services.

GVK Power (Goindwal Sahib) Limited
 Goindwal Sahib Kapurthala Road,
 Goindwal Sahib,
 Dist : Taran Taran - 143 422. Punjab - India.

T +91 01859 225113 F +91 01859 223332
 www.gvk.com
 CIN : U40109TG1997PLC028483

Registered Office

Paigah House, 156-159, Sardar Patel Road
 Hyderabad 500 003,
 Telangana, India.

Page 1 of 2

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Kindly acknowledge receipt of this extension of job order and confirm your acceptance of the same by signing and returning one copy with in same day.

Yours faithfully

for GVK POWER (GOINDWAL SAHIB) LIMITED

A handwritten signature in black ink is written over a circular stamp. The stamp contains the text 'GVK POWER (GOINDWAL SAHIB) LIMITED' around the perimeter and 'INDIA' at the bottom. Below the signature and stamp, the text 'AUTHORISED SIGNATORY' is printed in a bold, sans-serif font.
AUTHORISED SIGNATORY

Order Accepted

A circular stamp with the text 'GLOBUS ENGINEERS' around the perimeter and 'GVK' in the center. A handwritten signature in black ink is written across the stamp. Below the stamp, the text 'for GLOBUS ENGINEERS' is printed in a bold, sans-serif font.
for GLOBUS ENGINEERS



WORK ORDER

WO No: GVKPGSL-SITE-WO/18-19/ 267

September 10th, 2018

M/s. Globus Engineers
406-407, D-Wing, Neelkanth Business Park
VIDYAVIHAR WEST
Mumbai 400 086
Tel :022-25101616

ATTN : Mr. DINESH (M) : 09892110304
Mr. A. VASANTHA

Dear Sir,

Sub: 2x270 MW GVK Power (Goindwal Sahib) Thermal Power Project, Kapurthala, Taran-Taran District, Punjab - Job order for Operation and Maintenance of Complete Ash Handling Plant (AHP) System-reg .

Ref: a) Subsequent discussions held at our office dated 31.08.2018
b) Your Offer ref No. GVK/O&M/22818, dated 22.08.2018

With reference to your offer and subsequent discussions, we are pleased to place a Job Order for providing Complete Operation & Maintenance Services including Housekeeping for Ash Handling System (AHP) at our 2x270MW GVK Power (Goindwal Sahib) Ltd, Kapurthala; Tarn-Taran District, Punjab.

The detailed BOQ/Scope of Work is appended as per Annexures enclosed.

As the contract is purely on Job Performance basis, it shall be your responsibility to deploy the required manpower with appropriate skill sets to Operate and Maintain AHP 24X7 and achieve as per performance matrix (Annexure - 7) attached & try to achieve 99% availability on daily basis as per the BOQ, which will be support to get the services continuously from M/s Globus in future. But as mutually agreed you shall at a minimum deploy the manpower as Annexure 6 Deployment plan.

Based on demand, the Company would be operating either one unit or both the units at any given point of time for which M/s. Globus Engineers has to be prepared for complying with the terms of this Contract.

Gurush

GVK Power (Goindwal Sahib) Limited
Goindwal Sahib Kapurthala Road,
Goindwal Sahib,
Dist : Taran Taran - 143 422. Punjab - India.

T +91 01859 225113 F +91 01859 223332
www.gvk.com
CIN : U40109TG1997PLC028483

Page 1 of 12 Registered Office
Palganj House, 156-159, Sardar Patel Road
Secunderabad 500 003,
Telangana, India.



[Signature]

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Received original Copy of order with all Annexure.





1. COMMENCEMENT OF SERVICES WILL FROM 1ST OCTOBER, 2018

CONTRACT PRICE FOR 1ST YEAR :

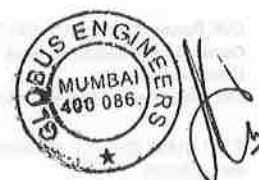
Rs. 24, 85,300/- Per Month – excluding GST (Rupees Twenty Four Lakh Eighty Five Thousand & Three Hundred only) inclusive 1 No. of tractor with diesel & driver for Duct hopper unloading. If more tractor will be provided by Globus as per requirement then amount will be paid extra at actual.

Further, the above Contract price is inclusive of the following:

- All your Service charges & expenses. However, GST will be extra as applicable.
- Salaries and all relevant employee benefits as per your Company Policy.
- All statutory fees that need to be paid for engaging the services to the extent of the services limited to Contractor's scope.
- Accident Insurance in the form of WMC / ESI whichever is applicable to your personnel including your assets
- All relevant statutory payments for contractor's own Tools & Tackles as applicable, as per law.
- Safety appliances, for its owned equipment only, PPEs including Uniforms.
- Tools & Tackles, Hand tools & Safety equipment for Operation & Maintenance.
- Conveyance vehicle for the deployed Personnel
- Accommodation for staff & workers
- All general Consumables for O&M will be in contractor's scope.
- If GVK provides the consumables (which are under M/s Globus scope of supply) in emergency conditions, the same shall be charged @ 125 % of respective material cost and accordingly shall be deducted from RA bill.
- Housekeeping of AHP area with all housekeeping equipments like Floor Scrubber, Vacuum Cleaner, Telescopic Rod and Brooms etc.
- To identify Expert Services on call basis whenever required for preventive & routine maintenance specifically only.(OEM Services shall be in the scope of the owner.)
- Any small modification/ safety requirements for system reliability should be in contractor scope without any additional cost. (Fabrication / erection of hand railing /platform etc). (If the quantity is more than 10 running meter, additional amount/ consumable shall be provided by the owner).

2. CONTRACT PERIOD:

This contract is initially being awarded for **one year (01)** and can be extended annually up to a period of three (03) years, subject to the satisfactory performance and due certification and recommendation of the Plant Head with 6% of escalation in the existing contract value with same terms & condition. In case of any substantial change of any terms & condition or scope of work, the renewal of the contract with relevant escalation in the rate of the workers' wages or in any other technical aspects of the work executions, justifiably, can be considered. However, GVKPGLS reserves the right to go for retendering for rates justifications.





3) List of deployment plan for smooth Operation & Maintenance:

As the Contract is purely on Job and Performance basis, the Deployment Plan rests with the Agency based on his experience for bringing adequate technical –Skilled and Semi-skilled personnel suitable to operate and maintain the AHP on a 3 shift basis to run both or single Units to achieve as per performance matrix as mentioned annexure 7 and try to 99% availability for the same, which will be support to get the services continuously from M/s Globus In future. However if the job demands more manpower to fulfill the scope of work as specified above and detailed Job Area-wise Activities, you shall deploy the required additional manpower at no extra cost, for completion of the AHP. The deployment should be made available on all Days (Round the clock) including Sundays and General Holidays during the period of contract. Minimum manpower to be deployed is as per Annexure 6

4) Minimum Qualification of Staff Required for Operation and Maintenance:

1. The Deployment Plan as agreed upon for Skilled, Semi-Skilled & Un-skilled Personnel has to be adhered to, based on the area of activities as per the BOQ on a 3 shift basis.
2. Diploma (Elect/Mech.) Engineers with 1-2 years of experience in operation of High concentration ash slurry disposal system and dry ash handling from PLC including Vibro Analysis System will be considered for Ash Handling Control room.
3. Supervisor should be Diploma (mech.) Engineer with 2-3 years of exp. in maintenance of AHP.
4. Maintenance Manager should be Diploma (Mech.) Engineer having 5-7 year of experience in AHP.
5. For other works in Ash Handling system, ITI/12th passed Operators/Technicians with relevant experience of 2-3 years may be considered.
6. The Site In charge should be Diploma Engineers with 8-10 years of relevant Experience in Thermal power plant (O&M).
7. He should be physically fit in all respects.
8. Minimum qualification criteria for selection of PLC engineer should be B. Tech/Diploma with 4 - 6 years of relevant experience.
9. Minimum qualification criteria for selection of C & I Technician should be Diploma / ITI with 2 - 4 years of relevant experience.
10. Minimum qualification criteria for selection of C & I Helper should be ITI / 12TH with 1 - 2 years of industrial experience.
11. Minimum qualification criteria for selection of Electrical Supervisor should be Diploma / ITI (Elec) with 8 - 10 years of relevant experience & also with statutory license.



12. Minimum qualification criteria for selection of Electrical Technician should be Diploma / ITI (Elec) with 3 - 8 years of relevant experience & also with statutory license.
13. Minimum qualification criteria for selection of Electrical Helper should be ITI (Elec) with 1 - 2 years of industrial experience & preferably statutory license

**Incase contractor want to engage electrician/supervisor without statutory license, it should be arrange within next 6 months. Any extension of that is GVK discretion based on requirement of manpower. GVK may impose penalty incase contractor do not take adequate initiative to get the license.

5) Special Conditions of the Contract :

- A. Lubricating oil for bearings and grease shall be provided by GVKPGSL. The Contractor shall ensure safe custody of all consumables & spares issued to him by concern departments. Pilferage, unaccounted consumption of grease/oil shall be liable to be recovered from monthly bills.
- B. For any loss or damage to the plant assets, due to the negligence of the contractor or any pilferage of property of the GVKPGSL, the contractor shall be liable to pay the cost of such repairs or replacements plus an overhead / penal charge of 25% of the total cost of such repairs / replacements. Alternatively, the same can be recovered from / adjusted in the next running bills submitted by the contractor.
- C. The induction of new Technicians / Diploma Engineers shall be interviewed & certified by the concern EIC's to ensure & maintain quality of the assigned Job.
- D. Concern EICs has the right to reject any personnel provided by the Contractor, if found not suitable at any point of time during execution of the contract, & the Contractor shall arrange for suitable replacement immediately in compliance with the labour laws.
- E. In case of any prolonged shut down of any one or both the units of the station, the contractor shall be liable to mobilise as per the direction of EICs, additional manpower Experts / Engineers/ Technicians of desired qualification / competencies and experience, within one week's time, for attending the shutdown defects planned, within the available stipulated time. Man-day's rate of extra manpower(categories) will be considered as per your offer enclosed with annexure - 6 (Page 3 of 3).
- F. Similarly for the pre-determined maintenance jobs / defects liabilities, to be attended during the short shut downs (less than a week), contractor shall mobilise, if so required, additional experts / engineers/ technicians for attending the defects at no extra cost. No extra payments shall be made for such maintenance works.(OEM services shall be in the scope of owner).

6) GENERAL TERMS & CONDITIONS:

- 1) State Entry Tax for all contractors' equipment, consumable spares, tools or any other contractor material is the responsibility of the contractor.
- 2) No child labour should be engaged for the entrusted work.
- 3) Work shall be carried out 24hrs on all days including Sundays and holidays.





- 4) The Contractor shall have all valid licenses and permits to carry on the work taken up. GVKPGSL shall be indemnified from all liabilities, claims and damages by the contractor in case of any failure on the part of the contractor in fulfilling these requirements.
- 5) Contractor shall make his own transport & accommodation arrangement for his staff.
- 6) Contractor shall submit medical fitness Certificate of all his staff to GVKPGSL before joining at the site and subsequently as per statutory requirements as per Factories Act.
- 7) Employees thus employed by the Contractor in the Carrying out Operation and routine/Breakdown / Maintenance works of AHP Areas limited for a period of one year shall regularly undergo medical check-ups on the direction of authorized representatives of management whenever felt necessary and fitness certificates obtained from the Hospital should be produced to the management.
- 8) The above premises are the property of the GVKPGSL and the Contractor is only permitted to enter into this property for carrying out contractual obligation only. Whenever the contract is terminated or the contract comes to an end or GVKPGSL decides that the Contractor should not be allowed to run the same, in that event, GVKPGSL will be entitled to restrain the Contractor from entering Goindwal Sahib Premises.
- 9) The antecedents of the staff engaged by the Contractor for the work should be verified through local police or by any other Government Agencies and only suitable persons with clean record should be engaged. The Contractor shall be responsible for the good conduct of his staff while on duty as well as off duty in GVKPGSL premises and the staff shall present themselves as responsible persons at all times.
- 10) This contract shall not grant any claims to the labour engaged by the Contractor for any appointment in GVKPGSL either during the currency of the contract or any time at a future

7) Tools & Tackles :

The contractor shall arrange general T & P as per the requirement from time to time and as per the site requirement. The Contractor shall submit a list of T&P which are proposed to be brought to site. Special T&P – if any shall be provided by owner. For such T&Ps the Contractor shall be responsible for safe custody and repair of damages due to mishandling / negligence shall be the responsibility of the contractor. Mobile material handling equipment like hydra / crane, tractor trolley and vans etc. shall be under the scope of contractor as per the work requirement.

8) Spares and Consumable :

All required general consumables are to be provided by M/s Globus on FOC. The agency shall be responsible for safe and proper custody of such materials issued for execution of the job. Proper accounts for materials issued shall be submitted to the owner's representative along with the monthly bills. Any shortage shall be debited from the monthly bills. Scrap shall be returned to the stores and in the monthly bills owners representative shall certify that all the relevant scrap and other materials which are not further required are returned to the store/ scrapyard.





