Comments on Draft Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) (Third Amendment) Regulations, 2023

Submitted By

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Submitted
To
Central Electricity Regulatory Commission

Sharing Regulations - 3rd Amendment:

The proposed amendment

- to determine the regional component and national components of HVDC system
- to be determined based on the reverse flow in the subject lines.
- more rational than the existing methodology

Issues: Missing many genuine concerns

- The planned outage, forced outage, outage allowed under regulations, availability/unavailability of parallel lines, operating conditions, ambient conditions, sharing ratio etc.,
- independent of actual utilization of the intended purpose
- may invite litigations for a certain range of HVDCr, let's say 29 to 31

Suggested Methodology:

Consider forward flows ($HVDC_f$) as well as reverse flows ($HVDC_r$)

$HVDC_f$ - Regional Component

$HVDC_r$ - National Component

$$HVDC_f = \frac{\sum_{k=1}^{n} \text{Maximum power flow in forward direction (MW) in any time block on } k^{th} \text{day}}{\text{Capacity of HVDC transmission system in forward direction (MW)} \times \text{number of days in a month}}$$

$$HVDC_r = \frac{\sum_{k=1}^{n} \text{Maximum power flow in reverse direction (MW)in any time block on } k^{th} \text{day}}{\text{Capacity of HVDC transmission system in forward direction (MW)} \times \text{number of days in a month}}$$

$$\text{Regional Component (\%)} = \mathbf{100} \times \frac{\boldsymbol{HVDC_f}}{HVDC_f + HVDC_r}$$

$$\text{National Component (\%)} = \mathbf{100} \times \frac{\boldsymbol{HVDC_r}}{HVDC_f + HVDC_r}$$

Thanking You