

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
AT NEW DELHI**

IN THE MATTER OF:

REVISION OF THE MECHANISM AS SET OUT IN THE ORDER DATED AUGUST 13, 2021, IN SUO MOTU PETITION NO. 6/SM/2021 FOR RECOVERY THROUGH TARIFF OF THE EXPENDITURE INCURRED ON ACCOUNT OF INSTALLATION OF EMISSION CONTROL SYSTEM BY THE GENERATING COMPANIES IN COMPLIANCE OF THE REVISED EMISSION STANDARDS OF THE MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVERNMENT OF INDIA FOR THE ELECTRICITY SUPPLIED BY THE COAL BASED THERMAL POWER GENERATING STATION WHOSE TARIFF IS DETERMINED THROUGH COMPETITIVE BIDDING UNDER SECTION 63 OF THE ELECTRICITY ACT, 2003

IN THE MATTER OF:

Suo-Motu Petition No. 4/SM/2024

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DATE: 04.08.2024
PLACE: NEW DELHI

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IN THE MATTER OF:

Suo-Motu Petition No. 4/SM/2024

COMMENTS ON BEHALF OF PUNJAB STATE POWER CORPORATION LIMITED – PSPCL

MOST RESPECTFULLY SHOWETH:

1. The present petition has been initiated suo-motu by this Hon'ble Commission for devising a revision in the mechanism for compensation as set out in the order dated 13.08.2021 in Suo-Motu Petition No. 6/SM/2021 on account of the installation of emission control system in compliance of the revised emission standards by the competitively bid coal based thermal power generating stations.
2. At the outset, it is stated that the beneficiaries such as the answering stakeholder (PSPCL) would be gravely prejudiced in case the revisions as proposed are implemented.

3. Issue-wise comments to the proposed revisions in the compensation mechanism are as under:

RE: RECOVERY OF DEPRECIATION

4. In the Tariff Regulations, 2019, this Hon'ble Commission had specified the treatment of depreciation of the emission control system as per Regulation 33(10), as under:

“(10) Depreciation of the emission control system of an existing or a new generating station or unit thereof where the date of operation of the emission control system is subsequent to the date of commercial operation of the generating station or unit thereof, shall be computed annually from the date of operation of such emission control system based on straight line method, with salvage value of 10%, over a period of—

- a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or*
- b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or*
- c) ten years or a period mutually agreed by the generating company and its beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”*

5. On similar lines, this Hon'ble Commission had considered the period of 25 years for depreciation of emission control systems for competitively bid projects in the existing compensation mechanism, considering the fact that no generating station has completed fifteen years of life. Relevant extract of the order dated 13.08.2021 passed in 6/SM/2021 is as under:

“Depreciation (DEPe) component of SFC

29. Many stakeholders have submitted comments mainly on two issues - period over which depreciation is to be recovered and the rate of depreciation. Some stakeholders have suggested that the recovery should be over the balance useful life or balance extended life of the thermal generating station or the balance tenure of the long term PPA, whichever is lower. Some stakeholders have suggested that the useful life of the emission control system should be considered as the remaining useful life of the thermal generating station and depreciation for the initial 12 years of operation may be considered at a rate of 6% to 7.5% for servicing the debt repayment and the remaining depreciation should be on Straight Line method basis till the end of useful life of the thermal generating station. Some stakeholders have pointed out that the standardized recovery of depreciation @ 3.6% per annum is premised on the assumption that all thermal generating stations shall continue to operate efficiently for 25 years post installation of the emission control system, irrespective of their actual years of operation, at the time of installing the emission control system.

30. One of the stakeholders has justified the approach proposed by the Commission on the ground that almost all the thermal generating stations under competitive bidding have been commissioned during the last fifteen years and since their useful life is considered as forty years, the consideration of 25 years for recovery of depreciation is logical.

