



एनएचपीसी लिमिटेड
(भारत सरकार का उद्यम)

NHPC Limited
(A Government of India Enterprise)

फोन/Phone : _____

दिनांक/Date : 30.06.2021

संदर्भ सं./Ref. No. NH/Comml./Tariff/29/2021/499

Secretary
Central Electricity Regulatory Commission,
3rd & 4th Floor, Chanderlok Building,
36 - Janpath, New Delhi- 110 001
Fax: 011-23753923

Sub:- Comments on draft Central Electricity Regulatory Commission (Ancillary Services) Regulations, 2021 - Reg.

Ref:- CERC Public notice No. RA-14026(11)/3/2019-CERC dated 29.05.2021

Sir,

In reference to above public notice dated 29.05.2021, the comments / suggestions / objections of NHPC on the draft CERC (Ancillary Services) Regulations, 2021 are enclosed for further necessary action. The comments / suggestions / objections have been uploaded through SAUDAMINI portal under 'e-Regulation'. The soft copy of the same has also been emailed to secy@cercind.gov.in.

Thanking You,
Encl: As above

Yours Sincerely,


(M G Gokhale)
General Manager (Comml.)

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बिजली से संबंधित शिकायतों के लिए 1912 डायल करें। Dial 1912 for Complaints on Electricity

**COMMENTS OF NHPC ON DRAFT CENTRAL ELECTRICITY REGULATORY COMMISSION
(ANCILLARY SERVICES) REGULATIONS, 2021**

Regulation no. of Draft Regulations	Description of Proposed Regulation	Comments to offer
Regulation No.3(C),	<p>Definitions and Interpretation:</p> <p>Ancillary Service” or “AS” in relation to power system operation, means the service necessary to support the grid operation in maintaining power quality, reliability and security of the grid and includes Primary Reserve Ancillary Service, Secondary Reserve Ancillary Service, Tertiary Reserve Ancillary Service, active power support for load following, reactive power support, black start and such other services as defined in the Grid Code;</p>	<p>The service of Black Start has been incorporated under the definition of Ancillary Services (AS), but no Payment/incentive is proposed for Black Starts support being done by any power plants.</p> <p>Since the Black Start is utmost essential services to restore the grid in case there is grid failure. The importance of incentivising Black Start has also been recognized Report of Forum of Load Despatchers (FOLD) on Operational Analysis for optimization of Hydro Resources & facilitating Renewable Integration in India. Hence there should be a mechanism to incentivise these services so that the power plants shall be motivated to keep all the associated systems in healthy condition to provide the services of Black Start, if needed to the grid.</p> <p>The payment of incentive can be done from Power System</p>

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		Development Fund.
Regulation No.5 (1),	<p>There shall be the following types of Ancillary Services, namely:</p> <ul style="list-style-type: none"> a) Primary Reserve Ancillary Service (PRAS); b) Secondary Reserve Ancillary Service (SRAS); c) Tertiary Reserve Ancillary Service (TRAS); and d) Such other Ancillary Services as specified in the Grid Code 	<p>The Draft regulation of Ancillary services described the various types of Ancillary services including Primary Reserve Ancillary services (PRAS), which is being provided by eligible hydro & other power plants as & when required to the grid depending on frequency variation.</p> <p>However, the modalities for payment in respect of PRAS provider has not been incorporated in the Draft Regulation. The same may be included for better support by the generators, whenever it is required.</p>
Regulation no. 8	Activation and Deployment of SRAS	<p>During high inflow season, the excess inflow is being released by the Hydro Stations. In such condition, SRAS-down will lead additional spillage.</p> <p>Hence, there should be a provision in the regulation that during spillage condition in Hydro Power Plants, the SRAS-</p>

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		<p>Down signal may not be issued to such power plants. Alternatively, Hydro Plant may be exempted to pay back to the Deviation and Ancillary Service Pool Account in terms of Regulation 11(2) of these regulations, in case there is spillage of water.</p>
<p>Regulation no 8(2),</p>	<p>Activation and Deployment of SRAS:</p> <p>SRAS shall be activated and deployed by the Nodal Agency on account of the following events to maintain or restore grid frequency within the allowable band as specified in the Grid Code and replenish primary reserves:</p> <p>(a) Area Control Error (ACE) of the region deviating from zero (0) and going beyond the minimum threshold</p>	<p>It has been detailed in the draft regulation that the SRAS-up or SRAS-down signal shall be issued on the basis of Area Control Error (ACE) for each region.</p> <p>It is observed during AGC operation that the unit wise real time set point received from NLDC is much lower than the approved schedule of NRLDC, some power stations receive AGC signal for (-)90% i.e. reduction of Power by 90% and some power stations receive AGC signal of (-)10%. This has resulted in huge energy mismatch in generation vis- a-vis schedule during the operation of AGC.</p> <p>In case of hydro stations having limited storage capacity, such variation on daily basis may lead to spillage even during lean</p>

