CENTRAL ELECTRICITY REGULATORY COMMISSION
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No. Eco-1/2022-CERC Date: May 24, 2023

PUBLIC NOTICE

Sub: Staff Paper on "Methodology for Transition from Six-Monthly Escalation Rates to Monthly Escalation Rates for Imported Coal"- reg.

The Commission, vide order dated 6th June 2022 in Petition No.7/SM/2022, specified a methodology for computing the escalation rates for imported coal for payment on a monthly basis. In the said order, the Commission recognized the need to address the transition to the monthly escalation rates and decided to address the issue separately.

2. In view of the above, a Staff Paper on "Methodology for Transition from Six-Monthly Escalation Rates to Monthly Escalation Rates for Imported Coal" has been prepared and is hosted on the Commission's website (www.cercind.gov.in) for comments and suggestions of the stakeholders. The paper discusses the present methodology for the computation and application of the escalation rates and provides various options for addressing the transition/switchover from six monthly escalation rates to monthly escalation rates.

3. It is clarified that the discussion in the Staff Paper does not represent the views of the Commission, its Chairperson or its individual Members.

4. Stakeholders are requested to submit their comments and suggestions on the Staff Paper through email to secy@cercind.gov.in and ashutosh.sharma@nic.in by June 24, 2024.

Encl: As above

Sd/-
(Harpreet Singh Pruthi)
Secretary

Staff Paper
on
Methodology for Transition from Six-Monthly Escalation Rates to Monthly Escalation Rates for Imported Coal

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Disclaimer

The issues presented in this Staff Paper do not represent the views of the Central Electricity Regulatory Commission (CERC), its Chairman, or its Members and are not binding on the Commission. The views are essentially of the staff of CERC and are circulated with the aim of initiating discussions on various aspects of the methodology for the transition from six-monthly escalation rates to monthly escalation rates for imported coal and soliciting inputs from the stakeholders in this regard.

Staff Paper on
Methodology for Transition from Six Monthly Escalation Rates to Monthly Escalation Rates for Imported Coal

A: Background

1. In pursuance of Clause 5.6 (vi) of the Ministry of Power (MOP) Notification dated 19.01.2005, as amended from time to time, on "Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees," the Central Electricity Regulatory Commission (CERC) has been notifying various escalation rates including the escalation rates for imported coal, every six months, for the purpose of payment.

2. MOP, vide its letter dated 13th April 2022, highlighted the need for notification of escalation rates for imported coal for payment on a monthly basis to avoid the lag in the notification of escalation rates with reference to actual variation in the price of imported coal. The relevant extract of the communication from the MOP is as under:

> *"After careful consideration, Government have decided that the escalation index for imported coal may be notified on a monthly basis by CERC, in addition to the present six-monthly escalation index. In existing PPAs where the generating company and the procurer agree, they can use the monthly index. For future PPAs, Government proposes to make provisions in the bidding guidelines and bidding document for the use of the monthly Escalation index for imported coal. The present practice of notifying escalation rates every six months, in addition to notification on monthly basis, should also be continued, to be used by sellers and procurers, in the context of concluded PPAs."*

3. In view of the above, the CERC, through its staff paper dated 6.5.2022, had proposed a methodology for computing the escalation rates for imported coal for payment on a monthly basis. Comments and suggestions of stakeholders and other interested persons on the proposed methodology were invited through a public notice dated 6.5.2022. In response to the public notice, comments and suggestions were received from various stakeholders. After incorporating the comments of the

stakeholders, the CERC, through its order dated 6th June 2022, in Petition No.7/SM/2022, specified a methodology for computing the escalation rates for imported coal for payment on a monthly basis. Following the methodology, the CERC has been notifying the monthly escalation rates for imported coal in addition to six-monthly escalation rates from April 2022 onwards.

4. The monthly escalation rates are also required to be notified by the CERC as per the Amendment dated 11.07.2022 to the MOP Guidelines for long-term Procurement of Electricity from Thermal Power Stations set up on Design, Build, Finance, Own, and Operate (DBFOO) basis.

5. As mandated above, the CERC has been notifying the monthly escalation rates for imported coal for the purpose of payment.

