MB POWER (MADHYA PRADESH) LIMITED - COMMENTS ON

"Methodology for Computing the Escalation Factors and other Parameters for the Purpose of Bid Evaluation and Payment for Procurement of Power from Renewable Energy Projects Complemented with Firm Power from any other source through Competitive Bidding"

Date: March 9, 2021

General Request

- We request the CERC to conduct a hearing before finalization of these rates and give us a chance to attend and present our case in the hearing.

Clause wise Comments

A.

Clause: 8.1: *Escalation Rate for domestic coal (for Evaluation):*

CERC has been using its own index based on the price of non-coking coal applicable for power sector (CERC Coal Price Index, Base 2017-18=100) for computing the escalation rate for domestic coal for payment and the same is available from April 2018 onwards. However, for computing the escalation rate for evaluation, time series data for latest 12 years is required. Due to non-availability of the time series data on CERC coal price index (being available only from April 2018 onwards), it is proposed to use Wholesale Price Index (WPI) for non-coking coal to compute escalation rate of domestic coal for evaluation. In the past also CERC had used WPI of non-coking coal for computing the escalation rate for domestic coal for evaluation.

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The annual escalation rate computed in the above table (7.51%) is to be notified as escalation rate for domestic coal for evaluation.

Proposed Changes:

Revised escalation rate of 1.10% (as computed in the below table) should be considered on Domestic Coal for evaluation purpose.

Year No. (t)	Year	WPI for Non-Coking Coal	Yt / Y1 = Rt	Loge(Rt)	year-1 (t-1)	Product [(t-1) x loge(Rt)]
1	2012	107.92				

Year No. (t)	Year	WPI for Non-Coking Coal	Yt / Y1 = Rt	Loge(Rt)	year-1 (t-1)	Product [(t-1) x loge(Rt)]
2	2013	105.4	0.98	-0.02	1	-0.02
3	2014	109.6	1.02	0.02	2	0.03
4	2015	109.6	1.02	0.02	3	0.05
5	2016	110.2	1.02	0.02	4	0.08
6	2017	110.7	1.03	0.03	5	0.13
7	2018	118.8	1.10	0.10	6	0.58
8	2019	119	1.10	0.10	7	0.68
A = Sum of "product" column						1.52
B = 6 times (6 x A)						9.15
C = (n-1) x n x (2n-1)						840.00
D = B/C						0.01
g (Exponential Factor) = Exponential (D) -1						0.011
e = Annual Escalation Rate (%) = g x 100						**1.10%**

Rationale:

- Considering that evaluation is done by taking the fuel escalation over next 25 years period and hence it is imperative to adopt a holistic view and capture the long term impact of recent policy developments on the coal price escalation.

- Contrary to this approach, using a time series data for previous 12 years has a basic flaw of ignoring the higher weightage to the latest development & its effect on the fuel industry and instead takes the impact of the historical variations which may not happen again.

- It is vital to note that from January 2012, Coal India Ltd (CIL) changed its pricing methodology from UHV to GCV. Accordingly CERC should use the WPI data only from 2012 onwards and not the previous data. Moreover it should strive to use 2020 WPI data as well if the same is available at the time of finalization of the rates.

- It is imperative to note the below latest changes which have been happening in the coal industry and which would have long term effect on the domestic coal pricing:

    - The demand for coal has been diminishing and there seems to be no reason for increase in the demand in future, as very few coal based thermal projects are under development. The PLF of the operating projects has also been low with 55.99% in FY2019-20 because of the must run status given to renewable sources. Moreover, as coal based plants retire, demand of coal is expected to reduce over time.

    - Having muted coal demand, supply of coal is also expected to increase significantly considering that

i. Atleast 94 coal mines are getting auctioned to private players which will increase the coal supply in next few years.

ii. MOEF has removed the restriction of using coal with upto 34% ash content for power plants. This would further increase the coal supply.

iii. Coal India's coal production output is increasing every year which will increase the coal supply and shall check the coal pricing.

iv. One of the factors which affect the pricing of domestic coal is parity with the international coal supply market. There seems to be no reason for increase in pricing of such imported fuel particularly when most of the geographies have targeted plans to reduce the GHG emission and shut the fossil fuel based thermal power projects.

v. Zero premium on the e-auction of coal pricing justify the above observations.

