MPERC "Ancillary Services" Regulations, 2024 [Draft]

Madhya Pradesh MPERC issued draft **"**Ancillary Services" Regulations, 2024 on 08th August, 2024, aiming to minimise deviation and helping in maintaining grid at 50 Hz .

Objective: The Ancillary Services (AS) mechanism are designed to establish procedures for the procurement, deployment and payment to service providers at state level. The goal is to support SLDC in maintaining gird frequency, alleviate congestion in intra-state transmission network and ensuring smooth operation, safety and security of the state power grid.

Key Highlights:

- The regulations provides operational directions for Secondary Reserve Ancillary Services (SRAS).
- MP-SLDC will act as nodal agency providing Automatic Generation Control signal to call up on supply of electricity.
- An SRAS Provider willing to participate are required to provide standing consent for a minimum period time of 7 days to the Nodal Agency.
- Selection of provider will be based on merit order of variable cost.
- No incentive shall be provided to SRAS Provider during the introductory stage of SRAS implementation.

The document can be accessed here.

CER Opinions

1. **Suggestion for Definition of Energy Storage:** The definition of energy storage in Clause 3.1 (10) *"Energy Storage" in relation to the electricity system, means a facility where electrical energy is converted into any form of energy which can be stored, and subsequently reconverted into electrical energy;"*

   It is prayed to the Commission to consider the following definition suggested for adaptation *"Energy Storage in relation to the electricity system, means a facility where electrical energy is converted into any* ***other*** *form of energy which can be stored, and subsequently reconverted into electrical energy which is* ***injected back to the grid****".* (emphasis added)

   The updated definition brings clarity that a storage technology should convert electricity into other forms of energy and vice versa.

2. **Definition of Un-requisitioned Surplus (URS):** In the proposed definition 3.1 (30) *"means the capacity in a generating station that has not been requisitioned and is available for despatch, and is computed as the difference between the declared capacity of the generating station and its total schedule."*

   Un-requisitioned surplus means the surplus capacity of a generating plant that has not been requisitioned by the beneficiaries and is available for despatch. It should be computed as the difference between the declared capacity of the generating station and its total schedule by the

respective beneficiaries. It is suggested that the calculation must be based on calculation 'prior to scheduling and despatch of the respective ancillary services'.

3. **Determination of Frequency Bias Coefficient (B_f):** In the draft Clause 8.3 *"Frequency Bias Coefficient (B_f) shall be assessed and declared by the Nodal Agency as per the Detailed Procedure."*

   The B_f is declared by Grid India for each region on a quarterly basis. The same may be utilised at the state level as well.

4. **Data Reporting and Archiving:** It is suggested that the SRAS report should be published on weekly as well as monthly basis outlining the block-wise SRAS requisitioned and supplied, as well as performance of the entities participating in the provision of SRAS. These reports, in machine readable format, should be archived on the State Load Dispatch Centre website and be accessible in public domain.

5. **Timeline Clarification on Release of Power Plant from SRAS Commitment:** As per the proviso 2 of Clause 9.2 *"Provided that in case the capacity earmarked for SRAS is not called for and at the same time there is a requirement of power by the beneficiary, the same may be released by the nodal agency at its sole discretion based on a written requisition for benefit of the beneficiary."*

   The above would be applicable only if recall is exercised before gate closure. A clarification to that affect may be included.

6. **Typo in Clause 11. Payment for SRAS:** The draft Clause 11.1 states *"SRAS Provider shall be paid from the State DSM Pool Account at the rate of their **energy charge of compensation charge**, as declared by the SRAS Provider, as the case may be, for the SRAS-Up MW quantum despatched for every 15-minute time block, calculated as per Clause 10.6 of Regulation 10 of these Regulations."*

   It is noted that due to error, the sentence 'energy charge of compensation charge' does not have any meaning. It is suggested that the sentence must be written as *"SRAS Provider shall be paid from the State DSM Pool Account at the rate of their **energy charge or compensation charge**,…."*

7. **Incentive Mechanism for SRAS Provider:** In the proposed Clause 11.3 *"No incentive shall be provided to SRAS Provider during the introductory stage of SRAS implementation. However, the Commission after the introduction of SRAS in the State and after analyzing the financial impact therein, may introduce the incentive at a later stage through a separate order."*

   The generators are going to be paid for the services provided under SRAS as per the energy charge or compensation charge. Any incentive over and above the same should only be relevant if it incentives the SRAS provided for their extra effort, else this would be a windfall gain without any additional effort by the SRAS providers. The incentive, if any, can be linked to the

efficiency of response by the SRAS provider i.e. how much percentage of time the call for SRAS service was adhered to by the service provider. Performance over 95 percent or above may attract limited graduated incentive i.e. one level of incentive for performance between 95-98% in a month, and additional incentive for performance above 98%.

8. **Percentage of Failure Allowed:** In the proposed Clause 13.1 *"Performance below 20% for two consecutive days by an SRAS Provider shall make the SRAS provider liable for disqualification for participation in SRAS for a week by the Nodal Agency"*

   A minimum level of performance should be set higher, say 40-50% in place of the proposed 20%. Such a low benchmark could affectively leave the most crucial hours of the need for AS and thus defeating the very purpose for its introduction. Consistent under-performance should be investigated to identify potential areas for gaming the system and jeopardizing the system stability. Appropriate measure may then accordingly be identified to correct the same. The LDC should publish weekly as well as monthly SRAS reports with identification of such underperformance and investigations of reasons thereof.

9. **Role of Renewable Energy (RE) Generators in SRAS:** Rising demand for electricity as well as share of renewables have increased uncertainties and number of events of imbalances in the power system. To handle imbalances, which have traditionally been addressed through the Deviation Settlement Mechanism are now being addressed through ancillary services, some of which are being procured with consideration of economics of their procurement or are procured through market-based instruments. It is observed that predominant service providers in AS are thermal, gas and hydro generators. RE generators restrict themselves from participating in AS due to must-run status and technical constraints.

   As on August 2024, Madhya Pradesh power system integrates high installed capacity of wind (2844 MW) and solar (4086 MW) power plants. The state's RPO target for 2030 directs 40% minimum annual energy consumption from RE sources. Such target will lead to larger integration of variable sources of energy, bringing about greater uncertainty for power system operation, thus placing greater stress on system stability planning. In future, the RE sources are expected to provide a range of ancillary services[1]. For example, the inherent nature of synthetic inertial control from the large wind generators enables reliable primary support to the frequency. Solar power plant provides reactive power absorption with increase in active power production.

   A well-developed document/discussion paper must be put forward in order to increase participation of RE power plants. A study needs to be conducted to understand the implication of RE power plant used as SRAS provider. It will also facilitate in removing the barriers that may be faced by RE generators entering ancillary services market[2]

[1] Anoop, T. Bharath, "Ancillary services in the Indian power sector – A look at recent developments and prospects:", 2020, https://doi.org/10.1016/j.enpol.2020.112020

[2] AEMO, "Horndale Windfarm FCAS trail", 2017, https://www.aemo.com.au/-/media/Files/Electricity/NEM/Strategic-Partnerships/2018/HWF2-FCAS-trial-paper.pdf