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

Petition No. 34 of 2020
Date of Order: 04.01.2021

Petition for approval of the Capital Investment Plan and Business Plan for 2X270 MW Goindwal Sahib Thermal Power Plant at Goindwal Sahib, Punjab for the Control period FY 2020-21 to 2022-23 under Regulation 9 of the Punjab State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2019 (PSERC MYT Regulations 2019).

AND

In the matter of: GVK Power (Goindwal Sahib) Limited, Plot No. 10, Paigah House, 156-159, Sardar Patel Road, Secunderabad – 500003

Petitioner

Versus

Punjab State Power Corporation Limited, The Mall, Patiala.

Respondent

Present: Ms. Kusumjit Sidhu, Chairperson
Ms. Anjuli Chandra, Member
Sh. Paramjeet Singh, Member

Order

GVK Power (Goindwal Sahib) Limited (GVK) is maintaining and operating a 2X270 MW (540 MW) coal based thermal power station at Goindwal Sahib in the state of Punjab and has filed the present petition for approval of its Capital Investment Plan and Business Plan for the Control Period FY 2020-21 to 2022-23. GVK has estimated the Capital Investment Plan as Rs. 540 Crore for the Control period FY 2020-21 to FY 2022-23 on account of installation of Flue Gas Desulphurization (FGD) system in the plant in compliance of Ministry of Environment, Forest and Climate Change (MoEFCC) notification dated 01.12.2015 which is an event of change in law in terms of Article 13 of the PPA dated 25.06.2009 and Regulation 3.15 of the PSERC Tariff Regulations 2019. GVK has prayed to

a) Condone the delay in filing the present petition

b) Admit the petition and grant approval for the Business Plan and Capital Investment Plan for the Control Period from FY 2020-21 to FY 2022-23 as detailed out by the petitioner.

c) Grant in-principle approval for the additional expenditure to be incurred by the Petitioner in installing and operating the FGD System in compliance of statutory mandate i.e., MoEFCC Notification dated 07.12.2015.

d) Pass any other order as the Commission may deem fit and appropriate.

1.1 The petition was admitted vide Order dated 30.09.2020. GVK was directed to issue a public notice inviting objections/suggestions from the general public/stakeholders and notice was issued to PSPCL to file its reply to the petition. GVK was directed to file rejoinder, if any, and the petition was fixed for hearing as well as public hearing on 28.10.2020. PSPCL filed its reply to the petition vide memo No. 5065 dated 29.10.2020 and GVK filed a rejoinder thereto dated 30.11.2020. PSPCL filed sur-rejoinder to the rejoinder vide memo No. 5358 dated 10.12.2020.

1.2. The public notice inviting objections/suggestions from the general public/stakeholders was published in The Hindustan Times (English), Ajit (Punjabi) & Ajit Samachar (Hindi) on 06.10.2020 however, no objection was received from public. The petition was taken up for hearing as well as public hearing on 28.10.2020 however, nobody appeared from the public in the public hearing. The petition was taken up for hearing on 10.11.2020, 02.12.2020 and after hearing the parties on 16.12.2020 the Order was reserved.

2.0 Observations and Decision of the Commission

The Commission has examined the petition, the reply submitted by PSPCL, rejoinder filed by GVK and the other documents adduced on the record and after hearing the counsel for the parties, decides as under:

Capital Investment Plan

GVK's Submissions

GVK submitted the year wise details of the additional capital expenditure to be incurred during the Control Period from FY 2020-21 to FY 2022-23 as under:

Table No 1: Additional Capital Investment submitted by GVK for FY 2020-21 to FY 2022-23

(Rs. Crore)

Sr.No.	Head	FY 2020-21	FY 2021-22	FY 2022-23
1.	Plant & Equipment	0	0	540
Total		**0**	**0**	**540**

GVK submitted that the said capital expenditure is to be incurred due to the installation of Flue Gas Desulphurization (FGD) System at its Plant in compliance of Ministry of Environment, Forest & Climate Change (MoEF&CC) Notification dated 07.12.2015. The MoEF&CC notification is an event of Change in Law in terms of Article 13 of the PPA dated 26.05.2009 and Regulation 3.15 of PSERC (Terms and Conditions for Determination of

Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2019. GVK further submitted that Central Pollution Control Board (CPCB) on 14.12.2017, in exercise of power under Section 5 of the Environment (Protection) Act, 1986 hasdirected it to install various Emission Control Systems including FGD System in its Project in compliance of the revised emission standards prescribed by MoEF&CC notification.