B: Need for addressing Transition to Monthly Escalation Rates

6. In response to the public notice dated 6.5.2022 regarding the staff paper on the "Methodology for Computing the Escalation Rates for Imported Coal for Payment on Monthly Basis", some of the stakeholders have raised issues with the implementation of the monthly escalation rates. In this context, Adani Power Mundra Ltd (APMuL) and Tata Power Company Ltd (TPCL) have suggested allowing one-time escalation for addressing the transition from six monthly escalation rates to monthly escalation rates. The Commission, in its order dated 6th June 2022 in Petition No.7/SM/2022, has recognized the need for addressing the transition to the monthly escalation rates as under:

> *"8. Most of the stakeholders have raised issues on the implementation of the monthly escalation rates, particularly in the context of the existing PPAs. APMuL and TPCL have suggested to allow one-time escalation for transition from six monthly to monthly escalation rates. TPCL also suggested that the escalation rates may be notified from April 2022 for the purpose of transition. GUVNL has raised concerns on the adoption of monthly escalation rates for the existing PPAs and submitted that any modification in escalation methodology should not be made applicable to the existing PPAs.*

9. In this context, the Commission notes that the MOP's communication dated 13th April 2022 stipulates that in the existing PPAs where the generating company and the procurer agree, they can use the monthly index. Accordingly, the parties to the existing PPAs may mutually decide as to whether to continue to use the six monthly escalation rates or adopt the monthly escalation rates as notified by the Commission from time to time. <u>As the proposal in the staff paper was limited to the methodology for computing monthly escalation rates, the suggestion of a changeover rate or correction factor for transition from six monthly escalation rates to monthly escalation rates for the existing PPAs is beyond the scope of the present order.</u>

<u>10. However, at the same time, the Commission recognizes that there is a need to specify the changeover rate or correction factor for transition from six monthly escalation rates to monthly escalation rates for the existing PPAs, as without the same, the parties to the PPAs may not be in a position to switch over from six monthly escalation rates to monthly escalation rates. The Commission, therefore, may address the issue separately</u>."

7. With reference to the above order, the Association of Power Producers (APP) vide emails dated 19th June 2023 and 21st August 2023 has made a request to the Commission to specify a correction factor for a changeover from six monthly escalation rates to monthly escalation rates w.e.f. 01.04.2022 for the existing PPAs.

8. In view of the above, an attempt has been made to address the transition/switchover from six monthly escalation rates to monthly escalation rates. A detailed analysis of the present methodology for computation and application of the escalation rates has been made in the following section.

C: Analysis of computation and application of the escalation rates

9. The data used for computing the escalation rates and the computation and application of the escalation rates have been examined in the following paras (para 9.1 to 9.6).

9.1. In case of procurement of electricity from thermal generating stations based on imported coal through competitive bidding, the procurers are required to pay energy charges in three components: (i) imported coal; (ii) transportation of imported coal; and (iii) inland handling of imported coal, as per the PPA during the operation of the contract. The energy charges are payable based on base energy charges specified in the bid (quoted energy charges) with suitable escalation, if applicable. If the imported coal component is escalable, the escalation rate for imported coal notified by CERC shall be applied to the base energy charges of the imported coal component to arrive at the payable energy charges for the imported coal component.

9.2. The present methodology for the computation and application of the escalation rates has been decided by the CERC through an extensive stakeholder consultation process. The six-monthly escalation rates (the escalation rates notified on a six-monthly basis) are computed using the latest one-year data, and the computed escalation rates are made applicable for the following six months[1]. The percentage variation between the average price/price index of the latest six months and the average price/price index of the previous six months shall be the escalation rate. Similarly, the monthly escalation rates are computed using the latest two months' data, and the computed escalation rates are made applicable for the following month[2]. The percentage variation between the price/price index of the latest month and the price/price index of the previous month shall be the escalation rate.

9.3. By considering the different data points for computing the escalation rates and by applying the computed escalation rates for different periods, a gap in the data used for computing the escalation rates between six-monthly and monthly escalation rates has been observed. For example, in case of a switchover to monthly escalation rates in April 2022, the data for the period from September 2021 to February 2022 would not get covered either in

[1] For further details on the methodology please refer https://cercind.gov.in/22112006/Explanation_General_.pdf

[2] For further details please refer https://cercind.gov.in/2022/orders/7-SM-2022.pdf

computing six-monthly escalation rates or monthly escalation rates. This is mainly for the reason that the latest one-year data (i.e., from September 2020 to August 2021) has been considered for computing the six-monthly escalation rates applicable from 1st October 2021 to 31st March 2022 (October 2021 six-monthly Notification), whereas the latest two months' data (February and March 2022) has been considered for computing the monthly escalation rates applicable for April 2022 (April 2022 monthly notification). Thus, the data for the period of six months, i.e., from September 2021 to February 2022, remains uncovered if the switchover takes place in April 2022.

