EXPLANATION FOR THE NOTIFICATION DATED 12.10.2020 ON ESCALATION FACTORS AND OTHER PARAMETERS

In pursuance of Clause 5.6 (vi) of Ministry of Power (MOP) Notification on "Guidelines for Determination of Tariff by Bidding Process for procurement of Power by Distribution Licensees", dated 19.1.2005, as amended from time to time, the Central Electricity Regulatory Commission (CERC) has been notifying various escalation factors and other parameters, every six months, for the purpose of payment. The escalation factors and other parameters are as under:

1. Escalation rate for domestic coal.
2. Escalation rate for domestic gas.
3. Escalation rates for different escalable sub-components of energy charge for plants based on imported coal.
4. Escalation rates for inland transportation charges for coal.
5. Escalation rates for inland transportation charges for gas.
6. Escalation rate for different escalable sub-components of energy charge for plants based on imported gas.
7. Inflation rate to be applied to indexed capacity charge component.
8. 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, and CERC order dated 15.01.2020 in Petition No.11/SM/2019 *(*see CERC website www.cercind.gov.in). 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 latest twelve months data. The steps followed while computing the escalation rates are as under.

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

Step 2: A half-yearly escalation rate computed based on the average six months 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 of two or more series in 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 Coal Price Index of CERC for the period from September 2019 to August 2020. The escalation rate for domestic coal has been computed as under.

Table-1: ESCALATION RATE FOR DOMESTIC COAL	
Period	**Coal Price Index of CERC (2017-18=100)**
Sep-19	107.7
Oct-19	107.7
Nov-19	107.7
Dec-19	107.7
Jan-20	107.7
Feb-20	107.7
Mar-20	107.7
Apr-20	107.7
May-20	107.7
Jun-20	107.7
Jul-20	107.7
Aug-20	107.7
Average Index (Sep 19-Feb 20)	107.70
Average Index (Mar 20-Aug 20)	107.70
Half-Yearly Inflation	0.00%
Annual Inflation	0.00%

The above computed annual inflation (0.00%) is notified as 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 2019 to June 2020. The data has been collected from Ministry of Petroleum & Natural Gas (MOPNG) and GAIL (India) Ltd. Composite index, using 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:

Table-2: ESCALATION RATE FOR DOMESTIC GAS

Period	Consumer Prices Off-shore (Landfall point and On-shore) (₹/'000' cubic metre)	Consumer Prices For North-Eastern States (₹/'000' cubic metre)	Composite Index*
Jul-19	9140.50	5474.39	8774
Aug-19	9450.99	5660.35	9072
Sep-19	9475.96	5675.31	9096
Oct-19	8260.47	4961.40	7931
Nov-19	8308.40	4990.19	7977
Dec-19	8282.95	4974.90	7952
Jan-20	8292.37	4980.55	7961
Feb-20	8312.68	4992.76	7981
Mar-20	8645.50	5192.65	8300
Apr-20	6559.39	3924.65	6296
May-20	6509.78	3894.97	6248
Jun-20	6515.54	3898.42	6254
Average Index (July 19-Dec 19)			8467
Average Index (Jan 20-June 20)			7173
Half-Yearly Escalation			-15.28%
Annual Escalation			-30.55%
* 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 (-30.55%) 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 price of South African Coal, Australian Coal and Indonesian Coal for the period from September 2019 to August 2020. The escalation rate for imported coal for payment has been computed as under:

Table-3.1: ESCALATION RATE FOR IMPORTED COAL		
Component Index	**Data Series**	**Annual Escalation Rate**
Composite series using weight of 25% to API4 (Price of South African Coal), 25% to GlobalCOAL (Price of Australian Coal), 25% to Argus ICI 3 (Price of Indonesian Coal) and 25% to Platts CI (Price of Indonesian Coal).	Weekly/Daily data from September 2019 to August 2020	-41.79%

The annual escalation rate computed in the above table (-41.79%) is notified as 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 (VLSFO Price at Singapore, basis maximum Sulphur content of 0.5% ($/t) for the period from September, 2019 to August, 2020. The escalation rate for transportation of imported coal has been computed as under:

Table-3.2: ESCALATION RATE FOR TRANSPORTATION OF IMPORTED COAL		
Component Index	**Data Series**	**Annual Escalation Rate**
Clarksons VLSFO price at Singapore, basis maximum sulphur content of 0.5%) ($/t)	Weekly data from September 2019 to August 2020	-93.60%

The annual escalation rate computed in the above table (-93.60%) is notified as escalation rate for 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, 2019 to June, 2020. 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 Ministry of Commerce & Industry and Labour Bureau, respectively. The escalation rate for inland handling of imported coal has been computed as under:

Table-3.3: ESCALATION RATE FOR INLAND HANDLING OF IMPORTED COAL

Period	WPI	CPI	Composite Index*
Jul-19	121.3	319.0	200.4
Aug-19	121.5	320.0	200.9
Sep-19	121.3	322.0	201.6
Oct-19	122.0	325.0	203.2
Nov-19	122.3	328.0	204.6
Dec-19	123.0	330.0	205.8
Jan-20	123.4	330.0	206.0
Feb-20	122.2	328.0	204.5
Mar-20	120.4	326.0	202.6
Apr-20	119.2	329.0	203.1
May-20	117.5	330.0	202.5
Jun-20	119.3	332.0	204.4
Average Index (July 19-Dec 19)			202.74
Average Index (Jan 20-Jun 20)			203.87
Half-Yearly Inflation			0.56%
Annual Inflation			1.11%
*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 (1.11%) is notified as 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 2019 to June 2020. The data has been collected from Ministry of Railways. The data on coal freight rate for 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 distance upto 125 km, upto 500 km, upto 1000 km, upto 2000 km and beyond 2000 km respectively. The escalation rate for inland transportation charges of coal for payment has been computed as under:

Table-4: ESCALATION RATE FOR INLAND TRANSPORTATION CHARGES FOR COAL					
Period	**Coal Freight Rate for 125 km**	**Coal Freight Rate for 500 km**	**Coal Freight Rate for 1000 km**	**Coal Freight Rate for 2000 km**	**Coal Freight Rate for 3000 km**
Jul-19	389.6	1054.7	1891.8	3065.7	3787.9
Aug-19	389.6	1054.7	1891.8	3065.7	3787.9
Sep-19	389.6	1054.7	1891.8	3065.7	3787.9
Oct-19	389.6	1054.7	1891.8	3065.7	3787.9
Nov-19	389.6	1054.7	1891.8	3065.7	3787.9
Dec-19	389.6	1054.7	1891.8	3065.7	3787.9
Jan-20	389.6	1054.7	1891.8	3065.7	3787.9
Feb-20	389.6	1054.7	1891.8	3065.7	3787.9
Mar-20	389.6	1054.7	1891.8	3065.7	3787.9
Apr-20	389.6	1054.7	1891.8	3065.7	3787.9
May-20	389.6	1054.7	1891.8	3065.7	3787.9
Jun-20	389.6	1054.7	1891.8	3065.7	3787.9
Average Rate (Jul 19-Dec 19)	389.60	1054.70	1891.80	3065.70	3787.90
Average Rate (Jan 20-June 20)	389.60	1054.70	1891.80	3065.70	3787.90
Half-Yearly Escalation Rate	0.00%	0.00%	0.00%	0.00%	0.00%
Annual Escalation Rate	0.00%	0.00%	0.00%	0.00%	0.00%

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

(5) Escalation rate for inland transportation charges for gas

The Escalation Rate for inland transportation charges for gas has been computed based on the data on transportation charges of gas along HVJ pipeline charged by GAIL for the period from July, 2019 to June, 2020. The data has been collected from Ministry of Petroleum & Natural Gas. The escalation rate for inland transportation charges for gas has been computed as under:

Table-5: ESCALATION RATE FOR INLAND TRANSPORTATION CHARGES FOR GAS	
Period	**Transportation charges along HVJ pipeline (₹/1000 SCM)**
Jul-19	1365
Aug-19	1365
Sep-19	1365
Oct-19	1365
Nov-19	1365
Dec-19	1365
Jan-20	1365
Feb-20	1365
Mar-20	1365
Apr-20	1365
May-20	1365
Jun-20	1365
Average Charges (Jul 19-Dec 19)	1365
Average Charges (Jan 20-Jun 20)	1365
Half-Yearly Escalation	0.00%
Annual Escalation	0.00%

The annual escalation rate computed in the above table (0.00%) is 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 Japan JCC LNG price for the period from September, 2019 to August, 2020. The data has been subscribed from Platts. The computation of escalation rate for imported gas can be seen from the following table.

Table-6.1: ESCALATION RATE FOR IMPORTED GAS		
Component Index	**Data Series**	**Annual Escalation Rate**
Japan JCC LNG Price Index	Monthly data from September 2019 to August 2020	-23.08%

The annual escalation rate computed in the above table (-23.08%) is notified as 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, 2019 to August, 2020. The escalation rate for transportation of imported gas has been computed as under:

Table-6.2: ESCALATION RATE FOR TRANSPORTATION OF IMPORTED GAS

Component Index	Data Series	Annual Escalation Rate
Clarksons VLSFO price at Singapore, basis maximum sulphur content of 0.5%) ($/t)	Weekly data from September 2019 to August 2020	-93.60%

