



HPERC (Deviation Settlement Mechanism and Related Matters) (Second Amendment) Regulations, 2025 [Draft]

HPERC notified for (Deviation Settlement Mechanism and Related Matters) (Second Amendment) on 26th April, 2025. The key highlights of this draft regulations are given below:

Objective: The amendment to the Principal Regulations substitutes the definitions of Contract Rate and Reference Charge Rate under Regulation 2, updates the key design parameters by aligning them with the CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2024, and revises Charges for Deviation under Regulation 7 for general seller, RoR generating station, and Buyer, incorporating slabs linked to system frequency, f band, Declared Generation Schedule (DGS), Declared Buyer Schedule (DBUY), and Volume Limits, to promote grid security, commercial discipline, and responsible scheduling.

The draft regulation can be accessed [here](#)

- 1. Contract Rate:** In the proposed clause K(ii) *“in respect of a WS seller or a MSW Seller or such other entity as applicable, whose tariff is not determined or adopted or approved under Section 62 or Section 63 or Section 86(1)(b) of the Act, and selling power through power exchange(s), the price as discovered in **the Power Exchange for the respective transaction;**”*

A merchant generator may sell electricity through multiple power exchanges as well as through multiple contracts, as well as through traders. Would the price discovered for the ‘respective’ trade at which a merchant generator sells electricity through power exchanges for the ‘respective transaction’ be considered? The above clause should be modified to account for weighted average price across all the products across all the power exchanges. Since discovered prices vary across the exchanges, for the same time block, would weight average price across exchanges be used?

As highlighted in our previous inputs to CERC¹, value of electricity varies across time blocks of the day. With significant difference between the electricity price across time blocks (for example, across the solar and the non-solar hours), use of average market prices significantly distorts the market signal.

¹ Singh, A. (ed). (2024), Opinion on CERC (Deviation Settlement and Related Matters), 2024[Draft], In Power Chronicle, (Volume 7, Issue 1, pp. 8-9), Energy Analytics Lab (EAL), Indian Institute of Technology Kanpur. https://eal.iitk.ac.in/assets/docs/power_chronicle_vol_7_issue_1.pdf

A merchant generator may sell all of its capacity under short-term contract through traders, or other bilateral arrangements (for example directly to open access consumers). How would such information be collected and incorporated in the weighted average price?

- 2. Correction in the definition of Contract Rate (RR):** In the proposed clause K(iv) “*in case of multiple contracts or transactions including captive consumption, the weighted average of the contract rates of all such contracts or transactions, as the case may be;*”

It is suggested to the commission to consider the following definition “*In case of multiple contracts or transactions & **Multiple exchanges** including captive consumption, the weighted average of the contract rates of all such contracts or transactions, as the case may be;*”

It is recommended to add this word “Multiple exchanges” for better clarification. the suggested change would more accurately reflect the practical scenarios where entities participate across different power exchanges.

- 3. Settling Multiple Contracts through a Single Meter:** The evolving nature of the power sector across states is witnessing sale of power through multiple contracts through a common metering. Energy accounting and settlement thereof have significant commercial implications including those on account of the applicable deviation settlement mechanism, especially when part of the contracts is of inter-state nature while the rest are for intra-state nature. Different rates and limits for DSM across the intra-state and inter-state transactions offer arbitrage opportunity. This was also highlighted in our previous inputs to TNERC².

Although the Indian power grid operates as a synchronized system, deviation charges levied by the Central Electricity Regulatory Commission (CERC) and Himachal Pradesh Electricity Regulatory Commissions (HPERC) differ (as proposed in the draft regulations). Figures below highlight this difference. In general, DSM charges for over-injection (under-drawl) are higher (lower) for inter-state deviation vis a vis those proposed in the draft amendment. CERC’s deviation charges tend to be higher for under-injection because

² Singh, A. (ed). (2021), Opinion on TNERC (Grid connectivity and Intra-State Open Access) 2021 [Draft], Indian Institute of Technology Kanpur.

deviations at the inter-state level have a wider impact on overall grid frequency stability and require costly ancillary services to restore balance.

Similarly, an open access/captive consumer drawing electricity against that scheduled at inter-/intra-state level from the same meter would also face such arbitrage. The regulations should provide for ‘appropriation’ of deviation across the inter-state and intra-state transaction.

