

Comments/ Suggestions on Draft Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2024

Regulation no. 6:

Computation of Deviation:

The regulation no 6.2 as per draft regulations is as follows:

The Deviation-WS seller (DWS) (in %) shall be as under:

Deviation-WS seller (DWS) (in %) = $100 \times [(Actual\ Injection\ in\ MWh) - (Scheduled\ Generation\ in\ MWh)] / Available\ capacity$

APPCC Views: In 6.2, the Deviation-WS seller (DWS) (in %) shall be as under:

Deviation-WS seller (DWS) (in %) = $100 \times [(Actual\ Injection\ in\ MWh) - (Scheduled\ Generation\ in\ MWh)] / (100\% \text{ of scheduled generation in Mwh})$.

Explanation: The renewable energy generators penetration into the grid has increased in the past few years and would increase in future too. As India aims for 500 GW of Renewable energy installed capacity by 2030, there is no need for incentivizing or promoting renewable energy now, as it was done in the nascent stages. Hence, there is need to reduce deviation criteria gradually in phased manner by replacing available capacity by scheduled generation.

Regulation no. 7:

Normal Rate of Charges for Deviations:

In Normal rate of charge, there is need to provide cap. Hence, the following proviso shall be added for Regulation no 7 in draft regulations:

"Further provided that the normal rate is subject to a ceiling of 10 Rs per kWh".

Explanation: In petition 04/SM/2023 (para 6), Hon'ble commission in public interest, directs all the Power Exchanges to re-design their bidding software for the period from 04.04.2023 until further orders, in such a way that the members can quote the price in the range of (a) **Rs.0/kWh to Rs.10/kWh** for all contracts, viz., DAM (including GDAM), RTM, Intra-day, Day Ahead Contingency and Term-Ahead (including GTAM); and (b) **Rs.0/kWh to Rs.20/kWh** in the HP-DAM segment. This in our view would reduce the cost of power for the buyers, while providing an opportunity to the high cost generators and the willing buyers to participate in the HP-DAM market.

Regulation no. 8(1): "... Charges for deviation for generators was @ Reference charge Rate ..
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APPCC view: *For a seller other than RoR, the penalties for a seller need to be similar to that of a buyer i.e., instead of RR, seller need to pay at normal rate.*

Explanation: The buyer/DISCOMs are bearing all charges of the generator including incentivizing them for beyond normative PLFs and also frequency based incentives have been recently introduced in current tariff regulations.

In such cases, it is important that sellers should maintain grid discipline and adhere to their schedules.

Hence, it is just to penalise generators @ normal rates rather than their energy charge rates as determined by the commission.

Regulation no. 8(4): " For Solar or Wind-Solar hybrid stations $VL_{ws} (3) = \text{Deviation beyond } 10\% D_{ws} \text{ and up to } 20\% D_{ws}, \dots "$

For wind based generating stations, $VL_{ws} (3) = \text{Deviation beyond } 15\% D_{ws} \text{ and up to } 25\% D_{ws}, \dots "$

APPCC view: *For Solar or Wind-Solar hybrid stations $VLws (3) = \text{Deviation beyond } 10\% Dws \text{ and up to } 15\% Dws.$
For wind based generating stations, $VLws (3) = \text{Deviation beyond } 15\% Dws \text{ and up to } 20\% Dws.$*

Explanation: The forecast of RE Generator should improve as there is lot of RE integration happening in the grid. If the volume limit band is large, then the scope of Effective forecast will be less. Stringent volume limits will enable the generators to better forecast.

Regulation no. 8(7):

The **Regulation 8(7)** in the draft regulation may be changed as below:

"Charges for Deviation, in respect of a Buyer shall be Receivable or Payable as under:

Deviation by way of Under drawal (Receivable by the Buyer):

Proposed provision in Regulation	APPCC suggestion
(I) For $VL_B (1)$ and f within f_{band}	
i) @ 85% of NR when $f = 50.00$ Hz;	i) @ 100% of NR when $f = 50.00$ Hz;

