BEFORE THE HON'BLE PUNJAB STATE ELECTRICITY REGULATORY COMMISSION, CHANDIGARH PETITION NO. OF 2023

IN THE MATTER OF:

GVK Power (Goindwal Sahib) Limited

...Petitioner

Versus

Punjab State Power Corporation Limited

...Respondent

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Place: New Delhi Date: 21.03.2023

BEFORE THE HON'BLE PUNJAB STATE ELECTRICITY REGULATORY COMMISSION, CHANDIGARH

PETITION NO. OF 2023

IN THE MATTER OF:

Application for approval of Aggregate Revenue Requirement and determination of tariff for sale of energy generated by 2X270 MW Goindwal Sahib Thermal Power Plant at Goindwal Sahib, Punjab for the control period FY 2023-24 to 2025-26 in terms of Section 62, Section 86 and Section 94 of the Electricity Act 2003 along with "Punjab State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2022.

AND

IN THE MATTER OF:

GVK Power (Goindwal Sahib) Limited

Plot No. 10 Paigah House, Sardar Patel Road, Secunderabad – 500003

...Petitioner

...Respondent

VS

Punjab State Power Corporation Limited

The Mall, PSEB Head Office, Patiala (Punjab)- 147001

A. Introduction

I. Brief Overview

1.1 GVK Power (Goindwal Sahib) Limited ("**Petitioner/GVK**") is a company incorporated under the provisions of Companies Act, 1956 with the object of engaging in the business of establishing, maintaining and operating a 2X270MW (540 MW) coal based thermal power station at Goindwal Sahib in the State of Punjab ("**Project**"). For the generation, sale and purchase of electricity from the Project, an Amended and Restated Power Purchase Agreement, dated 25.06.2009 (**"PPA"**) was entered into between the Petitioner and the Punjab State Power Corporation Limited (**"Respondent/PSPCL"**). Under the terms of the PPA, the entire power generated by the Petitioner from the Project shall be sold exclusive to the Respondent, including the full capacity of the Project.

1.2 The present petition is being filed by the Petitioner for the approval of Aggregate Revenue Requirement ("**ARR**") and determination of Tariff for the sale of electricity from the Project for the Control period 2023-24 to 2025-26 ("**Control Period**") under the Punjab State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2022 ("**PSERC MYT Regulations, 2022**"/ "**Regulations**").

II. Applicable Regulations

2.1. Regulation 10 of the PSERC MYT Regulations, 2022 contemplates a Multi Year Tariff Application as under:

"10.1 The Applicant shall make an application for the Multi Year Tariff on or before 30th November of the year preceding the first year of Control Period

10.2 The Applicant shall submit the forecast of Aggregate Revenue Requirement for each year of the Control Period and tariff proposal for the first Year of the Control Period, in a manner as provided in these Regulations and in formats specified by the Commission from time to time."

2.2 It is submitted that the Petitioner could not file the present petition within the time frame contemplated under Regulation 10.1 of the Regulations, on account of the ongoing insolvency proceedings against the Petitioner. It is submitted that on 10.10.2022, the Hon'ble NCLT admitted C.P. (IB) No. 43/7/HDB/2020 and put the Petitioner under Corporate Insolvency Resolution Proceedings ("**CIRP**"). The Interim Resolution Professional was appointed vide Order dated 10.10.2022 (effective from 18.10.2022 i.e., the date of uploading order dated 10.10.2022 on Hon'ble NCLT website). Consequently, there has been a delay in the filing of the present Petition.

2.3 It is prayed that the delay in filing the present Petition may be condoned by this Hon'ble Commission and the same may be taken on record, for this Hon'ble Commission's consideration.

III. Background

3.1 It is submitted that this Hon'ble Commission vide Order dated 17.01.2020 in Petition No. 54 of 2017 has approved a capital cost of Rs. 3,058.37 Crore against the Petitioner's submission of Rs. 4,441 Crore. By way of the said order, this Hon'ble Commission has approved the Annual Fixed Cost as Rs. 545.42 Crore for the Contract Year 2016-17 on a pro rata basis for 349 days considering the COD as 16.04.2016. The Petitioner has challenged Order dated 17.01.2020 vide Appeal No. 41 of 2020 before the Hon'ble Appellate Tribunal for Electricity ("**Hon'ble Tribunal**") and is pending adjudication, as on date. The Petitioner reserves its rights in this regard.

