

**EXPLANATION TO  
THE NOTIFICATION DATED 24.10.2024  
ON  
ESCALATION FACTORS AND OTHER PARAMETERS**

In pursuance of Clause 5.6 (vi) of Ministry of Power's Notification on "Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees" dated 19.01.2005, as amended from time to time, and in pursuance of paragraph 5.4 and paragraph 5.5 of Ministry of Power's Resolution dated 22.07.2020 on "Guidelines for Tariff Based Competitive Bidding Process for Procurement of Round-the-Clock Power from Grid Connected Renewable Energy Power Projects, complemented with Power from Coal Based Thermal Power Projects" read with amendment dated 03.11.2020, the Central Electricity Regulatory Commission (CERC) notifies various escalation factors and other parameters, every six months, for the purpose of payment. The escalation factors and other parameters are as under:

- i. Escalation rate for domestic coal
  - ii. Escalation rate for domestic gas
  - iii. Escalation rates for different escalable sub-components of energy charge for plants based on imported coal
  - iv. Escalation rates for inland transportation charges for coal
  - v. Escalation rates for inland transportation charges for gas
  - vi. Escalation rate for different escalable sub-components of energy charge for plants based on imported gas
  - vii. Inflation rate to be applied to indexed capacity charge component
  - viii. Inflation rate to be applied to indexed energy charge component in cases of captive fuel source
2. The escalation factors and other parameters have been computed based on the methodology/explanation published along with the notification dated 22.11.2006 and 3.7.2009, CERC Order dated 23.12.2013 in Petition No.308/SM/2013, CERC Order dated 18.10.2019 in Petition No.10/SM/2019, CERC Order dated 15.01.2020 in Petition No.11/SM/2019, CERC Order dated 29.5.2021 and its Addendum dated 6.4.2022 in Petition No.7/SM/2021, and CERC Order dated 25.9.2023 in Petition No. 12/SM/2023 (see CERC website [www.cercind.gov.in](http://www.cercind.gov.in) for details). Following the same, the escalation

factors and other parameters for payment have been computed for the present notification.

### 3. Escalation Factors and other parameters for Payment

The annual escalation rates for payment have been computed based on the latest available twelve-month data. The steps followed while computing the escalation rates are as under.

Step 1: Average index values for the appropriate six-month period computed.

Step 2: A half-yearly escalation rate is computed based on the average six-month index.

Step 3: Annual escalation rate computed by multiplying half-yearly escalation rate by two.

Step 4: The annual escalation rate for parameters that require combining two or more series in a pre-determined proportion has been determined by combining each data point of two or more series in the pre-determined proportion to arrive at a composite new single series, and then the annual escalation rate has been determined.

#### (1) Escalation Rate for Domestic Coal

The escalation rate for domestic coal for payment has been computed based on the data on the Coal Price Index of CERC (Base: 2022-23=100) for the period from September 2023 to August 2024.

<b>Table-1: ESCALATION RATE FOR DOMESTIC COAL</b>	
<b>Period</b>	<b>CERC Coal Price Index (2022-23=100)</b>
Sep-23	102.9
Oct-23	102.9
Nov-23	102.9
Dec-23	102.9
Jan-24	102.9
Feb-24	102.9
Mar-24	102.9
Apr-24	102.9
May-24	102.9
Jun-24	102.9
Jul-24	102.9
Aug-24	102.9
Average Index (Sep 23-Feb 24)	102.90
Average Index (Mar 24-Aug 24)	102.90
Half-Yearly Inflation	0.00%
<b>Annual Inflation</b>	<b>0.00%</b>

The above computed annual inflation (0.00%) is notified as an escalation rate for domestic coal for payment.

## (2) Escalation Rate for Domestic Gas

The escalation rate for domestic gas has been computed based on the data on consumer price of gas for the period from July 2023 to June 2024. The data has been collected from the Ministry of Petroleum & Natural Gas and GAIL (India) Ltd. A composite index, assigning a weight of 90% to Consumer Price off-shore and 10% to Consumer Price for North-Eastern States, has been developed and used for computing the escalation rate for domestic gas as under:

