

CENTRAL ELECTRICITY REGULATORY COMMISSION

EXPLANATION FOR THE NOTIFICATION ON ESCALATION FACTORS AND OTHER PARAMETERS DATED 11.11. 2009

1. In pursuance of Clause 5.6 (vi) of Ministry of Power (MOP) Notification dated 19.1.2005 (as amended from time to time) on “*Guidelines for Determination of Tariff by Bidding Process for procurement of Power by Distribution Licensees*”, the CERC notifies various escalation factors and other parameters, every six months, for the purpose of bid evaluation and payment. The relevant Clause stands amended as per the latest amendment to the competitive bidding guidelines dated 27.3.2009 and is as under:

“2.23 *Sub-clause (vi) of clause 5.6 is replaced by the following:*

Following shall be notified and updated by the CERC every six months:

1. *Escalation rate for domestic coal. (Separately for evaluation and payment)*
2. *Escalation rate for domestic gas. (Separately for evaluation and payment)*
3. *Escalation rates for different escalable sub-components of energy charge for plants based on imported coal. (Separately for evaluation and payment)*
4. *Escalation rates for inland transportation charges for coal (Separately for evaluation and payment)*
5. *Escalation rates for inland transportation charges for gas (Separately for evaluation and payment)*
6. *Escalation rate for different escalable sub-components of energy charge for plants based on imported gas. (Separately for evaluation and payment)*
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.*
9. *Discount rate to be used for bid evaluation.*
10. *Dollar-Rupee exchange variation rate. (For the purpose of evaluation)*
11. *Escalation for normative transmission charges (For the purpose of evaluation)”*

2. In addition to the above mentioned escalation factors, the CERC notifies the matrix of transmission charges and losses as per Format 5.10 & 5.11 of the RFP of Standard Bidding Document of Case-1.

3. The CERC is required to notify the above mentioned escalation factors and other parameters for bid evaluation and payment for the period applicable from 1.10.2009 to 31.3.2010. In its notification dated 30.9.2009, the CERC had notified the escalation factors and other parameters for bid evaluation. Therefore, **in the current notification, the CERC notifies only the escalation factors and other parameters for the purpose of payment.** Accordingly the explanation for the current notification is provided.

4. The methodology that was approved vide Explanation to the Notification dated 24.11.2006 and Notification dated 3.7.2009 has been used for computing the escalation factors and other parameters published in the present notification. The detailed methodology can be seen in the consultant's report (Revised as on 22 November 2006) followed by Explanation (General) and Revised methodology (as per the Amendment to the Competitive Bidding Guidelines dated 27.3.2009) dated July 2009, available on CERC website (www.cercind.gov.in).

5. The annual escalation rates for payment have been computed based on latest twelve months data (weekly/monthly). 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: In case of hybrid index, weights of various price indices applied on the computed annual escalation rate.

6. The data series and calculation of escalation factors and other parameters has been provided below:

(1) Escalation rate for Domestic coal component (for Payment)

The escalation rate for domestic coal for payment has been computed based on the data on WPI for Non-Coking coal for the period from July 2008 to June 2009. The escalation rate for domestic coal has been computed as under.

Table-1: ESCALATION RATE FOR DOMESTIC COAL (FOR PAYMENT)	
Period	WPI (Non-Coking Coal)
Jul-08	254
Aug-08	254
Sep-08	254
Oct-08	254
Nov-08	254
Dec-08	254
Jan-09	254
Feb-09	254
Mar-09	254
Apr-09	254
May-09	254
Jun-09	254
Average Index (July 08-Dec 08)	254
Average Index (Jan 09-Jun 09)	254
Half-Yearly Inflation	0.00%
Annual Inflation	0.00%

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

(2) Escalation rate for domestic gas (For Payment)

The escalation rate for domestic gas has been computed based on the data on consumer price of gas for the period from July 2008 to June 2009. The escalation rate for domestic gas for payment has been computed as under:

Table-2: ESCALATION RATE FOR DOMESTIC GAS (FOR PAYMENT)			
Period		Consumer Prices Off-shore (Landfall point and On-shore) (Rs./'ooo' cubic metre)	Consumer Prices For North-Eastern States (Rs./'ooo' cubic metre)
Jul-08		3200	1920
Aug-08		3200	1920
Sep-08		3200	1920
Oct-08		3200	1920
Nov-08		3200	1920
Dec-08		3200	1920
Jan-09		3200	1920
Feb-09		3200	1920
Mar-09		3200	1920
Apr-09		3200	1920
May-09		3200	1920
Jun-09		3200	1920
Average Index (July 08-Dec 08)		3200.0	1920.0
Average Index (Jan 09-Jun 09)		3200.0	1920.0
Half-Yearly Escalation		0.00%	0.00%
Annual Escalation		0.00%	0.00%
		Consumer Prices Off-shore	Consumer Prices For North-Eastern States
Capacity Esc Weights	1	0.90	0.10
Half-Yearly Inflation	0.00%	0.00%	0.00%
Annual Inflation Rate	0.00%	0.00%	0.00%