3.2 The present Petition is being filed by the Petitioner based on the approved figures by this Hon'ble Commission in Petition No. 54 of 2017. The Petitioner craves leave to revise the present Petition, in the event Hon'ble Tribunal grants any relief as sought by the Petitioner including but not limited to granting of an additional project cost in excess of Rs. 3,058.37 Crore.

IV. Prayer before the Hon'ble Commission

4. By way of the present Petition, the Petitioner is seeking following reliefs before this Hon'ble Commission: -

- a) Condone the delay in filing the present Petition.
- Approve the Capital Investment Plan and Business Plan for the Control Period of FY 2023-24 to FY 2025-26.
- c) Approve the Aggregate Revenue Requirement ("ARR") for MYT Control Period FY 2023-24 to FY 2025-26 for the Petitioner.
- d) Approve the proposed tariff for sale of power by the Petitioner based on ARR.

V. Scope of the Petition

5. The present Petition has been filed by the Petitioner seeking approval of Aggregate Revenue Requirement and determination of tariff for sale of electricity from the Petitioner's Project to the Respondent, PSPCL during the Control Period.

VI. Annual Fixed Cost

6.1 Regulation 14.3 of the PSERC MYT Regulations, 2022 deals with the determination of Annual Fixed Cost as under: -

"The Annual Fixed Cost of a generating plant (thermal or hydro) shall include the following elements:

(a) Return on Equity;

(b) Interest and Finance Charges on Loan Capital;

- (c) Interest Charges on Working Capital;
- (d) Depreciation;
- (e) Operation and Maintenance Expenses;
- (f) Statutory levies and taxes, if any."

A. Return on Equity (RoE)

6.2 It is submitted that this Hon'ble Commission vide Order dated 17.01.2020 in Petition No.54 of 2017 has approved a Capital Cost of Rs. 3,058.37 Crores for the Project. During the Control Period FY 2020-21 to FY 2022-23, the Petitioner has not incurred any additional capital expense. The Petitioner has filed Petition No. 68 of 2022 seeking Trueup of FY 2020-21 and FY 2021-22 and Petition seeking Annual Performance Review of FY 2022-23 before this Hon'ble Commission, which is pending adjudication. Thus, the opening Gross Fixed Asset ("**GFA**") for the Control Period has been taken as Rs. 3072.11 Crore.

6.3 The Petitioner, in terms of the PSERC MYT Regulations, 2022, computed the equity at a normative level (30 % of GFA) and has correspondingly considered an opening equity @ 30% % of Rs. 3072.11 Crore as Rs.921.89 Crore for the Control Period.

S. No.	Particular	Amount (Rs. Crore)
1	Capital Cost	3072.11
2	Additional Capitalization in Previous Control Period	0.00
3	Opening GFA for Control Period	3072.11
4	Opening Equity for Current Control Period - @ 30% of (3)	921.89

 Table 1 Calculation of Opening Equity for Control Period

It is submitted that the RoE has been calculated at the normative rate of 15.5%.

Table 2 Calculation of Return on Equity for Control Period (Rs Crore)

S. No	Particulars	FY 2023-24	FY 2024-25	FY 2025-26
1	Opening Balance of Equity	921.89	921.89	921.89

S. No	Particulars	FY 2023-24	FY 2024-25	FY 2025-26
2	Normative Equity addition @ 30% due to additional capitalization	0.00	0.00	72.90
3	Closing Balance of Equity	921.89	921.89	994.79
4	Average Equity	921.89	921.89	958.34
5	Rate of Return (%)	15.50	15.50	15.50
6	RoE (5*4)	142.89	142.89	148.54

Based on the above calculations, this Hon'ble Commission may be pleased to approve RoE for the Control Period as tabulated above.