ii) When $50.00 \text{ Hz} < f \leq 50.05 \text{ Hz}$, for every increase in f by 0.01 Hz, charges for deviation for such buyer shall be decreased by 7% of NR so that charges for deviation become 50% of NR when $f = 50.05 \text{ Hz}$;	ii) When $50.00 \text{ Hz} < f \leq 50.05 \text{ Hz}$, for every increase in f by 0.01 Hz, charges for deviation for such buyer shall be decreased by 5% of NR so that charges for deviation become 75% of NR when $f = 50.05 \text{ Hz}$;
iii) When $49.90 \text{ Hz} \leq f < 50.00 \text{ Hz}$, for every decrease in f by 0.01 Hz, charges for deviation for such buyer shall be increased by 1% of NR so that charges for deviation become 95% of NR when $f = 49.90 \text{ Hz}$;	iii) When $49.90 \text{ Hz} \leq f < 50.00 \text{ Hz}$, for every decrease in f by 0.01 Hz, charges for deviation for such buyer shall be increased by 2% of NR so that charges for deviation become 120% of NR when $f = 49.90 \text{ Hz}$;
(II) For VL_B (1) and f outside f_{band}	
i) @ Zero when $[50.05 \text{ Hz} < f < 50.10 \text{ Hz}]$: Provided that such buyer shall pay @ 10% of NR when $[f \geq 50.10 \text{ Hz}]$;	i) @ Zero when $[50.05 \text{ Hz} < f < 50.10 \text{ Hz}]$: @ Zero when $[f \geq 50.10 \text{ Hz}]$;
ii) @ 95 % of NR when $[f < 49.90 \text{ Hz}]$;	ii) @ 120 % of NR when $[f < 49.90 \text{ Hz}]$;
(III) For VL_B (2) and f within and outside f_{band}	
i) @ 80 % of NR when $f \leq 50.00 \text{ Hz}$; ii) @ 50 % NR when $[50.00 < f \leq 50.05 \text{ Hz}]$: @ Zero when $[50.05 < f < 50.10 \text{ Hz}]$: Provided that such buyer shall pay @ 10% of NR when $[f \geq 50.10 \text{ Hz}]$;	i) @ 120 % of NR when $f \leq 49.90 \text{ Hz}$ ii) @ 80 % of NR when $49.90 \leq f \leq 50.00 \text{ Hz}$; iii) @ 50 % NR when $[50.00 < f \leq 50.05 \text{ Hz}]$: @ Zero when $[50.05 < f < 50.10 \text{ Hz}]$: @ Zero when $[f \geq 50.10 \text{ Hz}]$;
(IV) For VL_B (3) and f within and outside f_{band}	
i) @ Zero when $f < 50.10 \text{ Hz}$ Provided such buyer shall pay @ 10% of NR when $[f \geq 50.10 \text{ Hz}]$;	i) @ 50 % when $f < 50.10 \text{ Hz}$ @ Zero when $[f \geq 50.10 \text{ Hz}]$;

Deviation by way of Over drawal (Payable by the Buyer):

Proposed provision in Regulation	APPCC suggestion
(I) For VL_B (1) and f within f_{band}	
iv) @ NR when $f = 50.00 \text{ Hz}$;	iv) @ 100% of NR when $f = 50.00 \text{ Hz}$;

v) When $50.00 \text{ Hz} < f \leq 50.05 \text{ Hz}$, for every increase in f by 0.01 Hz, charges for deviation for such buyer shall be reduced by 5% of NR so that charges for deviation become 75% of NR when $f = 50.05 \text{ Hz}$;	iv) When $50.00 \text{ Hz} < f \leq 50.05 \text{ Hz}$, for every increase in f by 0.01 Hz, charges for deviation for such buyer shall be decreased by 5% of NR so that charges for deviation become 75% of NR when $f = 50.05 \text{ Hz}$;
vi) When $49.90 \text{ Hz} \leq f \leq 50.00 \text{ Hz}$, for every decrease in f by 0.01 Hz, charges for deviation for such buyer shall be increased by 5 % of NR so that charges for deviation become 150% of NR when $f = 49.90 \text{ Hz}$;	iii) When $49.90 \text{ Hz} \leq f \leq 50.00 \text{ Hz}$, for every decrease in f by 0.01 Hz, charges for deviation for such buyer shall be increased by 2% of NR so that charges for deviation become 120% of NR when $f = 49.90 \text{ Hz}$;
(II) For VL_B (1) and f outside f_{band}	
iii) @ 50 % of NR when $[50.05 \text{ Hz} < f < 50.10 \text{ Hz}]$; iv) @ Zero when $[f \geq 50.10 \text{ Hz}]$;	iii) @ Zero when $[50.05 \text{ Hz} < f < 50.10 \text{ Hz}]$: Provided that such buyer shall receive @ 10% of NR when $[f \geq 50.10 \text{ Hz}]$;
v) @ 150 % of NR when $[f < 49.90 \text{ Hz}]$;	iii) @ 120 % of NR when $[f < 49.90 \text{ Hz}]$;
(III) For VL_B (2) and f within and outside f_{band}	
iii) @ 150 % of NR when $f \leq 50.00 \text{ Hz}$; iv) @ NR when $[50.00 \leq f \leq 50.05 \text{ Hz}]$: @ 75 % of NR when $[50.05 < f < 50.10 \text{ Hz}]$: @ Zero when $[f \geq 50.10 \text{ Hz}]$;	iv) @ 120 % of NR when $f \leq 49.90 \text{ Hz}$ v) @ 80 % of NR when $49.90 \leq f \leq 50.00 \text{ Hz}$; vi) @ 50 % NR when $[50.00 < f < 50.05 \text{ Hz}]$: @ Zero when $[50.05 < f < 50.10 \text{ Hz}]$: Provided that such buyer shall receive @ 20% when $[f \geq 50.10 \text{ Hz}]$;
(IV) For VL_B (3) and f within and outside f_{band}	
ii) @ 200 % of NR when $f < 50.00 \text{ Hz}$ iii) @ 110 % of NR when $[f \geq 50.00 \text{ Hz}]$;	iv) @ 200 % of NR when $f \leq 49.90 \text{ Hz}$ @ 150 % of NR when $49.90 \leq f \leq 50.00 \text{ Hz}$; @ 110 % NR when $[50.00 < f < 50.05 \text{ Hz}]$: @ 100 % when $[50.05 < f < 50.10 \text{ Hz}]$: Provided that such buyer shall receive @ 20% of NR when $[f \geq 50.10 \text{ Hz}]$;