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	<p>limit of ±10 MW;</p> <p>(b) Such other events as specified in the Grid Code.</p>	<p>period. As such some percentage of Schedule/Actual generation be specified for SRAS-down and accordingly be incorporated in clause no. 8 of said regulations.</p>
<p>Regulation no. 9(2),</p>	<p>An SRAS Provider willing to participate in SRAS shall be required to provide standing consent to the Nodal Agency for participation, which shall remain valid till it is modified or withdrawn:</p> <p>Provided that standing consent cannot be modified or withdrawn without giving notice of at least forty-eight hours.</p>	<p>In case of hydro Power Stations, the generation is totally dependent on the inflow being received from upstream project and upstream rivers.</p> <p>Many times the assessment of inflow is unpredictable and suddenly inflow increases and decreases due to rain in catchment areas/upstream areas and other measures in upstream.</p> <p>If suddenly inflow increases and the situation to spill the water arrives in spite of full generation than Power Station wouldn't be able to implement the SRAS-up or SRAS-down signal.</p> <p>Accordingly, especially, the Hydro Power Plants should be allowed to withdraw their consent for their participation in</p>
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		SRAS.
Regulation no. 9(5),	The SRAS Providers that are generating stations, shall declare their variable charge upfront on monthly basis in the manner as stipulated in the Detailed Procedure.	<p>In case of Hydro Power Plants, there is no concept of “Variable charges”.</p> <p>The AFC of a hydro generating station is recovered in two parts viz. “Capacity Charge” and “Energy Charge”.</p> <p>Accordingly, for hydro power stations the variable charges may be defined as Energy Charge Rate (ECR) plus water usage charges (additional energy charges). Further, the ECR for hydropower stations where ECR is greater than Rs 1.20/kWh also depends upon whether the energy supplied i.e. saleable schedule energy is in excess of saleable design energy or not. This is as per Regulation 44(9) of CERC Tariff Regulations, 2019.</p> <p>“(9) In case the energy charge rate (ECR) for a hydro generating station, computed as per clause (5) of this Regulation exceeds one hundred and twenty paise per kWh, and the actual saleable energy in a year exceeds { $DE \times (100 - AUX) \times (100 - FEHS) / 10000$ }</p>

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		<p>MWh, the energy charge for the energy in excess of the above shall be billed at one hundred and twenty paise per kWh only.”</p> <p>Thus, there is a possibility that at the start of the month the ECR applicable for the hydro power station is its actual ECR and after dfew days the ECR applicable is Rs 1.20/kWh.</p> <p>Therefore, Hon’ble Commission is requested to kindly provide a provision of revising Variable charges (ECR plus water usage charges in case of hydro generating stations) during the month as per applicable ECR for the power station. It is also to mention that for a particular power station the need for revising of variable charges (i.e. ECR plus water usage charges) during the month will only come into the picture once in an year.</p>
Regulation no 11(2)	<p>SRAS Provider shall pay back to the Deviation and Ancillary Service Pool Account , at the rate of their variable charge or compensation</p>	<p>The ECR for hydropower stations where ECR is greater than Rs 1.20/kWh depends upon whether the energy supplied i.e. saleable schedule energy is in excess of saleable design energy or not. This is as per Regulation 44(9) of CERC Tariff Regulations, 2019.</p>

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	<p>charge, as the case may be, for the SRAS-Down MW quantum despatched for every 15 minutes time block, calculated as per clause (12) of Regulation 10 of these regulations.</p>	<p>Therefore, the energy charge billed to beneficiary DISCOMs in respect of hydropower stations where ECR is greater than Rs 1.20/kWh for energy supplied in excess of saleable Design Energy is calculated at Rs 1.20/kWh. Therefore, Hon'ble Commission is requested to either modify the clause as under:</p> <p>“SRAS Provider shall pay back to the Deviation and Ancillary Service Pool Account, at the rate of their variable charge as billed to beneficiary DISCOMs or compensation charge, as the case may be, for the SRAS-Down MW quantum despatched for every 15 minutes’ time block, calculated as per clause (12) of Regulation 10 of these regulations.”</p> <p>Or keep the provision of revising the Variable charges (energy charge plus water usage charges) during the month as per applicable ECR for the power station as mentioned in comments to Regulation no 9(5) of draft Regulations.</p>
<p>Regulation 12(3)</p>	<p>SRAS Provider shall be eligible for incentive based on the performance</p>	<p>In the changing scenario of large scale Renewable Energy integration leading to increased focus on grid stability and</p>

