

----- Forwarded Message -----

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Sent: Mon, 31 Oct 2022 18:13:18 +0530 (IST)

Subject: Comments /Suggestions on Draft Central Electricity Regulatory
Commission (Indian Electricity Grid Code) Regulations, 2022 - regarding

Dear Sir,

In reference to the subject cited above, the comments has already been forwarded through e-mail on 30.09.2022 & 18.10.2022. However, please find attached herewith the final Comments / suggestion from SJVN for kind consideration at your end. T he same has also been uploaded in the e-filing portal of Hon'ble CERC.

Regards,

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Comments / Suggestions / Observations on Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022 by SJVN

Clause / Regulations	Draft Proposal of CERC (IEGC) Regulations, 2022	Comments/Suggestion of SJVN on the draft Proposal
Clause 3 (b) of Regulations 14 (i.e. PROTECTION SETTINGS), Page-35	(b) Carry out detailed system studies, twice a year, for protection settings and advice modifications / changes, if any, to the CTU and to all users and STUs of their respective regions.	Detailed system studies report may be shared with generators also.
Clause 2 of Regulations 16 (i.e. SYSTEM PROTECTION SCHEME (SPS)), Page-37	(2) For the operational SPS, RPCs shall perform regular dynamic studies and mock testing for reviewing SPS parameters & functions, at least once in a year.	Report of regular dynamic studies and mock testing for reviewing SPS parameters & functions to be shared with concerned generators also.
Clause 2 (d) of Regulations 29 (i.e. SYSTEM SECURITY), Page-58	(d) In case of switching off or tripping of any of the important elements of the regional grid under emergency conditions or otherwise, it shall be intimated immediately by the users with available details (i) to SLDC if the element is within the control area of SLDC, who in turn shall intimate the concerned RLDC and (ii) to RLDC if the element is within the control area of RLDC. The reasons for such switching off or tripping to the extent determined and the likely time of restoration shall also be intimated within half an hour. The concerned RLDC or SLDC and the users shall ensure restoration of such elements within the estimated time of restoration as intimated.	During tripping, the likely time of restoration to be intimated within half an hour may be changed to “within one hour” as such event occurs during odd hours, maintenance team may take some extra time to analyze the fault and estimation of restoration time.
Clause 4 of Regulations 30 (i.e. FREQUENCY	(4) There shall be reserves as under: (a) Primary, Secondary and Tertiary reserves:	As per New DSM guidelines, generators shall have to adhere the schedule. Any variation in load beyond 2%

<p>CONTROL AND RESERVES), Page-64</p>	<p>(i) Primary, Secondary and Tertiary reserves shall be deployed for the purpose of frequency control, reducing area control error and relieving congestion.</p>	<p>due to Primary response (FGMO) will result in heavy penalties to generators. This clause may be reviewed in context to new DSM regulations.</p>
<p>Clause 9 of Regulations 34 (i.e. SYSTEM RESTORATION), Page-88 & 89</p>	<p>(9) Any entity extending black start support by way of injection of power as identified in clause (6) of this Regulation shall be paid for actual injection @ 110 % of normal rate of charges for deviation in accordance with DSM Regulations for the last block in which the grid was available.</p>	<p>In case of grid failure, load will be disconnected and transmission lines will get tripped.</p> <p>During Black start operation by any plant scheduling as per actual injection schedule shall be done @ 110 % of normal rate of charges for deviation in accordance with DSM Regulations for the last block in which the grid was available. To encourage generators for participation in Black Start exercise, additional incentives may also be given to the generators for reviving the grid and charging the lines in adverse operating conditions.</p> <p><i>It is therefore submitted that the Hon'ble Commission may also notify the additional incentive to the generators for operating in the adverse conditions during Black Start Exercise.</i></p>
<p>Clause 5/6 of Regulation 43, Page-103</p>	<p>43. CONTROL AREA JURISDICTION OF LOAD DESPATCH CENTER</p> <p>(5) Entities connected to both inter-State transmission system and intra-State transmission system shall be under control area jurisdiction of RLDC, if more than 50% of quantum of connectivity is with ISTS, and if more than 50% of the quantum of connectivity is with intra-State transmission system, then it shall be under control area jurisdiction of</p>	<p>The proposed Regulations has elaborated the control area Jurisdiction of Load Despatch Center depending upon their quantum of Connectivity.</p> <p><i>However, if the Project location is in One State and the Connectivity Granted in the Intra- State Network of Other State and PPA has not been tied up, then Control Area Jurisdiction of Load Despatch may be specified i.e. Which State load despatch center would give the approval for the Charging of new elements in to the</i></p>