9.4. In order to understand the appropriate application of the escalation rates, the relevant extract of the CERC order dated 6.6.2022 in 7/SM/2022 has been provided as under:

> *"4. The methodology proposed for computing the escalation rates for imported coal for payment on monthly basis was as under:*
>
> *"II: Proposed methodology for notification, computation and application of the escalation rates*
> *…...*
> *6. It is proposed that the monthly escalation rate shall be computed using the monthly data on price/price index as under:*
>
>> *Formula for calculating monthly escalation is as under:*
>> *{(Current month price index - Previous month price index) / Previous month price index} X 100*
>>
>> *Illustration:*
>> *If the current month (April 2022) price index is 110 and the previous month (March 2022) price index is 100, the method of calculation of escalation for the month April 2022 is as under:*
>> *{(110-100)/100} X 100 = 10%*
>
> *7. <u>It is appropriate to follow the above illustration for computation and application of the escalation rate for imported coal and other related escalation rates to be notified on monthly basis. However, in general the billing takes place in the first week of the following month (say May 2022) for supply of electricity for the current month (say April 2022). If we follow the above illustration, the escalation rates for the month of April 2022 may not be available at the time of billing (May 2022) due to lag in the availability of the data.</u>*

8. Therefore, it is proposed that:
(i) the escalation rate shall be computed based on the above formula; and
(ii) the computed escalation rate shall be made applicable as explained in the following table:

Notification and Application of the Escalation Rate		
Issue of Notification	***Data for the period used for computing the Escalation Rate***	***Escalation Rate Applicable for the Month***
May 2022	*March to April 2022 (In case of Escalation Rate for Imported coal and Transportation of Imported Coal)*	*May 2022*
	January to February 2022 (In case of Escalation Rate for Inland handling of Imported Coal)	
June 2022	*April to May 2022 (In case of Escalation Rate for Imported coal and Transportation of Imported Coal)*	*June 2022*
	February to March 2022 (In case of Escalation Rate for Inland handling of Imported Coal)	

””

9.5. As highlighted at para 9.4, the escalation rates should be made available before the billing period. To meet this requirement, the escalation rates computed for April 2022 have been made applicable for May 2022. Similarly, the six-monthly escalation rates have been made applicable for the following six months.

9.6. One can understand from the above that the application of the escalation rate has been made for the future period instead of the current period due to a lag in the availability of data. However, the appropriate application of the escalation rates should be for the period for which the escalation rates are computed (i.e. for the current period) and not for the future period.

10. In view of the reasons discussed above, it is clear that there would be a gap in the data used for computing the escalation rates while transitioning to monthly escalation rates. However, the transition to monthly escalation rates can be addressed with or without any gap in the data used for computing the escalation rates, as discussed in the following section.

D: Proposed Methodology for Transition to Monthly Escalation Rates

11. After examining the data used for the computation of the escalation rates and the computation and application of the escalation rates, we have arrived at two possible options for addressing the issue of transition from six-monthly escalation rates to monthly escalation rates. In both options, there is no need to provide a separate escalation rate to address the transition/switchover to monthly escalation rates.

12. In **Option 1**, it is proposed that the parties may opt for a transition to monthly escalation rates by adopting an appropriate application of the escalation rates. The six-monthly escalation rates need to be made applicable for the current period instead of the future period. In this option, the application needs to be corrected from the start date of PPA to the date of transition/switchover. The parties to the existing PPAs would get escalation on the corrected base energy charges (corrected payment index) from the date of transition/switchover. In this option, a methodology is required to be specified, and the same is proposed as under:

   a. The transition to monthly escalation rates provides an opportunity to the parties to the existing PPAs to adopt an appropriate application of six-monthly escalation rates (i.e., application of the six-monthly escalation rates for the current period instead of future period) from the start date of the PPA. By following an appropriate application of escalation rates, the transition can be addressed without any gap in the data used for computing the escalation rates.

b. In this option, the CERC is required to notify six-monthly escalation rates applicable for the current period from the start date of PPA to the date of transition/switchover. These rates for the past period shall be made applicable for correcting the payment index (e.g., correcting the base energy charges) and not for the purpose of payment. The payment index needs to be corrected from the start date of PPA (the escalation rates are applicable from the date of financial bid opening in the case of imported coal) to the date of transition/switchover.