The annual escalation rate computed in the above table (0.00%) 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 (for Payment)

(3.1) Escalation Rate for Imported Coal (For Payment)

Table-3.1: ESCALATION RATE FOR IMPORTED COAL (FOR PAYMENT)				
Component Index	Data Series	Mean Escalation Rate (%)	Weight	Contribution to Index (%)
API 4	52 weekly data points from September 2008 to August 2009 (Friday Series)	-71.67%	0.50	-35.84%
BJI	52 weekly data points from September 2008 to August 2009 (Thursday Series)	-62.05%	0.25	-15.51%
Global Coal	52 weekly data points from September 2008 to August 2009 (Friday Series)	-58.26%	0.25	-14.57%
Annual Escalation Rate				-65.92%

(3.2) Escalation Rate for Transportation of Imported Coal (For Payment)

Table-3.2: Escalation Rate for transportation of Imported Coal (For Payment)				
Component Index	Data Series	Escalation Rate	Weight	Contribution to Index (%)
Singapore Bunker Price Index	Monthly data from September 2008 to August 2009	12.73%	1	12.73%
Annual Escalation Rate				12.73%

(3.3) Escalation Rate for Inland Handling of Imported Coal (For Payment)

The escalation rate for inland handling of imported coal has been computed based on the data on WPI and CPI-IW for the period from July 2008 to June 2009. A hybrid index of WPI with 60% weight and CPI-IW with 40% weight is used while 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 (FOR PAYMENT)			
Period		WPI	CPI
Jul-08		240.0	143.0
Aug-08		241.2	145.0
Sep-08		241.5	146.0

Oct-08		239.0	148.0
Nov-08		234.2	148.0
Dec-08		229.7	147.0
Jan-09		228.9	148.0
Feb-09		227.6	148.0
Mar-09		228.2	148.0
Apr-09		231.5	150.0
May-09		234.3	151.0
Jun-09		235.0	153.0
Average Index (July 08-Dec 08)		237.60	146.17
Average Index (Jan 09-Jun 09)		230.92	149.67
Half-Yearly Inflation		-2.81%	2.39%
Annual Inflation		-5.63%	4.79%
		WPI Component	CPI Component
Capacity Esc Weights	1	0.6	0.4
Half-Yearly Inflation	-0.73%	-1.69%	0.96%
Annual Inflation	-1.46%	-3.38%	1.92%

The annual inflation computed in the above table (-1.46%) is notified as escalation rate for inland handling charges of imported coal for payment.

(4) Escalation rates for inland transportation charges for coal (For Payment)

The escalation for inland transportation of coal has been computed based on the data on coal freight rates for the period from July 2008 to June 2009. The data has been collected from Ministry of Railways. The data on coal freight rate for 100 km, 500 km, 1000 km, 2000 km and 3000 km has been used for computing the escalation rate for inland transportation of coal for distance upto 100 km, upto 500 km, upto 1000 km, upto 2000 km and beyond 2000 km respectively. The escalation rate for inland transportation of coal for payment has been computed as under:

Period	Coal Freight Index for 100 km	Coal Freight Index for 500 km	Coal Freight Index for 1000 km	Coal Freight Index for 2000 km	Coal Freight Index for 3000 km
Jul-08	116.8	431.5	828.7	1535.0	1963.6
Aug-08	116.8	431.5	828.7	1535.0	1963.6
Sep-08	116.8	431.5	828.7	1535.0	1963.6
Oct-08	116.8	431.5	828.7	1535.0	1963.6
Nov-08	116.8	431.5	828.7	1535.0	1963.6
Dec-08	125.1	462.3	887.9	1644.6	2103.9
Jan-09	125.1	462.3	887.9	1644.6	2103.9
Feb-09	125.1	462.3	887.9	1644.6	2103.9
Mar-09	125.1	462.3	887.9	1644.6	2103.9
Apr-09	125.1	462.3	887.9	1644.6	2103.9
May-09	125.1	462.3	887.9	1644.6	2103.9
Jun-09	125.1	462.3	887.9	1644.6	2103.9
Average Index (Jul 08-Dec 08)	118.18	436.63	838.57	1553.27	1986.98
Average Index (Jan 09-June 09)	125.10	462.30	887.90	1644.60	2103.90
Half-Yearly Esclation	5.85%	5.88%	5.88%	5.88%	5.88%
Annual Escalation	11.70%	11.76%	11.77%	11.76%	11.77%