31. We have considered all the suggestions and comments of the stakeholders. We are of the view that the useful life of a thermal generating station is to be considered as 40 years in line with the Companies Act, 2013. The life of emission control system has considered as 25 years in line with other major equipment of thermal generating stations. The Commission observes that as on today, there are no thermal generating stations with competitively bid tariff which have completed more than 15 years of life after COD. Therefore, based on 40 years of life of thermal generating stations, 25 years of life of emission control system would be available for recovery of depreciation. Further, the recovery of depreciation in 25 years also balances the interest of the generating companies and the procurers.

32. Accordingly, 90% of additional capital expenditure on account of installation of ECS (considering salvage value of 10%) shall be

recovered by the generating company in 25 years as depreciation (straight line method @3.6% per year). The depreciation shall be computed from the date of operation of the emission control system after meeting all applicable technical and environmental standards, certified through the Management Certificate duly signed by an authorized person. The value base for the purpose of depreciation shall be the additional capital expenditure of the emission control system as admitted by the Commission. The computation of depreciation during each year of the contract period shall be worked out by the parties directly based on admitted capital cost and the depreciation rate as follows:

$$DEPe = (0.036) \times ACEe$$

Where,

ACEe is the gross capital cost (in Rupees) of emission control system as admitted by the Commission;

DEPe is annual depreciation (in Rupees)."

6. In the Tariff Regulations, 2024, this Hon'ble Commission has revised the treatment of depreciation of the emission control system for new and existing projects. This Hon'ble Commission has revised the period of recovery of 70% depreciation (after adjusting the salvage value) of the emission control system to 12 years for all the generating stations where the operation of emission control system commences within the 20th year of the COD of the generating station or unit thereof and the balance depreciation is graded over 13 years or the balance operational life of the generating station, whichever is lower. This is a shift from the Tariff Regulations, 2019, where 90% depreciation was to be recovered within 25 years from the date of installation of an emission control system for projects that have completed fifteen years or less of their useful life. Further, in the Tariff Regulations, this Hon'ble Commission has introduced the concept of "operational life" of the coal-based thermal generating stations and fixed it at 35 years [Ref: Regulation 3(87)].

7. In the light of the above discussion, this Hon'ble Commission has proposed to, *inter-alia*, modify Paras 31 and 32 of the order in petition 6/SM/2021 as under:

“31. The Commission has specified the operational life of a thermal generating station as 35 years in the 2024 Tariff Regulations. Further, the Commission, in light of the operational life of 35 years, has specified the period of recovery of 70% of depreciation of the emission control system as 12 years in the 2024 Tariff Regulations, which is commensurate with the standard loan tenor. There are very few thermal generating stations under competitively bid tariffs that have completed 15 years of life after their COD, and their loan tenors are in the range of 12-15 years. The Commission considers it appropriate to provide for the recovery of 70% of the depreciation of the emission control system over a period of 12 years from the date of operation of the emission control system commensurate with the loan tenor in order to enable the generating companies of competitively bid projects to meet their debt service obligations and the balance depreciation shall be spread over the remaining operational life of the generating stations.

*32. Accordingly, 70% of additional capital expenditure on account of the installation of the ECS (considering a salvage value of 10%) shall be recovered by the generating company in 12 years. The depreciation shall be computed from the date of operation of the emission control system after meeting all applicable technical and environmental standards, certified through the Management Certificate duly signed by an authorized person. The value base for the purpose of depreciation shall be the additional capital expenditure of the emission control system as admitted by the Commission. The computation of depreciation during each year of the contract period shall be worked out by the parties directly based on admitted capital cost and the depreciation rate as follows:-
.....”*

8. It is stated that the revision to the mechanism of recovery of depreciation as proposed by this Hon'ble Commission is prejudicial to

the interests of the beneficiaries and would result in undue gain to the generating stations.