<b>Table-2: ESCALATION RATE FOR DOMESTIC GAS</b>			
<b>Period</b>	<b>Consumer Prices Off-shore (Landfall point and On-shore) (₹/'000' cubic metre)</b>	<b>Consumer Prices for North-Eastern States (₹/'000' cubic metre)</b>	<b>Composite Index*</b>
Jul-23	19223.6	11534.1	18454.6
Aug-23	19371.8	11623.1	18596.9
Sep-23	19425.9	11655.6	18648.9
Oct-23	19477.1	11686.2	18698.0
Nov-23	19491.7	11695.0	18712.1
Dec-23	19503.4	11702.1	18723.3
Jan-24	19450.3	11670.2	18672.3
Feb-24	19413.5	11648.1	18637.0
Mar-24	19421.4	11652.9	18644.6
Apr-24	19517.0	11710.2	18736.3
May-24	19513.9	11708.4	18733.4
Jun-24	19532.2	11719.3	18750.9
Average Index (Jul 23-Dec 23)			18638.96
Average Index (Jan 24-Jun 24)			18695.74
Half-Yearly Escalation			0.30%
<b>Annual Escalation</b>			<b>0.61%</b>
* Composite index using weight of 90% to Consumer Price Off-shore and 10% to consumer price North-Eastern States.			

The annual escalation rate computed in the above table (0.61%) is notified as escalation rate for domestic gas for payment.

### **(3) Escalation Rate for different escalable sub-components of energy charge for plants based on imported coal**

#### ***(3.1) Escalation Rate for Imported Coal***

The escalation rate for imported coal for payment has been computed based on the price of South African Coal, Australian Coal, and Indonesian Coal for the period from September 2023 to August 2024, as per the revised formula for the composite index for imported coal specified by CERC in Order dated 25<sup>th</sup> September 2023 in Petition No. 12/SM/2023, is as under:

<b>Table-3.1: ESCALATION RATE FOR IMPORTED COAL</b>		
<b>Component Index</b>	<b>Data Series</b>	<b>Annual Escalation Rate</b>
Composite series using weight of 25% to API-3 (Price of South African Coal), 10% to API-5 (Price of Australian Coal), 16.25% to Argus ICI 3 (Price of Indonesian Coal), 16.25% to Argus ICI-4 (Price of Indonesian Coal), 16.25% to Platts CI 5000 GAR (Price of Indonesian Coal) and 16.25% to Platts CI 4200 GAR (Price of Indonesian Coal)	Weekly/Daily data from September 2023 to August 2024	-9.55%

The annual escalation rate computed in the above table (-9.55%) is notified as an escalation rate for imported coal for payment.

#### ***(3.2) Escalation Rate for Transportation of Imported Coal***

The escalation rate for transportation of imported coal for payment has been computed based on the price of LSFO published by Clarksons Research [VLSFO Price at Singapore, basis maximum Sulphur content of 0.5% (\$/t)] for the period from September 2023 to August 2024 as under:

<b>Table-3.2: ESCALATION RATE FOR TRANSPORTATION OF IMPORTED COAL</b>		
<b>Component Index</b>	<b>Data Series</b>	<b>Annual Escalation Rate</b>
Singapore Bunker Price (VLSFO price, basis maximum sulphur content of 0.5%) (\$/t)	Weekly data from September 2023 to August 2024	-6.86%

The annual escalation rate computed in the above table (-6.86%) is notified as the escalation rate for the transportation of imported coal for payment.

### ***(3.3) Escalation Rate for Inland Handling of Imported Coal***

The escalation rate for inland handling of imported coal has been computed based on the data on WPI-all commodities and CPI-IW for the period from July 2023 to June 2024. A composite index, based on WPI-all commodities with 60% weight and CPI-IW with 40% weight, has first been developed, which then has been used for computing the escalation rate. The data on WPI and CPI-IW has been taken from the website of the Ministry of Commerce & Industry and Labour Bureau, respectively. The escalation rate for inland handling of imported coal has been computed as under:

<b>Period</b>	<b>WPI (Base 2011-12=100)</b>	<b>CPI-IW (Base 2016=100)</b>	<b>Composite Index*</b>
Jul-23	152.1	139.7	147.1
Aug-23	152.5	139.2	147.2
Sep-23	151.8	137.5	146.1
Oct-23	152.5	138.4	146.9
Nov-23	153.1	139.1	147.5
Dec-23	151.8	138.8	146.6
Jan-24	151.2	138.9	146.3
Feb-24	151.2	139.2	146.4
Mar-24	151.4	138.9	146.4
Apr-24	152.9	139.4	147.5
May-24	153.5	139.9	148.1
Jun-24	154.0	141.4	149.0
Average Index (Jul 23-Dec 23)			146.89
Average Index (Jan 24-Jun 24)			147.27
Half-Yearly Inflation			0.25%
<b>Annual Inflation</b>			<b>0.51%</b>
*Composite index using weight of 60% to Wholesale Price Index (WPI) and 40% to Consumer Price Index (CPI).			

