**EXPLANATION TO**
**THE NOTIFICATION DATED 25.4.2025**
**ON**
**ESCALATION RATES AND OTHER PARAMETERS**

In pursuance of paragraph 5.1 and paragraph 6.4 of the Resolution 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" dated 22.07.2020 read with amendment dated 03.11.2020 issued by the Ministry of Power (MOP), the Central Electricity Regulatory Commission (CERC) is required to notify various escalation rates/factors and other parameters, for the purpose of bid evaluation. The escalation rates and other parameters are as under:

(1) Escalation Rate for Domestic Coal
(2) Escalation Rate for Domestic Gas
(3) Escalation Rate for Inland Transportation Charges of Coal
(4) Escalation Rate for Inland Transportation Charges of Gas
(5) Escalation Rate for Imported Coal
(6) Escalation Rate for Imported Gas
(7) Escalation Rate for Transportation of Imported Coal
(8) Escalation Rate for Transportation of Imported Gas
(9) Discount rate

2. The escalation factors and other parameters have been computed based on the methodology defined in the CERC Order dated 29.5.2021 in Petition No.7/SM/2021 and its Addendum dated 6.4.2022 (see CERC website www.cercind.gov.in).

3. **Escalation Factors for Bid Evaluation**

The method of Minimum Mean Square Error has been used for determining the escalation rates for the purpose of evaluation of bids. Using the Minimum Mean Square Error method on the time series data for the latest twelve calendar years, the annual escalation rates for bid evaluation have been computed with the formula given as under:

*e: annual escalation rate in percent =g*100, where:*

*g: escalation factor* $= [exp\{\{(6 \times \Sigma n_t=2\ (t-1)x\ log_e(R_t)\}/\{(n-1)x\ n\ x\ (2n-1)\}\}]-1$

$R_t = (Y_t/Y_1)$

$Y_t$ = *"t" th observation*

$Y_1$ = *initial observation*

*n = number of observations*

**3.1 Escalation Rate for Domestic Coal (for Evaluation):** The escalation rate for domestic coal has been computed based on the time series data on WPI for non-coking coal (G7 to G14) for the period from 2013 to 2024. The data on WPI for non-coking coal has been taken from the website of the Ministry of Commerce & Industry. The escalation rate for domestic coal has been computed as under:

**Table-1: ESCALATION RATE FOR DOMESTIC COAL (FOR EVALUATION)**

| Year No. (t) | Year | WPI for Non-Coking Coal | Yt/Y1 =Rt | Ln Rt | Year -1 (t-1) | Product [(t-1) x (Ln Rt)] |
|---|---|---|---|---|---|---|
| 1 | 2013 | 106.27 | | | | |
| 2 | 2014 | 113.30 | 1.07 | 0.06 | 1 | 0.06 |
| 3 | 2015 | 113.30 | 1.07 | 0.06 | 2 | 0.13 |
| 4 | 2016 | 118.84 | 1.12 | 0.11 | 3 | 0.34 |
| 5 | 2017 | 122.80 | 1.16 | 0.14 | 4 | 0.58 |
| 6 | 2018 | 136.40 | 1.28 | 0.25 | 5 | 1.25 |
| 7 | 2019 | 136.70 | 1.29 | 0.25 | 6 | 1.51 |
| 8 | 2020 | 136.79 | 1.29 | 0.25 | 7 | 1.77 |
| 9 | 2021 | 137.80 | 1.30 | 0.26 | 8 | 2.08 |
| 10 | 2022 | 137.80 | 1.30 | 0.26 | 9 | 2.34 |
| 11 | 2023 | 141.00 | 1.33 | 0.28 | 10 | 2.83 |
| 12 | 2024 | 143.30 | 1.35 | 0.30 | 11 | 3.29 |
| A = Sum of "product" column | | | | | | 16.17 |
| B= 6 times (6 x A) | | | | | | 97.00 |
| C= (n-1) x n x (2n-1); n = No. of Years of data = 12 | | | | | | 3036.00 |
| D = B/C | | | | | | 0.03 |
| g (Exponential Factor) = Exponential (D) -1 | | | | | | 0.03 |
| e = Annual Escalation Rate (%) = g x 100 | | | | | | **3.25** |

The annual escalation rate computed in the above table (3.25%) is notified as the escalation rate for domestic coal for evaluation.