9. It is stated that the revision in mechanism namely that 70% of the depreciation of the emission control system is to be recovered over a period of 12 years is gravely prejudicial to the beneficiaries. This Hon'ble Commission has itself taken note of the fact that the most of the generating stations have not completed 15 years and that in most case the tenure of the PPAs is 25 years. Therefore, allowing recovery of 70% of the depreciation in the first 12 years itself would result in the generating stations recovering majority of the depreciation within the PPA tenure (i.e., 15 years operation as on date + 12 years).
10. Such revision in mechanism may not be in line with the financial trajectory of the nature of contract between the generating stations and the beneficiaries. This is because, the beneficiaries and in turn the consumers would end up paying for the majority of depreciation towards the emission control system when the same would continue to be used by the generating station even after the life of the PPA.
11. Moreover, in most cases the emission control system is retrofitted with the thermal power plants. So the useful life of the emission control system is akin to the useful life of the generating stations. Under the scheme of the regulated nature of the power sector, the cost borne by the beneficiaries is in exchange for the power supplied. Therefore, it cannot be that the beneficiaries end up recompensing the generators for majority of the depreciation and after the end of the PPA tenure, not get any power in return. In other words, the generator will end up being reimbursed for

the emission control system by the beneficiaries and sell power to others for the balance useful life of the plant after the PPA tenure.

12. Further, in most of the PPAs the tenure is liable to be extended. In such a scenario, it is pragmatic that the depreciation be spread over the remaining balance useful life of the plant or 25 years, whichever is higher.

RE: OPERATION & MAINTENANCE EXPENSES

13. Under the Tariff Regulations, 2019, the compensation for additional operation and maintenance expenses on account of the installation of an emission control system was specified as 2.5% of the additional capital expenditure incurred for the installation of an emission control system (excluding IDC and FERV), which was to be escalated at the rate of 3.5% per annum for the period up to 31.3.2024, and the norms were to be reviewed based on available data thereafter. Keeping in view the provisions of the Tariff Regulations, 2019, and after considering the comments and suggestions of stakeholders, this Hon'ble Commission, *vide* Para 44 of the order dated 13.08.2021 in Suo-Motu Petition No. 6/SM/2021, decided the escalation rate as under:

“44. Accordingly, the Commission is of the view that operation and maintenance expenses shall be allowed @2.5% (instead of 2% proposed in the draft Suo-Motu order) of the additional capital expenditure (ACEe) for installation of ECS (excluding IDC and FERV) as admitted by the Commission and to be escalated at the rate of 3.5% per annum for the period up to 31.03.2024 and, thereafter, the norms shall be reviewed based on available data.”

14. This Hon'ble Commission, *vide* Regulation 36(1)(9) of the 2024 Tariff Regulations, has specified the operation and maintenance expenses on account of the emission control system as a percentage of the capital cost in the absence of adequate data. The relevant provision is extracted below: -

"36. Operation and Maintenance Expenses:

(1) Thermal Generating Station:

...

(9) The operation and maintenance expenses on account of emission control systems in coal or lignite based thermal generating stations shall be 2% of the admitted capital expenditure (excluding IDC and IEDC) as on its date of operation, which shall be escalated annually @ 5.25% during the tariff period ending on 31st March 2029:

Provided that income generated from the sale of gypsum or other by-products shall be reduced from the operation and maintenance expenses. ..."

15. Now this Hon'ble Commission has stated that while framing the Tariff Regulations, 2024, data was sought from the various generating companies. In order to determine the norms of operation & maintenance expenses, data from a longer horizon (3-5 years) is required. That some of the generating stations have installed the emission control system recently, and hence, this Hon'ble Commission has observed that adequate operational data is still not available. Accordingly, in view of the limitation of data availability, annual escalation rate is proposed to be upwardly revised from 3.5% per annum to 5.25% per annum. This escalation rate of 5.25% is purportedly worked out based on the inflation indices. Along with the same, this Hon'ble Commission has also sought to revise the additional

operation and maintenance expenses to be allowed at 2% of the additional capital expenditure.