B. Interest on Loan Capital

6.4 The Petitioner has estimated the Opening Loan for the Control Period as follows:-

Table 1 Calculation of Opening Loan for the Control Period

S.No.	Particular	Amount (Rs. Crore)
1	Capital Cost as on 1.4.2022	3072.11
2	Additional Capitalization in 2022-23	0.00
3	Opening GFA for Control Period	3072.11
4	Opening loan for Current Control Period - @ 70 % of (3)	2151.08

6.5 For computing above rate of interest, the rate of interest has been taken as the weighted average rate of interest of the loans availed by the Petitioner. Detailed working for the same has been provided in the financial formats (Form-G14-Appendix) as filed along with the present Petition. Accordingly, the interest rate of 13.22% p.a. has been computed and the same has been considered for the MYT Control Period in accordance with Regulation 23 of the PSERC MYT Regulations, 2022, as under:

"24.1. For existing loan capital, interest and finance charges on loan capital shall be computed on the outstanding loans, duly considering 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. 24.2. Interest and finance charges on the future loan capital for new investments shall be computed on the loans, based on one (1) year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI as may be applicable as on 1st April of the relevant year, plus a margin determined on the basis of current actual rate of interest of the capital expenditure loan taken by the Generating Company, Licensee or SLDC and prevailing SBI MCLR.

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 considering cumulative depreciation made to the extent of de-capitalisation."

6.6 The interest on loan capital for MYT Control Period FY 2023-24 to FY 2025-26 has been tabulated as under:

S.No	Particulars	FY 2023-24	FY 2024-25	FY 2025-26
1	Gross Normative Loan – Opening	2151.08	2151.08	2151.08
2	Cumulative Repayment up to	1006.52	1153.04	1299.57
	Previous Year (Cumulative			
	Depreciation up to previous year)			
3	Net Normative Loan - Opening	1144.56	998.04	851.51
4	Less: Repayment During the Year	146.53	146.53	152.94
	(Considering Depreciation as			
	Principal Repayment)			
5	Loan Addition due to Additional	0.00	0.00	170.10
	Capitalization during the year (=			
	Additional Capitalization -			
	Normative Equity Addition			
	considered for ROE computation)			
6	Net Loan Closing	998.04	851.51	868.67
7	Average Loan	1071.30	924.77	860.09
8	Weighted Average Rate of Interest	13.22%	13.22%	13.22%
	on Loan			
9	Interest on Loan	141.63	122.26	113.70

Table 2 Calculation of Interest on Loan During the Control Period (Rs Crore)

6.7 Therefore, it is prayed that this Hon'ble Commission may be pleased to approve the above expenses as Interest on Loan Capital for the MYT Control Period.

C. Depreciation

6.8 The depreciable value has been computed by reducing the value of land from the GFA and considering 90% of such value as depreciable value. The depreciable value of IT assets has been considered as 100%, in line with Regulation 21.2 of the PSERC MYT Regulations, 2022.

6.9 The rate of depreciation for individual block of assets has been taken as per the CERC (Terms and Conditions of Determination of Tariff) Regulations, 2019 and overall depreciation has been calculated at the weighted average rate arrived by using these rates. The Rates for individual asset class are tabulated below: **Table 3 Rates of Depreciation for Individual Asset Class**

S.No.	Asset Class	Rate of Depreciation (as per CERC 2019 Tariff Regulations)
1	Freehold land	0.00%
2	Plant and equipment	5.28%
3	Capital Spares	5.28%
4	Buildings	3.34%
5	Computers	15.00%
6	Office equipment	6.33%
7	Furniture and fixtures	6.33%
8	Vehicles	9.50%
.9	Computer software	15.00%
10	Right to Use Railway Line	0.00%
	Weighted Average Rate of Depreciation	4.77%

6.10 Based on the above rates, the Depreciation claimed for the Control Period is tabulated below:

Table 4 Depreciation for the Control Period (Rs. Crore)

Description	FY 2023-24	FY 2024-25	FY 2025-26
Depreciation	146.53	146.53	152.94

6.11 The detailed calculation for arriving at the above Depreciation is provided in the financial formats as submitted along with the present Petition. This Hon'ble Commission may be pleased to approve the Depreciation arrived at by the Petitioner as above for the Control Period.