**3.2. Escalation Rate for Domestic Gas (For Evaluation):** The escalation rate for domestic gas has been computed based on the time series data on consumer price of gas for the period from 2013 to 2024. The data has been collected from the Ministry of Petroleum & Natural Gas (MoPNG) and GAIL (India) Ltd. Composite series (Average consumer price of Gas), based on 90% weight to Consumer Price-Off-shore (Landfall point and On-

shore) and 10% weight to Consumer Price (North-Eastern States) has first been developed, which then has been used for computing the escalation rate as under:

| Composite series: Average Consumer Price of Gas | | | | | |
|---|---|---|---|---|---|
| Year | Consumer Price-Off-shore (Landfall point and On-shore) (₹/'000' cubic metre) | Consumer Price (North-Eastern States) (₹/'000' cubic metre) | Proportion of off-shore Gas in total Gas Production | Proportion of North-East gas in Total Gas Production | Average Consumer Price of Gas (₹/'000 cubic metre) (Yi) |
| 2012 | 8080 | 4848 | 90% | 10% | 7757 |
| 2013 | 8860 | 5316 | 90% | 10% | 8506 |
| 2014 | 9754 | 5854 | 90% | 10% | 9364 |
| 2015 | 10482 | 6293 | 90% | 10% | 10063 |
| 2016 | 8359 | 5014 | 90% | 10% | 8024 |
| 2017 | 6396 | 3834 | 90% | 10% | 6140 |
| 2018 | 7630 | 4583 | 90% | 10% | 7325 |
| 2019 | 8851 | 5310 | 90% | 10% | 8497 |
| 2020 | 6524 | 3908 | 90% | 10% | 6263 |
| 2021 | 5512 | 3299 | 90% | 10% | 5291 |
| 2022 | 16922 | 10152 | 90% | 10% | 16245 |
| 2023 | 21009 | 12604 | 90% | 10% | 20169 |
| 2024 | 19579 | 11747 | 90% | 10% | 18795 |

| Table-2: ESCALATION RATE FOR DOMESTIC GAS (FOR EVALUATION) | | | | | | |
|---|---|---|---|---|---|---|
| **Year No. (t)** | **Year** | **Average Consumer Price of Gas (₹ /'000 cubic metre) (Yi)** | **Yt/Y1 =Rt** | **Ln Rt** | **Year -1 (t-1)** | **Product [(t-1) x (Ln Rt)]** |
| 1 | 2013 | 8506 | | | | |
| 2 | 2014 | 9364 | 1.10 | 0.10 | 1 | 0.10 |
| 3 | 2015 | 10063 | 1.18 | 0.17 | 2 | 0.34 |
| 4 | 2016 | 8024 | 0.94 | -0.06 | 3 | -0.17 |
| 5 | 2017 | 6140 | 0.72 | -0.33 | 4 | -1.30 |
| 6 | 2018 | 7325 | 0.86 | -0.15 | 5 | -0.75 |
| 7 | 2019 | 8497 | 1.00 | 0.00 | 6 | -0.01 |
| 8 | 2020 | 6263 | 0.74 | -0.31 | 7 | -2.14 |
| 9 | 2021 | 5291 | 0.62 | -0.47 | 8 | -3.80 |
| 10 | 2022 | 16245 | 1.91 | 0.65 | 9 | 5.82 |
| 11 | 2023 | 20169 | 2.37 | 0.86 | 10 | 8.63 |
| 12 | 2024 | 18795 | 2.21 | 0.79 | 11 | 8.72 |
| A = Sum of "product" column | | | | | | 15.44 |
| B= 6 times (6 x A) | | | | | | 92.64 |
| C= (n-1) x n x (2n-1); n = No. of Years of data = 12 | | | | | | 3036.00 |
| D = B/C | | | | | | 0.03 |
| g (Exponential Factor) = Exponential (D) -1 | | | | | | 0.031 |
| e = Annual Escalation Rate (%) = g x 100 | | | | | | **3.10** |

The annual escalation rate computed in the above table (3.10%) is notified as escalation rate for domestic gas for evaluation.