On completion of the contract the final bill shall be processed only after the agency has returned to stores all the owner's spares, consumables, scrap and T&Ps in good condition.

If GVK provides the consumables (which are under M/s Globus scope of supply) in emergency conditions, the same shall be charged @ 125% of respective material cost and accordingly shall be deducted from RA bill.

Damage of Spare parts due to poor workmanship / material handling shall be liable for penalty @ 125% of respective material cost and accordingly shall be deducted from RA bill.

9) **FACILITIES TO BE PROVIDED BY THE AGENCY:** Agency should make their own arrangements for providing accommodation & conveyance for their staff. Also the following facilities shall be provided.

- a. **Communication:** The agency shall identify a site in Charge from amongst his staff who shall coordinate the daily activities with GVK Engineer In Charge.
- b. **Uniform:** The agency shall provide uniforms to all his staff.
- c. **Arrangements for providing food, drinking water etc.** to their staff engaged is in the scope of agency.

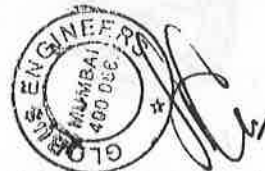
10) **LOSS / LIABILITIES:** In case of theft of any property belonging to the Company inside premises, the agency shall depute its Investigators at its cost to conduct inquiry and shall submit the report accordingly and similarly investigation shall be initiated from the Company & if required the matter shall be reported to Police and other Authorities. The agency shall subject the staff for police interrogation / investigation and shall assist in the follow-up of the investigation by the police. If it is proved by the joint enquiry police interrogation that the theft is directly due to negligence of the staff, the loss shall be recovered at the rate of, entire cost of lost material / maximum previous month billing whichever is less. The recovery shall be affected as per the instructions of Plant Head in one or more installments.

11) **DISCIPLINE:** The Agency shall ensure that he and his employees maintain proper discipline and decorum at GVK while dealing and executing the contract so that there should not be any hindrance for the smooth running of the power plant. If any of the employees of the Agency is found unsuitable by the Engineer-in-Charge, then on demand by GVK, such employee shall be removed and the Agency shall depute another employee in his place immediately.

12) **DAMAGES TO THE PROPERTY:** The Agency shall be liable to pay damages caused to the property of GVK, on account of negligence or defective working on the part of the agency and his employees. Such amount of damages shall be recovered from the bills of the Agency and the Agency shall be liable to pay such damages to the GVK.

13) **SAFETY AND SECURITY:**

The plant activities such as plant operation and maintenance services are covered under factory act 1948 and Punjab factory rules. The contractor should adhere to all safety norms as per the requirement of factory act guidelines. Contractor shall provide personnel protective equipment, prepare working platforms, make safety risk analysis, supervise all safety norms of workers, safety precautions, ensure safety in all respect while execution of work. In the event of any injuries /





accidents contractor shall report to the concerned Engineer In charge / safety officer /GM. The contractor shall take all the responsibilities for arranging treatment to the injured persons. In case of any major/fatal accidents contractor shall adhere to all the statutory guidelines such as payment of workmen compensation, submission of compliance and explanation to the statutory authority and take over all the legal responsibilities as per the guidelines of the factory act.

All safety PPEs of standard / approved quality such as safety shoes, helmet, belt, hand gloves, facemask, goggles, power and control fuse puller, portable earthing rod, HT/LT gloves, electric arc suits, torches for emergency, chemical handling safety equipments etc. in sufficient nos, shall be purchased by the contractor. The contractor shall maintain the records of issued PPEs to all workmen deployed during work. If the contractor fails to provide any of the same, these Safety gadgets will be arranged by GVKPGSL and one and half time of the cost will be deducted in the next forthcoming Bills. Any additional safety devices / equipments as instructed by concerned EICs which are required to carry out the various works, the same shall be provided by the contractor free of cost within a reasonable time.

No personnel shall be allowed to work without the required and adequate safety equipments.

Essential Conditions for Compliance with Safety Standards are attached as per Annexure -4

Environmental key points to be adhered by Contractor are attached as per Annexure-5

14) RIGHTS OF GVK:

- A. The GVKPGSL authorized Officers shall have the power, to issue notice in writing from time to time, in the execution of the work and to instruct / direct the Contractor to make alterations / variations in the work.
- B. If the Contractor fails to carry out the assigned works under the scope of this contract satisfactorily during the currency of the Contract, GVKPGSL shall have the power to enter upon and take possession of the works and to engage any other person, firm or contractor to complete the work. Twice the cost incurred by the GVKPGSL due to such failure shall be recovered from the contractor. A written communication shall be sent to the contractor by concerned EICs on case to case basis and all decision in this regard, finally, shall be with the Plant Head.
- C. To prevent disputes and litigations, it shall be accepted as an inseparable part of this contract that in matters regarding work, interpretation of contract, mode of procedure and carrying out the work, the decision of Plant Head)-GVKPGSL shall be final and binding on the Contractor.
- D. GVKPGSL shall reserve the right to decide to extend the contract for any period of time (up to another 24 months after the first year of satisfactory execution) or short close the contract with an advance notice of two months, if the quality of execution of the assigned works by the contractor has been found to be unsatisfactory or for any other reasons thereof for discontinuation of the contract, without assigning any reasons thereto..





- E. Beyond three years period, if required, due to any exigency, GVKPGSL shall have the right to extend the contract for a reasonable period of maximum three months at the then prevalent terms and condition of the contract.
- F. GVKPGSL reserves the right to forfeit the security deposit upon termination of the contract at any time.

15) TERMINATION OF CONTRACT:

- A. If the agency neglects to execute the work with due diligence and expedition or does not comply with the instruction given, the Company reserves the right to terminate the contract by giving a month notice and Security Deposit will be forfeited.
- B. If the agency fails to carry-out Operation, Preventive Maintenance, routine / break down maintenance works to the satisfaction of the Company,, the Company reserves the right to terminate the contract with one month notice and recover damages beside forfeiting security deposit in full and also from the other amounts, bills etc., payable to the agency. The decision of Company is final.
- C. If the services of the Agency in GVK found not satisfactory and if any of the conditions are violated, the Plant Head reserves the right to terminate the contract prematurely without any compensation on any kind of loss.
- D. Misbehavior on the part of laborer / workmen / technician, rash and negligent driving by the operator deployed by the agency shall be reviewed very seriously and the contract may be terminated if the same attitude is continued in spite of three notices issued by the GVK.

16) PRICES, TAXES AND DUTIES INCLUDES:

- A. Wages and allowances includes insurance, PF, HRA, conveyance, medical facility, Administration, transportation, and communication etc to your personnel.
- B. Providing vehicles, communications, uniforms, safety gadgets other unforeseen Items.
- C. The price is exclusive of GST as applicable. The GST shall be reimbursed as per actual on production of documentary proof.
- D. Operation and maintenance of AHP works as stated under scope of work item wise and Job area-wise Activities.
- E. The price is inclusive of all requirements of Licenses wherever required, statutory taxes and duties for the above components.

PRICE VARIATION: No price variation shall be admissible. The agreed rate of the contract holds for entire 12 months period of the contract.





17) BILLING AND PAYMENT:

Contractor shall provide PAN/GIR Number to GVKPGSL Deduction of Income Tax, and Other Applicable Taxes and Duties etc.

Preceding month's all clear bill / invoices shall be raised as per the performance matrix and submitted to EICs latest by 2ND or 3RD the next month, the Contractor should furnish the bills along with all other requisites such as, proof of attendance & wages disbursement with bank statements, PF / ESIC remittance statement (for the previous month before the billing month), GST statement (for which the tax has been released) and other related records along with bills.

In case of shortage of manpower / Holidays (as per GVKPGSL calendar) the contractor shall ensure the payment of overtime & C-off as applicable to the workers deployed on these accounts as per the statutory requirement.

On receipt of bills by EICs, the verified & certified bills will be forwarded to HR department for all related compliance checks, subsequently to Accounts for releasing the payments.

Bill claims for Payment, after due verifications for recommended deductions / penalties will be forwarded by the GVKPGSL accounts department to the Plant Head for necessary approval and subsequently sent to HO Accounts for the release of final payments.

All Payments shall be made through account payee cheque./RTGS /Electronic payment gateways & all the bank charges shall be borne by Contractors.

18) PENALTY & LIQUIDATED DAMAGES:

The Contractor shall provide continuous availability of manpower, the work execution as per the laid norms of timeliness, performance with quality, as per the terms & condition of this Work Order and this is the essence of this contract. In case of non-performance, the GVKPGSL reserves the rights to make deductions as per the performance evaluation matrix (Annexure- 7).

If the planned works are not completed within the reasonable time over and above the scheduled time or in case of repetitive breakdowns / failures immediately after any maintenance due to any oversight or ignorance or inadequate supervision / improper maintenance (both for PM or CM or Overhauling jobs on any equipments) will be liable for penalization up to Rs 25000/- on case to case basis from RA Bills.

Contractor shall deploy the specified manpower grade /category wise with all the envisaged required statutory certificates, else he will be liable for a penalty up to Rs. 50000 for every individual cases, over and above the pro-rata deductions on account of short all of targets of manpower attendance, as per the deployment plan.

GVKPGSL reserve the right to impose all the above penalties simultaneously,



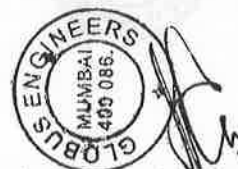


19) PERFORMANCE GUARANTEE / SECURITY DEPOSIT:

- A. The Agency shall furnish a non Interest bearing Security Deposit for equivalent to one month contract value of Rs. 24, 85,300 /- in the form of Bank Guarantee. The Bank guarantee shall be valid till the completion of contract period. Alternatively, the Agency may opt for recovery of Security Deposit from their 1st month bill.
- B. The Security Deposit shall be refunded only on completion and closure of the contract to the satisfaction of the GVK. If GVK incur any loss or damage on account of non-fulfilment of obligations under this contract, then such losses / damages incurred by GVK shall be deducted from the Security Deposit. The amount so deducted / adjusted shall not be refunded to the Agency.
- C. In the event of any upward revision in the value of the contract arising on account of increase in the quantity handled or increase in the rates the GVK reserves the right to call for Additional Security deposit amount and Agency shall, on receiving intimation from the GVK, increase the Security Deposit suitably as may be directed by the GVK within 30 days.

20) STATUTORY RULES AND REGULATIONS:

- A. The Contractor shall register under the Contract Labour Act or any other Labour Acts as may be applicable from time to time. The Contractor shall follow all the provisions of Labour laws and other laws including the Payment of Wages Act, Minimum Wages Act, Factory act, Child labour act, Workman Compensation Act and other Local Laws and rules framed there under from time to time. Any amount payable to the employees of the Contractor under any of the law by the Contractor, if demanded from the Corporation being a Principal Employer, same shall be recovered from the Bills of the Contractor. The Contractor shall maintain all registers and records as required under the various laws and regulations made there under from time to time. The Contractor shall make arrangements for the engagement of labors according to the provisions of Indian Labour Laws and the local acts and for the payment thereof. The Contractor shall pay rates of wages and observe conditions as defined in the Contracted Labour Law of State of Punjab. On receipt of the order, the Contractor shall furnish copies of all relevant documents to this contract to GVK Power (Goindwal Sahib) Ltd. The Contractor and his employee shall observe all the statutory rules and regulations of the power stations limited to the extent of their scope of work and the provisions of the other labour laws and regulations made there under which are applicable to the power stations.
- B. In the event of any accident / injury / fatal to the Contractor employee during the course of his employment in pursuance of the present contract, the Contractor shall be responsible to pay the compensation or any sum payable to such employee under the provisions of Law or Regulations made there under including the provisions of Workman Compensation Act. The Contractor shall arrange for treatment, medical facility and dealing with statutory /legal other all responsibility are rest upon Contractor.
- C. The Contractor shall comply with all relevant acts, rules by-laws, regulations and all other statutory requirements of local or other authorities, having jurisdiction over the areas and shall





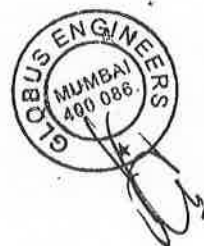
- be responsible for the payment of all fees and other charges limited to the extent to their scope of work only and giving and receiving of all necessary notices and keep the Plant Head informed of the said compliance with such acts, rules, by-laws, regulations, statutory requirements, payments made, notice issued and received.
- D. The Contractor shall also be responsible and fulfillment of all the statutory obligations under the statutory provisions such as Provident Fund etc. in respect of his personnel posted under this contract. The Contractor shall arrange to deposit the contribution towards the PF (both employees and employers) to the concerned Authorities at the notified rates promptly.
- E. The Contractor shall cover the personnel under personal risk Insurance Scheme. The copy of the Policy should be produced, as a proof for having insured/ PF remittance. The deductions towards PF shall be at the rate as prescribed by the Government from time to time.
- F. Salary/wages of manpower should be done upto 10th of every month.