Volume limits for buyers:

Buyer (being RE Super rich state)	VL _B (1) = Deviation up to 400 MW VL _B (2) = Deviation beyond 400 MW and up to 500 MW VL _B (3) = Deviation beyond 500 MW
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Explanation:

- i) In the present Draft Regulations, the deviation charges for over drawal are on high side for RE rich and super rich states. Since the RE power is volatile, it is very difficult to maintain the deviation outside the VLB (2) & VLB (3) limits whenever the RE generation falls drastically which is out of the control of state Grid operators.
- ii) "For under drawal buyer shall pay @10% of NR when $f \geq 50.10 \text{ Hz}$ ".

APPCC is of the view that during unexpected high RE period, it would be difficult for the RE rich states to cut down the under drawal further. Instead, it is opined that down regulation of high price Ancillary services would be more beneficiary than penalizing.

iii) "Over drawal @ $f \geq 50.10$ Hz is zero"

APPCC is opine that over drawal @ $f \geq 50.10$ Hz will always support in improving the Grid stability to bring the frequency within f_{band} . Hence the over drawee may be incentivised at least @ 10 % of NR @ $f \geq 50.10$.

Regulation9 (7):

The following was mentioned in the **9(7) of draft regulations** "Provided that in case the surplus amount in the Deviation and Ancillary Service Pool Accounts of all other regions is not sufficient to meet such deficit, the balance amount shall be recovered from the drawee DICs -(i) for the period from the date of effect of these regulations till 31.03.2025, in the ratio of [50% in proportion to their drawal at the regional periphery] and [50% in proportion to their GNA]; and (ii) from 01.04.2025, in the ratio of the shortfall of reserves allocated by NLDC to such DICs in accordance with the detailed procedure to be issued in this regard by the NLDC with the approval of the Commission."

APPCC View:

The regulation 9(7) of draft regulations may be replaced with the following, "**Provided that in case the surplus amount in the Deviation and Ancillary Service Pool Accounts of all other regions is not sufficient to meet such deficit, the amounts may be adjusted from PSDF funds and if the same is also not sufficient receivables from the pool may be reduced on pro rata basis based on the amount available**"

Explanation:

Due to the fact that, all the Drawees would already be penalized to the cram for their deviations as per the Regulations & frequency bands mentioned thereof and further cost implications does not go well with the financially stressed beneficiaries/ Discoms. And also the cost/ charges paid for DSM is not recoverable from the ARR/RSTO published by the state ERC. Hence this would definitely be an unrecoverable burden on the Discoms for which they are not involved in.

Instead of recovering the balance amount from the Drawee DICs, the deficit amount can be met either by PSDF since the PSDF accounts receives credit from DSM pool account itself and same may be used for adjusting the deficit in DSM pool account in return or by reducing the receivable amounts on prorata basis.

Hence, the present Regulations may be notified after duly considering the practical difficulties in maintaining the Grid especially for RE rich and super rich states and also to consider the fact that more RE integration would happen in future.