### 3.3 Escalation Rate for Inland Transportation Charges of Coal (For Evaluation):

The escalation rate for inland transportation charges for coal has been computed based on the time series data on coal freight rates for the period from 2013 to 2024. The data has been collected from the Ministry of Railways. Based on the availability of data from the Ministry of Railways and in terms of their Circular dated 30.06.2020 and 29.06.2021 regarding long lead concession @ 20% for coal transportation of distance more than 1400 kms w.e.f. 01.07.2020 till 31.12.2021, the data on coal freight rates for 125 km, 500 km, 1000 km, 2000 km, and 3000 km has been used for computing the escalation rate for inland transportation of coal for distances up to 125 km, up to 500 km, up to 1000 km, up to 2000 km and beyond 2000 km respectively. From January 2022 onwards, notified coal freight rates without concession have been considered. The escalation rate for inland transportation charges for coal has been computed as under:

**Table-3.1: ESCALATION RATE FOR INLAND TRANSPORTATION CHARGES FOR COAL (UP TO 125 KM) (FOR EVALUATION)**

| Year Number (t) | Year | Coal Freight Rate (₹/Tonne) for 125 km | Yt/Y1 =Rt | Ln Rt | Year -1 (t-1) | Product [(t-1) x (Ln Rt)] |
|---|---|---|---|---|---|---|
| 1 | 2013 | 157.33 | | | | |
| 2 | 2014 | 192.10 | 1.221 | 0.200 | 1 | 0.200 |
| 3 | 2015 | 202.55 | 1.287 | 0.253 | 2 | 0.505 |
| 4 | 2016 | 205.60 | 1.307 | 0.268 | 3 | 0.803 |
| 5 | 2017 | 247.68 | 1.574 | 0.454 | 4 | 1.815 |
| 6 | 2018 | 361.20 | 2.296 | 0.831 | 5 | 4.156 |
| 7 | 2019 | 389.60 | 2.476 | 0.907 | 6 | 5.441 |
| 8 | 2020 | 389.60 | 2.476 | 0.907 | 7 | 6.348 |
| 9 | 2021 | 389.60 | 2.476 | 0.907 | 8 | 7.254 |
| 10 | 2022 | 389.60 | 2.476 | 0.907 | 9 | 8.161 |
| 11 | 2023 | 389.60 | 2.476 | 0.907 | 10 | 9.068 |
| 12 | 2024 | 389.60 | 2.476 | 0.907 | 11 | 9.975 |
| A = Sum of "product" column | | | | | | 53.73 |
| B= 6 times (6 x A) | | | | | | 322.36 |
| C= (n-1) x n x (2n-1); n = Number of Years of data = 12 | | | | | | 3036.00 |
| D = B/C | | | | | | 0.11 |
| g (Exponential Factor) = Exponential (D) -1 | | | | | | 0.11 |
| e = Annual Escalation Rate (%) = g x 100 | | | | | | **11.20** |