c. In this regard, for the sake of presenting a sample calculation, two assumptions have been made: (i) 1st October 2006 has been assumed as the start date of PPA, and (ii) 1st April 2024 has been assumed as the date of transition/switchover to monthly escalation rates. There are two reasons for assuming April 2024 for the switchover: (i) volatility in the imported coal prices was relatively low during the last six months, and (ii) application of the latest six-monthly escalation rates notified in October 2023 is ending on March 31, 2024.

d. Using the above assumptions and adopting an appropriate application of the six-monthly escalation rates, the payment index has been corrected from 1st October 2006 to 1st April 2024 in the following table.

Sample Calculation of Payment Index (Payable Energy Charges) for Imported Coal for addressing the transition from Six-Monthly to Monthly Escalation Rate							
Data used for the period	**Date of Notification**	**Escalation Rate based on Six-monthly notification***	**Escalation Rate Applicable for the period as per the Notification**	**Payment Index based on Six-monthly escalation rate as per existing methodology**	**Escalation Rate based on Six-monthly notification as per proposed methodology (Option-1)**	**Payment Index based on Six-monthly escalation rate as per proposed methodology (Option-1)**	**Remarks**
A	**B**	**C**	**D**	**E**	**F**	**G**	
Six monthly Escalation Rates							
				100	43.60%	100	**Base for next six months**
Sept 2005 Aug 2006	November 22, 2006	43.60%	Oct 2006 to Mar 2007	122	-12.80%	94	
Mar 2006 to Feb 2007	April 04, 2007	-12.80%	Apr 2007 to Sept 2007	114	36.00%	110	
Sept 2006 Aug 2007	September 24, 2007	36.00%	Oct 2007 to Mar 2008	135	112.10%	172	

Mar 2007 to Feb 2008	March 31, 2008	112.10%	Apr 2008 to Sept 2008	210	115.13%	272	
Sept 2007 Aug 2008	October 6, 2008	115.13%	Oct 2008 to Mar 2009	331	-64.07%	185	
Mar 2008 to Feb 2009	March 27, 2009	-64.07%	Apr 2009 to Sept 2009	225	-65.92%	124	
Sept 2008 Aug 2009	September 30, 2009	-65.92%	Oct 2009 to Mar 2010	151	38.10%	147	
Mar 2009 to Feb 2010	March 31, 2010	38.10%	Apr 2010 to Sept 2010	179	42.07%	178	
Sept 2009 Aug 2010	December 28, 2010	42.07%	Oct 2010 to Mar 2011	217	34.43%	209	
Mar 2010 to Feb 2011	March 31, 2011	34.43%	Apr 2011 to Sept 2011	255	21.70%	232	
Sept 2010 Aug 2011	October 7, 2011	21.70%	Oct 2011 to Mar 2012	282	-13.50%	216	
Mar 2011 to Feb 2012	April 3, 2012	-13.50%	Apr 2012 to Sept 2012	263	-31.43%	182	
Sept 2011 Aug 2012	October 08, 2012	-31.43%	Oct 2012 to Mar 2013	222	-15.12%	168	
Mar 2012 to Feb 2013	April 1, 2013	-15.12%	Apr 2013 to Sept 2013	205	-16.53%	154	
Sept 2012 Aug 2013	October 07, 2013	-16.53%	Oct 2013 to Mar 2014	188	-5.00%	151	
Mar 2013 to Feb 2014	April 7, 2014	-5.00%	Apr 2014 to Sept 2014	183	-15.09%	139	
Sept 2013 Aug 2014	October 01, 2014	-15.09%	Oct 2014 to Mar 2015	170	-20.53%	125	
Mar 2014 to Feb 2015	April 7, 2015	-20.53%	Apr 2015 to Sept 2015	152	-17.91%	114	
Sept 2014 Aug 2015	October 09, 2015	-17.91%	Oct 2015 to Mar 2016	139	-26.51%	99	
Mar 2015 to Feb 2016	April 1, 2016	-26.51%	Apr 2016 to Sept 2016	120	14.09%	106	
Sept 2015 Aug 2016	October 06, 2016	14.09%	Oct 2016 to Mar 2017	129	97.50%	157	
Mar 2016 to Feb 2017	May 30, 2017	97.50%	Apr 2017 to Sept 2017	191	-4.36%	154	
Sept 2016 Aug 2017	October 10, 2017	-4.36%	Oct 2017 to Mar 2018	187	33.82%	180	
Mar 2017 to Feb 2018	June 22, 2018	33.82%	Apr 2018 to Sept 2018	219	2.98%	182	
Sept 2017 Aug 2018	October 15, 2018	2.98%	Oct 2018 to Mar 2019	222	-24.36%	160	
Mar 2018 to Feb 2019	April 5, 2019	-24.36%	Apr 2019 to Sept 2019	195	-30.71%	136	
Sept 2018 Aug 2019	October 30, 2019	-30.71%	Oct 2019 to Mar 2020	165	-4.94%	132	
Mar 2019 to Feb 2020	May 13, 2020	-4.94%	Apr 2020 to Sept 2020	161	-41.79%	105	
Sept 2019 Aug 2020	October 12, 2020	-41.79%	Oct 2020 to Mar 2021	127	63.89%	138	
Mar 2020 to Feb 2021	April 23, 2021	63.89%	Apr 2021 to Sept 2021	168	115.33%	217	
Sept 2020 Aug 2021	October 27, 2021	115.33%	Oct 2021 to Mar 2022	265	107.52%	334	
Mar 2021 to Feb 2022	April 18, 2022	107.52%	Apr 2022 to Sept 2022	407	107.99%	515	
Sept 2021 Aug 2022	October 1, 2022	107.99%	Oct 2022 to Mar 2023	627	-34.19%	427	
Mar 2022 to Feb 2023	April 5, 2023	-34.19%	Apr 2023 to Sept 2023	520	-63.54%	291	
Sept 2022 Aug 2023	October 20, 2023	-63.54%	Oct 2023 to Mar 2024	355	-10.69%	276	**Base for Next Month**
Mar 2023 to Feb 2024	April, 2024	-10.69%	Apr 2024 to Sept 2024	336			