The annual escalation rates computed in the above table (11.70%, 11.76%, 11.77%, 11.76% and 11.77% respectively applicable upto 100 km, upto 500 km, upto 1000 kms, upto 2000 kms and beyond 2000 kms) are notified as annual escalation rates for inland transportation charges for coal for payment.

(5) Escalation rates for inland transportation charges for gas (For Payment)

The Escalation Rate for Inland Transportation Charges of Gas has been computed based on the data on transportation charges of gas along HVJ pipeline charged by GAIL for the period from July 2008 to June 2009. The data has been collected from Ministry of Petroleum & Natural Gas and GAIL (India) Ltd. The escalation rate for transportation of natural gas has been computed as under:

Table-5: ESCALATION RATE FOR INLAND TRANSPORTATION CHARGES FOR GAS (FOR PAYMENT)	
Period	Transportation charges along HVJ pipeline (Rs./'ooo' cubic metre)
Jul-08	986
Aug-08	986
Sep-08	986
Oct-08	1000
Nov-08	1000
Dec-08	1000
Jan-09	950
Feb-09	950
Mar-09	950
Apr-09	950
May-09	950
Jun-09	950
Average Index (July 08-Dec 08)	993
Average Index (Jan 09-Jun 09)	950
Half-Yearly Inflation	-4.33%
Annual Inflation Rate	-8.66%

The annual escalation rate computed in the above table (-8.66%) is notified as escalation rate for transportation charges of gas.

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

(6.1) Escalation rate for imported gas (for Payment)

The escalation rate for imported gas for payment has been computed based on Japan JCC LNG price for the period from September 2008 to August 2009. The data has been subscribed from Platts. The computation of escalation rate for imported gas can be seen from the following table.

Escalation Rate for Imported Gas (For Payment)	
Date	Japan JCC LNG Imp Est CIF \$/MMbtu
30-Sep-08	14.47
31-Oct-08	14.63
28-Nov-08	15.14
31-Dec-08	13.43
30-Jan-09	12.74
27-Feb-09	10.92
31-Mar-09	9.67
30-Apr-09	8.18
29-May-09	7.45
30-Jun-09	7.27
31-Jul-09	7.54
31-Aug-09	7.80
Sept 08-Feb 09	13.56
Mar 09-Aug 09	7.99
Half Yearly Escalation	-41.09%
Annual Escalation Rate	-82.18%

The annual escalation rate computed in the above table (-82.18%) is notified as escalation rate for imported gas for payment.

(6.2) Escalation rate for transportation of imported gas (for Payment)

The escalation rate for transportation of imported gas has been computed based on FOB prices of 380cst bunker fuel for the period from September 2008 to August 2009. The data has been subscribed from Clarkson Research. The escalation rate for transportation of imported gas for payment has been computed as under:

Table-6.2: Escalation Rate for transportation of imported gas (For Payment)				
Component Index	Data Series	Escalation Rate	Weight	Contribution to Index (%)
Singapore Bunker Price Index	Monthly data from September 2008 to August 2009	12.73%	1	12.73%
Annual Escalation Rate				12.73%

The annual escalation rate computed in the above table (12.73%) is notified as escalation rate for transportation of imported gas for payment.

(6.3) Escalation rate for inland handling of imported gas (for Payment)

The escalation rate for inland handling of imported gas has been computed based on the data on WPI and CPI-IW for the period from July 2008 to June 2009. A hybrid index of WPI with 60% weight and CPI-IW with 40% weight is used while 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 (FOR PAYMENT)			
Period		WPI	CPI
Jul-08		240.0	143.0
Aug-08		241.2	145.0
Sep-08		241.5	146.0
Oct-08		239.0	148.0
Nov-08		234.2	148.0
Dec-08		229.7	147.0
Jan-09		228.9	148.0
Feb-09		227.6	148.0
Mar-09		228.2	148.0
Apr-09		231.5	150.0
May-09		234.3	151.0
Jun-09		235.0	153.0
Average Index (July 08-Dec 08)		237.60	146.17
Average Index (Jan 09-Jun 09)		230.92	149.67
Half-Yearly Inflation		-2.81%	2.39%
Annual Inflation		-5.63%	4.79%
		WPI Component	CPI Component
Capacity Esc Weights	1	0.6	0.4
Half-Yearly Inflation	-0.73%	-1.69%	0.96%
Annual Inflation	-1.46%	-3.38%	1.92%

The annual inflation computed in the above table (-1.46%) is notified as escalation rate for inland handling charges of imported gas for payment.