**Table-3.2: ESCALATION RATE FOR INLAND TRANSPORTATION CHARGES FOR COAL (UP TO 500 KM) (FOR EVALUATION)**

| Year Number (t) | Year | Coal Freight Rate (Rs/Tonne) for 500 km | Yt/Y1 =Rt | Ln Rt | Year -1 (t-1) | Product [(t-1) x (Ln Rt)] |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2013 | 604.12 | | | | |
| 2 | 2014 | 641.17 | 1.06 | 0.06 | 1 | 0.06 |
| 3 | 2015 | 691.95 | 1.15 | 0.14 | 2 | 0.27 |
| 4 | 2016 | 705.86 | 1.17 | 0.16 | 3 | 0.47 |
| 5 | 2017 | 754.08 | 1.25 | 0.22 | 4 | 0.89 |
| 6 | 2018 | 977.68 | 1.62 | 0.48 | 5 | 2.41 |
| 7 | 2019 | 1054.70 | 1.75 | 0.56 | 6 | 3.34 |
| 8 | 2020 | 1054.70 | 1.75 | 0.56 | 7 | 3.90 |
| 9 | 2021 | 1054.70 | 1.75 | 0.56 | 8 | 4.46 |
| 10 | 2022 | 1054.70 | 1.75 | 0.56 | 9 | 5.02 |
| 11 | 2023 | 1054.70 | 1.75 | 0.56 | 10 | 5.57 |
| 12 | 2024 | 1054.70 | 1.75 | 0.56 | 11 | 6.13 |
| A = Sum of "product" column | | | | | | 32.51 |
| B= 6 times (6 x A) | | | | | | 195.07 |
| C= (n-1) x n x (2n-1); n = Number of Years of data = 12 | | | | | | 3036.00 |
| D = B/C | | | | | | 0.06 |
| g (Exponential Factor) = Exponential (D) -1 | | | | | | 0.07 |
| e = Annual Escalation Rate (%) = g x 100 | | | | | | **6.64** |

**Table-3.3: ESCALATION RATE FOR INLAND TRANSPORTATION CHARGES FOR COAL (UP TO 1000 KM) (FOR EVALUATION)**

| Year Number (t) | Year | Coal Freight Rate (₹/Tonne) for 1000 km | Yt/Y1 =Rt | Ln Rt | Year -1 (t-1) | Product [(t-1) x (Ln Rt)] |
|---|---|---|---|---|---|---|
| 1 | 2013 | 1160.70 | | | | |
| 2 | 2014 | 1231.94 | 1.06 | 0.06 | 1 | 0.06 |
| 3 | 2015 | 1329.43 | 1.15 | 0.14 | 2 | 0.27 |
| 4 | 2016 | 1349.50 | 1.16 | 0.15 | 3 | 0.45 |
| 5 | 2017 | 1391.58 | 1.20 | 0.18 | 4 | 0.73 |
| 6 | 2018 | 1753.71 | 1.51 | 0.41 | 5 | 2.06 |
| 7 | 2019 | 1891.80 | 1.63 | 0.49 | 6 | 2.93 |
| 8 | 2020 | 1891.80 | 1.63 | 0.49 | 7 | 3.42 |
| 9 | 2021 | 1891.80 | 1.63 | 0.49 | 8 | 3.91 |
| 10 | 2022 | 1891.80 | 1.63 | 0.49 | 9 | 4.40 |
| 11 | 2023 | 1891.80 | 1.63 | 0.49 | 10 | 4.89 |
| 12 | 2024 | 1891.80 | 1.63 | 0.49 | 11 | 5.37 |
| A = Sum of "product" column | | | | | | 28.49 |
| B= 6 times (6 x A) | | | | | | 170.92 |
| C= (n-1) x n x (2n-1); n = Number of Years of data = 12 | | | | | | 3036.00 |
| D = B/C | | | | | | 0.06 |
| g (Exponential Factor) = Exponential (D) -1 | | | | | | 0.06 |
| e = Annual Escalation Rate (%) = g x 100 | | | | | | **5.79** |