	<p>SLDC.</p> <p>(6) In case an entity is connected to both inter-State transmission system and intra-State transmission system, the load despatch centre responsible for scheduling such entity shall coordinate with the concerned RLDC or SLDC, as the case may be, with a view to ensuring grid security.</p>	<p><i>Grid/ Synchronization / COD / Schedule etc.</i></p> <p><i>It is therefore submitted that the Hon'ble Commission may notify the suitable Regulation for the above mentioned type of entities.</i></p>
<p>Clause 8 (a) of Regulations 45 (i.e. GENERAL PROVISIONS), Page-108</p>	<p>(8) Declaration of Declared Capacity by Regional entity generating stations</p> <p>(a) The regional entity generating station shall declare ex-bus Declared Capacity, limited to 100% MCR, on day ahead basis as per provisions of Regulation 47 of these regulations.</p> <p>Provided that in case of REGS or ESS the available capacity shall be declared by such regional entity generating station.</p>	<p>(8) Declaration of Declared Capacity by Regional entity generating stations</p> <p>The proposed draft regulation, limits the declaration by the generating stations upto 100% MCR, which is contradictory in line with CERC order in the petition No. 74/MP/2018 order dtd. 11.07.2018. The para 18 of the tariff order is reproduced here as under:</p> <p><i>The Amendment in the Regulation 5.2 (h) of the Grid Code was necessitated for ensuring that the margins for primary response in case the DC is above 100% of installed capacity corrected to auxiliary consumption. Further, to ensure proper incentive for the generator for keeping units in readiness for providing much needed grid support in case of frequency excursion, the generator has been allowed to declare above installed capacity by including overload margins provided water is available for such generation. This has also been made amply clear in the Statement of Reasons to the Fifth Amendment to the Grid Code which was issued on 13.4.2018. Relevant Portion of the SOR is extracted as under:</i></p> <p><i>13.2.8 We are of the view that declaration of capacity</i></p>

		<p><i>including overload margins is the prerogative of the generator. Generator based on its experience about the healthiness of the units is allowed to declare its declared capability based on machine and fuel/water availability. However, it was being observed that units which were scheduled beyond ex-bus capability corresponding to 100% of IC were not able to provide primary response as these units were operating on VWO mode leaving no margins for further valve opening by governor action during frequency decrease. As such, through the addition in Regulation 5.2 (h), of IEGC, RLDCs/SLDCs have been allowed not to schedule the units beyond ex-bus generation corresponding to 100% of installed capacity. However, for the purpose of calculation of PAF, DC declared by the generator is not to be reduced. This would ensure proper incentive for the generator for keeping units in readiness for providing much needed grid support in case of frequency excursion.”</i></p> <p>Hence, the generating station can declare based on the availability of fuel/source of energy and capability of machines. Therefore, this regulation may be proposed as under:</p> <p><i>“The regional entity generating station shall declare ex-bus Declared Capacity, based on installed capacity including overload capability, if any, minus auxiliary consumption (depending on availability of fuel/inflow) on day ahead basis as per provisions of Regulation 47 of these regulations.</i></p>
<p>Clause 15 of Regulations 45 (i.e. GENERAL</p>	<p>..... (15) A generating station including renewable energy generating station shall be allowed to draw power from ISTS during non-generation hours, whether before COD</p>	<p>Hydro Stations are generally located in remote and hilly terrains. During lean season for providing peak power, Hydro plant needs frequent starting and stopping. Arrangement of Station Power is done through</p>