21) INDEMNITY:-

- i) Furthermore, the Agent hereby shall undertake to indemnify and keep harmless forever, the Owner /Principal Employer from and against all losses, claims, demands, actions, liabilities and expenses under any labour enactment in respect of the labour involved in the said Services, for the period of the Contract, which might arise during the subsistence of the contract or at any future point of time. The above said indemnity would include compliance under the Minimum Wages Act, 1948, The Employees' State Insurance Act 1948, if applicable, The Employees Provident Fund and Miscellaneous Provisions Act, 1952 and any other extant Act or any other Act, which might become applicable or which might come into force during the tenure of the contract.
- ii) In case of any manner of action initiated by the Authorities implementing or enforcing labour laws against the Owner in respect of the employees of the Sub-contractors, notwithstanding and without prejudice to the other civil remedies for damages available to the Owner, by virtue of the indemnity clause herein contained, the Owner shall, in addition, be entitled to implead the Contractor as a necessary party to the proceedings before such authority.

22) ARBITRATION:-

In case of any dispute or differences, breach and violation relating to the terms of this Job order, the said dispute or difference shall be referred to mutually agreed sole arbitrator - who will be the Managing Director of the Company GVKGPL, and that the award of the arbitrator shall be final and binding on both the parties. The adjudication of such arbitrator shall be governed by the provision of the 'ARBITRATION and CONCILIATION Act, 1996' or any statutory modification or reenactment thereof or any rules made thereof.





- 23) **FORCE MEJEURE** : At any time during the continuance of this contract, if the performance in whole or in part of any obligation under this contract shall be prevented or delayed by reasons of any war, hostility, acts of public enemy, acts of civil commotion, strikes, lockouts, sabotage fires, floods, explosions, epidemics, quarantine restrictions or other acts of God (hereinafter referred to as eventualities) then, provided notices of the happening of any such eventuality is given by Agency to the Company within 15 days from the date of occurrence thereof, neither party shall, by reasons of such eventuality, be entitled to terminate this contract, nor shall have any claim for damages against the other In respect of such non-performance or delay in performance, and deliveries under this contract shall be resumed as soon as practicable after such eventuality has come to an end or ceased to exist. Provided that if the performance in whole or part by Agency or any obligation under this contract is prevented or delayed by reasons of any eventuality for a period exceeding 60 days, both parties to the contract may at their option terminate this contract by a notice in writing.

Yours faithfully

for GVK POWER (GOINDWAL SAHIB) LIMITED

Order Accepted

Gurpreet

 AUTHORIZED SIGNATORY

[Signature]
 26/9/18
 for GLOBUS ENGINEERS



Enclosures:

- i. Annexure 1A – Maintenance of Ash handling plant
- ii. Annexure 1B – Operation of Ash handling Plant
- iii. Annexure 1C – Exclusions
- iv. Annexure 1D – Facilities by GVKPGSL
- v. Annexure 2 – C&I job list
- vi. Annexure 3 – Electrical job list
- vii. Annexure 4 – Compliance with Safety Standards
- viii. Annexure 5 - Environmental key points to be adhered by Contractor -
- ix. Annexure 6 - Deployment plan
- x. Annexure 7 - Performance Matrix (KPI)
- xi. Annexure 8 - Housekeeping staff deployment
- xii. Annexure 9 – Performance Matrix HR

Annexure - 1A

Scope of work includes Day to day Operation and Maintenance of Mechanical, C&I, Electrical equipment and associated PLC systems for the following: -

- Bottom ash and bottom ash overflow system.
- Economizer system
- Fly ash pressure conveying system below ESP to silo within design nos of cycles (in case of worst coal cycle counts can be relaxed on pro rata to Ash % in coal).
- Ash slurry disposal system up to Ash dyke.
- Instrument and Transport air compressor system
- Ash water pumping system.
- Seal water Pumping system.
- Silo Unloading system.
- ESP Hopper and silo fluidizing system.
- Ash handling below boiler hopper.
- High Concentration Slurry Disposal system up to Ash dyke (ratio not less than 50:50).
- ESP inlet Duct hopper unloading
- Cleaning of Equipment.
- Transportation of spares and materials from plant's stores to work site and scrap materials from work site to plant's store.
- Preparation and implementation of preventive maintenance program.
- Facilitate smooth coordination with GVK Officials for trouble free O&M and suggesting for improvement in O&M.
- Supply of Consumables such as, welding rod, cutting gas, emery paper, cotton waste etc.
- Periodic Housekeeping of whole concerned area including ESP, Switchgear room and AHP Control room, Ash slurry pump house, HCSD pump house, Silo area, Ash related area below the boilers including boiler / ESP peripheral drain channel.
- In case of any necessity of rolling or replacing of ash disposal pipes or shifting of the disposal pipe inside the ash pond, such maintenance of ash disposal piping up to and ASH pond about 3.5 km in length shall be in this scope.
This will exclude the pending project works (balance garlanding of ash disposal piping)
- In case of any welding in ash disposal piping, if electricity is available will be provided by GVK. Otherwise agency shall get it done at his own cost, arrange DG set with diesel etc. For that if hydra needed, the agency shall arrange & mobilize the same as and when required at their own cost.
- Contractor to provide one tractor-trolley with driver and required diesel for housekeeping in AHP area, 24x7. In case of exigency, extra tractor-trolley to be engaged by contractor with extra cost burden to GVK. Also, monthly break-up of

Annexure - 1A Page 1 of 2



- diesel (variable part) to be mentioned separately. If required, duct hopper cleaning may have to be done with same tractor-trolley.
- Operation and maintenance of AHP weighbridge shall be in the scope of the Agency. If required OEM expert shall be called by GVK. The work assistance shall be provided by the Agency.

A) Maintenance – Mechanical:

- A) The maintenance work will cover Routine, Preventive, Predictive, Breakdown maintenance of the system, sub-systems and equipments.
- B) Execution of equipment overhauls.
- C) The maintenance work will include servicing / replacement, internal checking, trouble shooting and rectification of defects of equipments.
- D) During any short or long shutdown the defect rectification and preventive maintenance responsibility is covered in the scope of this contract.
- E) Arresting Ash / water / Oil / Air leakages.
- F) Replacement and Servicing of all type of Valves.
- G) Replacements of valves, flanges, fasteners, orifices, pipe fittings, traps, filter elements etc. Cutting & welding work required for the same.
- H) Repairing of spares which can be further used .

B) Preventive / Online Maintenance – C&I & Electrical

- Troubleshooting / Corrective Maintenance of PLC Control System & Field Instruments.
- Cleaning of all Local Field Instruments, Instrumentation Equipment, Local Junction Boxes and Cable Trays.
- Checking & Calibration of Level Instruments.

Note: For smooth Operation & maintenance of AHP, if any activity/area pertaining to AHP not mentioned above shall be in the scope of this contract.




Annexure 1 B

OPERATION OF ASH HANDLING SYSTEM:

- 1 Taking charge of Ash Handling Control room, Operating dry ash & wet ash slurry system from PLC as well as from local, Operation and de-ashing of Bottom ash hoppers & Ash Silos as per Standard operating procedures & instructions of Shift charge Engineer (SCE) or his representative.
2. Routine check-up of healthiness of ESP fields, rapping mechanism, hopper heaters & ash handling equipment. If anything found abnormal, inform the same to UCE/SCE.
3. Isolations and normalizations of different systems are to be done during issue/discharge of Work permits for maintenance works or during leakages of ash conveying pipes/ cooling water lines/ air lines as per instructions of UCE/SCE.
- 4 Local Line-up, starting & stopping of ash transport compressors, compressors driers, ash slurry system, etc. are to be carried out as per standard operating procedures. Any vibration, abnormalities, leakages should be brought to the notice of UCE/SCE or control room Engineer immediately. Any oil leakage shall be informed to UCE/SCE and isolate immediately and area is to be cleaned by spreading sand over it.
- 5 Ensure proper running of ash evacuation system (Both dry and wet).
- 6 Evacuate bottom ash hopper at least once in every shift and ensure there shall not be any ash build in Bottom ash hopper and if so, corrective action is to be taken.
- 7 Check, monitor & record ash evacuation system and inform the same to UCE/SCE.
- 8 Routine Check-up and monitoring of transport air Compressors, Slurry Pumps and all balance rotary equipment from local and record the same in the Log Book.
- 9 Operate Ash Silos and unload moist/dry ash in the Trucks/Bulkers as per instructions of UCE/ his representative.
- 10 Ensure Zero dust emissions & spillage during unloading of ash in Trucks/ Bulkers at Silos.
- 11 Ensure all ESP fields are available and charged. (Spark rate < 2 / min.)
- 12 Ensure all ESP ash collecting hoppers are maintained below its high level alarm.
- 13 Ensure Economizer & APH ash collecting hoppers are maintained below 50% level.
- 14 Ensure Ash silo level shall not > 50% at any time.
- 15 Ensure level of ash in the Bottom ash hoppers shall not >50% at any time.
- 16 Ensure continuous running of ash evacuation system of Economiser hoppers.
- 17 Ensure proper operation of ash water recovery systems & maximum water recovery.
- 18 Ensure minimum make-up water requirement for wet ash handling system.
- 19 Maintain proper chemical dosing in ash water as per instructions of Shift Chemist.
- 20 Any line leakage/dome valve problem/ C&I problem in the Ash evacuation system (dry ash/wet ash) due to which ash handling system suffers, should be attended without delay. For this, the AHP control room Technician/Engineer



- should co-ordinate with the maintenance department to get the job done. If, problem persists for more than 3 hours, inform SCE/UCE to expedite the work.
- 21. Topping up of bearing oil, greasing of motor bearings. Minor and routine maintenance like attending gland leakage, replacement of small valves etc. shall be part of this job. Bearing oil greases and spares shall be provided by GVK Power Ltd.
 - 22. Electrical isolation of equipment like racking out of circuit breakers, switching off power supply and removal of power and control fuses for carrying out maintenance on the equipment & subsequent restoration of all the isolations are to be carried out.
 - 23. De choking of Ash Conveying line shall be done by the field Operator.
 - 24. De choking of ash silo discharge chute shall be done by ash silo Operator.
 - 25. Ensure ash slurry discharge point at ash Pond, Ash Pond and ash water recovery system are healthy and if found any abnormality, inform to SCE.
 - 26. Ensure good house-keeping within 24 hours of ash collection in Ash Silo area, ESP and Bottom ash hoppers area and boiler bottom hopper areas.

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Annexure- 1C**Exclusions**

The following works shall be excluded from the above scope of work:

1. All lubricants such as oil and special grease However damage / wastage of these due to poor workmanship / material handling shall be liable for penalty @ 125% of the respective material cost and accordingly shall be deducted from RA bill
2. Extension / major modification of wet ash disposal pipeline.
3. Supply of spares, Hardware, Paints, Gaskets, any special sealant & special welding rods etc.
4. Repair and maintenance of civil and structural works.
5. Maintenance of air conditioning, ventilation system and painting.
6. Dismantling and re erection of major equipment for replacement.
7. Providing of power supply if available for attending Ash disposal lines.
8. Lab Instruments (For Testing / Calibration). However damage / wastage of these due to poor workmanship / material handling shall be liable for penalty @ 25% of the respective material cost and accordingly shall be deducted from RA bill.



A handwritten signature in black ink, appearing to be "S. S.", written next to the circular stamp.


Annexure- 1D

Services / Facilities to be provided by GVKPGSL

The following service / facilities shall be provided by GVKPGSL:

1. All lubricants and spare parts as required.
2. Required shut down permit for carrying out maintenance work as required.
3. Compressed air, electricity, water and lighting.
4. First Aid facility shall be provided by GVK on need basis.
5. OEM Service for the major equipment.

A handwritten signature in black ink is written over a circular stamp. The stamp contains the text "GVK POWER SERVICES" around the perimeter and a central mark.

A circular stamp for "GLOBUS ENGINEERS" is positioned next to a handwritten signature. The stamp includes the text "GLOBUS ENGINEERS" and "ESTD 1982" around the edge, with a central logo.

