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No.: HRED/R-212/
Dated: June 24, 2021

Shri Sanoj Kumar Jha
Secretary
Central Electricity Regulatory Commission
3 rd & 4 th Floor, Chanderlok Building,
36, Janpath, **New Delhi- 110001**
Tel: 91-11-23353503
Email: secy@cercind.gov.in; advisor-re@cercind.gov.in

Subject: Draft Central Electricity Regulatory Commission (Ancillary Services) Regulations, 2021.

Dear Sir,

This is with reference to public notice no. RA-14026(11)/3/2019-CERC dated May 29, 2021 regarding Draft Central Electricity Regulatory Commission (Ancillary Services) Regulations, 2021.

The observations and suggestions on the draft regulations prepared by Prof Himanshu Jain and self are submitted for kind consideration of the CERC.

Yours faithfully,

Encl.: As above

(ARUN KUMAR)

Observations and suggestions on the Central Electricity Regulatory Commission (Ancillary Services) Regulations, 2021

From: Prof. Arun Kumar & Prof. Himanshu Jain,

Hydro & Renewable Energy Department,

IIT Roorkee, Uttarakhand, India, 247667

Dated: June 24, 2021

The Central Electricity Regulatory Commission (CERC) (Ancillary Services) Regulations, 2021 (*regulations*, hereafter) are timely and will help in improving the reliability of the power system in India as large quantities of variable renewable energy resources are integrated. The inclusion of energy storage and demand response resources as eligible resources for providing Secondary Reserve Ancillary Service (SRAS) and Tertiary Reserve Ancillary Service (TRAS) is also welcome because the growth of energy storage and Distributed Energy Resources (DERs) will be encouraged by these regulations.

We discuss next our view on some of the clauses of these regulations that we would like to submit for your kind consideration.

1. Clause 21(5) makes it clear that providers will have to pay charges to the Deviation and Ancillary Service Pool Account if they are called upon to provide the SRAS-down and/or TRAS-down services. This may result in reduction in revenue for the providers of SRAS-down and/or TRAS-down services because they will sell less electricity. It is our considered view that because SRAS-down and TRAS-down services will support the smooth and secure operation of the grid, the key objectives of these regulations as mentioned under clause (2) "Objective", the providers of these services should not be asked to pay the money for the instructed amount of power reduction. The entity or entities whose actions resulted in the deployment of SRAS-down and TRAS-down services should instead pay these charges.

We request the commission to kindly provide more clarity on the reasons for requiring SRAS-down and TRAS-down service providers to pay charges to the Deviation and Ancillary Service Pool Account.

2. Clause 7(1)(b) seems to indicate that energy storage and demand-side resources do not need to be AGC-enabled for providing SRAS. Please clarify this because the mechanism through which these resources will receive the SRAS signals is not clear.

3. In clause 8(1)(a), it is mentioned that "*Area Control Error (ACE) of the region deviating from zero (0) and going beyond the minimum threshold limit of ±10 MW*" will result in activation of SRAS. Is there any associated threshold for time? In other words, will SRAS become active immediately as ACE deviates beyond 10 MW or should the deviation persist beyond a certain time threshold before SRAS is activated. It is possible that more than 10 MW deviation in ACE is caused by a generator trip event, but sufficient primary frequency response exists to reduce the deviation to less than 10 MW in a few seconds. SRAS will not be needed in this situation.

4. The equation under clause 21(3) should be clarified. While the term "Actual MWh of AS Provider" seems to suggest that it includes the total of actual energy, SRAS, and TRAS generated by the provider, the necessity for explicit mentioning "including TRAS MWh" in the next term "Scheduled MWh of AS Provider including TRAS MWh" is not clear. Moreover, it is not clear if the third term "SRAS MWh of AS Provider" refers to actual or scheduled SRAS MWh.