<p>PROVISIONS), Page-112</p>	<p>or after COD, only after obtaining schedule for such drawal of power in accordance with a valid contract entered into by it with a seller or distribution licensee or through power exchange.</p>	<p>DISCOMs network, which is not reliable due to difficult terrain and weather conditions. Station Power Supply through ISTS Network provides a reliable alternative and assets have already been developed in some Power Stations for the same. For reliable auxiliary power and smooth starting and stopping of the units, NJHPS (being a Underground power House) has installed a station service transformer at 400KV busbar at Jhakri.</p> <p>It is not very difficult to schedule drawl of small quantum of station power during lean period. As the outages of the units cannot be anticipated in advance hence, it is not feasible to draw such power through valid contract with a seller or distribution licensee.</p> <p><i>It is therefore proposed that the Hydro Generators shall be allowed to draw power from ISTS during non-generation hours, whether before COD or after COD, and the same shall be adjusted against the schedule after the day is over or as a process requirement drawl of power by hydro generator during unit start- stop may please be continued to be allowed under DSM.</i></p>
<p>Sub Clause (a) (ii) of Clause 1 of Regulations 47 (i.e. PROCEDURE FOR SCHEDULING AND DESPATCH FOR INTER-STATE TRANSACTIONS), Page-116</p>	<p>(ii) The generating station based on hydro energy shall submit the following information for 0000 hours to 2400 hours of the ‘D’ day, by 6 AM on ‘D-1’ day:: (d) Time block-wise Ramp up rate (MW/min) for on-bar capacity; (e) Time block-wise Ramp down rate (MW/min) for on-bar capacity; (f) Unit-wise forbidden zones in MW and percentage (%) of ex-bus installed capacity;</p>	<p>Data required at point no (d), (e) and (f) are generally fixed for hydro generators and are declared during COD and need not required to be declared daily.</p> <p>It is therefore submitted that the Hon’ble Commission may change the Regulation suitably for Hydro Generating Stations.</p>

<p>Sub Clause (b) of Clause 3 of Regulations 47 (i.e. PROCEDURE FOR SCHEDULING AND DESPATCH FOR INTER-STATE TRANSACTIONS), Page-127 & 128</p>	<p>(3) Power to revise schedules:</p> <p>(b) In the event of bottleneck in evacuation of power due to outage, failure or limitation in the transmission system or any other constraint necessitating reduction in generation, the RLDC shall revise the schedules.</p> <p>Provided that generation and drawal schedules revised by the Regional Load Despatch Centre shall become effective from 7th block or 8th block depending on time block in which schedule has been revised as first time block.</p>	<p>In case of bottle neck in evacuation /Grid Constraints if for generators, injection schedules are revised by 7th or 8th Block, then the 7/8 blocks for which machines were available and power evacuation could not be done due to grid/ transmission constraints, may lead to spillage of water and also lead to heavy penalties on generators.</p> <p>Since these events are beyond the control of generator, it is submitted that the Hon'ble Commission may change the Regulation suitably for Generating Stations i.e.</p> <p><i>The scheduled generation of the ISGS shall be revised to be equal to actual generation till normalization of the Grid Conditions to avoid heavy penalties on Generator.</i></p>
<p>Sub Clause (c) of Clause 4 of Regulations 47 (i.e. PROCEDURE FOR SCHEDULING AND DESPATCH FOR INTER-STATE TRANSACTIONS), Page-129</p>	<p>(4) Revision of schedules on request of regional entities:</p> <p>(c) Based on the request for revision in schedule made as per sub-clauses (a) and (b) of Clause 4 of this Regulation, any revision in schedule made in odd time blocks shall become effective from 7th time block and any revision in schedule made in even time blocks shall become effective from 8th time block, counting the time block in which the request for revision has been received by the RLDCs to be the first one.</p>	<p>(4) Revision of schedules on request of regional entities:</p> <p>(c) Based on the request for revision in schedule made as per sub-clauses (a) and (b) of Clause 4 of this Regulation, any revision in schedule made in odd time blocks shall become effective from 7th time block and any revision in schedule made in even time blocks shall become effective from 8th time block, counting the time block in which the request for revision has been received by the RLDCs to be the first one.</p> <p><i>Provided that in the event of unforeseen scenario in Hydro Projects such as high silt, cloud burst, heavy rain, flash flood in the river, the RLDC shall revise the schedules which shall become effective from the 7th / 8th time block, counting the first time block in which the unforeseen scenario of High Silt / Cloud Burst has been reported to be the first one. Also, during the 1st to 6th / 7th time blocks of such an event, the scheduled</i></p>