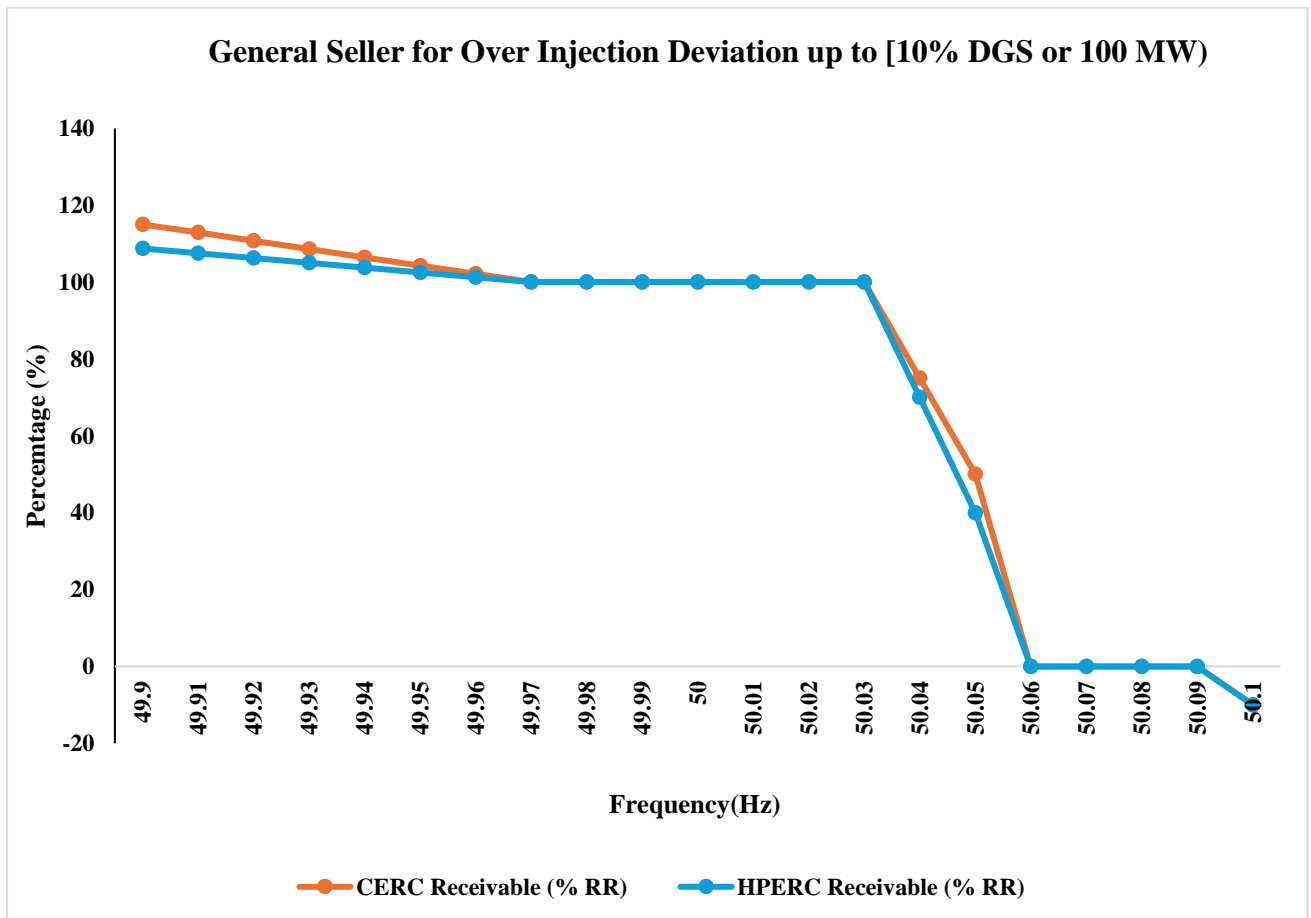


Figure 1: General Seller for Over Injection Deviation CERC & HPERC

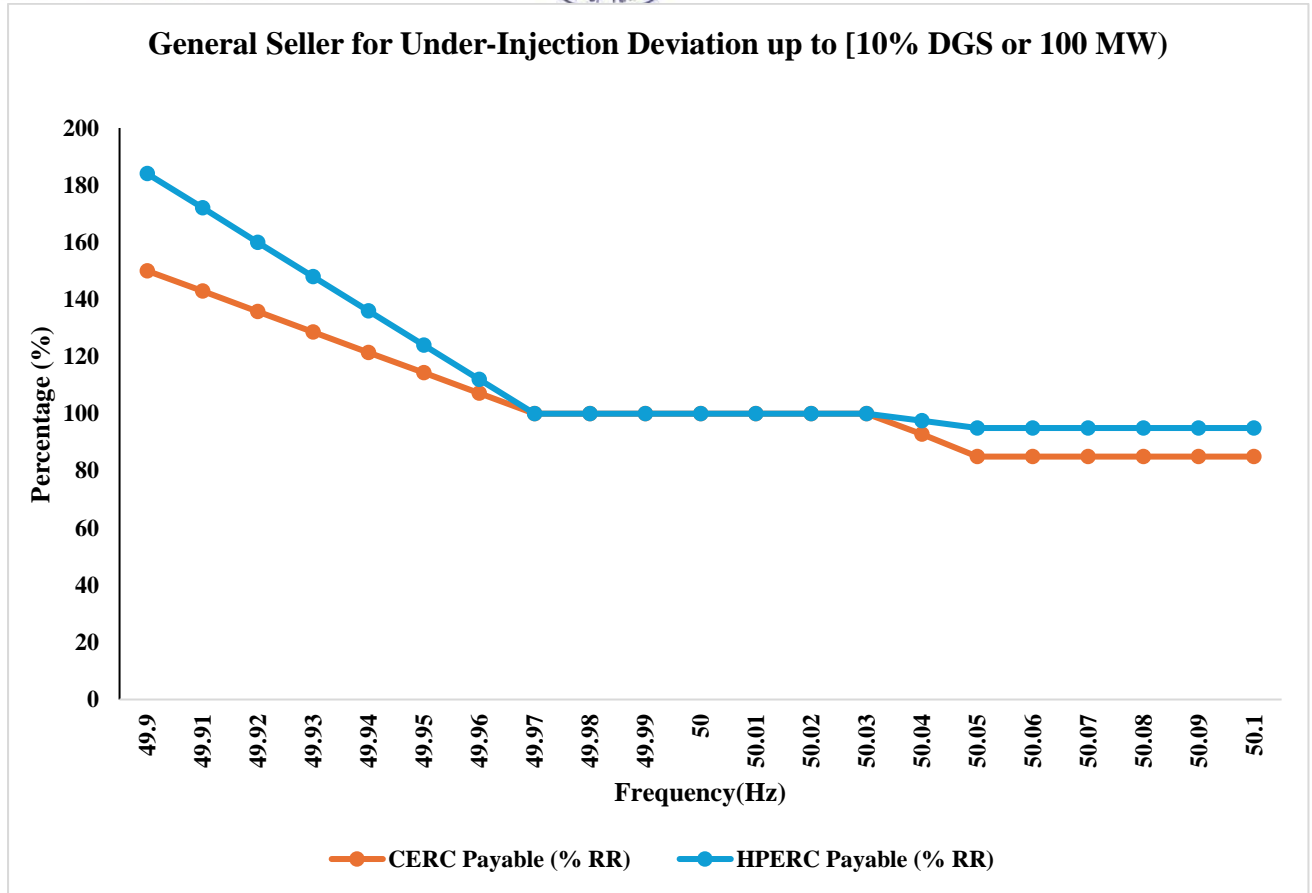


Figure 2: General Seller for Under-Injection Deviation of CERC & HPERC

4. HPERC DSM Proposal for Buyer

The HPERC DSM proposal should adopt a phased alignment with CERC’s DSM framework over 2-3 years to ensure smooth transition and national consistency. Under-drawl incentives above 50.09 Hz should be removed to prevent grid instability, while over-drawl penalties during high-frequency periods (above 50 Hz) should be aligned with that under CERC’s framework. Similarly, significant higher under-drawl DSM penalty, in certain cases nearly 100% higher than that under the CERC framework (See Figure 3), presents significantly higher deviation arbitrage.

