

**EXPLANATION FOR THE NOTIFICATION
ON
ESCALATION FACTORS AND OTHER PARAMETERS
FOR
TARIFF BASED COMPETITIVE BIDDING FOR TRANSMISSION SERVICE,
DATED 05.10.2023**

In pursuance of the "Tariff based Competitive-bidding Guidelines for Transmission Service" (as amended up to 10th October 2008) issued by the Ministry of Power and Schedule-7 of the Standard Transmission Service Agreement (TSA) documents, the Central Electricity Regulatory Commission (CERC) notifies escalation factors and other parameters, every six months, for the purpose of payment. Schedule 7 of the Standard TSA states the following:

".....the value of the Escalation Index shall be computed by applying the per annum inflation rate specified by CERC for payment of Escalable Transmission Charges,"

2. The CERC has now been mandated to notify the Discount rate as required under Schedule-9 of the Standard Transmission Service Agreement under the "Revised Guidelines and Standard Bidding Documents (SBDs) for procurement of Inter-State Transmission Services (ISTS) through Tariff Based Competitive Bidding (TBGB) process" dated 6th August 2021 as under:

".....The relief in the form of revision in tariff due to Force Majeure Event leading to extension of Scheduled COD for a period beyond one hundred eighty (180) days and/ or Change in Law during the construction period shall be as under:

$$\Delta T = [(P \times d)] = [1 - (1 + d)^{-n}]l$$

Where,

.....

d = Discount rate as notified by the CERC, applicable on the bid deadline"

....."

3. In line with the above provisions, CERC is required to notify the following rates:
(i) Annual inflation rate for escalable transmission charges for the purpose of payment, and

(ii) Discount rate for determining the Relief for Force Majeure Event & Change in Law during Construction Period in accordance with Transmission Service Agreement.

4. While determining the rate mentioned in paragraph 3(i) for the present notification, i.e., applicable for the period from 01.10.2023 to 31.03.2024, the methodology that was used by the Commission for the notification dated 1.2.2012 [*in the context of "Tariff based Competitive-bidding Guidelines for Transmission Service" (as amended up to 10th October, 2008) issued by Ministry of Power, Government of India, Clause 3.3.1.3 (a) of the Standard Request for Proposal (RFP), and Schedule 7 of the Standard Transmission Service Agreement (TSA) documents*] has been used. For determining the discount rate mentioned in paragraph 3(ii), the methodology that was 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 amendment dated 3.11.2020*] has been used. The computation of the escalation factors for payment and Discount rate is provided in the following paras.

5. Escalation rate for Escalable Transmission charges for payment

Annual inflation rate for Escalable Transmission Charges for payment has been computed based on the data on WPI and CPI-Industrial Workers (CPI-IW) for the period from July 2022 to June 2023. The data on WPI and CPI-IW has been used as published by the Ministry of Commerce & Industry and Labour Bureau, respectively. A composite series has been developed based on WPI with 45% weight and CPI-IW with 55% weight, which has been used for computing the inflation rate. The inflation rate has been computed as under:

ANNUAL INFLATION RATE FOR ESCALABLE TRANSMISSION CHARGES FOR PAYMENT			
Period	WPI for All Commodities (Base: 2011-12=100)	CPI for Industrial Workers (Base: 2016=100)	Composite Series*
Jul-22	154.0	129.9	140.7
Aug-22	153.2	130.2	140.6
Sep-22	151.9	131.3	140.6
Oct-22	152.9	132.5	141.7
Nov-22	152.5	132.5	141.5
Dec-22	150.5	132.3	140.5
Jan-23	150.7	132.8	140.9
Feb-23	150.9	132.7	140.9

Mar-23	151.0	133.3	141.3
Apr-23	151.1	134.2	141.8
May-23	149.4	134.7	141.3
Jun-23	148.9	136.4	142.0
Average Index (Jul 22-Dec 22)			140.92
Average Index (Jan 23-Jun 23)			141.36
Half-Yearly Inflation			0.31%
Annual Inflation			0.62%
*Composite series using weight of 45% to Wholesale Price Index (WPI) and 55% to Consumer Price Index- Industrial Workers (CPI-IW).			

The annual inflation rate computed in the above Table (**0.62%**) is notified as the annual inflation rate for Escalable Transmission Charges for Payment.

6. Discount rate for determining the Relief under Force Majeure Event and change in Law during the Construction Period.

Weighted Average Cost of Capital (WACC) has been considered as discount rate and computed as under:

$$\text{WACC} = [\text{Cost of Debt} + \text{Cost of Equity}]$$

Where,

$$\text{Cost of Debt} = [0.70 (\text{Market Rate of Interest}) \times (1 - \text{Corporate Tax Rate})]$$

$$\text{Cost of Equity} = [0.30 \{ \text{Risk Free Rate} + b (\text{Equity Market Risk Premium}) \}]$$

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)	4.76	
2. Cost of Equity		
0.30((RF+b(ERP))	2.94	
Discount Rate (1+2)		7.70
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 2023-24 (Effective tax rate, i.e., inclusive of cess and surcharge)	25.17	
Risk Free rate (RF)	7.20	
Beta Value (b)	0.85	

Equity Market Risk Premium (ERP)	3.06
Cost of Debt	9.09
Cost of Equity	9.78

The Debt and Equity of 70:30 has been assumed based on CERC norms on Debt and Equity in its Tariff Regulations 2019-24. The effective corporate tax rate (i.e. inclusive of surcharge and cess) proposed in the GOI Budget for the year 2023-24 has been used as corporate tax rate while computing the cost of debt.

While calculating the cost of debt, the market rate of interest is being linked to the marginal cost of funds-based lending rate (MCLR) that 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 2022 is taken as the MCLR (7.09%, 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 amendment dated 3.11.2020*). Accordingly, the market rate of interest has been taken as 9.09%.

10-year GOI securities rate for 2022 is being 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. 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 Power Sector and Sensex for the year 2022.

The WACC computed in the above table (**7.70%**) is notified as the discount rate.

7. Explanation for the notifications dated 01.02.2012 and 31.05.2021 (see CERC website www.cercind.gov.in) provides further details like date of announcement of the notification, sources of the data used for computing the discount rate, application of inflation rate for the purpose of payment, etc.