16. Accordingly, this Hon'ble Commission has proposed the following revisions:

"44. Accordingly, the Commission is of the view that operation and maintenance expenses shall be allowed @2.0% of the additional capital expenditure (ACEe) for installation of ECS (excluding IDC, IEDC, and FERV) as admitted by the Commission and to be escalated at the rate of 5.25% per annum till 31st March 2029 or revision by the Commission based on availability of data, whichever is earlier. Till 31.03.2029, the additional O&M expenses (O&Me) shall be worked out as follows: -

First Year: 2.0% of ACEe excluding IDC, IEDC, and FERV (to be allowed proportionately if the operation of the ECS is for part of the year)

Second Year onwards: 2.0% of ACEe escalated annually at the rate of 5.25%.

The additional O&M expenses payable shall be worked out by reducing the income generated from the sale of gypsum or other by-products from the operation and maintenance expenses.

44A. All generating companies are directed to maintain the operation & maintenance expenses of the emission control system separately and submit them to the Commission as and when directed."

17. At the outset, it is submitted that lack of data cannot be to the detriment of the beneficiaries and to the benefit of the generating companies. It is stated that the normative figure of 3.5% was already granted in the previous regulations and extending the same, let alone increasing the escalation factor for a further period of 5 years may not be the correct prudent methodology being applied.

18. It is requested that moving forward the escalation be applied on actual figures and not on an across the board 5.25% basis. After the data corresponding to the first year of the control period i.e., 2024-25 is available then the future escalation index can be based on the same. It cannot be that the actual escalation is somewhere along the range the 3-4% and the generating companies keep on getting benefitted.
19. Even otherwise, fixing the escalation index based on actuals would inculcate spending discipline amongst the generating companies as they would try to increased efficiency and confine themselves within the actual escalation index. Otherwise, for the 5 years, the generating companies would stretch their expenses in a manner that it remains consistent with the already high escalation index of 5.25%.

RE: COST OF DEBT AND EQUITY OF EMISSION CONTROL SYSTEM

20. At the outset, it is respectfully submitted that this Hon'ble Commission has proposed a paradigm shift from its earlier position in the manner in which the debt and equity *ratio* is to be considered when it comes to the costing of the emission control system.
21. In the existing compensation mechanism, the Commission has followed the approach of net fixed assets and cost of capital employed for servicing capital expenditure. Hence, the return on equity and servicing of debt are recognized as integral parts of the return on capital employed. The rate of investment on capital employed is allowed as the weighted average rate of interest on loans of the generating station, including the emission control system, or at the rate of Marginal Cost of Funds based Lending Rate (MCLR) of State

Bank of India (for one year tenor) as on 1st April of the year plus 350 bps, whichever is lower. The relevant paragraph of the Suo-Motu order dated August 13, 2021, in 6/SM/2021 is extracted below: -

“36. We have considered all the suggestions and comments of the stakeholders. However, the Commission notes that the approach of net fixed assets and cost of capital employed suggested in the draft Suo-Motu order satisfies the principle of economic restitution. The Commission is aware of the concerns and financial position of the generating companies. However, compensation for change in law cannot be a mechanism to improve their financial position. Accordingly, the proposed approach of servicing investment through cost of capital employed is appropriate, being consistent with the principle of economic restitution.

37. The servicing of capital employed during each year of the contract period shall be worked out based on net fixed asset (derived by adjusting cumulative depreciation of emission control system) and interest rate of fund. The interest rate will be weighted average rate of actual interest on loans of the thermal generating station including ECS or Marginal Cost of Lending Rate of State Bank of India (for one year tenor) as on 1st April of the year under consideration plus 350 basis points, whichever is lower. The generating companies shall workout the applicable interest rate for the cost of capital employed towards emission control system for the year under consideration.....”

22. In the Tariff Regulations, 2024, this Hon’ble Commission has notified the normative capital structure (70% debt and 30% equity) in respect of additional capitalization beyond the original scope, including additional capitalization on account of the emission control system, Change in Law, and Force Majeure. The servicing of equity and debt has been dealt with as under:

- a) The equity capital is capped to the extent of 30% and the rate of return on equity is restricted at a Base Rate of 1-year MCLR of

SBI as on 1st April of the year of operation plus 350 bps or 14% (whichever is lower), on a pre-tax basis.

b) The debt for servicing consists of actual debt, and the excess equity fund beyond the normative limit of 30% is considered for servicing the debt. The interest of debt is serviced at the weighted average rate of interest calculated on the basis of the actual loan portfolio or allocated loan portfolio of the project, and in the absence of an actual loan, 1-year MCLR of the State Bank of India as applicable as on April 01, of the relevant financial year.

