



CERC (Terms and Conditions of Tariff) (First Amendment) Regulations, 2024. [Draft]

CERC notified a draft (Terms and Conditions of Tariff) (First Amendment) Regulations, 2024. [Draft] on 7th September, 2024

Objective: The proposed Regulations include the provisions for determination of tariff for generating station or unit thereof (excluding the renewable generators) and transmission system or element thereof whose tariff is to be determined by the Commission u/s 62 of the COD falls within the tariff period from 01.04.2024 to 31.03.2029 and for the projects whose final tariff has not been determined till 31.03.2024.

The proposed draft Regulations lay the provisions for determination of tariff components i.e. IoL, RoE, depreciation, interest on working capital, O&M expenses (normative), energy charge rate for the thermal generating stations (coal-/ lignite-based and gas based) including that of the emission control system, hydro generating stations, transmission system or element thereof. The Regulations provide for computation of the input price of coal and lignite from integrated mine and the recovery mechanism thereof including the mine closure expenses, adjustment due to shortfall of overburden removal and non-tariff income. The draft also proposes the methodology for computation and recovery of capacity and energy charges (supplementary capacity and energy charges for emission control system) applicable for the above-mentioned entities.

The document can be accessed [here](#)

CER Opinion

- 1. Recommendation for Capping Coal Price:** Proposed Proviso (ii) of Clause 50 states that *“Provided further that where such consents of beneficiaries are not available, the input price of coal from such integrated mine(s) shall be so fixed that the energy charge rate based on the input price of coal from integrated mine(s) does not exceed by more than 20% of the energy charge rate based on the notified price of Coal India Limited for the commensurate grade of coal in a month”*.

Private participation in the coal sector was introduced with the expectation of better operational efficiency and lesser cost. Compensation at a rate more than that Coal India Limited offered by the Coal India limited would defy that philosophy at its basic core. The effective cap on the input price of coal should be limited to the price of commensurate grade coal declared by the Coal India Limited. Furthermore, this should be adjusted for any discount provided by CIL on account of timely payment, advance payment etc., if any. This will avoid undue financial strain on beneficiaries, and by extension, on end consumers of electricity. Reporting of the information related to the average input coal price across all such power plants vis a vis the CIL prices for the comparable grade of coal should be part of the Annual Report of the Commission.

- 2. Eliminating Ambiguities in Shortfall Adjustments:** Draft Clause 51 states *“Factor of adjustment for the shortfall of overburden removal during the year shall be computed as under:- [(Annual Stripping ratio as per mining plan) - (Actual Stripping ratio based on the actual quantity of coal and overburden removed during the year)] / (1+Annual Stripping Ratio as per Mining Plan);”* (Emphasis Added)

The regulatory approach to generation tariff determination is based on normative principles. In case of



coal mining, the adopted approach is based on ‘actuals’ as **the provision for ‘adjustment for the shortfall of overburden removal’ affectively transforms the approach to ‘cost plus basis’.**

A high stripping ratio not only increases the cost of coal mining but also reduces the quantum of coal mined. A high stripping ratio would thus have double impact on the coal of coal mining operation. While each coal mine may have different geological condition, and may face varying stripping ratio across the mining areas. **The regulatory approach should be to fix a norm for the average stripping ratio for the tariff control period¹.**

Additionally, advanced verification techniques such as satellite imaging and geological reports should be incorporated to objectively assess and validate the proposed stripping ratios. These measures will enhance transparency and accountability in mining operations while promoting efficiency and sustainability.

3. **Public Hearing on Coal Mining Plan:**

Cost of mined coal depends on the operational efficiency of coal mining as well as operational cost towards the same. A coal mining plan provides a glimpse of the expected coal of coal mining that would influence cost of coal and thus the final price of electricity. The coal mining plan and its amendments should thus be shared on the Commission’s website along with the tariff petition and be a part of the public hearing process.

4. **Lower ‘Voluntary’ Technical Minimum of Thermal Power Plants:**

The proposed compensation for part load operation of thermal plant below normative level, provides for a technical minimum level going as low as 40%. It is noted that some of the thermal power plants are able to operate, even for longer duration, for operational level below 55%. Given the rising share of renewables, greater flexibility of thermal plants is the need of the hour. The technical minimum level for the thermal power plants be thus lowered and be brought up to 40% in a phased manner.

From a regulatory point of view, provision for part load compensation, as per the proposed draft, effectively means that the operational level of the thermal plants stand lowered to 40% level. Since all plants may not immediately be prepared to operate at lower levels, the part load compensation below 55% should be applicable only to plants who have declared their ‘willingness’ to the RLDCs for the same. This solution would ensure that regulatory provisions are defined for plants, which can and operate at technical levels lower than the current regulatory limit of 55%.

5. **Basis for Part Load Compensation for Auxiliary Energy Consumption and Station Heat:**

Technical as well as operational characteristics of thermal generating plants vary depending on design features of the boiler, turbine, generator as well as the auxiliaries, as well as the fuel quality and operating conditions of the plant. **Design of a part load compensation mechanism largely on the**

¹ In case a coal power plant having SCoD within a control period, this may be averaged across the remaining years of the control period.

basis of data submitted by the regulated entities suffers from information asymmetry as well as sample selection bias. The regulatory principles, in contrast, should utilise efficient operating benchmarks with appropriate adjustment for the local conditions. While the amendment's proposal should thus be examined in light of wider operational data leading to recalibration of the compensation. **The commission should mandate submission of operational data by the regulated entities so that an in depth analysis can be conducted under a research study, thus assisting the commission to set efficient norms.**

6. Non-linear Rate of Part Load Compensation and Period of Calculation:

The compensation rate for part load operation is non-linear in nature (See Figure) as it depicts increasing cost of operation at subsequent lower level of operation. **Payment of part-load compensation on a monthly average PLF would lead to lower level of compensation calculation than that calculated on the basis of block-level PLF. This would thus lead to financial loss for the generators.** To address the same, it is suggested that **payment for part load compensation for fuel cost including cost of secondary fuel should be based on block level calculation**, while that for auxiliary consumption may be based on a monthly average basis as it seems to follow a linear rise.