GVK submitted that CEA vide letters dated 10.04.2018 and 31.05.2018 directed GVK to approach the concerned Regulator for the installation of FGD and submit a detailed feasibility report so that the whole process could be completed in the specified timeline. GVK on 30.01.2019 engaged M/s Save Urja as consultants for a detailed feasibility study of its Project, qua identifying a suitable technology and cost estimates for complying with the Revised Emission Norms. GVK further submitted that CEA vide letter dated 06.02.2019 informed GVK that it is accepting the feasibility report by TPPs and was not insisting for prior approval from the concerned Regulator. CEA directed GVK to submit its detailed feasibility report for installation of FGD system. M/s Save Urja on 08.03.2019, submitted the Feasibility Report of the Project to GVK wherein it is proposed to retrofit GVK's Project with emission control technology on DeSOx and DeNOx i.e. by installation of wet lime FGD System and Primary NOx reduction measures (combustion optimization). In March 2019, GVK submitted the Feasibility Report of its Project to CEA seeking its recommendation on the suitable technology and associated cost implications qua the installation of FGD system. CEA on 30.04.2019 provided an advisory report detailing suggestive technology and estimated indicative cost qua the installation of FGD System at GVK's Project. CEA also stated that the cost of retrofitting of FGD for the plant needs to be discovered through open competitive bidding in consultation with representatives of the major PPA stakeholder. CEA gave the following recommendations:

a) As per the Feasibility Report, GVK has opted for the Wet Limestone based FGD technology. Under this technology, the reagent source may be selected based on availability of limestone, limestone purity, cost and quality. Additionally, source of limestone should be chosen with life cycle cost analysis.

b) The maximum additional auxiliary power consumption for complete FGD facilities (limestone based FGD) would be maximum of 1%. However, if the existing chimney is used, the requirement of Gas to Gas Heater (GGH) would have to be seen and the additional auxiliary power consumption with GGH (only if using old chimney) would be 0.3%.

c) The indicative estimated cost for Wet limestone base FGD works out to Rs. 0.45 Crore/MW (CAPEX only for Limestone based FGD). This indicative cost is the 'Base Cost' only and does not include Opportunity cost (associated with generation loss due to interconnection of chimneys with absorber) and taxes-duties. This indicative base cost is calculated considering new chimney without GGH.

d) GVK shall approach the concerned Regulator at the appropriate stage for any piling related additional Cost implications on account of installation of FGD system.

e) The cost of retrofitting the FGD for GVK ought to be discovered through open competitive bidding in consultation with the lead procurer. The lead procurer (to be invited by GVK) may participate in bidding process till final award of FGD contract.

f) As per the Feasibility Report, GVK has opted for new wet chimney. However, final selection of chimney may only be made after conducting a lifecycle cost benefit analysis and seeing technical feasibility of available options.

g) As regards Opportunity Cost, GVK was advised to minimize the interconnection time by taking suitable measures so that 'Opportunity Cost' may have least impact on tariff revision.

h) For operating expenditure (Opex), the same would include reagent cost, additional water consumption associated with FGD, manpower cost, auxiliary power consumption (APC) and By-product handling and revenue earned through disposal of by product. Opex should be kept as low as possible by reducing APC and producing good quality of saleable by-product.

GVK submitted that as per CEA report, the indicative base cost for installation of FGD system is Rs. 0.45 Crore per MW as CAPEX. Such substantial expenditure for GVK's Plant cannot be arranged internally and requires additional funding from lenders/ banks. Thus, given the implications of implementing these changes to meet the Revised Emission Norms prescribed by MoEF&CC, it is important that there is a certainty of Regulatory treatment and recovery of these costs and charges. Therefore, in-principle Regulatory approval of the cost is critical for arranging funds for implementation of Emission Control Systems. GVK submitted that the requirement of in-principle approval of FGD cost has been discussed and affirmed by Hon'ble APTEL in the case of TSPL vs. PSERC (Appeal No. 21 of 2019), CERC in the case of Sasan Power Ltd. vs. MP Power Management Company Ltd. and MoP office memorandum dated 24.04.2020. The lenders/banks are reluctant to provide funding to generating companies for compliance of MoEF&CC notification without a Change in Law declaration of the said Notification and in-principal approval of the associated cost from the concerned Regulatory Commission. Accordingly, prior in-principle approval of the resultant expenditure on account of installation of Wet Lime FGD System and primary NOx reduction measures is required in order to:

a) Obtain / deploy additional funds including debt funds, which will not be sanctioned by lenders in the absence of Regulatory certainty with regard to the methodology / mechanism of arriving at the compensation to be provided to GVK to mitigate the impact of Change in Law event;

b) Ensure that the entire process of compliance is carried out in a transparent manner under the orders of the Commission and with the cooperation of PSPCL.