**Table-3.4: ESCALATION RATE FOR INLAND TRANSPORTATION CHARGES FOR COAL (UP TO 2000 KM) (FOR EVALUATION)**

| Year Number (t) | Year | Coal Freight Rate (₹/Tonne) for 2000 km | Yt/Y1 =Rt | Ln Rt | Year -1 (t-1) | Product [(t-1) x (Ln Rt)] |
|---|---|---|---|---|---|---|
| 1 | 2013 | 2149.99 | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | 2014 | 2281.78 | 1.06 | 0.06 | 1 | 0.06 |
| 3 | 2015 | 2462.48 | 1.15 | 0.14 | 2 | 0.27 |
| 4 | 2016 | 2407.42 | 1.12 | 0.11 | 3 | 0.34 |
| 5 | 2017 | 2285.48 | 1.06 | 0.06 | 4 | 0.24 |
| 6 | 2018 | 2841.88 | 1.32 | 0.28 | 5 | 1.40 |
| 7 | 2019 | 3065.70 | 1.43 | 0.35 | 6 | 2.13 |
| 8 | 2020 | 2816.65 | 1.31 | 0.27 | 7 | 1.89 |
| 9 | 2021 | 2567.60 | 1.19 | 0.18 | 8 | 1.42 |
| 10 | 2022 | 3065.70 | 1.43 | 0.35 | 9 | 3.19 |
| 11 | 2023 | 3065.70 | 1.43 | 0.35 | 10 | 3.55 |
| 12 | 2024 | 3065.70 | 1.43 | 0.35 | 11 | 3.90 |
| A = Sum of "product" column | | | | | | 18.39 |
| B= 6 times (6 x A) | | | | | | 110.36 |
| C= (n-1) x n x (2n-1); n = Number of Years of data = 12 | | | | | | 3036.00 |
| D = B/C | | | | | | 0.04 |
| g (Exponential Factor) = Exponential (D) -1 | | | | | | 0.04 |
| e = Annual Escalation Rate (%) = g x 100 | | | | | | **3.70** |

**Table-3.5: ESCALATION RATE FOR INLAND TRANSPORTATION CHARGES FOR COAL (BEYOND 2000 KM) (FOR EVALUATION)**

| Year Number (t) | Year | Coal Freight Rate (₹/Tonne) for 3000 km | Yt/Y1 =Rt | Ln Rt | Year -1 (t-1) | Product [(t-1) x (Ln Rt)] |
|---|---|---|---|---|---|---|
| 1 | 2013 | 2750.41 | | | | |
| 2 | 2014 | 2918.80 | 1.06 | 0.06 | 1 | 0.06 |
| 3 | 2015 | 3149.90 | 1.15 | 0.14 | 2 | 0.27 |
| 4 | 2016 | 3051.93 | 1.11 | 0.10 | 3 | 0.31 |
| 5 | 2017 | 2835.48 | 1.03 | 0.03 | 4 | 0.12 |
| 6 | 2018 | 3511.37 | 1.28 | 0.24 | 5 | 1.22 |
| 7 | 2019 | 3787.90 | 1.38 | 0.32 | 6 | 1.92 |
| 8 | 2020 | 3409.11 | 1.24 | 0.21 | 7 | 1.50 |
| 9 | 2021 | 3030.32 | 1.10 | 0.10 | 8 | 0.78 |
| 10 | 2022 | 3787.90 | 1.38 | 0.32 | 9 | 2.88 |
| 11 | 2023 | 3787.90 | 1.38 | 0.32 | 10 | 3.20 |
| 12 | 2024 | 3787.90 | 1.38 | 0.32 | 11 | 3.52 |
| A = Sum of "product" column | | | | | | 15.79 |
| B= 6 times (6 x A) | | | | | | 94.72 |
| C= (n-1) x n x (2n-1); n = Number of Years of data = 12 | | | | | | 3036.00 |
| D = B/C | | | | | | 0.03 |
| g (Exponential Factor) = Exponential (D) -1 | | | | | | 0.03 |
| e = Annual Escalation Rate (%) = g x 100 | | | | | | **3.17** |

The annual escalation rates computed in the above tables (11.20%, 6.64%, 5.79%, 3.70%, and 3.17%, respectively, are applicable for transportation of coal up to 125 km, up to 500 km, up to 1000 km, up to 2000 km and beyond 2000 km) are notified as annual escalation rates for inland transportation charges of coal for evaluation.