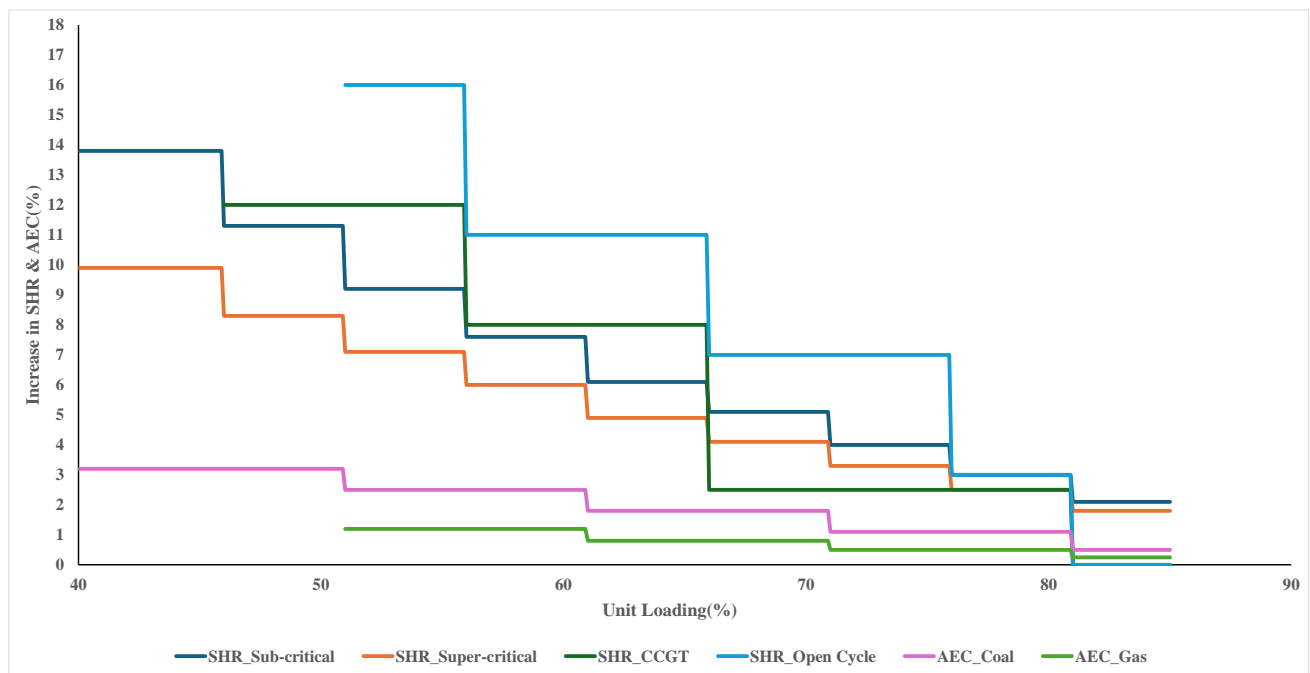


Figure: 1 Incremental SHR & AEC Compensation for part load operation of thermal power plants

7. High Part Load Compensation for gas based plants?:

The rate of part load compensation extends up to 16 % in terms of SHR. This would further reduce the probability of schedule for gas based power plants, except in the case of high load conditions. **As suggested above, a study based on actual operational characteristics of wider set of plants should help the Commission in setting such norms in future. Furthermore, AEC compensation may be differentiated for open as well as combined cycle plants.**



8. **Causer Pays Principle and Burden of Part Load Compensation:** The approach to impose cost of part load compensation in proportion to the beneficiaries' responsible for the same due to lower schedule reflects the **basic principles of 'polluter or causer pays' principle. This would provide correct price signals for the beneficiaries as per their schedule, and would not penalize those who have given a schedule above normative level.**

9. **Differentiating Percentage Point change Vs Percentage change:** The table specifying compensation factor mentions the rate of change in SHR and AEC are mentioned in terms of percentage. **The table should carry a clarification if these are to be interpreted as a change in terms of percentage or percentage points.** For e.g. An absolute percentage point increase of 1% on a AEC of, say, 5% would mean 6%, whereas 1 percent increase on a AEC of 5% would translate to 5.05%

10. **Reference date for MCLR Rate:** It is suggested that the Commission may offer clear guidelines regarding the applicable State Bank of India (SBI) Marginal Cost of Funds-Based Lending Rate (MCLR) to be used for petitions. The MCLR is generally published between the 10th to 15th of each month. Given the variability in the timing of its release and the fact that even small fluctuations in this rate can significantly affect the financial calculations and outcomes in petitions, it is essential for stakeholders to have clarity on which specific rate will be considered.

A clearly defined reference date for the applicable MCLR rate in each month would help minimize any ambiguity or potential discrepancies in financial models, ensuring fairness for all parties while issuing the tariff order. We suggest that **the Commission should fix a reference date of the month for capturing the MCLR rate.**