D. Operation and Maintenance Expenses

6.12 In terms of Regulation 25 of the PSERC MYT Regulations, 2022:

"The O&M expenses for the nth year of the Control Period shall be approved based on the formula shown below:

(i) 0&M_n = (R&M_n + EMP_n + A&G_n) x (1-X_n) Where, R&M_n -Repair and Maintenance Costs of the Applicant for the nth year; EMPn -Employee Cost of the Applicant for the nth year; A&Gn -Administrative and General Costs of the Applicant for the nth year;

6.13 Further the Regulations provide that the components of O&M Expenses shall be computed as below:

"R&Mn= K*GFA*WPIn/WPIn-1 Where. 'K' is a constant (expressed in %) governing the relationship between R&M costs and Gross Fixed Assets (GFA) for the nth 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 nth year. WPIn means the average rate (on monthly basis) of Wholesale Price Index (all *commodities*) over the year for the nth year. *(ii)* $EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDEX_n/INDEX_{n-1})$ $INDEX_n$ - Inflation Factor to be used for indexing the Employee Cost and Administrative and General Costs for nth year. This will be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) of nth year and shall be calculated as under: - $INDEXn = 0.50*CPI_n + 0.50*WPI_{n''}$

In the above Regulations, the K factor and Efficiency factor X_n are to be determined by this Hon'ble Commission in the MYT Order for the Control Period.

6.14 The Petitioner while calculating the various components of O&M expenses has considered an estimate R&M Expenses to a tune of Rs. 11.64 Crore for FY 2023-24. K factor has also been calculated based on GFA and R&M of FY 2023-24 and the same K

factor has been considered for entire Control Period. WPI and CPI data has been considered for FY 2021-22 and FY 2022-23. Accordingly, the various components of O&M are as follows:

S. No.	Particulars	FY 2023-24	FY 2024-25	FY 2025-26
1	O&M Expenses	87.63	95.58	104.24
1.1	Employee Expenses	32.63	35.59	38.82
1.2	R&M Expenses	11.64	12.70	13.85
1.3	A&G Expenses	43.36	47.29	51.58
2	O&M Expense capitalised	0.00	0.00	0.00
3	TotalOperation&MaintenanceExpenses(netof capitalisation)	87.63	95.58	104.24

Table 5 O&M Expenses for MYT Control Period (Rs Crore)

Calculation of K Factor:-

R&M Expenses of 2023-24 (Estimated) = Rs. 11.64 Crore.

Average GFA for 2023-24 – Rs. 3072.11 Crore.

K Factor = B/A

Which comes out to be 0.38%

Calculation of Index for A&G and Employee Expenses

Average WPI (For all commodities) FY 2020-21 = 123.38 Average WPI (For all commodities) FY 2021-22 = 338.69 Average CPI (Industrial Workers) FY 2020-21 = 139.41 Average CPI (Industrial Workers) FY 2022-23 = 356.06

The Petitioner prays that the Hon'ble Commission to approve the above O&M expenses for the Control Period of MYT FY 2023-24 to FY 2025-26.

Source

WPI Data- https://eaindustry.nic.in/download data 1112.asp

CPI Data - http://labourbureau.gov.in/LBO indtab Feb 2019.pdf

E. Interest on Working Capital

6.15 In terms of Regulation 32.1 (a) of the PSERC MYT Regulations, 2022, the Working Capital for Thermal Generating Plants is to be computed as under:

"i. Fuel Cost including cost of limestone / other reagent 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."

Considering the above guiding principles and Normative Availability Factor as 85%, the Petitioner has worked out the Working Capital for each year of the Control Period as follows:

S. No.	Particulars	FY 2023-24	FY 2024-25	FY 2025-26
1	Cost of Fuel for 2 months corresponding to Normative Annual Plant Availability Factor.	318.51	334.44	351.16
2	O&M expenses for 1 month	7.30	7.96	8.69
3	Receivables equivalent to 2 months of fixed & variable charges corresponding to Normative Annual Plant Availability Factor	416.93	431.46	450.82
4	Maintenance Spares (@15% of O&M Expenses)	13.15	14.34	15.64
	Total	755.89	788.20	826.30

Table 6 Calculation of Working Capital for Control Period (Rs Crore)

6.16 Regulation 24 of the PSERC MYT Regulations, 2022 details the Rate of Interest on Working Capital, as under:

"24.1 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 one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI as may be applicable as on 1st April of the relevant year plus 350 basis points, whichever is lower. 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 accordance with the foregoing, SBI MCLR rate on 01.04.2022 has been taken as the base. The rate as on 01.04.2022 was 7%. Adding 250 basis points to the same, the rate of interest on working capital comes out to be 9.5% and the same has been considered for calculation on interest in working capital for every year of control period.