The annual inflation computed in the above table (0.51%) is notified as an escalation rate for inland handling of imported coal for payment.

### **(4) Escalation rates for inland transportation charges for coal**

The escalation for inland transportation charges for coal has been computed based on the data on coal freight rates (₹/Tonne) for the period from July 2023 to June 2024. The data has been collected from the Ministry of Railways. Based on the availability of

data from the Ministry of Railways, the data on coal freight rates for 100 km, 125 km, 500 km, 1000 km, 2000 km, and 3000 km has been used for computing the escalation rate for inland transportation charges for coal for a distance up to 100 km, up to 125 km, up to 500 km, up to 1000 km, up to 2000 km and beyond 2000 km respectively. The escalation rate for inland transportation charges of coal for payment has been computed as under:

<b>Table-4: ESCALATION RATE FOR INLAND TRANSPORTATION CHARGES FOR COAL</b>						
<b>Period</b>	<b>Coal Freight Rate for 100 km</b>	<b>Coal Freight Rate for 125 km</b>	<b>Coal Freight Rate for 500 km</b>	<b>Coal Freight Rate for 1000 km</b>	<b>Coal Freight Rate for 2000 km</b>	<b>Coal Freight Rate for 3000 km</b>
Jul-23	216.0	389.6	1054.7	1891.8	3065.7	3787.9
Aug-23	216.0	389.6	1054.7	1891.8	3065.7	3787.9
Sep-23	216.0	389.6	1054.7	1891.8	3065.7	3787.9
Oct-23	216.0	389.6	1054.7	1891.8	3065.7	3787.9
Nov-23	216.0	389.6	1054.7	1891.8	3065.7	3787.9
Dec-23	216.0	389.6	1054.7	1891.8	3065.7	3787.9
Jan-24	216.0	389.6	1054.7	1891.8	3065.7	3787.9
Feb-24	216.0	389.6	1054.7	1891.8	3065.7	3787.9
Mar-24	216.0	389.6	1054.7	1891.8	3065.7	3787.9
Apr-24	216.0	389.6	1054.7	1891.8	3065.7	3787.9
May-24	216.0	389.6	1054.7	1891.8	3065.7	3787.9
Jun-24	216.0	389.6	1054.7	1891.8	3065.7	3787.9
Average Rate (Jul 23-Dec 23)	216.00	389.60	1054.70	1891.80	3065.70	3787.90
Average Rate (Jan 24-Jun 24)	216.00	389.60	1054.70	1891.80	3065.70	3787.90
Half-Yearly Escalation Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Annual Escalation Rate</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>

The annual escalation rates computed in the above table (0.00% applicable up to 100 km, 0.00% applicable up to 125 km, 0.00% applicable up to 500 km, 0.00% applicable up to 1000 km, 0.00% applicable up to 2000 km and 0.00% applicable beyond 2000 km) are notified as annual escalation rates for inland transportation charges of coal for payment.

**(5) Escalation rate for inland transportation charges for gas**

CERC has been computing the escalation rate for inland transportation charges for gas using the transportation charges of gas along the HVJ pipeline charged by GAIL/ GAIL Integrated, based on the zonal tariff for individual pipelines notified by PNGRB. The average of the zonal tariff (Zone 1 to 4) was used for computing the escalation rates. PNGRB, vide its Order dated 29.3.2023, notified zone-wise Unified Tariff for 20 connected natural gas pipelines, which are now part of National Gas Grid, which shall be charged from customers.

Consequent to the above developments and based on the availability of data, the zone-wise Unified Tariff has been used for computing the escalation rate for inland transportation charges for gas, applicable for the period from July 2023 to June 2024. The Unified Tariff for consumers for different tariff zones is based on distance, viz., Zone-1: 300 km, Zone-2: 300-1200 km, and Zone-3: >1200 km. In view of variation in tariff in different zones, separate escalation rate for each zone (Zone 1 to 3) has been computed as under:

Period	Unified Tariff (₹/1000 SCM)		
	Zone-1 (300 Km)	Zone-2 (300-1200 Km)	Zone- 3 (above 1200 Km)
Jul-23	1440.00	2844.00	4122.72
Aug-23	1440.00	2844.00	4122.72
Sep-23	1440.00	2844.00	4122.72
Oct-23	1440.00	2844.00	4122.72
Nov-23	1440.00	2844.00	4122.72
Dec-23	1440.00	2844.00	4122.72
Jan-24	1440.00	2844.00	4122.72
Feb-24	1440.00	2844.00	4122.72
Mar-24	1440.00	2844.00	4122.72
Apr-24	1440.00	2844.00	4122.72
May-24	1440.00	2844.00	4122.72
Jun-24	1440.00	2844.00	4122.72
Average Rate (Jul 23-Dec 23)	1440.00	2844.00	4122.72
Average Rate (Jan 24-Jun 24)	1440.00	2844.00	4122.72
Half-Yearly Escalation Rate	0.00%	0.00%	0.00%
<b>Annual Escalation Rate</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>