Annexure 2 Scope of Work for C & I Maintenance Activities for 2 x 270 MW GVK Power (Gandwal sahib) Limited Area: Complete AHP Area				
Sr. No	Area / System	FUNCTIONAL LOCATION	Nature of Activities	REMARKS
1	AHP	IN MNT OF ASH SLURRY SERIES PUMP	Pressure Guage Cleaning & Inspection	
			Pr. Guage Calibration; If Required	
			Pr. Switch Cleaning & Inspection	
			Pr. Switch Cable Termination Tightness	
			Pr. Switch Calibration; If Required	
			SOV Inspection & Cleaning (If Required)	
			SOV Cable Termination Tightness	
			Pnematic Tubing & Fittings Leak Check	
			PU Tubing/Fitting Replacement (If Req)	
			Limit Switch Cleaning & Inspection	
			Limit Switch Cable Termination Tightness	
			Limit Switch Setting (If Required)	
			LT Cleaning & Inspection	
			LT Cable Termination Tightness	
			LT Calibration/ Setting (If Required)	
Cable Termination Tightness at Elec Bkr				
Cable Termination Tightness at RIO				
JB Cleaning, Cable Termination Tightness				
Health Check of Signals at PLC/SCADA/HMI				
2	AHP	IN MNT OF HP WATER PUMP	Pressure Guage Cleaning & Inspection	
			Pr. Guage Calibration; If Required	
			Pr. Switch Cleaning & Inspection	
			Pr. Switch Cable Termination Tightness	
			Pr. Switch Calibration; If Required	
			SOV Inspection & Cleaning (If Required)	
			SOV Cable Termination Tightness	
			Pnematic Tubing & Fittings Leak Check	
			PU Tubing/Fitting Replacement (If Req)	
			Limit Switch Cleaning & Inspection	
			Limit Switch Cable Termination Tightness	
			Limit Switch Setting (If Required)	
			LT Cleaning & Inspection	
			LT Cable Termination Tightness	
			LT Calibration/ Setting (If Required)	
Vibration Sensor Cleaning & Inspection				
Vibration Sensor Tightness				
Vibration Module Cable Termination Tight				
Cable Termination Tightness at Elec Bkr				
Cable Termination Tightness at RIO				
JB Cleaning, Cable Termination Tightness				
Health Check of Signals at PLC/SCADA/HMI				
3	AHP	IN MNT OF LP WATER PUMP	Pressure Guage Cleaning & Inspection	
			Pr. Guage Calibration; If Required	
			Pr. Switch Cleaning & Inspection	
			Pr. Switch Cable Termination Tightness	
			Pr. Switch Calibration; If Required	
			SOV Inspection & Cleaning (If Required)	
			SOV Cable Termination Tightness	
			Pnematic Tubing & Fittings Leak Check	
			PU Tubing/Fitting Replacement (If Req)	
			Limit Switch Cleaning & Inspection	
			Limit Switch Cable Termination Tightness	
			Limit Switch Setting (If Required)	
			LT Cleaning & Inspection	
			LT Cable Termination Tightness	
			LT Calibration/ Setting (If Required)	
Cable Termination Tightness at Elec Bkr				
Cable Termination Tightness at RIO				
JB Cleaning, Cable Termination Tightness				

4	AHP	IN MNT OF SEAL WATER PUMP	Health Check of Signals at PLC/SCADA/HMI	
			Pressure Guage Cleaning & Inspection	
			Pr. Guage Calibration; If Required	
			Pr. Switch Cleaning & Inspection	
			Pr. Switch Cable Termination Tightness	
			Pr. Switch Calibration; If Required	
			Cable Termination Tightness at Elec Fdr	
			Cable Termination Tightness at RIO	
			JB Cleaning, Cable Termination Tightness	
			Health Check of Signals at PLC/SCADA/HMI	
			Pressure Guage Cleaning & Inspection	
			Pr. Guage Calibration; If Required	
			Pr. Switch Cleaning & Inspection	
5	AHP	IN MNT OF FLUID COUPLING	Pr. Switch Cable Termination Tightness	
			Pr. Switch Calibration; If Required	
			Temp. Guage Cleaning & Inspection	
			Temp. Guage Callbration; If Required	
			Temp. Switch Cleaning & Inspection	
			Temp. Switch Cable Termination Tightness	
			Temp. Switch Calibration; If Required	
			SOV Inspection & Cleaning (If Required)	
			SOV Cable Termination Tightness	
			Cable Termination Tightness at Elec Fdr	
			Cable Termination Tightness at RIO	
			JB Cleaning, Cable Termination Tightness	
			Health Check of Signals at PLC/SCADA/HMI	
6	AHP	IN MNT OF DRAIN SUMP PUMP (AWAS AREA)	Pressure Guage Cleaning & Inspection	
			Pr. Guage Calibration; If Required	
			Pr. Switch Cleaning & Inspection	
			Pr. Switch Cable Termination Tightness	
			Pr. Switch Calibration; If Required	
			Level Switch Cleaning & Inspection	
			Level Switch Cable Termination Tightness	
			Level Switch Setting (If Required)	
			SOV Inspection & Cleaning (If Required)	
			SOV Cable Termination Tightness	
			Cable Termination Tightness at Elec Fdr	
			Cable Termination Tightness at RIO	
			JB Cleaning, Cable Termination Tightness	
Health Check of Signals at PLC/SCADA/HMI				
7	AHP	IN MNT OF DRAIN SUMP PUMP (SILO AREA)	Pressure Guage Cleaning & Inspection	
			Pr. Guage Calibration; If Required	
			Pr. Switch Cleaning & Inspection	
			Pr. Switch Cable Termination Tightness	
			Pr. Switch Calibration; If Required	
			Level Switch Cleaning & Inspection	
			Level Switch Cable Termination Tightness	
			Level Switch Setting (If Required)	
			SOV Inspection & Cleaning (If Required)	
			SOV Cable Termination Tightness	
			Cable Termination Tightness at Elec Fdr	
			Cable Termination Tightness at RIO	
			JB Cleaning, Cable Termination Tightness	
Health Check of Signals at PLC/SCADA/HMI				
			Pressure Guage Cleaning & Inspection	
			Pr. Guage Calibration; If Required	
			Pr. Switch Cleaning & Inspection	
			Pr. Switch Cable Termination Tightness	
			Pr. Switch Calibration; If Required	
			Temp. Guage Cleaning & Inspection	
			Temp. Guage Calibration; If Required	
			Temp. Switch Cleaning & Inspection	
			Temp. Switch Cable Termination Tightness	
			Temp. Switch Calibration; If Required	
			PT Cleaning & Inspection	


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8	AHP	IN MNT OF HSCD PUMP	PT Cable Termination Tightness	
			PT Flushing/ Line Cleaning (If Required)	
			PT Calibration/ Setting (If Required)	
			SFT Cleaning & Inspection	
			SFT Cable Termination Tightness	
			SFT Line Cleaning (If Required)	
			SFT Calibration/ Setting (If Required)	
			DM Cleaning & Inspection	
			DM Cable Termination Tightness	
			DM Line Cleaning (If Required)	
			DM Calibration/ Setting (If Required)	
			SOV Inspection & Cleaning (If Required)	
			SOV Cable Termination Tightness	
			AFR Cleaning & Checking	
			Pneumatic Tubing & Fittings Leak Check	
			PU Tubing/Fitting Replacement (If Req)	
			Cable Termination Tightness at VFD	
			Cable Termination Tightness at RIO	
			LCP Checking & Cleaning	
			LCP Cable Termination Tightness	
			Health Check of Signals at PLC/SCADA/HMI	
9	AHP	IN MNT OF CHARGE PUMP	Pressure Guage Cleaning & Inspection	
			Pr. Guage Calibration; If Required	
			Pr. Switch Cleaning & Inspection	
			Pr. Switch Cable Termination Tightness	
			Pr. Switch Calibration; If Required	
			SOV Inspection & Cleaning (If Required)	
			SOV Cable Termination Tightness	
			Pneumatic Tubing & Fittings Leak Check	
			PU Tubing/Fitting Replacement (If Req)	
			Limit Switch Cleaning & Inspection	
			Limit Switch Cable Termination Tightness	
			Limit Switch Setting (If Required)	
			PT Cleaning & Inspection	
			PT Cable Termination Tightness	
			PT Flushing/ Line Cleaning (If Required)	
			PT Calibration/ Setting (If Required)	
			Cable Termination Tightness at Elec Fdr	
			Cable Termination Tightness at RIO	
JB Cleaning, Cable Termination Tightness				
Health Check of Signals at PLC/SCADA/HMI				
10	AHP	IN MNT OF ART AGITATOR & MIXING TANK	LT Cleaning & Inspection	
			LT Cable Termination Tightness	
			LT Calibration/ Setting (If Required)	
			FT Cleaning & Inspection	
			FT Line Flushing	
			FT Cable Termination Tightness	
			FT Calibration/ Setting (If Required)	
			Control VLV Cleaning & Checking	
			CV I/P, PFT Cable Termination Tightness	
			CV Pneumatic Tubing & Fittings Leak Check	
			CV Part Replacement (If Req)	
			Cable Termination Tightness at Elec Fdr	
			Cable Termination Tightness at RIO	
JB Cleaning, Cable Termination Tightness				
Health Check of Signals at PLC/SCADA/HMI				
11	AHP	IN MNT OF SCAVANGER FAN	Cable Termination Tightness at Elec Fdr	
			Cable Termination Tightness at RIO	
			Health Check of Signals at PLC/SCADA/HMI	
			Pressure Guage Cleaning & Inspection	
			Pr. Guage Calibration; If Required	
			DP Guage Cleaning & Inspection	
			DP Guage Calibration	
			DP Switch Cleaning & Inspection	
			DP Switch Cable Termination Tightness	

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12	AHP	IN MNT OF VENT FAN & PURGING SYSTEM	DP Switch Calibration SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
13	AHP	IN MNT OF SILO AERATION BLOWER & HEATER	Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required Temp. Gauge Cleaning & Inspection Temp. Gauge Calibration; If Required Temp. Switch Cleaning & Inspection Temp. Switch Cable Termination Tightness Temp. Switch Calibration; If Required Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
14	AHP	IN MNT OF ESP AERATION BLOWER & HEATER	Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required Temp. Gauge Cleaning & Inspection Temp. Gauge Calibration; If Required Temp. Switch Cleaning & Inspection Temp. Switch Cable Termination Tightness Temp. Switch Calibration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pnematic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
15	AHP	IN MNT OF ECONOMISER WATER PUMP	Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
16	AHP	IN MNT OF BA OVERFLOW PUMP	Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pnematic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) LT Cleaning & Inspection LT Cable Termination Tightness

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			LT Calibration/ Setting (If Required) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
17	AHP	IN MNT OF FEED GATE	Pressure Guage Cleaning & Inspection Pr. Guage Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
18	AHP	IN MNT OF CLINKER GRINDER	Pressure Guage Cleaning & Inspection Pr. Guage Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pnematic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) ZSS Cleaning & Inspection ZSS Cable Termination Tightness Sensor Position/ Gap Setting (If Req) LCP Checking & Cleaning LCP Cable Termination Tightness Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
19	AHP	IN MNT OF ROTARY FEEDER FOR HCSD (VFD)	SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pnematic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) Cable Termination Tightness at VFD Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
20	AHP	IN MNT OF ROTARY FEEDER FOR TS (C Truck)	SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pnematic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
			SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pnematic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection

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21	AHP	IN MNT OF ROTARY FEEDER FOR OPEN TRUCK	Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
22	AHP	IN MNT OF DUST CONDITIONER FOR HCSD	Pressure Guage Cleaning & Inspection Pr. Guage Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pnematic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness MFM Cleaning & Inspection MFM Cable Termination Tightness MFM Calibration/ Setting (If Required) Health Check of Signals at PLC/SCADA/HMI
23	AHP	IN MNT OF TELESCOPIC SPOUT	Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness LCP Checking & Cleaning LCP Cable Termination Tightness LCP Equip. Checking & Setting (If Req) Health Check of Signals at PLC/SCADA/HMI
24	AHP	IN MNT OF DUST CONDITIONER OPEN TRUCK	Pressure Guage Cleaning & Inspection Pr. Guage Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pnematic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) Limit Switch Cleaning & Inspection Limit Switch Cable Termination Tightness Limit Switch Setting (If Required) Cable Termination Tightness at Elec Fdr Cable Termination Tightness at RIO JB Cleaning, Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
25	AHP	IN MNT FOR FLY ASH CONVEYING SYSTEM	ESP HOPPER LS Cleaning & Inspection ESP HOPPER LS Setting (If Required) ESP HOPPER LS Cable Termination Tight PT Cleaning & Inspection PT Cable Termination Tightness PT Flushing & Impulse Line Tightness PT Calibration/ Setting (If Required) Pressure Guage Cleaning & Inspection Pr. Guage Calibration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Calibration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness

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			Pnematic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) AFR Cleaning & Checking Quick Exhaust Valve Checking & Cleaning Air Limit Switch Checking & Cleaning Cable Termination Tightness at RIO Instrument Panel Checking & Cleaning Instr. Panel Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI LT Inspection & Cleaning (If Required) LT Cable Termination Tightness LT Callbration/ Setting (If Required) Pressure Guage Cleaning & Inspection Pr. Guage Callbration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Callbration; If Required SOV Inspection & Cleaning (If Required) SOV Cable Termination Tightness Pnematic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) AFR Cleaning & Checking Quick Exhaust Valve Checking & Cleaning Air Limit Switch Checking & Cleaning Cable Termination Tightness at RIO Instrument Panel Checking & Cleaning Instr. Panel Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI
26	AHP	IN MNT AT FLY ASH SILO	Pressure Guage Cleaning & Inspection Pr. Guage Callbration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Callbration; If Required PT Cleaning & Cable Tightness PDT Cleaning & Cable Tightness TT Cleaning & Cable Tightness LS Cleaning & Cable Tightness SOV Cleaning & Cable Tightness Cable Termination Tightness at Elec Bkr Cable Termination Tightness at RIO Local Panel Checking & Cleaning Elec Contr Cable Termination Tightness Temp. Scanner Cleaning & Inspection Temp. Scanner Cable Termination Tight Vibration Sensor Cleaning & Inspection Vibration Sensor Tightness Vibration Module Cable Termination Tight Auto Drain Valve Checking & Cleaning Healthiness Checking at Electroncon Health Check of Signals at PLC/SCADA/HMI
27	AHP	IN MNT FOR TAC SYSTEM	Pressure Guage Cleaning & Inspection Pr. Guage Callbration; If Required Pr. Switch Cleaning & Inspection Pr. Switch Cable Termination Tightness Pr. Switch Callbration; If Required Temp. Guage Cleaning & Inspection Temp. Guage Callbration; If Required Temp. Switch Cleaning & Inspection Temp. Switch Cable Termination Tightness Temp. Switch Callbration; If Required PT Cleaning & Cable Tightness PDT Cleaning & Cable Tightness TT Cleaning & Cable Tightness LS Cleaning & Cable Tightness SOV Cleaning & Cable Tightness
28	AHP	IN MNT FOR INSTRUMENT AIR COMP (AHP)	

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			Drain SOV Process Connection Tightness Drain Test (If Required) Cable Termination Tightness at Elec Bkr Cable Termination Tightness at RIO Local Panel Checking & Cleaning Elec Contr Cable Termination Tightness Healthiness Checking at Electroncon Health Check of Signals at PLC/SCADA/HMI Pressure Gauge Cleaning & Inspection Pr. Gauge Calibration; If Required FS Cleaning & Inspection FS Cable Termination Tightness Temp. Gauge Cleaning & Inspection Temp. Gauge Calibration; If Required RTD Cleaning & Inspection RTD Cable Termination Tightness Temp. Controller Checking Electronic Controller Checking SOV Cleaning & Inspection SOV Cable Termination Tightness Pneumatic Tubing & Fittings Leak Check PU Tubing/Fitting Replacement (If Req) FRL Cleaning & Checking Cable Termination Tightness (LCP) Health Check of Signals at Local Panel PLC/RIO Panel Blowering/ Cleaning PLC/RIO Panel Cable Termination Tight Healthiness Checking of PLC Healthiness Checking of Networking Cards Healthiness Checking of I/O Modules Healthiness Checking of Ethernet Switch Healthiness Checking of PSU's Tightness Check of Communication Cables Parameter Checking at TB (If Required) Fuse Checking & Replacement (If Req) MCB & Relay Board Checking Fan, Lamp Checking & Cleaning Panel Dust Filter Cleaning Panel Door Hinges & Lock Checking Panel Hole Covering (If Required) Engg/Opr Desk Checking & Cleaning Earth Pit & Resistance Checking (If Req) LCP Checking & Cleaning LCP Cable Termination Tightness Health Check of Signals at PLC/SCADA/HMI Cable Termination Tightness at Elec Bkr Cable Termination Tightness at PLC RIO Parameter Measurement & Checking Health Check of Signals at PLC/SCADA/HMI Cable Termination Tightness at Elec Bkr Cable Termination Tightness at PLC RIO Parameter Measurement & Checking Health Check of Signals at PLC/SCADA/HMI Removal & Installation of new MOV Tight looseness at all end of MOV Inspection of Internals of MOV Check O-rings healthiness of MOV Check MOV O-rings properly positioned Check for gland tightnes of MOV Check field cable dress of MOV Check Insulation damage of MOV Check MOV lubricant leakage & attend Check phy damage and replace MOV Ensure proper stroking of MOV Check MOV Signal Healthiness in DCS	
29	AHP	IN MNT FOR INSTRUMENT AIR DRYER (AHP)		
30	AHP	IN MNT FOR PLC/ RIO/ LCP PANEL (AHP)		
31	AHP	IN MNT IC/ BC/BPT HT ELECT BKR (AHP)		
32	AHP	IN MNT IC/ BC/BPT/ TRAFO LT BKR (AHP)		
33	AHP	Preventive, predictive & corrective maintenance of all types of Motorized Operated Valves used in Gate/Damper and Pipe lne (make: Auma, Rotork, Limitorque, Marsh,Cair)		The Job includes the complete C & I, Electrical & Mechanical work of the Actuator



			Ensure proper Cleaning of MOV Ensure for monsoon protection of MOV Ensure for field KKS tag of MOV Ensure for properly mounting of MOV Installation of new LCP Tight looseness In LCP & JB Check phy damage In LCP & JB Cleaning of Inst of LCP & JB Check closing of Door of LCP & JB Proper gland tightness of LCP & JB Field cable dressing of LCP & JB Cable Ins damage of LCP & JB Seal gland Holes of LCP & JB Proper lighting In LCP & JB Monsoon protection of LCP & JB Proper Earthing of LCP & JB
34	AHP	Preventive maintenance of Different types of Field LCP	
35	AHP	Preventive maintenance of Different Sizes Junction Box	Installation of new JB Tight looseness In LCP & JB Check phy damage In LCP & JB Cleaning of Inst of LCP & JB Check closing of Door of LCP & JB Proper gland tightness of LCP & JB Field cable dressing of LCP & JB Cable Ins damage of LCP & JB Seal gland Holes of LCP & JB Proper lighting In LCP & JB Monsoon protection of LCP & JB Proper Earthing of LCP & JB
36	AHP	Preventive, predictive & corrective maintenance of Different Capacity UPS (HI-REL, DB Power, Emerson) with Battery bank and ACDB	Tight loose components of UPS/ACDB Check phy damage of UPS/ACDB Internals Ensure proper cooling of UPS room Cleaning of Door Filters of UPS/ACDB Check proper closing of Door of UPS/ACDB Proper gland Holes sealing of UPS/ACDB Check for the lighting of UPS/ACDB Check all Cooling Fans of UPS/ACDB Remove dust of UPS/ACDB Ensure proper Earthing of UPS/ACDB Record alarm present of the UPS system. Check for gland tightnes of UPS/ACDB Check for cable dressing of UPS/ACDB Check for Insulation damage of UPS/ACDB Ensure for field KKS tag for UPS/ACDB
37	AHP	Preventive and Corrective maintenance of Work Stations/CCR PC's	Installation of new workstation Check phy damage of PC Internals Cleaning of all the parts of Work Stn Proper dressing of cables of Work Stn Check for gland tightness of Work Stn Check for cable dressing of Work Stn Check for cable Insu damage of Work Stn Ensure Work Stn cooling Fans are healthy Remove dust of Work Stn Ensure for field KKS tag of Work Stn
38	AHP	Preventive and Corrective maintenance of Printer	Installation of new Printer Check phy damage of Printer Proper dressing of cables of Printer Remove dust of Printer Check for gland tightness of Printer Check for cable dressing of Printer Check for cable Insu damage of Printer Replaced the catridge If required Ensure for field KKS tag of Printer
			Removal & Installation of new SOV Arrest the leakages if any of SOV Tight looseness In SOV Cable connections

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39	AHP	Preventive, predictive & corrective maintenance of Different types of Solenoid Valves	Check phy damage in SOV Gland tightness of SOV Cables Cable dressing of SOV Cable Insu damage of EWLI Proper Cleaning of SOV Ensure for monsoon protection of SOV Check O-rings healthiness of SOV Check SOV O-rings properly positionned Ensure for field KKS tag of SOV Ensure for proper mounting of SOV
40	AHP	Fabrication of Cable Tray Perforated (50 mm to 300 mm)	New Fabrlication Erection Repair Cleaning
41	AHP	Laying of Control Cable from 2 core to 6 Core Including Glandng & Termination	Laying Dressing Glandng Ferruling Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement
42	AHP	Laying of Control Cable from 6 core to 12 Core Including glandng & termination	Laying Dressing Glandng Ferruling Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement
43	AHP	Laying of Control Cable from 14 core to 24 Core Including glandng & termination	Laying Dressing Glandng Ferruling Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement
44	AHP	Laying of Signal Cable from Single pair to 4 pair Including glandng & termination	Laying Dressing Glandng Ferruling Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacemnt
			Laying Dressing Glandng Ferruling

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45	AHP	Laying of Signal Cable from Six pair to 12 pair including glanding & termination	Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement
46	AHP	Laying of different types of Thermocouple Cable upto 7 Pair including glanding & termination	Laying Dressing Glanding Ferruling Lugging Tagging Cold Loop Checking Termination Hot Loop Checking Damage Inspection Damage Replacement
47	AHP	Laying of different size Earthing cable Including glanding & termination	Laying Dressing Glanding Ferruling Lugging Tagging Termination Damage Inspection Damage Replacement Loop Testing Healthiness Checking
48	AHP	Laying of CAT-5 / 6 Cable	Laying Dressing Glanding Ferruling Crimping Tagging Damage Inspection Damage Replacement
49	AHP	Laying of FO Cable, Belden(Modbus) Cable	Laying Dressing Glanding Ferruling Crimping Tagging Splicing OTDR Testing Damage Inspection Damage Replacement
50	AHP	Fabrication of MS Angle , Channel	
51	AHP	Fabrication of Canopy	
52	AHP	Fabrication of Transmitter Mounting Pipe	
53	AHP	Calibration Charges for different types of Instruments	
54	AHP	Breakdown & corrective maintenance during shift operation. The shift maintenance will be in A, B & C Shift	
55	AHP	Loop Checking of any Cable	
56	AHP	Cable Lugging & Termination	
57	AHP	Daily checking of different parameters shift wise In Control Room	
58	AHP	Daily checking of different parameters shift wise In Field	
59	AHP	Fuse Checking and replacing In DCS & PLC	
60	AHP	Installation of Junction Box	

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61	AHP	Regular Field maintenance Job to be attended daily like AFR flushing, Air Leakage checking etc	
62	AHP	Covering of Instruments by Polythene	
63	AHP	Marking of Instrument / JB	
64	AHP	Material Shifting	
65	AHP	Cooper Tube 1/4 " laying with necessary fitting	
66	AHP	Preventive, predictive & corrective maintenance of Loop Indicators	Removal & Installation of Indicator.
			Removal & Installation of existing indicator.
			Tight looseness at all end of Indicator.
			Check for gland tightness of Indicator.
			Check field cable dress of Indicator.
			Check insulation damage of Indicator.
			Check phy damage and replace Indicator.
67	AHP	Preventive, predictive & corrective maintenance Dew point measuring system.	Check Indicator Signal Healthiness In DCS
			Ensure for monsoon prot of Indicator.
			Removal & Installation of sensor/transmitter.
			Removal & Installation of existing sensor/transmitter.
			Tight looseness.
			Cleaning of sensor.
			Check for gland tightness.
Check field cable dressing.			
Check insulation damage of cable.			
Check phy damage and replace sensor.			
Check Indicator Signal Healthiness in DCS/PLC.			
Ensure for monsoon prot of sensor/transmitter.			

Annexure 3.		
Scope of Work for Electrical maintenance Activities for 2x 270 MW GVK Power (Goindwal Sahib) Limited -Area :Complete AHP area		
Sr. No.	Detail Item Description	Details of work to be Carried Out
1	Preventive, predictive & corrective maintenance of battery banks & Chargers. (each bank having 110 Cell)	The Work will include Preventive schedule Maintenance of battery & Chargers, testing, repairing.
2	Preventive, predictive & corrective maintenance HT motors.	The Work will include Preventive schedule Maintenance of HT motors, testing, repairing, replacement, handling as & when require
3	Preventive, predictive & corrective maintenance LT motors.	The Work will include Preventive schedule Maintenance of HT motors, testing, repairing, replacement, handling as & when require
4	Preventive, predictive & corrective maintenance of HT Switchgears.	The Work will include Preventive schedule Maintenance of HT Switchgears, testing, repairing, replacement, handling as & when require.
5	Preventive, predictive & corrective maintenance of LT switchgears.	The Work will include Preventive schedule Maintenance of LT Switchgears, testing, repairing, replacement, handling as & when require.
6	Preventive, predictive & corrective maintenance of Oil filled Distribution transformers.	The Work will include Preventive schedule Maintenance of Distribution Transformer, testing, repairing, handling as & when require.
7	Preventive, predictive & corrective maintenance of Dry type transformers	The Work will include Preventive schedule Maintenance of Dry Type Transformer, testing, repairing, handling as & when require.
8	Preventive, predictive & corrective maintenance of Electrical Panels.	The Work will include Preventive schedule Maintenance of Generators, testing, repairing, as & when require & its auxiliaries.
9	Preventive, predictive & corrective maintenance of Lighting system (Indoor, Outdoor, High mast, Street Lights & Security)	The Work will include Preventive schedule Maintenance of Lighting Systems, testing, repairing, handling as & when require.
10	Preventive, predictive & corrective maintenance of Hoist & cranes	The Work will include Preventive schedule Maintenance of Hoist & Cranes, testing, repairing, handling as & when require.
11	Preventive, predictive & corrective maintenance of Bus duct.	The Work will include Preventive Maintenance of Bus duct & LAVT, testing, repairing, handling as & when require.
12	Preventive, predictive & corrective maintenance of HT & LT Cables. (In meters)	The Work will include corrective Maintenance of HT & LT Cables, testing, repairing, handling, termination as & when require.
13	Preventive, predictive & corrective maintenance of Earthing & Lightning Protections.	The Work will include Preventive schedule Maintenance of Earthing & Lightning protection, testing, repairing as & when require.
14	Preventive, predictive & corrective maintenance of VFDs & Softstarter.	The Work will include Preventive schedule Maintenance of VFD, testing, repairing, handling as & when require.
15	Preventive, predictive & corrective maintenance of Other Small battery.	
16	Weed removal of Transformer yard.	
17	Work to be carried out by engaging all tools & tackles, test instruments & PPE.	