23. On the issue of whether separate treatment of servicing debt and equity as followed in the Tariff Regulations, 2024, can be applied for the competitively bid projects insofar as additional capital expenditures on account of the emission control system is concerned, this Hon'ble Commission is at variance from its earlier stand.
24. It has been proposed that since emission control system requires significant additional capital expenditure and since financing of large amounts of capital expenditure may require equity infusion by the generating companies therefore the servicing of capital employed during each year of the contract period is proposed to be delinked from the actual weighted average rate of interest. It is proposed to be worked out based on net fixed asset (derived by adjusting cumulative depreciation of emission control system) and 1-year MCLR of State Bank of India (for one year tenor as on 1st April of the financial year) plus 250 bps.

25. It is respectfully stated that there arises no occasion for this Hon'ble Commission to deviate from its mechanism which allowed servicing of capital employed during each year of the contract period to be worked out based on net fixed asset (derived by adjusting cumulative depreciation of emission control system) and weighted average rate of interest on loans of the generating station including emission control system.
26. It is stated that there has been no change in the position, the generating companies ought not to be allowed to profit from the implementation of the change in law schemes. As it is when the entire cost is being made a pass through and mulcted upon the consumers, the consumers cannot be further prejudiced by being made to pay for the higher equity.
27. This Hon'ble Commission has itself recognized that the generating companies are at liberty to infuse the additional capital cost in any *ratio*. This means that the generating companies are free to service the cost by way of 100% debt. Even when doing so, the generating companies do not suffer as they are liable to get the debt servicing component at the weighted average of the actual lending rates. It is respectfully submitted that the same remains the most prudent mechanism and one which balances the equities of both the parties.

RE: INTERIM RELIEF IN THE FORM OF PROVISIONAL TARIFF

28. This Hon'ble Commission has proposed that after the emission control system is installed, the generating company shall approach it for determination for compensation in the form of provisional tariff.

Wherein this Hon'ble Commission may consider granting interim compensation during the preliminary hearing subject to the determination of final compensation.

29. Accordingly, this Hon'ble Commission has proposed the following revision:

"110. We are of the view that a provisional tariff for the emission control system needs to be mutually agreed upon between generating companies and their respective procurers considering the compensation mechanism decided in this order. In the absence of mutual agreement, the generating companies may file petitions before the Commission after the installation of emission control systems with a specific prayer for an interim supplementary tariff. The Commission may grant interim supplementary tariff as may be considered appropriate in the course of preliminary hearings of the petitions, which shall be applicable from the date of operation of the emission control system."

30. It is respectfully submitted that in the regulated power sector where PPA is the only controlling document between the generating company and the beneficiaries. It is stated that PPAs (atleast the ones entered into between PSPCL and Sasan Power-CGPL) do not provide for any supplementary tariff. There cannot be any tariff mechanism outside the PPA.
31. The law on the subject is now crystal clear, namely that PPA is sacrosanct, is binding and cannot be reopened. The Hon'ble Supreme Court in Haryana Power Purchase Centre v. Sasan Power Limited and Ors. (2023 SCC Online SC 577) has clarified that terms of the PPA cannot be varied by the electricity commissions even under exercise of their regulatory powers.

32. When this Hon'ble Commission is respectfully barred from providing any supplementary tariff, the question of granting the same in the interim does not even remotely arise.
33. It is respectfully submitted that the above comments may kindly be taken into account while implementing the proposed revisions.

DATE: 04.08.2024
PLACE: NEW DELHI


(ANAND K GANESAN)
ADVOCATE FOR PSPCL