S. No.	Particulars	FY 2023- 24	FY 2024-25	FY 2025-26
1	Working Capital	755.89	788.20	826.30
2	Rate of Interest on Working Capital	9.500%	9.500%	9.500%
3	Interest on Working Capital	71.81	74.88	78.50

Table 7 Interest Calculation on Working Capital (Rs Crore)

Therefore, it is prayed that this Hon'ble Commission may be pleased to approve the Interest on Working Capital as calculated table for the Control Period 2023-24 to 2025-26.

6.17 Based on the calculation of the various components of the Annual Fixed Cost, the AFC for each year of the control period has been arrived at, as under:

Table 8 Annual Fixed Charges (Rs Cr)

Particular	FY 2023-24	FY 2024-25	FY 2025-26
Return on Equity	142.89	142.89	148.54
Interest on Loan	141.63	122.26	113.70
Depreciation	146.53	146.53	152.94

O&M Expenses	87.63	95.58	104.24
IOWC	71.81	74.88	78.50
Total	590.49	582.14	597.92

F. Calculation of Energy Charges

6.18 Regulation 35 of PSERC MYT Regulations, 2022 deals with the computation of Energy Charges. Regulation 35.1 reads as under:

"Energy charges shall be derived on the basis of the landed fuel cost (LFC) of a generating station (excluding hydro) and shall consist of the following cost:

(a) Landed cost of primary fuel;

(b) Landed cost of secondary fuel; and

(c) Cost of limestone or any other reagent, as applicable:

Provided that taxes, duties and amount received on account of penalties received from fuel supplier shall have to be adjusted in landed fuel cost."

6.19 It is submitted that the Petitioner has a long-term coal linkage under the Shakti Scheme and the actual landed cost of coal for the FY 2022-23 has been considered as the base for calculating the landed fuel cost for the Control Period. The actual landed cost of coal for the FY 2022-23 has been escalated at the average escalation rate notified by the Hon'ble CERC for domestic coal of past 5 years. Hon'ble CERC has notified an escalation rate of 5% for domestic coal.

6.20 The PLF considered for the Control Period is based on the fact that entire power generated from the Project is to be sold to the PSPCL and as such the generation is to be based upon the despatch instruction. The calculation of Energy Charges has been summarized as below:

	Particulars	Unit	Control Period Projections		
No.			1st Year	2nd Year	3rd Year
			2023-24	2024-25	2025-26
1	Plant Capacity	MW	540	540	540
2	Plant Load Factor	%	62%	62%	62%
3	Gross Generation	MU	2932.848	2932.848	2932.848

Table 9 Calculation of Energy Charges for Control Period

		Unit	Control Period Projections		
No.	Particulars		1st Year	2nd Year	3rd Year
			2023-24	2024-25	2025-26
4	Auxiliary Consumption	%	9%	9%	9%
5	Net Generation	MU	2668.892	2668.892	2668.892
6	Availability Factor	%	85%	85%	85%
7	Station Heat Rate	kcal/kWh	2332	2332	2332
8	Weighted Average 'GCV of received Coal'	kcal/kg	3205	3205	3205
9	Specific Consumption of Coal	kg/kWh	0.73	0.73	0.73
10	Quantity of Coal Received		2133978.64	2133978.64	2133978.64
a)	Indigenous		2133978.64	2133978.64	2133978.64
b)	Imported	MT			
c)	Captive mine				
d)	Other (specify)				
11	Transit Loss of Coal (where ever applicable)		0.80%	0.80%	0.80%
a)	Indigenous				
b)	Imported	70			
c)	Captive mine				
d)	Other (specify)				
11	Transit Loss of Coal (where ever applicable)	MT	-		
a)	Indigenous		-		
b)	Imported]	-		