**3.4 Escalation Rate for Inland Transportation Charges of Gas (For Evaluation):** The escalation rate for inland transportation charges for gas for the period from 2013 to 2022 has been computed based on the time series data on transportation charges of gas for the HVJ Integrated pipeline as notified by PNGRB. From April 2023 onwards, PNGRB has started notifying tariffs for GAIL Integrated piplelines (inclusive of HVJ Integrated and other pipelines) and the Unified Tariff for the National Gas Grid System, which shall be charged to customers. Consequent to the above developments and based on the availability of time series data, the escalation rate for inland transportation charges for gas from April 2023 onwards has been computed using data on transportation charges for gas applicable for GAIL Integrated pipelines, as notified by PNGRB from time to time. The escalation rate for inland transportation charges for gas for the purpose of evaluation has been computed as under:

**Table-4: ESCALATION RATE FOR INLAND TRANSPORTATION CHARGES OF GAS**

| Year No. (t) | Year | Transportation charges along HVJ pipeline (₹/'000' cubic metre) | Yt/Y1 =Rt | Ln Rt | Year -1 (t-1) | Product [(t-1) x (Ln Rt)] |
|---|---|---|---|---|---|---|
| 1 | 2013 | 856 | | | | |
| 2 | 2014 | 856 | 1.00 | 0.00 | 1 | 0.00 |
| 3 | 2015 | 856 | 1.00 | 0.00 | 2 | 0.00 |
| 4 | 2016 | 856 | 1.00 | 0.00 | 3 | 0.00 |
| 5 | 2017 | 856 | 1.00 | 0.00 | 4 | 0.00 |
| 6 | 2018 | 856 | 1.00 | 0.00 | 5 | 0.00 |
| 7 | 2019 | 1111 | 1.30 | 0.26 | 6 | 1.56 |
| 8 | 2020 | 1365 | 1.60 | 0.47 | 7 | 3.27 |
| 9 | 2021 | 1365 | 1.60 | 0.47 | 8 | 3.74 |
| 10 | 2022 | 1365 | 1.60 | 0.47 | 9 | 4.20 |
| 11 | 2023 | 1994 | 2.33 | 0.85 | 10 | 8.45 |
| 12 | 2024 | 2203 | 2.57 | 0.95 | 11 | 10.40 |
| A = Sum of "product" column | | | | | | 31.62 |
| B= 6 times (6 x A) | | | | | | 189.73 |
| C= (n-1) x n x (2n-1); n = No. of Years of data = 12 | | | | | | 3036.00 |
| D = B/C | | | | | | 0.06 |
| g (Exponential Factor) = Exponential (D) -1 | | | | | | 0.064 |
| e = Annual Escalation Rate (%) = g x 100 | | | | | | **6.45** |

The annual escalation rate computed in the above table (6.45%) is notified as the escalation rate for inland transportation charges of gas for evaluation.

**3.5 Escalation Rate for Imported Coal (For Evaluation):** The escalation rate for imported coal has been computed based on the revised formula for the composite index for imported coal specified by CERC in the Order dated 25th September 2023 in Petition No.

12/SM/2023. The time series data on the composite index for imported coal for the period from 2013 to 2024 has been considered for computing the escalation rate for imported coal for evaluation.

| Table-5: ESCALATION RATE FOR IMPORTED COAL (For Evaluation) | | |
|---|---|---|
| **Component Index** | **Data Series** | **Annual Escalation Rate** |
| 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) | 12 years (Jan 2013 to Dec 2024) | **2.91%** |

The annual escalation rate computed in the above table (2.91%) is notified as the escalation rate for imported coal for evaluation.

**3.6 Escalation rate for Imported Gas (For Evaluation):** The escalation rate for imported gas has been computed based on the time series data on Japan/Korea Marker (JKM) published by Platts for the period from 2013 to 2024 as under:

| Table-6: ESCALATION RATE FOR IMPORTED GAS (For Evaluation) | | |
|---|---|---|
| **Component Index** | **Data Series** | **Annual Escalation Rate** |
| LNG Japan/Korea DES Spot Crg. ($/MMBTU) | 12 years (Jan 2013 to Dec 2024) | **(-)4.81%** |

The annual escalation rate computed in the above table (-4.81%) is notified as the escalation rate for imported gas for evaluation.