The annual escalation rate computed in the above table (-93.60%) is notified as escalation rate for 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, 2019 to June, 2020. 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 Ministry of Commerce & Industry and Labour Bureau, respectively. The escalation rate for inland handling of imported gas has been computed as under:

Table-6.3: ESCALATION RATE FOR INLAND HANDLING OF IMPORTED GAS

Period	WPI	CPI	Composite Index*
Jul-19	121.3	319.0	200.4
Aug-19	121.5	320.0	200.9
Sep-19	121.3	322.0	201.6
Oct-19	122.0	325.0	203.2
Nov-19	122.3	328.0	204.6
Dec-19	123.0	330.0	205.8

Jan-20	123.4	330.0	206.0
Feb-20	122.2	328.0	204.5
Mar-20	120.4	326.0	202.6
Apr-20	119.2	329.0	203.1
May-20	117.5	330.0	202.5
Jun-20	119.3	332.0	204.4
Average Index (July 19-Dec 19)			202.74
Average Index (Jan 20-Jun 20)			203.87
Half-Yearly Inflation			0.56%
Annual Inflation			1.11%
*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 (1.11%) 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 Indexed Capacity Charge Component has been computed based on the data on WPI-all commodities and CPI-IW for the period from July, 2019 to June, 2020. 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 Ministry of Commerce & Industry and Labour Bureau, respectively. The inflation rate has been computed as under:

Table-7: INFLATION RATE TO BE APPLIED TO INDEXED CAPACITY CHARGE COMPONENT

Period	WPI	CPI	Composite Index*
Jul-19	121.3	319.0	200.4
Aug-19	121.5	320.0	200.9
Sep-19	121.3	322.0	201.6
Oct-19	122.0	325.0	203.2
Nov-19	122.3	328.0	204.6
Dec-19	123.0	330.0	205.8
Jan-20	123.4	330.0	206.0
Feb-20	122.2	328.0	204.5
Mar-20	120.4	326.0	202.6
Apr-20	119.2	329.0	203.1
May-20	117.5	330.0	202.5
Jun-20	119.3	332.0	204.4

Average Index (July 19-Dec 19)	202.74
Average Index (Jan 20-Jun 20)	203.87
Half-Yearly Inflation	0.56%
Annual Inflation	1.11%
*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 (1.11%) is notified as Inflation Rate to be applied to Indexed Capacity Charge Component.

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

Using Consumer Price Index for industrial workers (CPI-IW), Wholesale Price Index for all commodities and disaggregated items used in the captive mining for the period from January, 2019 to December, 2019, 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, composite index has been arrived at by giving weight of 10% to WPI; 20% to CPI; 10% to Tyres; 10% to Matches, Explosives & Other Chemicals; 25% to Machinery & Machine Tools; and 25% to HSD Oil and the same has been used for computing the escalation rate.

Table-8: INFLATION RATE TO BE APPLIED TO INDEXED ENERGY CHARGE COMPONENT IN CASE OF CAPTIVE MINE COAL SOURCE

Period	WPI-all commo-dities	CPI-IW	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-19	121.3	319.0	97.4	114.2	113.2	93.2	148.69
Aug-19	121.5	320.0	98.0	114.0	113.6	93.5	149.13
Sep-19	121.3	322.0	97.4	113.7	113.6	93.6	149.44
Oct-19	122.0	325.0	95.7	113.7	112.7	94.9	150.04
Nov-19	122.3	328.0	95.1	114.0	112.8	93.6	150.34
Dec-19	123.0	330.0	95.9	113.6	113.0	94.1	151.03
Jan-20	123.4	330.0	97.7	113.4	113.2	96.0	151.75
Feb-20	122.2	328.0	98.0	113.5	113.2	91.9	150.25
Mar-20	120.4	326.0	95.6	114.3	113.3	86.5	148.18
Apr-20	119.2	329.0	96.0	114.6	113.0	76.0	146.03
May-20	117.5	330.0	94.7	114.8	112.9	62.9	142.65
Jun-20	119.3	332.0	96.6	113.6	112.7	71.6	145.43
Average Index (July 19-Dec 19)							149.78
Average Index (Jan 20-Jun 20)							147.38

Half-Yearly Inflation	-1.60%
Annual Inflation	**-3.20%**
*Composite Index using weight of 10% to Wholesale Price Index (WPI), 20% to Consumer Price Index (CPI), 10% to WPI-Tyres, 10% to WPI-Matches, Explosives & other chemicals, 25% to WPI-Machinery & Machine Tools and 25% to WPI-HSD Oil.	

The annual inflation computed in the above table (-3.20%) is notified as inflation rate to be applied to indexed energy charge component in cases of captive fuel source.

4. The data series for API-4, Global Coal Index, Argus ICI3, Platts CI, Japan JCC LNG Price Index 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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