Exclusion

- 1) Rewinding of Motors
 - 2) All Statutory Charges
- All spares are in the scope of GVK

Annexure 4Essential Conditions For WOs on Compliance with Safety Standards:

- The contractor shall establish and implement an effective safety management system in line with the company policy and as per the directions of the engineer in charge and maintain a high level of safety performance.
- To maintain good safety performance, it is mandatory on the contractor's part that they shall follow safe working practices, laid down procedures of GVK and maintain safe and healthy working conditions for all the jobs in their scope of work, for the entire tenure of the contract.
- The contractor shall ensure to provide recommended & safe working/Standard(BIS/IS) tools / tackles to the workers under their control; immediately before the execution of work and also ensure Competent Person certificate of Lifting machines.
- The contractor shall ensure to provide all the recommended & required PPEs like safety shoes, safety helmet, adequate hand gloves, dust masks, full body harness (safety belt), apron, PVC suit/hand gloves, heat resistant suit, Electrical Gloves, ear plugs and goggle etc. of recommended / standard quality before execution of any work. Preferably brands should be M/S Karam, M/s Honeywell, M/s Liberty, M/s Udyogi, M/S 3M, M/s MSA, M/s Tiger)
- All other specific safety gears & gadgets like ELCB/RCCB, FBA/NRV etc. will be arranged by the contractor and also ensure standard / sound condition equipments for material handling(like, cylinder trolley, small trolley for scrape material handling etc)
- Contractor shall ensure to carry out the Job safety analysis (JSA/HIRA), Tool box talk before execution of work.
- Contractor shall ensure that work area is to be cleared of all encumbrances like debris and scrap material which may poses a safety risk to other persons on job in the plant; after the work is completed.
- As the House keeping is very vital component of safety ; hence contractor shall ensure to maintain all house-keeping standard at par to GMP standards.
- The company shall not be responsible for any injury, fatal or otherwise that may be suffered by Contractor's employees at any time during the course of providing services or otherwise, and Contractor shall take due precautions to cover his employees against all such risks at his sole costs.
- In the event of an accident, Contractor shall ensure that timely, proper and adequate medical care is provided to his employees/injured person. Contractor shall ensure that



their casuals / employees shall be medically fit and also ensure periodic health check-up as per legal requirement and record to be maintained.

- Contractor shall ensure to maintain all the safety training records and submit to the safety department of GVK on monthly basis.
- The contractor shall always endeavour and continuously strive to further improve and maintain the overall safety performance of the company by effectively implementing the safety management projects as per the directions given by EICs.
- Contractor shall abide by & ensure compliance with all laid down safety rules. In case of any violation of safety rule, the concerned EICs or safety Official of GVK shall have the power to impose penalty as per the company's GVK safety policy. The prescribed penalty amount shall be debited from respective monthly bills.
- Contractor whose numbers of workers are 50 or more shall deploy a dedicated, qualified and experienced safety officer (SO)/supervisor, also ensure one SO for every 50 persons. If number of workers is below 50, shall nominate a person to ensure/look after safety compliance of their working area.
- The major contractor, who is deploying number of agencies under their control, shall appoint at least one qualified safety officer.
- He/ they shall report to Contractor Site In-charge for taking corrective action as well as GVK safety department.





Annexure 5

GVK Power (Goindwal Sahib) Ltd., is committed to protect and improve the Environment and comply with the law & regulations, governing environment protection and conservation . The company strives to provide safe & healthy workplace for its work force and positively contribute towards protection of the environment and conserving energy and natural resources.

As per guiding principles to adhere to **Health, Safety & Environment Policy** adopted by **GVK Power (Goindwal Sahib) Ltd**, it is also expected that the following points may please be strictly followed by our service providers :

- The prevalent Health, Safety & Environment (HSE) policy as approved & revised from time to time shall be adopted & communicated to their employees by all our associates, to ensure working in an environmentally responsible manner.
- Necessary drives, class room sessions & campaigns etc shall be undertaken by the associates for spreading awareness among their employees/workers about the GVK's policies and all the related aspects & impacts of our activities / operations on the environment at periodical intervals to encourage desired eco-friendly behavior.
- Contractor shall ensure safe and proper storage & use of all the materials and proper disposal of all the wastes generated by the processes & activities involved with the plant operations, as per the instructions & standard procedures, laid down by the concerned authorized representatives of the management. They will also, always strive to minimizing the generation of waste to prevent pollution.
- Strict compliance shall be ensured by all employees of our associates to the directions regarding maintaining & promoting healthy & hygienic environment and to avoid all factors or nuisance at work place caused for example due to indiscreet spiting on the walls / equipments , leaving left over foods / containers / plastic wrappers and other waste etc. littering within & around the plant premises .
- Associates will co-operate with the GVK management in our endeavours to promote greenery in and around the plant, for tree plantations and promote preservation of the bio-diversities in the area of the company's operations.




Annexure – 5 Page 1 of 1




Annexure 6

Deployment Plan**1. OPERATION**

SI No	Description	Manpower Deployment
A	Operation Staff :	
	Shift In-charge	3
	Manager Operation	0
	Desk Operator	3
	ESP Field Operator	3
	Electrical Operator	3
	BA Field Operator	3
	Pump House Operator	3
	HCSO & SILO Operator	6
	ESP Field -Helper	3
	Ba Field -Helper	3
	Housekeeping Manpower	5
	TOTAL A	35

Note: All manpower is excluding relievers.

2. MAINTENANCE

SI No	Description	Manpower deployment
B	Maintenance Staff :	
	Maintenance Manager	1
1	Maintenance Supervisor	3
2	MW Fitter	1
3	General Fitter	4
4	Helper	12
5	Welder	2
6	Electrical Supervisor	1
7	Electrician	3
8	Electrical helper	4
9	C & I/PLC Engineer	1
10	C & I Master / Senior Technician	1
11	C & I Technician	1
12	C & I Technician, Shift	3
13	C & I Helper	3
	TOTAL B	40
	TOTAL A + B	75

Note:

1. All manpower is excluding relievers.
2. Contingency Manpower: Contractor shall provide the contingency manpower up to 5000 man-hours (625 man-days) as and when required on call basis. As per requirement this manpower (category wise) should be deployed within 15 days for minimum of 30 days after intimation. Billing for extra manpower will be done on monthly basis with RA Bill as per actual.
3. Man-day's rate of extra manpower(categories) will be considered as per your offer enclosed with annexure-6




MANDAYS RATE

SI No	Description	MAN DAYS RATE
	Operation Staff :	
1	Shift In-charge	2116.00
2	Desk Operator	1771.00
3	ESP Field Operator	1067.20
4	Electrical Operator	1591.60
5	BA Field Operator	1067.20
6	Pump House Operator	1067.20
7	HCSO & SILO Operator	1067.20
8	ESP Field –Helper	1062.60
9	Ba Field –Helper	1062.60
10	Housekeeping Manpower	851.00
	TOTAL A	

SI No	Description	MAN DAYS RATE
B	Maintenance Staff :	
1	Maintenance Manager	2484.00
2	Maintenance Supervisor	2116.00
3	MW Fitter	2392.00
4	General Fitter	2116.00
5	Helper	1288.00
6	Welder	1932.00
7	Electrical Supervisor	2208.00
8	Electrician	2097.60
9	Electrical helper	1288.00
10	C & I/PLC Engineer	2484.00
11	C & I Master / Senior Technician	2024.00
12	C & I Technician	1771.00
13	C & I Technician, Shift	1771.00
14	C & I Helper	1012.00
	TOTAL	

Omish



ANNEXURE 7
MONTHLY COMPLIANCE SUMMARY (AHP)

S.No	DESCRIPTION	WEIGHTAGE (Min % to be Maintain)	Min % to be Maintain	TOTAL SCORE (%) FROM DEPARTMENT	FINAL SCORE	TARGET AMOUNT	OBTAINED AMOUNT	MAXIMUM DEDUCTIBLE AMOUNT	Remarks
1.0	EQUIP AVAILABILITY								
1.1	MECHANICAL	11	95	100.00	11.58	273383.00	287771.58		
1.2	ELECTRICAL	7.5	95	100.00	7.89	186397.50	196207.89		
1.3	C & I	7.5	95	100.00	7.89	186397.50	196207.89		
1.4	OPERATION	8.5	95	100.00	8.95	211250.50	222368.95		
2.0	MANPOWER DEPLOYMENT								
2.1	OPERATION	7	95	100.00	7.00	173971.00	173971.00		
2.2	MECHANICAL	10	95	100.00	10.00	248530.00	248530.00		
2.3	ELECTRICAL	6	95	100.00	6.00	149118.00	149118.00		
2.4	C & I	6	95	100.00	6.00	149118.00	149118.00		
2.5	HOUSEKEEPING	6	95	100.00	6.00	149118.00	149118.00		
3.0	PM SCHEDULE COMP								
3.1	MECHANICAL	10	90	100.00	10.00	248530.00	248530.00		
3.2	ELECTRICAL	7	90	100.00	7.00	173971.00	173971.00		
3.3	C & I	5	90	100.00	5.00	124265.00	124265.00		
4.0	SAFETY COMPLIANCE								
4.1	SHE Compliance	7	100	100.00	7.00	173971.00	173971.00		
5.0	Housekeeping Quality								
5.1	Housekeeping	3.5	92	100.00	1.50	37273.50	37273.50		
	TOTAL	100				2485300.00	2530427.82		



HEAD MAINTENANCE

HEAD OPERATION





MECHANICAL EQUIPMENT AVAILABILITY

S.No	Unit of Equipment	Weight	31-Jul-18	30-Jul-18	29-Jul-18	28-Jul-18	27-Jul-18	26-Jul-18	25-Jul-18	24-Jul-18	23-Jul-18	22-Jul-18	21-Jul-18	20-Jul-18	19-Jul-18	18-Jul-18	17-Jul-18	16-Jul-18	15-Jul-18	14-Jul-18	13-Jul-18	12-Jul-18	11-Jul-18	10-Jul-18	9-Jul-18	8-Jul-18	7-Jul-18	6-Jul-18	5-Jul-18	4-Jul-18	3-Jul-18	2-Jul-18	1-Jul-18	Average Availability	
1	Slurry pump series 1 stage 1 Series 1 stage 2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0		
2	Slurry pump series 2 stage 1 Series 2 stage 2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0		
3	LP Ash Water Pump #3.3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0		
4	HP Ash water Pump 1.2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0		
5	Seal water Pump # 1.2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0		
6	Clinker Grinder Unit#1 A1.62.B1.82	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0		
7	Clinker Grinder Unit#2 A1.62.B1.82	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0		
8	Feed gate Unit#1 A1.A2.B1.B2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	
9	Feed gate Unit#2 A1.62.B1.82	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	
10	Economiser Water Pump #1.2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	
11	BA Overflow Pump U#1 1.2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	
12	BA Overflow Pump U#2 1.2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	
13	JACH 1.2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	
14	TACH 1.2 & 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	
15	Air Drier #1 & 2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0	
16	ESP hopper fluidizing blower #1, 2 & 3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0	
17	ESP U#1, Pass A, 1st, 2nd & 3rd field dome valves /double disc valves	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0	
18	ESP U#1, Pass A, 1st, 2nd & 3rd field dome valves /double disc valves	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0	
19	ESP U#1, Pass A, 4, 5, 6 & 7th field dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
20	ESP U#1, Pass B, 4, 5, 6 & 7th field dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
21	ESP U#2, Pass A, 1st, 2nd & 3rd field dome valves /double disc valves	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0
22	ESP U#2, Pass B, 1st, 2nd & 3rd field dome valves /double disc valves	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0
23	ESP U#2, Pass A, 4, 5, 6 & 7th field dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
24	ESP U#2, Pass B, 4, 5, 6 & 7th field dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
25	Slipoff vent fan 1, 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
26	Slipoff vent fan 1, 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
27	Unit#1 silo selection dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
28	Unit#2 silo selection dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
29	Silo#1 RVF open truck, closed truck, hcsd	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
30	Silo#2 RVF open truck, closed truck, hcsd	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
31	Charges Pump #1, 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
32	HCSO Pump #1, 2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0
33	Dust Conditioner for HCSO Pump#1 & Open Truck#1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
34	Dust Conditioner for HCSO Pump#2 & Open Truck#2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
35	Telescopic spout #1, #2, scavenger fan 1, 2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.0
36	Silo Aeration Blower #1, 2, 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0
37	Unit#1 APH dome valves	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
38	Unit#2 APH dome valves	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
39	Silo Drain Pump #1 & 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
40	Ash water pump house drain sump pump 1 & 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
41	unit #1 ESP drain pump 1 & 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
42	unit #2 ESP drain pump 1 & 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0