c) Prevent multiplicity of proceedings which may crop up on account of disputes in relation to change in law claims; and

d) Ensure that project economics and time value of money is secured, which will also be beneficial to the Procurers who can avoid incurring interest / carrying cost.

GVK submitted that it has been under severe financial stress on account of the cancellation of its captive coal block. GVK has been declared a non-performing asset since August 2017 and is currently undergoing a resolution process with its lenders in terms of the RBI Circular dated 07.06.2019. In these circumstances, the lenders are reluctant to provide credit facilities towards the additional capital required for the installation of the FGD Systems. The actual adjustment of tariff will be based on actual expenditure subject to prudence check by the Commission, after the installation of the FGD Systems.

GVK further submitted that the expression of interest was published in Financial Express and Economic Times on 18.06.2018 inviting bids for Design, Supply, Installation, Testing, Erection and Commissioning of FGD system through International Competitive Bidding (ICB) process.GVK informed PSPCL on 19.07.2018 that it has floated ICB tender inviting bids for installation of FGD system. Seven firms expressed their interest. M/s GE Power and Hamon Research-Cottrell India Pvt. Ltd. submitted their technical bid. Out of which M/s GE Power submitted the financial bid of Rs. 400 Crore i.e. 0.74 Crore/MW excluding civil works, taxes, GST, IDC, EDC and inclusive of design, installation, commissioning and testing of FGD wet limestone system. As such, the total cost works out to about Rs.540 Crore. GVK prayed the Commission to approve the Capital Investment Plan of Rs.540 Crore on account of installation of FGD System and grant in-principle approval for the increase in cost/or revenue expenditure on account of implementation of revised emission norms. GVK submitted that the said capital investment during the control period shall be funded at a normative debt equity ratio of 70:30.

GVK submitted that the cost of the FGD system was not included in the project cost as the project was conceptualized on the then existing laws and Government policies in terms of which there was no mandate to install FGD. The environmental clearance mandates GVK to make provision for space to retrofit FGD, if required at a later stage. CPCB vide letter dated 14.12.2017 mandated the installation of FGD. GVK submitted that the cost of Rs. 0.45 Crore/MW as recommended by CEA is the base cost for wet limestone based FGD system and does not include the cost of the following component:

a) Taxes and duties
b) Pre operative expenditure including insurance cost and startup expenses
c) Finance charges
d) Interest during construction
e) Hedging cost and/or impact of Foreign Exchange Rate Variation
f) Contingency
g) Miscellaneous Financial cost and cost for additional work specific to GVK project.

GVK submitted the breakup of cost to be incurred towards installation of FGD system as under:

Table No. 2: Breakup of cost to be incurred towards installation of FGD system (Rs. Crore)

Sr.No.	CAPEX item	Base Cost
1.	FGD Cost as per M/s GE Quote	400
2.	Assumed 7.5% discount from M/s GE	370
3.	Civil Work (Chimney with Piles)	42
4.	Waste Water treatment plant	4
5.	Total Cost	416
6.	Taxes @ 12%	49.92
7.	Total Cost of FGD works	465.92
8.	Financing Charges	2
9.	Excluding civil works, taxes, GST, financing charges, IDC, EDC	71.50
10.	Total Cost of FGD works including IDC	539.425
11.	Contingent	0.575
12.	**Total Cost of FGD works including IDC**	**540**