** The percentage variation between the average price of the latest six months and the average price of the previous six months is computed as the escalation rate [(Latest six-months) - 1]*100*
(Previous six-months)

e. As may be observed in the table above, the first six-monthly escalation rate notified on November 22, 2006 (notified value: 43.60%) was computed using the last one-year data for the period Sep 2005- Aug 2006 and was made applicable for the future period Oct 2006-Mar 2007. Under option-1, through an appropriate application of escalation rate, i.e. by removing the six-month lag in the application, the next six-monthly escalation rate notified on April 04, 2007 (notified value: (-)12.80%) computed using the data from Mar 2006-Feb 2007 has been made applicable to the period Oct 2006-Mar 2007. By using this simple approach, the payment index has been corrected from the start date by correcting its application. The corrected rates for the past period here are used for the purpose of arriving at a corrected payment index to enable the transition to monthly escalation rates and are not meant to be used for the purpose of payment.

13. In **Option 2**, it is proposed that the parties may adopt the escalation rates as it is, i.e., as notified by the CERC and as applicable. This option may be justified for the following reasons:

a. The parties to the existing PPAs have already agreed to the present methodology for the computation and application of the escalation rates. Once the parties to the existing PPAs have agreed to a methodology, they should only be concerned with the escalation rates notified by the CERC.
b. As discussed in para 9 above, the gap in the data used for computing the escalation rates is arising because the escalation rates were made applicable for the future period instead of the current period following the present methodology. If the gap in the data is addressed separately, it would lead to double counting.

14. The parties who wish to opt for Option 1 may need to consider the corrected payment Index, i.e., after correcting the application of six-monthly escalation rates (i.e., base payment index value of 276 as on March 2024) and monthly escalation rate applicable for April 2024, for arriving at the energy charges for April 2024. The parties who wish to opt for Option 2 may need to consider the payment index based on six monthly escalation rates as per the existing methodology (i.e., base payment index value of 355 as on March 2024) and monthly escalation rate applicable for April 2024, for arriving at the energy charges for April 2024.

15. Following the above methodology, the payment index has to be corrected for all three components of energy charges, viz., (i) imported coal, (ii) transportation of imported coal, and (iii) inland handling of imported coal.

16. The parties to the existing PPAs may opt for either Option 1 or Option 2 to address the transition/switchover to monthly escalation rates. In this staff paper, April 2024 has been proposed for transition/switchover to monthly escalation rates. However, the concerned parties are free to opt for their own methodology for transition/switchover to monthly escalation rates.

17. Comments of stakeholders are invited on the methodology proposed in the staff paper.

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