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ELECTRICAL EQUIPMENT AVAILABILITY

Sr.no	List of Equipment	Weightage	1-Jul-18	2-Jul-18	3-Jul-18	4-Jul-18	5-Jul-18	6-Jul-18	7-Jul-18	8-Jul-18	9-Jul-18	10-Jul-18	11-Jul-18	12-Jul-18	13-Jul-18	14-Jul-18	15-Jul-18	16-Jul-18	17-Jul-18	18-Jul-18	19-Jul-18	20-Jul-18	21-Jul-18	22-Jul-18	23-Jul-18	24-Jul-18	25-Jul-18	26-Jul-18	27-Jul-18	28-Jul-18	29-Jul-18	30-Jul-18	31-Jul-18	Average Availability
1	Slurry pump series 1 stage 1, Series 1 stage 2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	
2	Slurry pump series 2 stage 1, Series 2 stage 2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	
3	LP Ash Water Pump #1,2,3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	
4	HP Ash water Pump# 1,2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	
5	Seal water Pump # 1,2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	
6	Clinker Grinder, Unit#1, A1, A2, B1, B2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	
7	Clinker Grinder, Unit#2, A1, A2, B1, B2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	
8	Feed gate Unit#1, A1, A2, B1, B2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	
9	Feed gate Unit#2, A1, A2, B1, B2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	
10	Economiser Water Pump #1, 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	
11	BA Overflow Pump Unit 1, 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	
12	BA Overflow Pump Unit 1, 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	
13	HAC#1, 2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	
14	TAC#1, 2 & 3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
15	Air Orier #1 & 2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0
16	ESP hoppers/Blowers Blower#1, 2, 3, 4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0
17	ESP U#1, Pass A 1st, 2nd & 3rd field dome valves /double disc valves	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0
18	ESP U#1, Pass B 1st, 2nd & 3rd field dome valves /double disc valves	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0
19	ESP U#1, Pass A 4th, 5th & 7th field dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
20	ESP U#1, Pass B 4th, 5th & 7th field dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
21	ESP U#2, Pass A 1st, 2nd & 3rd field dome valves /double disc valves	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0
22	ESP U#2, Pass B 1st, 2nd & 3rd field dome valves /double disc valves	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0
23	ESP U#2, Pass A 4th, 5th & 7th field dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
24	ESP U#2, Pass B 4th, 5th & 7th field dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
25	Silo#1 vent fan 1,2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
26	Silo#2 vent fan 1,2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
27	Unit#1 silo selection dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
28	Unit#2 silo selection dome valves	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
29	Silo#1 RVF open truck, closed truck, hcsf	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
30	Silo#2 RVF open truck, closed truck, hcsf	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
31	Charge Pump #1,2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0
32	HCSO Pump #1,2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
33	Dust Conditioner for HCSO Pump#1 & Open Truck#1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
34	Dust Conditioner for HCSO Pump#2 & Open Truck#2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
35	Transonic sprayer #1, 2/ screwfeeder fan 1,2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0
36	Silo Aeration Blower #1, 2, 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0
37	Unit#1 APH dome valves	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
38	Unit#2 APH dome valves	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
39	Silo Drain Pump #1 & 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
40	Ash water pump house drain sump pump 1 & 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
41	Unit #1 ESP drain pump 1 & 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
42	Unit #2 ESP drain pump 1 & 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0



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CGI EQUIPMENT AVAILABILITY

Sr.no	List of Equipment	Weightage	1-Jul-18	2-Jul-18	3-Jul-18	4-Jul-18	5-Jul-18	6-Jul-18	7-Jul-18	8-Jul-18	9-Jul-18	10-Jul-18	11-Jul-18	12-Jul-18	13-Jul-18	14-Jul-18	15-Jul-18	16-Jul-18	17-Jul-18	18-Jul-18	19-Jul-18	20-Jul-18	21-Jul-18	22-Jul-18	23-Jul-18	24-Jul-18	25-Jul-18	26-Jul-18	27-Jul-18	28-Jul-18	29-Jul-18	30-Jul-18	31-Jul-18	Average Availability
1	Air compressors & instruments	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20.0
2	bottom ash instruments	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20.0
3	fly ash handling system instruments	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20.0
4	silos instruments	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.0	
5	DCSD instruments	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.0	
6	AHP PLC	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20.0
7	AHP UPS	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10.0

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CGI Equipment Availability Chart

Globus Operation Availability (AHP)

Date	Proper conveying of FLY ash from ESP hopper/APH hopper (25)	Proper/timely conveying/emptying of wet ash/Bottom ash hopper/Eco Hopper (20)	Proper/timely Loading of Bulkers in silo area/ maintaining weigh bridge records (20)	Filling operation Check-List/ log book (15)	Proper/Timely Isolation & normalization/Following PTW (10)	Following safety /wearing PPE (10)	Total %	Remarks
01-07-2017	25	20	20	15	10	10	100	
02-07-2017	25	20	20	15	10	10	100	
03-07-2017	25	20	20	15	10	10	100	
04-07-2017	25	20	20	15	10	10	100	
05-07-2017	25	20	20	15	10	10	100	
06-07-2017	25	20	20	15	10	10	100	
07-07-2017	25	20	20	15	10	10	100	
08-07-2017	25	20	20	15	10	10	100	
09-07-2017	25	20	20	15	10	10	100	
10-07-2017	25	20	20	15	10	10	100	
11-07-2017	25	20	20	15	10	10	100	
12-07-2017	25	20	20	15	10	10	100	
13-07-2017	25	20	20	15	10	10	100	
14-07-2017	25	20	20	15	10	10	100	
15-07-2017	25	20	20	15	10	10	100	
16-07-2017	25	20	20	15	10	10	100	
17-07-2017	25	20	20	15	10	10	100	
18-07-2017	25	20	20	15	10	10	100	
19-07-2017	25	20	20	15	10	10	100	
20-07-2017	25	20	20	15	10	10	100	
21-07-2017	25	20	20	15	10	10	100	
22-07-2017	25	20	20	15	10	10	100	
23-07-2017	25	20	20	15	10	10	100	
24-07-2017	25	20	20	15	10	10	100	
25-07-2017	25	20	20	15	10	10	100	
26-07-2017	25	20	20	15	10	10	100	
27-07-2017	25	20	20	15	10	10	100	
28-07-2017	25	20	20	15	10	10	100	
29-07-2017	25	20	20	15	10	10	100	
30-07-2017	25	20	20	15	10	10	100	
31-07-2017	25	20	20	15	10	10	100	



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GLOBUS ENGINEERS

10

SAFETY & ENVIRONMENT COMPLIANCE SCORE SHEET

Sr. No.	Head	Content	Target Score %	Target Score Points	Actual Score %	Actual Score Points
1		Fatality or permanent disability case.	100		100	
2		Lost Time Injury	50		50	
3		First Aid Injury Reporting of near misses	20		20	
4		Nearmiss Reporting/ Attendance in safety meetings & training program.	10		10	
5	Safety Compliance	Not addressing/ closing the safety instructions / safety observations given by safety department	5	2	5	2
6		Discipline of workmen at site (like sleeping, Mobile using, Horseplay & other unsafe practices/ Behavioral Part etc)	10		10	
7		TBT / PEP Talk / ON-JOB / Specific Training / Awareness & motivational Program.	5		5	
8	PPEs Compliance	PPEs compliance at work site	80	2	80	2
9		Quality of Safety PPEs / Gadget & procurement timely.	20		20	
10	Legal & other requirement.	Lifting tools and tackles test by Competent person with record keeping.	100	1	100	1
11		Improper handling of oil & Grease near equipments and work site.	80		80	
12	Environment Compliance	Esthetically, Contractor work site (Contractor Site Office) is not maintained properly.	10	2	10	2
13		Contractors do not concern to save natural resources.	10		10	

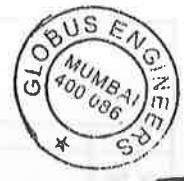
Final Score 7

% Final Score 100.00



Annexure 8
AHP Housekeeping manpower deployment

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
ASH HANDLING CELL	Control room	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
	CCR Shift/Operator Robin Area	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
	Non CCR Driftage Canal	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	ESP 10 min Area	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	ESP Substation cum. & Pnl Room	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	ESP Area Draining Chan	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	ESP Switchgear Room	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
	ESP Switchgear Room Out Side Area	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
	ESP 10 min Area	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
	ESP Substation cum. & Pnl Room	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
ESP 2	ESP Area Draining Canal	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
	ESP Switchgear Room	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	ESP Switchgear Room Out Side Area	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
	ESP 10 min Area	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
	ESP Substation cum. & Pnl Room	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
	ESP Area Draining Canal	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	ESP Switchgear Room	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	ESP Switchgear Room Out Side Area	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
	Compressor House	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	Chem. Switchgear Room	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
COMPRESSION HOUSE	Compressor House Out Side Area	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
	Compressor House	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
	Chem. House Area Draining Canal	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	Site 10 min Area	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	Site Silencing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Site Area Road	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	Site Area Draining Canal	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	Site Area Draining Canal	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	Sub Station Transfer Area	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	HCCSD Pump House	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
HCCSD PUMP HOUSE	HCCSD Mixing Tank Area	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
	HCCSD Area Draining Canal	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
	HCCSD Area Draining Canal	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		



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Annexure - 9 Performance Matrix of HR Department					
Sr. No	Parameter	Target Date	Status	Penalty in case of non compliance	Remarks
1	ESI Challan	25th of Every Month for the previous month		5 % of Wage Amount will be held back	
2	EPF Challan	25th of Every Month for the previous month		5 % of Wage Amount will be held back	
3	Medical Checkup	After Every 06 Month or As per Punjab Factories Act,1948		02 % of Billing Amount will be held back	
4	Labour Welfare Fund	Every 06 Months		2 % of Billing Amount will be held back	
5	Statutory Register Including personal Files	Every Month		2 % of Billing Amount will be held back	
6	Labour Licence	Updated		2 % of Billing Amount will be held back	

(Verified by)

(Checked by)

(Approved by)





WORK ORDER AMENDMENT

WO NO.:GVKPGSL/SITE/18-19/267/AMENDMENT/01

Date : 09/01/2019

**M/s Globus Engineers**

406-407, D-Wing, Neelkanth Business Park

Vidyavihar West

Mumbai - 400086

Mobile No. 9892514304, 9892110304

Contact Person: Mr. A. Vasantha/Mr. Dinesh

Dear Sir,

Sub: Amendment/01 to our Work Order No. GVKPGSL/SITE/18-19/267 dated 10/09/2018

We are hereby amending the subject order to read as follows:

SI No.	Description	Before Amendment					After Amendment			
		Unit	Qty	Rate/ Month	Value/ Month	Value/ Year	Qty	Rate/ Month	Value/ Month	Value/ Year
1	Operation and Maintenance of complete Ash Handling Plant (AHP) with deputing of 5 Nos. of additional houskeeping unskilled manpower @ Rs. 20400/- per manpower/ per month	LS	1	2485300	2485300	29823600	1	2485300	2485300	29823600
2	Below additional manpower are required :									
	Houskeeping unskilled manpower	Nos					5	20400	102000	826200
	Total				2485300	29823600			2587300	30649800
	GST 18%				447354	5368248			465714	5516964
	Total Value				2932654	35191848			3053014	36166764
	Value increased due to this amendment								120360	974916

Note: Now total minimum manpowers are to be deputed 80 Nos. instead of 75 Nos. This amendment will be valid from 09/01/2019 to 09/09/2019.

All other terms and conditions remain unchanged.

Thanking you

Yours faithfully

For GVK POWER (GOINDWAL SAHIB) LIMITED

AUTHORISED SIGNATORY
 GVK Power (Goindwal Sahib) Limited
 GVK Power, Purthala Road,
 Goindwal Sahib,
 Dist : Taran Taran - 143 422. Punjab - India.

T +91 01859 225113 F +91 01859 223332
 www.gvk.com
 CIN : U40109TG1997PLC028483

Registered Office
 Paigah House, 156-159, Sardar Patel Road
 Secunderabad 500 003,
 Telangana, India.