PSPCL's Submissions

PSPCL submitted that the environmental clearance dated 09.05.2008 provided that the cost of all protection measure should be included as part of the project cost and should not be diverted for any other purpose, duly keeping in mind that MoEF&CC may impose environmental conditions for modifying the existing system. Considering that the environmental condition has indicated a future requirement, if any, for retrofitting of FGD system for which adequate space is to be reserved, it follows that GVK has been required to ear mark expenditure towards existing/subsequently modifying environmental protection measures and include the same in the project cost. MoEF&CC notification dated 07.12.2015 is prior to the commissioning of the project. MoP vide letter dated 30.05.2018 informed CERC that MoEF&CC

notification is in the nature of change in law except where (a) PPAs had been entered under Section 63 of the Electricity Act, 2003 having bid deadline on or after 07.12.2015 or (b) where such requirements of pollution control system had been mandated under the Environment Clearance for thermal power plants or otherwise envisaged before the notifications. MoP further informed that the additional cost implication due to installation or upgradation of various emission control systems and its operational cost is to be considered for a pass-through in the tariff in accordance with the law and the thermal power plant may approach the Appropriate Commission for approval of additional capital expenditure and compensation for additional cost on account of this Change in Law event in respect of the PPAs entered into by them. As such, the Thermal Power Plants are to approach the appropriate Commission for approval of additional capital expenditure only if they do not fall under the said exceptions. PSPCL rejected the reliance placed by the petitioner on the case of TSPL vs. PSERC (Appeal No. 21 of 2019). PSPCL submitted that the conditions in the environmental clearance issued to GVK are similar to those which have been considered by Hon'ble APTEL in JSW Energy Ltd. vs. Maharashtra State Electricity Distribution Company case which does not consider a subsequent requirement of FGD as a change in law in view of the specific condition prescribed under the environmental clearance. PSPCL further submitted that CEA has estimated the cost for a unit of 250 MW as 0.40 Crore/MW. As such, for the petitioner project of 2 units of 270 MW each, the estimated cost works out to Rs. 225 Crore. PSPCL submitted that the installation of FGD is not an efficiency improvement measure but a mandatory condition imposed by MoEF&CC. The said claim in compliance to the MoEF&CC notification does not amount to a change in law event under the PPA.

Observation and Decision of the Commission

In the petition, GVK has requested the Commission to allow for the MYT period FY 2020-21 to FY 2022-23 a capital cost of Rs. 540 Crore to be incurred in FY 2022-23 for the installation of FGD considering it as change in law, in compliance with the MoEF & CC notification dated 07.12.2015 amending the environmental norms. The Commission notes that MoEF & CC notification dated 07.12.2015 is applicable for all operational thermal power stations and the Central Pollution Control Board (CPCB) vide letter dated 14.12.2017 issued directions to GVK under Section 5 of the Environment (Protection) Act, 1986 for compliance of the emission limit notified vide notification No. S.O. 3305 (E) dated 07.12.2015.

The Commission further notes that CEA vide its recommendations issued to GVK for the installation of FGD mentioned the estimated cost for Wet limestone base FGD as Rs. 0.45 Crore/MW which does not include opportunity cost (associated with generation loss due to interconnection of chimneys with absorber) and taxes/duties. Further, CEA vide its report mentioned that GVK has shown the piling foundation requirement for FGD facilities structure, resulting in additional CAPEX beside the indicative base cost and advised GVK to approach the Regulator at appropriate stage for any piling related additional cost implications.

The Hon'ble APTEL's judgments in any of the cases mentioned by PSPCL and GVK are not relevant because GVK is a cost plus project under section 62 of the Electricity Act, 2003 and the Commission in its Order dated 17.01.2020 in petition no. 54 of 2017 after detailed prudence check had determined the capital cost the GVK project as Rs. 3058.37

Crore. This cost does not include the cost of FGD. Considering the above, the Commission provisionally allows a capital investment of Rs. 243 Crore at the rate of Rs. 0.45 Crore/MW as recommended by CEA for the installation of FGD at its plant.

Table No.3: Capital Investment provisionally allowed by the Commission

(Rs. Crore)

Sr.No	Head	FY 2020-21	FY 2021-22	FY 2022-23
1	Plant & equipment (FGD)	0	0	243

The actual cost of retrofitting of FGD needs to be discovered through open competitive bidding in consultation with PSPCL and as per the directions/advice given by the CEA. The process should be started immediately.