- There has been no escalation on the coal prices since 9th January 2018 (for last 3 years) except a recent increase of Rs. 10/tonne in Nov 2020. This shows that the coal price is not expected to move upward any more. However impact of these three years has diminished in the approach currently taken for considering the WPI for a period from 2008 to 2019.

  Therefore evaluating the tariff on the basis of escalation rates which do not correctly represent the fuel pricing position will lead to erroneous results.

B.

Clause 8.5: Escalation Rate for Imported Coal (For Evaluation):

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Description: The Escalation Rate for imported coal shall be computed based on the time series data on composite index based on Global Coal Index, API4, ICI3 of Argus and Platts index for the latest 12 years.

Proposed Changes:

- Escalation rates for Imported Coal should be considered at par with the domestic coal.

Rationale:

- Based on the methodology of escalation computation as suggested above, it seems that the escalation rates for imported coal would come out to be negative. Applying the negative escalation over 25 years period for tariff evaluation would give erroneous results.

- It should be noted that just like any other commodity, coal pricing also follows the same trend. There cannot be disparity between domestic and imported coal pricing. This may lead to shift in the industry to import coal instead of utilizing the domestic one. Since it goes against the nation's interest and hence it cannot happen in reality. Accordingly the parity would be maintained by the GOI itself.
- Moreover there are forex devaluation risks which should be factored in while computing the rates.
- We therefore suggest to make the escalation rates for imported coal at par with the domestic coal.

C.

Clause: 9: Discount Rate for Bid Evaluation

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"Weighted Average Cost of Capital (WACC) has been considered as discount rate and computed as under:

WACC = Cost of Debt + Cost of Equity

Where,

Cost of Debt = 0.70 (Market Rate of Interest) X (1-Corporate Tax Rate)

Cost of Equity= 0.30 (Risk Free Rate + b (Equity Market Risk Premium))

The computation of WACC can be seen in the following table.

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For the calculation of cost of equity, the market risk premium is assumed as the difference between the expected market return and the risk free rate. Accordingly, the market risk premium in this Notification has been arrived at by subtracting the average risk-free rate for the last 10 years from the average rate of return on market portfolio over the past 10 years. Sensex values for the past eleven years have been used to arrive at rate of return on the market portfolio for the past 10 years. Historical approach has been adopted for arriving at the expected market return assuming the expected future return to be the same as past returns. The beta value has been computed based on the data on Bombay Stock Exchange (BSE) Indices for Power Sector and Sensex for the year 2019.

Proposed Changes:

- Computation of Cost of Debt should be corrected (from the current mistake) in the WACC computation table to 6.92 and accordingly Discount Rate should be revised.

- Risk Free rate of 15.5% should be considered for the purpose of computation of Cost of Equity.

Rationale:

- CERC has arrived at a cost of equity of 8.75% which is lesser than the cost of Debt at 12.67%. This goes against the basic principal of finance. The cost of equity should be such that the investor may be able to earn at least the prevailing rate of interest being offered by the banks and additional component to counter the risk factor.

- It should also be noted that the project developer does not receive any return on equity during the construction stage of the project and hence the consideration of taking 10 years GOI securities rate as risk free rate is wrong. To take care of loss of ROE during the construction period, approx. 3% margin should be added.

- Rate of return on equity may be linked with SBI base rate added with a premium which should also cover the cost of equity forgone during gestation period.

- The Beta value has been computed based on the data on BSE Indices for Power Sector. Since very few power companies are listed, and for each category (generation, transmission, etc), we don't have number of listed companies. Most of the PSUs and IPPs from power sector are not listed. Therefore it would be appropriate to list a large number of comparable firms from other countries, calculate Beta values for them, and take their median as a global estimate for Beta. This can be then adjusted based on factors relevant for India.

- CERC itself has determined much higher normative Return on Equity in its recently notified below regulations:

    - CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 enforced on 1.7.2020 mentions the normative Return on Equity of 14%.

    - In CERC (Terms and Conditions of Tariff) Regulations, 2019 enforced on 1.4.2019 and valid for 5 years, return on equity is computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of 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.