No buyer under-drawl penalty above 50 Hz (Figure 4) also does not hove well for the grid discipline as there is no counterbalancing incentive to stabilise the grid if frequency overshoots 50 Hz.

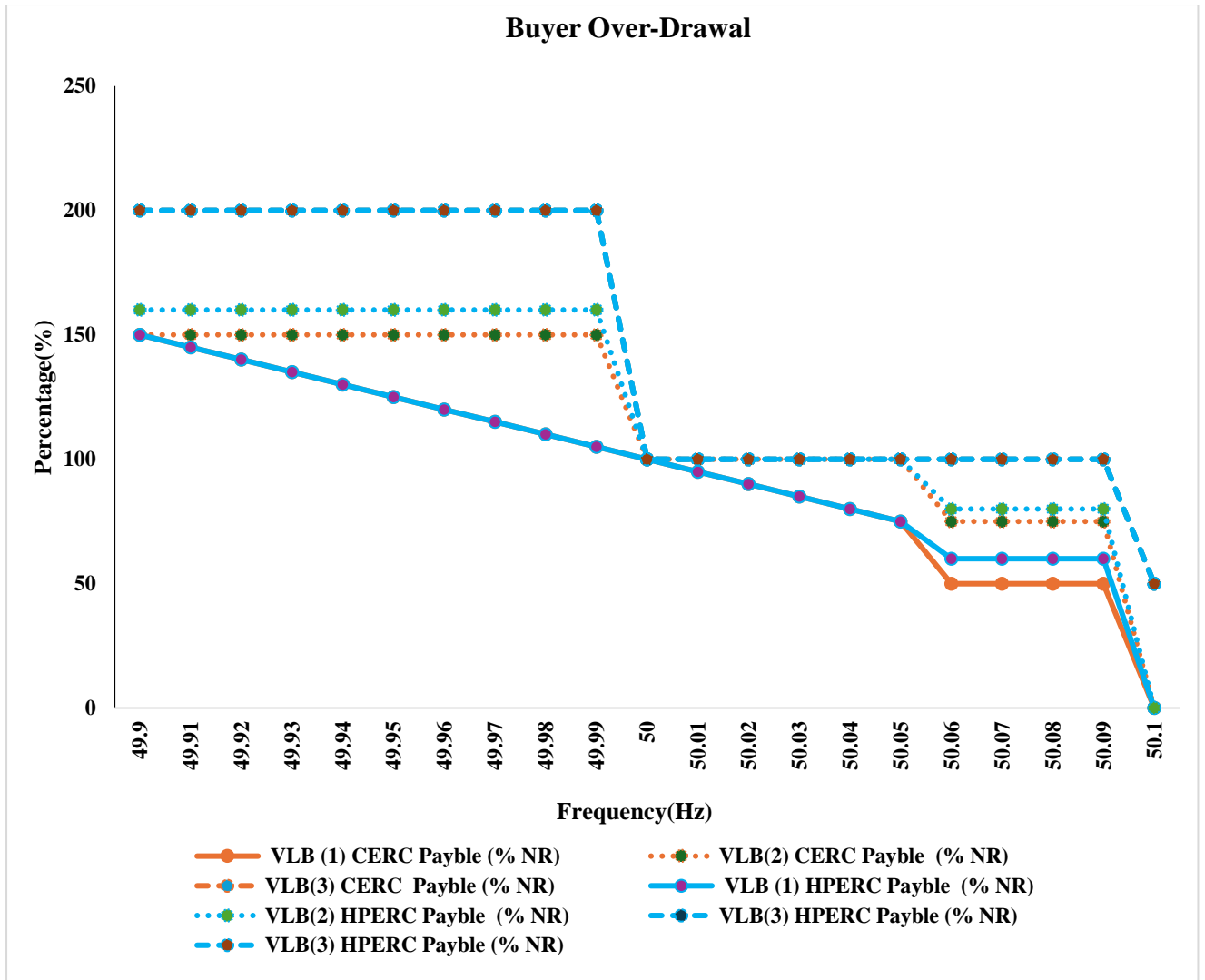


Figure 3: Buyer for Over-Drawal Deviation of CERC & HPERC

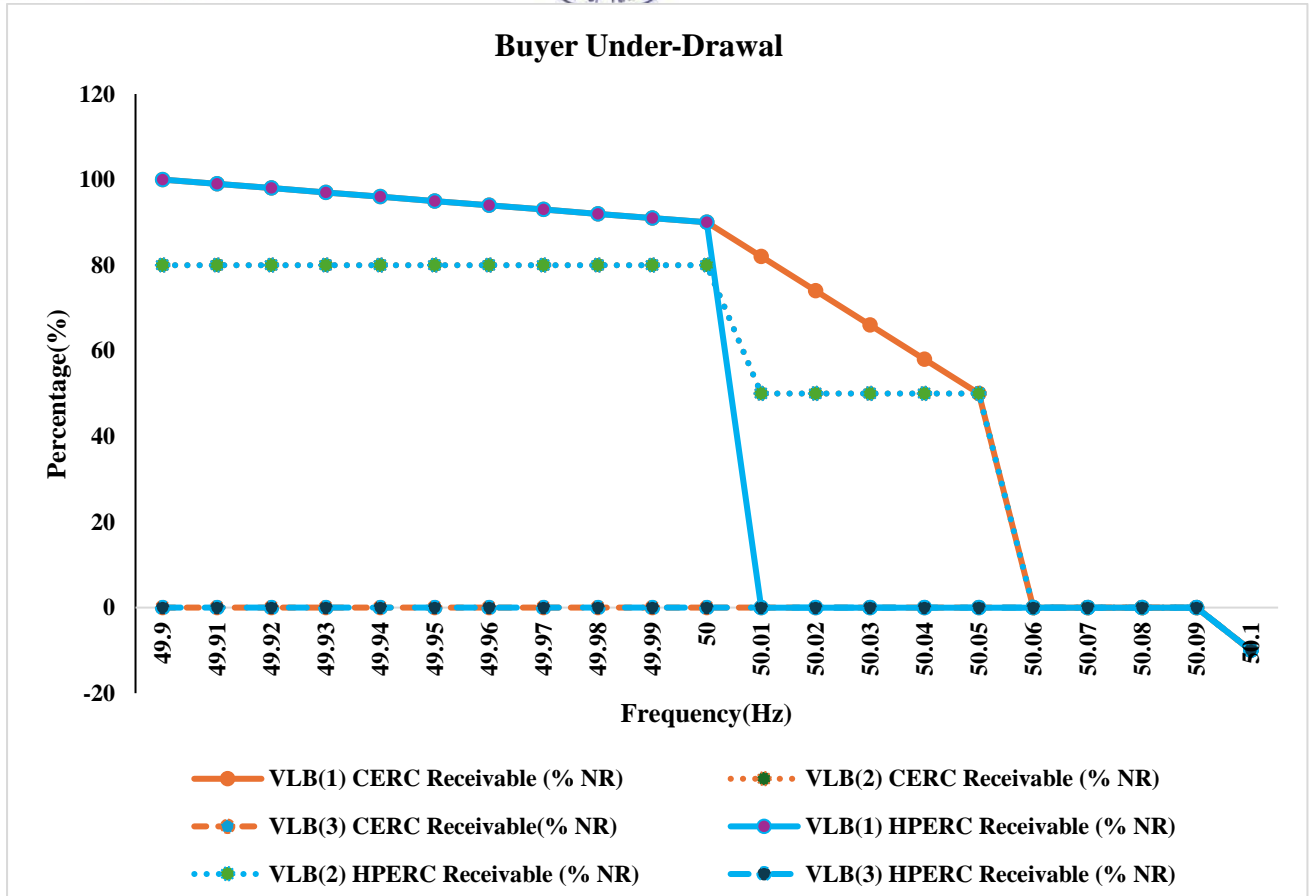


Figure 4: Buyer for Under-Drawal Deviation of CERC & HPERC

Finally, enhancing transparency through real-time monitoring dashboards and regular deviation reports will improve accountability and effectiveness. Overall, gradual convergence with inter-state regulations will obviate arbitrage opportunity while still strengthening grid discipline.