The annual escalation rates computed in the above table (0.00% applicable for Zone-1 for 300 km, 0.00% applicable for Zone-2 from 300-1200 km and 0.00% applicable for Zone-3 above 1200 km) are notified as escalation rate for inland transportation charges for gas for payment.

**(6) Escalation rate for different escalable sub-components of energy charge for plants based on imported gas**

**6.1 Escalation rate for imported gas**

The escalation rate for imported gas for payment has been computed based on the Japan/ Korea Marker (JKM) for the period from September 2023 to August 2024. The data has been subscribed from S&P Global Platts. The computation of the escalation rate for imported gas can be seen in the following table.

<b>Table-6.1: ESCALATION RATE FOR IMPORTED GAS</b>		
<b>Component Index</b>	<b>Data Series</b>	<b>Annual Escalation Rate</b>
LNG Japan/Korea DES Spot Crg (\$/Mmbtu)	Daily data from September 2023 to August 2024	-23.80%

The annual escalation rate computed in the above table (-23.80%) is notified as an escalation rate for imported gas for payment.

**6.2 Escalation rate for transportation of imported gas**

The escalation rate for transportation of imported gas for payment has been computed based on the price of LSFO published by Clarksons (VLSFO Price at Singapore, basis maximum Sulphur content of 0.5% (\$/t)) for the period from September 2023 to August 2024. The escalation rate for the transportation of imported gas has been computed as under:

<b>Table-6.2: ESCALATION RATE FOR TRANSPORTATION OF IMPORTED GAS</b>		
<b>Component Index</b>	<b>Data Series</b>	<b>Annual Escalation Rate</b>
Singapore Bunker Price (VLSFO price, basis maximum sulphur content of 0.5%) (\$/t)	Weekly data from September 2023 to August 2024	-6.86%



The annual escalation rate computed in the above table (-6.86%) is notified as the escalation rate for the transportation of imported gas for payment.

### 6.3 Escalation rate for inland handling of imported gas

The escalation rate for inland handling of imported gas has been computed based on the data on WPI-all commodities and CPI-IW for the period from July 2023 to June 2024. A composite index, based on WPI with 60% weight and CPI-IW with 40% weight, has first been developed, which then has been used for computing the escalation rate. The data on WPI and CPI-IW has been taken from the website of the Ministry of Commerce & Industry and Labour Bureau, respectively. The escalation rate for inland handling of imported gas has been computed as under:

<b>Table-6.3: ESCALATION RATE FOR INLAND HANDLING OF IMPORTED GAS</b>			
<b>Period</b>	<b>WPI (Base 2011-12=100)</b>	<b>CPI-IW (Base 2016=100)</b>	<b>Composite Index*</b>
Jul-23	152.1	139.7	147.1
Aug-23	152.5	139.2	147.2
Sep-23	151.8	137.5	146.1
Oct-23	152.5	138.4	146.9
Nov-23	153.1	139.1	147.5
Dec-23	151.8	138.8	146.6
Jan-24	151.2	138.9	146.3
Feb-24	151.2	139.2	146.4
Mar-24	151.4	138.9	146.4
Apr-24	152.9	139.4	147.5
May-24	153.5	139.9	148.1
Jun-24	154.0	141.4	149.0
Average Index (Jul 23-Dec 23)			146.89
Average Index (Jan 24-Jun 24)			147.27
Half-Yearly Inflation			0.25%
<b>Annual Inflation</b>			<b>0.51%</b>
*Composite index using weight of 60% to Wholesale Price Index (WPI) and 40% to Consumer Price Index (CPI).			

The annual inflation computed in the above table (0.51%) is notified as escalation rate for inland handling of imported gas.