(7) Inflation Rate to be applied to Indexed Capacity Charge Component (For Payment)

The Inflation Rate to be applied to Indexed Capacity Charge Component has been computed based on the data on WPI and CPI-IW for the period from July 2008 to June 2009. A hybrid index of WPI with 60% weight and CPI-IW with 40% weight is used while 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 (FOR PAYMENT)			
Period		WPI	CPI
Jul-08		240.0	143.0
Aug-08		241.2	145.0
Sep-08		241.5	146.0
Oct-08		239.0	148.0
Nov-08		234.2	148.0
Dec-08		229.7	147.0
Jan-09		228.9	148.0
Feb-09		227.6	148.0
Mar-09		228.2	148.0
Apr-09		231.5	150.0
May-09		234.3	151.0
Jun-09		235.0	153.0
Average Index (July 08-Dec 08)		237.60	146.17
Average Index (Jan 09-Jun 09)		230.92	149.67
Half-Yearly Inflation		-2.81%	2.39%
Annual Inflation		-5.63%	4.79%
		WPI Component	CPI Component
Capacity Esc Weights	1	0.6	0.4
Half-Yearly Inflation	-0.73%	-1.69%	0.96%
Annual Inflation	-1.46%	-3.38%	1.92%

The annual inflation computed in the above table (-1.46%) 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 (For Payment)

Using Consumer Price Index for industrial workers (CPI-IW), Wholesale Price Index for all commodities (WPI-All Commodities) and disaggregated WPI series for various commodities used in the captive mining, the inflation rate to be applied to indexed energy charge component in cases of captive fuel source has been computed.

Table-8: INFLATION RATE TO BE APPLIED TO INDEXED ENERGY CHARGE COMPONENT IN CASE OF CAPTIVE MINE COAL SOURCE (FOR PAYMENT)							
Period		WPI	CPI	Wholesale Price Index			
				Tyres	Matches Explosive	Heavy Machinery & Parts	High Speed Diesel Oil
Jul-08		240.0	143.0	149.3	154.5	222.6	511.5
Aug-08		241.2	145.0	149.3	154.5	222.6	511.5
Sep-08		241.5	146.0	150.6	159.9	223.5	511.5
Oct-08		239.0	148.0	151.0	163.0	223.9	511.5
Nov-08		234.2	148.0	151.0	163.0	224.6	511.5
Dec-08		229.7	147.0	151.0	161.8	223.0	482.3
Jan-09		228.9	148.0	151.0	160.8	222.1	476.1
Feb-09		227.6	148.0	151.0	159.4	222.1	451.1
Mar-09		228.2	148.0	151.0	155.9	222.1	452.2
Apr-09		231.5	150.0	153.9	155.9	221.8	452.2
May-09		234.3	151.0	154.9	157.0	221.6	452.2
Jun-09		235.0	153.0	155.0	157.0	222.7	452.2
Average Index (July 08-Dec 08)		237.60	146.17	150.37	159.45	223.37	506.63
Average Index (Jan 09-Jun 09)		230.92	149.67	152.80	157.67	222.07	456.00
Half-Yearly Inflation		-2.81%	2.39%	1.62%	-1.12%	-0.58%	-9.99%
Annual Inflation		-5.63%	4.79%	3.24%	-2.24%	-1.16%	-19.99%
		WPI Component	CPI Component	Tyres Component	Explosives Component	Machinery Component	HSD Component
		t	t	t	t	t	t
Weights	1	0.1	0.2	0.1	0.1	0.25	0.25
Half-Yearly Inflation	-2.40%	-0.28%	0.48%	0.16%	-0.11%	-0.15%	-2.50%
Annual Inflation Rate	-4.79%	-0.56%	0.96%	0.32%	-0.22%	-0.29%	-5.00%

The annual inflation computed in the above table (-4.79%) is notified as inflation rate to be applied to indexed energy charge component in cases of captive fuel source.

9. The data series for API 4, Global Coal Index, Barlow Jonker Index, Platts Gas 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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