

Calculation Sheet of Standby Charges for 132 kV

Sr. No.	Particulars	FY 2022-23	Charges FY 2022-23
1	Capacity of Xmer	160	-
2	Cost of 160 MVA Xmer (in Rs. Crores)	8.76	-
3	Cost of 132 KV DCDS line (in Rs. Crores) / Km	1.38	-
4	No Load Losses (Assuming 160 MVA Transformer) (in kw)	30	-
5	Average Cost of Supply (AvCoS)	6.79	-
6	On Account of No Load Losses	-	148701
7	Interest on investment on 160 MVA transformer (including accessories)	1%	876000
8	O&M Charges for maintenance of transformer	0.50%	438000
9	O&M Charges for maintenance of lines.	0.50%	690000
10	Commitment charges per month	-	2152701
11	Commitment charges per kVA per month		13.45
12	Commitment charges per kVA per month Say		13.00

Calculation sheet for working out the Commitment charges for 33 KV Consumers

of Discom

Generally the CPP demand for standby contract demand between 2 MVA to 5 MVA in West Discom on 33 KV line.

The Licensee has to keep reserve the capacity of 2 MVA to 5 MVA continuously at the open end of isolator installed at the consumer premises. Therefore, the expenditure to be incurred for this shall have to be recovered from the CPP towards commitment charges. The standby consumer will be connected on 33 KV line and therefore this capacity will be reserve at EHV substation. As per Transco Company the cost available is of 50 MVA (For minimum capacity) EHV transformer. Therefore the calculation has done of 50 MVA and then is converted to per KVA.

(A) On account of No Load Losses (Assuming 50 MVA Transformer)

(Assuming no load losses as 25 kW, the amount of energy lost in a month, as per discussion with Transco Company.)

$$\begin{aligned} &= \text{No load losses} \times \text{no. of hours in a month (365 Days} \times 24 \text{ Hrs. / 12 Months)} \\ &= 25 \times 730 \\ &= 18250 \text{ units} \end{aligned}$$

(B) Cost of energy lost based on average cost of supply

(As per Table 99 of ARR for FY 2023-24 and Retail Supply Tariff Order for FY 2023-24, the average cost of supply is Rs. 6.79)

$$\begin{aligned} &= \text{Rs. } 6.79 \times 18250 \\ &= \text{Rs. } 1,23,918/- \end{aligned}$$

(C) Interest on investment on 50 MVA transformer (Including accessories)

(The cost of transformer and the amount of interest has been taken from SoR for FY 2023-24 of Transmission Company.)

$$\begin{aligned} \text{Cost of 50 MVA, 132/33 KV Transformer (including accessories)} &= \text{Rs. } 3.91 \text{ Crores} \\ \text{Amount of interest @ 1\% per month on cost of transformer} \\ &= \text{Rs. } 3,91,00,000 \times 0.01 = \text{Rs. } 3,91,000 \end{aligned}$$

(D) O&M Charges for maintenance of transformer

(As per Regulation RG 31(II) of 2022, Annex.-I, XVI, Schedule of other Charges, the charges for maintenance of transformer, lines and other equipment for HT Consumers is mentioned as 0.5% per month of cost as per current schedule of the rates.)

$$\begin{aligned} \text{O\&M charges} &= 0.5\% \text{ per month of cost of transformer} \\ &= 0.5 \times 39100000 / 100 \\ &= 1,95,500 \end{aligned}$$

(E) O&M Charges for maintenance of lines (33 KV Line)

(As per Regulation RG 31(II) of 2022, Annex.-I, XVI, Schedule of other Charges, the charges for maintenance of transformer, lines and other equipment for HT Consumers is mentioned as 0.5% per month of cost as per current schedule of the rates. The cost of 1 KM of 33 KV line for urban area as per schedule – A -1.2B is Rs. 17,32,955/-.)

O&M charges = 0.5% per month of cost of line (max. 10 Kms.)

$$= 0.5 \times 17,32,955 / 100$$

$$= \text{Rs. } 86,648$$

(F) Therefore, Commitment charges per month for 50 MVA = (B+C+D+ E)

$$= \text{Rs. } 1,23,918 + \text{Rs. } 3,91,000 + \text{Rs. } 1,95,500 + \text{Rs. } 86,648 = \text{Rs. } 7,97,066/-$$

And

(G) Commitment Charges per kVA per month

$$= \text{Rs. } 7,97,066 / 50,000 = \text{Rs. } 15.94 \text{ say Rs. } 16.$$