### **(7) Inflation Rate to be applied to Indexed Capacity Charge Component**

The inflation rate to be applied to the Indexed Capacity Charge Component has been computed based on the data on WPI-all commodities and CPI-IW for the period from July 2023 to June 2024. A composite Index, based on WPI with 60% weight and CPI-IW with 40% weight, has first been developed, which then has been used for computing the escalation rate. The data on WPI and CPI-IW has been taken from the website of the Ministry of Commerce & Industry and Labour Bureau, respectively. The inflation rate has been computed as under:

<b>Table-7: INFLATION RATE TO BE APPLIED TO INDEXED CAPACITY CHARGE COMPONENT</b>			
<b>Period</b>	<b>WPI (Base 2011-12=100)</b>	<b>CPI-IW (Base 2016=100)</b>	<b>Composite Index*</b>
Jul-23	152.1	139.7	147.1
Aug-23	152.5	139.2	147.2
Sep-23	151.8	137.5	146.1
Oct-23	152.5	138.4	146.9
Nov-23	153.1	139.1	147.5
Dec-23	151.8	138.8	146.6
Jan-24	151.2	138.9	146.3
Feb-24	151.2	139.2	146.4
Mar-24	151.4	138.9	146.4
Apr-24	152.9	139.4	147.5
May-24	153.5	139.9	148.1
Jun-24	154.0	141.4	149.0
Average Index (Jul 23-Dec 23)			146.89
Average Index (Jan 24-Jun 24)			147.27
Half-Yearly Inflation			0.25%
<b>Annual Inflation</b>			<b>0.51%</b>
*Composite index using weight of 60% to Wholesale Price Index (WPI) and 40% to Consumer Price Index (CPI).			

The annual inflation computed in the above table (0.51%) is notified as the Inflation Rate to be applied to the Indexed Capacity Charge Component.

### **(8) Inflation Rate to be applied to indexed energy charge component in cases of captive fuel source**

Using the Consumer Price Index for Industrial Workers (CPI-IW) and Wholesale Price Index for all commodities and disaggregated items used in captive mining for the period from July 2023 to June 2024 the inflation rate to be applied to indexed energy charge component in cases of captive fuel source has been computed. Before computing

the escalation rate, the composite index has been arrived at by assigning a weight of 10% to WPI-all commodities; 20% to CPI-IW; 10% to WPI-Medium & heavy commercial vehicle tyres; 10% to WPI- Manufacture of other chemical products; 25% to WPI-Machinery & Equipment; and 25% to WPI-HSD Oil and the same has been used for computing the escalation rate.

<b>Table-8: INFLATION RATE TO BE APPLIED TO INDEXED ENERGY CHARGE COMPONENT IN CASE OF CAPTIVE MINE COAL SOURCE</b>							
Period	WPI-all commodities (Base 2011-12=100)	CPI-IW (Base 2016=100)	Wholesale Price Index				Composite Index*
			Medium & heavy commercial vehicle tyre	Manufacture of other chemical products	Manufacture of Machinery and Equipment	High Speed Diesel Oil	
Jul-23	152.1	139.7	114.0	134.2	128.6	170.2	142.67
Aug-23	152.5	139.2	114.4	134.3	128.5	171.9	143.06
Sep-23	151.8	137.5	113.9	134.1	129.2	174.4	143.38
Oct-23	152.5	138.4	113.1	133.9	128.9	175.1	143.63
Nov-23	153.1	139.1	114.3	133.1	129.2	174.3	143.75
Dec-23	151.8	138.8	115.4	133.1	129.4	172.0	143.14
Jan-24	151.2	138.9	115.3	133.5	129.8	171.8	143.18
Feb-24	151.2	139.2	114.4	133.2	130.0	172.1	143.25
Mar-24	151.4	138.9	113.5	134.5	129.9	170.3	142.77
Apr-24	152.9	139.4	111.6	135.1	130.4	168.5	142.57
May-24	153.5	139.9	111.8	135.0	130.7	167.7	142.61
Jun-24	154.0	141.4	111.5	135.8	130.8	166.0	142.61
Average Index (Jul 23-Dec 23)							143.3
Average Index (Jan 24-Jun 24)							142.8
Half-Yearly Inflation							-0.31%
Annual Inflation							<b>-0.62%</b>
*Composite Index using weight of 10% to Wholesale Price Index (WPI), 20% to Consumer Price Index (CPI), 10% to WPI-Medium & heavy commercial vehicle tyre, 10% to WPI-Manufacture of other chemical products, 25% to WPI-Machinery & Equipment and 25% to WPI-HSD Oil.							

The annual inflation computed in the above table (-0.62%) is notified as the inflation rate to be applied to indexed energy charge components in cases of captive fuel sources.

4. The data series for API-3, API-5, Argus ICI-3, Argus ICI-4, Platts CI, Platts JKM, and Singapore VLSFO Bunker Fuel Price Index has been analysed by CERC. The data is not made available for public dissemination since it is paid for and is sourced on a single user subscription.

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