**3.7 Escalation Rate for Transportation of Imported Coal (For Evaluation):** The escalation rate for transportation of imported coal has been computed based on the time series data on Singapore 380 CST Bunker Fuel Price for the latest 12 years for the period from 2013 to 2024 as under:

| Table-7: ESCALATION RATE FOR TRANSPORTATION OF IMPORTED COAL (For Evaluation) | | |
|---|---|---|
| **Component Index** | **Data Series** | **Annual Escalation Rate** |
| Singapore 380 CST Bunker Price Index | 12 years (Jan 2013 to Dec 2024) | **(-)5.20%** |

The annual escalation rate computed in the above table (-5.20%) is notified as the escalation rate for the transportation of imported coal for evaluation.

**3.8 Escalation Rate for Transportation of Imported Gas (For Evaluation):** The escalation rate for transportation of imported gas has been computed based on the time series data on Singapore 380 CST Bunker Fuel Price for the latest 12 years for the period from 2013 to 2024 as under:

| Table-8: ESCALATION RATE FOR TRANSPORTATION OF IMPORTED GAS (For Evaluation) | | |
|---|---|---|
| **Component Index** | **Data Series** | **Annual Escalation Rate** |
| Singapore 380 CST Bunker Price Index | 12 years (Jan 2013 to Dec 2024) | **(-)5.20%** |

The annual escalation rate computed in the above table (-5.20%) is notified as the escalation rate for the transportation of imported gas for evaluation.

## 4. Discount Rate for Bid Evaluation

The discount rate has been computed as under:

Weighted Average Cost of Capital (WACC) has been considered as the 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.

| Discount Rate to be used for Bid Evaluation | | |
|---|---|---|
| **Weighted Values** | **Cost of Debt/Equity** | **WACC (%)** |
| **1. Cost of Debt** | | |
| 0.70(Cost of Debt)x(1-CTR) | **5.40** | |

| | | |
|---|---|---|
| **2. Cost of Equity** | | |
| 0.30((RF+b(ERP)) | **4.48** | |
| **Discount Rate (1+2)** | | **9.88** |
| | | |

| **Assumptions used for computing the Discount Rate** | |
|---|---|
| **Components of Debt/Equity** | **Assumptions (%)** |
| Debt | 70.00 |
| Equity | 30.00 |
| Corporate tax rate for the assessment year 2025-26 (Effective tax rate i.e. inclusive of cess and surcharge) | 25.17 |
| Risk Free rate (RF) | 7.34 |
| Beta Value (b) | 1.40 |
| Equity Market Risk Premium (ERP) | 5.42 |
| Cost of Debt | 10.31 |
| Cost of Equity | 14.94 |

The Debt and Equity of 70:30 has been assumed based on CERC norms on Debt and Equity in its 2024-29 Tariff Regulations. The effective corporate tax rate (i.e., inclusive of surcharge and cess) proposed in the Interim Union Budget 2025-26 has been used as a corporate tax rate while computing the cost of debt.

While calculating the cost of debt, the market rate of interest is linked to the marginal cost of funds-based lending rate (MCLR), which refers to the minimum interest rate of a bank below which it cannot lend, except in some cases allowed by the RBI. The market rate of interest for the year 2024 is taken as the MCLR (8.31%, i.e., average of MCLR of five major banks) + 200 basis points. The 200 basis points have been considered as per the methodology used for the Notification dated 31.05.2021 (*in the context of Escalation Rates for the purpose of Evaluation as per the competitive bidding guidelines dated 22.7.2020, read with an amendment dated 3.11.2020*). Accordingly, the market rate of interest has been taken as 10.31%.

The 10-year GOI securities rate for 2024 has been considered as the risk-free rate.

For the calculation of the 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 12 years from the average rate of return on the market portfolio over the past 12 years. Sensex values for the past thirteen years have been used to arrive at the rate of return on the market portfolio for the past 12 years. A 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 the Bombay Stock Exchange (BSE) Indices for the Power Sector and Sensex for the year 2024.

The WACC computed in the above Table (**9.88%**) is notified as the discount rate.

5. The data series for API-3, API-5, Argus ICI-3, Argus ICI-4, Platts CI, Platts JKM, and Singapore and Singapore 380 CST 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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