ENERGY
 RESOURCES
 AIRPORTS
 TRANSPORTATION
 HOSPITALITY
 LIFE SCIENCES

No. 1140-42/35 38 (TP)

date 21/5/19

To

**Director
GVK Power Goindwal Shaib Limited
Goindwal Shaib
Dist. Tarn Taran**

Sub: Regarding Balance payment of water consumed from river Beas for 2x270 M/s GVK Goindwal Sahib based thermal power plant at Goindwal Sahib Villlage Tarn Taran District Punjab.

With reference to the subject, Sub Divisional Officer, Verka Sub Division, Amritsar has intimated to this office that GVK Power Goindwal Sahib Limited has used 7859380 cubic meter water during year 2018-19. The calculation is as under

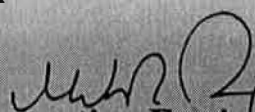
Water used during year 2018-19	7859380 m ³ or 277514708 cft.
Water rate for year 2018-19	Rs. 54.06 for 2500 cft
Amount to be paid	$277514708 \times 54.06/2500 = 6000978.00$

As per the agreement between your firm and Govt of Punjab, this amount has to be deposited in advance in April 2018, but you have not deposited the same till now. Further as per agreement, you are requested to deposit advance payment for the year 2019-20 which has to be deposited by you in the month of April 2019, so that this amount can be deposited into the treasury.

This office vide letter no. 1137-38/35 W TP dated 04-12-18, 109-110/35W TP dated 15-01-19, 496-97/35W TP dated 13-03-19 and 1065/35W TP dated 10-05-19 has written to you regarding deposit the balance payment of Rs 13341875/- of water charges for year 2012-13 to 31-03-2018 to this office but the same has not been deposited by you till now. You are again requested to deposit the total amount to this office immediately as per detail given below.

1.	(i) Balance amount to be paid upto 31-03-2018		1,33,41,875-00
	(ii) Interest @ 12% for 14 months for amount not deposited for period 01-04-2018 to 31-05-2019	$13341875 \times 12/100 \times 14/12$	18,67,863=00
2.	(i) Water charges for year 2018-19		60,00,978=00
	(ii) Water charges for year 2018-19 has to be deposited in advance in April 2018, which was not deposited, so interest @ 12% for 14 months	$6000978 \times 12/100 \times 14/12$	8.40,137-00
3	Advance Water charges for year 2019-20 which has to be deposited in April 2019		60,00,978=00
	Total amount to be paid		2,80,51,831=00

You are again requested to deposit the above amount of Rs 2,80,51,831=00 immediately to this office, so that the same can be deposited in the treasury office.


Executive Engineer
Bari Doab Drainage Division
Amritsar

**BEFORE THE HON'BLE PUNJAB STATE ELECTRICITY
REGULATORY COMMISSION, CHANDIGARH**

I.A. NO. _____ OF 2020

IN

REVIEW PETITION NO. _____ OF 2020

IN THE MATTER OF:

GVK Power (Goindwal Sahib) Ltd.	...	Petitioner
	Versus	
Punjab State Power Corporation Ltd.		...Respondent

APPLICATION ON BEHALF OF APPLICANT / GVK POWER (GOINDWAL SAHIB) LTD. SEEKING CONDONATION OF DELAY IN FILING THE PRESENT PETITION

1. The Applicant/Petitioner, GVK Power (Goindwal Sahib) Ltd. has filed the accompanying Petition, petition under Section 94(1)(f) of the Electricity Act, 2003 ("**Electricity Act**") read with Regulation 64 of Punjab State Electricity Regulatory Commission (Conduct of Business) Regulations, 2005 ("**PSERC CBR 2005**") seeking review and clarification of Order dated 17.09.2020 passed by this Hon'ble Commission in Petition No. 34 of 2019 ("**Order under Review**").

2. It is submitted that there are errors apparent on the face of record in the Order under Review with respect to truing up of tariff for FY 2017-18 and FY 2018-19 for the following components, which have been computed contrary to the Punjab State Electricity (Terms and Conditions of Tariff) Regulations, 2014 ("**PSERC Tariff Regulations 2014**"):

- (a) Interest on Loan
- (b) O&M Expenses
- (c) Interest on working capital
- (d) Depreciation

3. It is submitted that in terms of Regulation 64 of the PSERC CBR 2005, a review may be filed within 60 days from the date of receipt of the certified copy of the Order under review. The certified copy of the Order under Review was dispatched by this Hon'ble Commission on 22.09.2020 and was received by GVK on 25.09.2020. Therefore, the limitation for filing a review petition against Order dated 17.09.2020 expired on 24.11.2020.

4. It is submitted that drafting the present petition required legal, technical and financial inputs from the counsel, consultants as well as the employees of the

Petitioner. Given ongoing Covid-19 pandemic, there was a disruption in the functioning of the counsel, consultants as well as the employees of the Petitioner. Furthermore, all coordination and discussions had to be done over video conferencing which was a lengthy and time consuming process. Documents were required to be perused and reviewed for the purposes of the filing the present petition and the documents had to be scanned and sent from the Petitioner's Head Office as well as Camp Office located at the Plant Site. Thus, considerable time was taken in drafting the present petition which is beyond the period of 60 days prescribed in the PSERC CBR 2005.

5. Accordingly, the present Application has been filed by GVK seeking condonation of delay of 9 days in filing the accompanying Petition. It is submitted that the said delay was wholly unintentional and unavoidable and under circumstances which were beyond the control of GVK.

6. GVK most humbly prays that the delay in filing the Petition be condoned and the Petition be taken on record, otherwise grave prejudice would be caused to the Applicant.

7. This Application is made *bona fide* in the interests of justice.

PRAYER

8. In light of the above submissions, this Hon'ble Tribunal may kindly be pleased to:

- (a) Condone the delay of 9 days in filing the Petition seeking review of this Hon'ble Commission's Order dated 17.09.2020; and
- (b) Pass such order(s) as this Hon'ble Tribunal may deem fit and proper in facts and circumstances of the present case.

Through



J. Sagar Associates
Advocates for the Applicant/Petitioner
B-303, 3rd Floor, Ansal Plaza,
Hudco Place, August Kranti Marg,
New Delhi - 110049

Place: Hyderabad
Date: 03.12.2020

BEFORE THE PUNJAB STATE ELECTRICITY REGULATORY COMMISSION

AT CHANDIGARH

I.A NO. _____ OF 2020

IN

PETITION NO. 34 OF 2020

IN THE MATTER OF:

GVK Power (Goindwal Sahib) Limited

Plot No.10, Sardar Patel Road,

Secunderabad - 500 003

... Petitioner / Applicant

Versus

Punjab State Power Corporation Limited

The Mall, Patiala (Punjab)

... Respondent

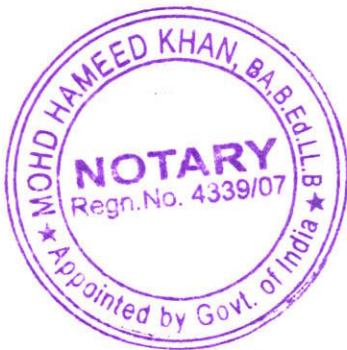
AFFIDAVIT

I, P. Rama Mohana Rao, son of P. Krishna Murthy, aged about 61 years, resident of E-308, First Lane, Czech Colony, Sanath Nagar, Hyderabad - 500018, working as Assistant Vice President (Finance) with the Petitioner Company, do solemnly affirm and state as follows:-

1. I say that I am duly authorized and competent to affirm this Affidavit for and on behalf of the GVK Power (Goindwal Sahib) Ltd. and I am acquainted with the facts and circumstances of the present case. I state that I have read and understood the contents of the accompanying Application.
2. I state that the facts stated in the accompanying Application are true and correct to the best of my knowledge based on the records maintained by the Petitioner and that the legal submissions made therein are based upon information received by me and believed to be true. The present Application has been drafted pursuant to my instructions and its contents are true and correct.
3. I state that the Annexures, if any, annexed to the Application are true copies of the respective originals.

For GVK POWER (GOINDWAL SAHIB) LTD.

g n v
 Authorised Signatory
 DEPONENT



ATTESTED

Mohd Hameed Khan
 B.A.B.Ed., LL.B
 ADVOCATE & NOTARY
 H.No. 1-8-495/19/C,
 Vikar Nagar, Near Prakash Nagar,
 Begumpet, Secunderabad, Hyd.
 Cell: 9391025702

VERIFICATION

I, the deponent above named, do hereby verify that the contents of my above affidavit are true and correct, no part of it is false and nothing material has been concealed therefrom.

Verified at Hyderabad on this 3rd day of December, 2020.

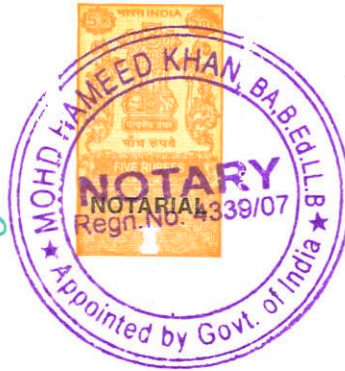
For GVK POWER (GOINDWAL SAHIB) LTD.

g n
Authorised Signatory

DEPONENT

ATTESTED

3/12/2020
Mohd Hameed Khan
B.A.B.Ed., LL.B
ADVOCATE & NOTARY
H.No. 1-8-495/19/C,
Vikar Nagar, Near Prakash Nagar,
Begumpet, Secunderabad, Hyd.
Cell: 9391025702



VAKALATNAMA**BEFORE THE PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
AT CHANDIGARH****REVIEW PETITION NO. 34 OF 2020**

GVK Power (Goindwal Sahib) Limited
Plot No. 10, Paigah Colony, Sardar Patel Road,
Secunderabad - 500003 ...Petitioner

Versus

Punjab State Power Corporation Limited,
The Mall, Patiala (Punjab) ...Respondent

I, P. Rama Mohana Rao, son of P. Krishna Murthy, aged about 61 years, resident of E-308, First Lane, Czech Colony, Sanath Nagar, Hyderabad - 500018, working as Assistant Vice President (Finance) with the Petitioner Company, in the above appeal/petition/application do hereby appoint and retain Mr. Amit Kapur, Mr. Vishrov Mukerjee, Mr. Janmali Manikala, Mr. Girik Bhalla, Mr. Rohit Venkat, Mr. Yashaswi Kant Mr. Ameya Vikram Mishra, Mr. Pratyush Singh and Ms. Raveena Dhamija (hereinafter called the Advocates) to appear, plead and act for me/us in the above appeal/petition/application and to conduct and prosecute all proceedings that may be taken in respect thereof and applications for return of documents, enter into compromise and to draw any moneys payable to me/us in the said proceeding and also to appear in all applications for review and for leave to the Supreme Court of India in all applications for review of judgement.

Place: Hyderabad

Date: 03-12-2020

Executed in my presence.

For GVK POWER (GOINDWAL SAHIB) LTD.
QAN
Signature of the Party
Authorised Signatory

"Accepted"

J. Sagar Associates,
Advocates for the Petitioner
B-303, 3rd Floor, Ansal Plaza,
Hudco Place August Kranti Marg,
New Delhi - 110 049

*Signature with date
(Name and Designation)



ATTESTED
3/12/2020
Mohd Hameed Khan
B.A.B.Ed., LL.B
ADVOCATE & NOTARY
H.No. 1-8-495/19/C,
Vikar Nagar, Near Prakash Nagar,
Bagumpet, Secunderabad, Hyd
Cell: 9391025702

VAKALATNAMA

**BEFORE THE PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
AT CHANDIGARH**

REVIEW PETITION NO. OF 2020

GVK Power (Goindwal Sahib) Limited
Plot No. 10, Paigah Colony, Sardar Patel Road,
Secunderabad - 500003

...Petitioner

Versus

Punjab State Power Corporation Limited,
The Mall, Patiala (Punjab)

...Respondent

I, P. Rama Mohana Rao, son of P. Krishna Murthy, aged about 61 years, resident of E-308, First Lane, Czech Colony, Sanath Nagar, Hyderabad - 500018, working as Assistant Vice President (Finance) with the Petitioner Company, in the above appeal/petition/application do hereby appoint and retain Mr. Amit Kapur, Mr. Vishrov Mukerjee, Mr. Janmali Manikala, Mr. Girik Bhalla, Mr. Rohit Venkat, Mr. Yashaswi Kant Mr. Ameya Vikram Mishra, Mr. Pratyush Singh and Ms. Raveena Dhamija (hereinafter called the Advocates) to appear, plead and act for me/us in the above appeal/petition/application and to conduct and prosecute all proceedings that may be taken in respect thereof and applications for return of documents, enter into compromise and to draw any moneys payable to me/us in the said proceeding and also to appear in all applications for review and for leave to the Supreme Court of India in all applications for review of judgement.

For GVK POWER (GOINDWAL SAHIB) LTD.

Place:

Signature of the Party
Authorised Signatory

Date:

Executed in my presence.

"Accepted"

J. Sagar Associates,
Advocates for the Petitioner
B-303, 3rd Floor, Ansal Plaza,
Hudco Place August Kranti Marg,
New Delhi - 110 049

*Signature with date
(Name and Designation)