3.0 BUSINESS PLAN

As per Regulation 9 of the PSERC MYT Regulations, 2019, the Applicant shall file a business plan for its generation, transmission or distribution businesses, as the case may be, on or before 20TH August of the year preceding the first year of the control period, for a duration covering at least the entire control period for approval of the Commission. The business plan shall cover details for each year of the control period. Key requirements of Business Plan Regulation 9 of the MYT Regulations, 2019 relates to the Business Plan, which is reproduced below:

"9. BUSINESS PLAN

9.1 The Applicant shall file the Business Plan including the Capital Investment plan for its Generation, Transmission, SLDC and/or Distribution businesses, as the case may be for approval of the Commission on or before 20th August of the year preceding the first *year of the Control Period for a duration covering the entire Control Period.*

9.2……..

9.3 The Business Plan for Generation Business shall contain among other things the following:
(a) Capacity addition / reduction;
(b) Availability forecasts;
(c) Future performance targets;
(d) Proposed efficiency improvement measures;
(e) R&M of existing generation units/projects and any other new measures to be initiated for the Generation Business, e.g.; automation, IT initiatives etc.;
(f) Capital Investment Plan based on the above;
(g) Man Power Plan.
9.4 ……

9.5 ……

9.6 ……

9.7 The Capital Investment Plan covering the entire MYT Control Period will be submitted in the following two parts:

a) Ongoing schemes of the previous MYT Control Period (i.e. works / schemes which are under construction or where full payments have not yet been made). All spillover works will be included in this;

b) Schemes to be taken up in the order of priority giving the schedule over the full MYT Control Period. In case it is likely to take more than 3 years, the likely date of completion should also be given. This will also include such schemes which were part of the Capital Investment Plan of the previous MYT Control Period but could not be started and which the Applicant considers necessary to take up during the present Control Period.

9.8 The Applicant shall submit the Detailed Project Reports (DPRs) for all the schemes as per Part (a) and (b) above which shall include:
(a) Purpose of investment;
(b) Broad Technical Specifications of the proposed investment and supporting details;

(c) Capital Structure;
(d) Capitalization Schedule;
(e) Financing Plan, including identified sources of investment;
(f) Physical targets;
(g) Cost-benefit analysis;
(h) Prioritization of proposed Investments:
Provided that DPRs will not be necessary for schemes under Rs. 10 Crore for Generation and Transmission Businesses, Rs. 5 Crore for Distribution Business and Rs. 1 Crore for SLDC:

Provided further that the total capital expenditure on non-DPR schemes in any year should not exceed 20% of that for DPR schemes during that year.

9.9 The capital investment plan shall match with:

(a) For Generation Business:
i) capacity addition during the Control Period;
ii) renovation and modernisation of the generating plant as allowed in CERC Regulations;
(b)….
(c)…
9.10 ….
9.11….
9.12 ….
9.13….
9.14….
9.15….
9.16…..
9.17 …..
9.18 …..
9.19 The Commission shall scrutinize and approve the business plan including capital investment plan taking into consideration the additional information, if any, provided by the applicant and the objections/suggestions of the key stakeholders.

GVK was required to file the Capital Investment Plan as well as Business Plan with the Commission on or before 20th August of the preceding year of the first year of the Control Period, i.e. on or before 20.08.2019, for all three years of

Control Period from FY 2020-21 to FY 2022-23. The Petition was not filed within the stipulated time. Though the delay was condoned while admitting the petition subsequently GVK has delayed providing complete information to the Commission. GVK has now submitted its Business Plan for the Second Control Period along with the petition which includes the following components of the Business Plan:

a) Capacity Addition/ Reduction
b) Availability Forecast
c) Future Performance targets
d) Generation forecast and performance targets
e) Efficiency Improvement Measures
f) R&M of Existing generation units and other new measures
g) Capital Investment Plan
h) Manpower Plan

On the scrutiny of the above, it has been observed that incomplete data/details have been furnished in the Business Plan. However, GVK has submitted some details pertaining to the same in its petition No.14 of 2020 for determination of Tariff for 2nd MYT Control Period from FY 2020-21 to FY 2022-23, wherein the same will be considered by the Commission separately.

The Commission in this Order provisionally approves the Capital Investment of Rs.243 Crore on the FGD for the control period as brought out in table No.3.

The petition is disposed of in terms of above.

Sd/-	Sd/-	Sd/-
(**Paramjeet Singh**)	(**Anjuli Chandra**)	(**Kusumjit Sidhu**)
Member	Member	Chairperson

Place: Chandigarh
Date: 04.01.2021