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	<p>measured as per clause (2) of this Regulation and the 5-minute MWh data calculated for SRAS-Up and SRAS-Down as per clause (11) of Regulation 10 of these regulations and aggregated over a day, as under:</p>	<p>operational aspects the requirement of Hydro is become a necessity as a support services in form of SRAS (Secondary Response Ancillary Services) and Fast Response Ancillary Services (FRAS) & Frequency Response Characteristics (FRC) etc.</p> <p>An order was issued by CERC vide petition no. 79/RC/2017 dated 06/12/2017 in the matter of Automatic Generation Control (AGC) pilot project, wherein in Clause no. 84, following was approved:</p> <p>“The Commission accepts the proposal of the Petitioner that the fixed cost shall continue to be paid by the beneficiaries while the generator shall be paid a mark-up at 50p/unit for both positive AGC MWh generation and negative AGC MWh reduction”.</p>
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		Considering, the huge requirement of Hydro Power for balancing of grid an incentive for ancillary services from AGC (SRAS) in line with above petition be considered.
Regulation 20 (4) and 20(5)	<p>(4) The generating stations as referred to in clause (1) of this Regulation, whose URS is despatched for TRAS-Up, in the event of short-fall in procurement of TRAS-Up through the Market, shall be paid at the rate of their variable charges for the quantum of TRAS-Up despatched.</p> <p>(5) The generating stations as referred to in clause (1) of this Regulation, if despatched for TRAS-Down, shall pay back at the rate of their variable charges, corresponding to the quantum of TRAS-Down despatched.</p>	<p>In case of shortfall all the generating stations, whose tariff is determined by the Commission under Section 62 of the Act and having URS power after Gate Closure, shall be deemed to be available for use by the Nodal Agency for SRAS-Up or SRAS-Down or TRAS-Up or TRAS-Down, subject to technical constraints of such generating stations. Thus, the generating stations which have decided not to participate in sell bid for TRAS up and TRAS down and whose tariff is determined under Section 62 of the Act can be utilized for TRAS up and TRAS down, however as per proposed Regulation these generating stations shall be compensated at the rate equal to their variable charges. Thus, even though these generating stations shall be used for supporting grid no incentive is being paid to these generating stations for TRAS up and TRAS down.</p>

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		<p>In view of above, Hon’ble Commission is requested to provide incentive as per Regulation 12(3) of these Regulations or may define some incentives separately for TRAS up and TRAS down in the case of shortfall.</p>
<p>Regulation 20 (6)</p>	<p>In case of emergency conditions (6) In case the Nodal Agency requires any generating station to provide Ancillary Services to meet the emergency conditions for reasons of grid security as per the provisions of the Grid Code, such generating station shall be compensated at the rate of the energy charge as determined under Section 62 of the Act or adopted under Section 63 of the Act, or at the rate of the compensation charge declared by the AS provider, as the case may be.</p>	<p>As per Regulation 20(6) the nodal agency can utilize any generating station to provide ancillary services for reasons of grid security in case of emergencies, however these generating stations shall be compensated at the rate of the energy charge as determined under Section 62 of the Act or adopted under Section 63 of the Act, or at the rate of the compensation charge declared by the AS provider, as the case may be. Thus, even though these generating stations shall be used for grid support no incentive is being paid to these generating stations to provide ancillary service in case of emergencies.</p> <p>Therefore, in view of above, Hon’ble Commission is requested to provide incentive as per Regulation 12(3) of these Regulations or may define some incentives separately for</p>

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		TRAS up and TRAS down in the case of shortfall
Addition of New Definition		
Addition of Regulation 3(af)	3 Definitions and Interpretations af. Variable Charges for hydrogenating stations shall mean the Energy Charge Rate plus water usage charges	In case of hydrogenating stations, AFC is recovered in two parts i.e. Capacity Charges and Energy Charges and there is no concept of variable charges. Therefore, Hon'ble Commission is requested to define the variable charges for hydro generating station.

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