		<p><i>generation of the ISGS shall be deemed to have been revised to be equal to actual generation, and the scheduled drawals of the beneficiaries shall be deemed to have been revised accordingly.</i></p> <p>It is therefore submitted that the Hon'ble Commission may change the Regulation suitably for Hydro Generating Stations as proposed above to safeguard the underwater components and to avoid the accumulation of excess silt in Head Race Tunnel in the Hydro Projects. The detailed justifications are as under:</p> <p>SJVN's two operational Hydro Plants are located on Satluj Basin, where problem of high silt is very frequent during the monsoon season which leads to shutdown of plants as and when the level of silt increases beyond the permissible limits.</p> <p>During the high silt conditions arising due to due to cloud burst, heavy rain, flash floods, land slide etc. ocuring near to the reservoir, the shutdown of the plant is generally on emergency basis and is required to be managed within few time blocks or on Immediate basis. However, as per the mentioned clause of CERC draft IEGC Regulations, 2022 (clause 4 (c) of Regulations 47) the schedule of the generating station is revised only after 7th or 8th time block as per the intimation received by NRLDC. During such period, SJVNs generating plants viz NJHPS and RHPS are bearing heavy penalty on account of DSM charges due to deviation in schedule.</p> <p>Similarly, when the silt level is on decreasing trend, generating units may not commence generation due to aforesaid CERC IEGC Regulations, as revision in</p>
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		<p>generation is allowed only after 7th or 8th time block.</p> <p>The problem of high silt in river Satluj is beyond the control of generator and increase/decrease of quantum of silt may not be predicted in advance before 7th or 8th time block. When the silt is increasing beyond the permissible limit, generating station needs to shut down their unit(s) as a whole or part thereof to safeguard the underwater components and to avoid the accumulation of excess silt in Head Race Tunnel.</p> <p>It is, therefore, requested to kindly allow generating stations in such unforeseen scenario of high silt, cloud burst, heavy rain, flash flood, land slide to replace the scheduled generation with actual generation to safeguard the interest of Generating Stations/ Discoms as well as to avoid spillage of water in the interest of country.</p>
<p>New Clause for</p> <p><i>Run-of River type of Hydro Generating Station (i.e. less than three hours pondage)</i></p>	<p>-</p>	<p>The aforesaid draft Regulations mentioned about the Run-of-River Generating Station with Pondage, run of the river hydro plants with upto three hours pondage, However, regarding purely Run-of River Hydro plants the Regulation is silent.</p> <p>It is therefore submitted that the Hon'ble Commission may notify Suitable Regulations in the upcoming IEGC Regulations, 2022 regarding:</p> <p><i>Declared Capacity / Scheduling / Utilization of purely Run-of River type of Hydro Generating Station (i.e. less than three hours pondage) may also be elaborated for its smooth operation.</i></p>
<p>New Clause for</p>		<p>Presently Several Hydro projects are being implemented with additional Dam-Toe Auxiliary Units type of Hydro</p>

Hydro Electric Projects having Auxiliary Units along with Main units due to mandatory release of Environmental flows.

Generating stations (whether the type of HEPs are Run-of-River / Run-of-River with Pondage / Dam-Toe / Storage etc.) to release the mandatory e-flows in the river as per the guidelines issued by Ministry of Environment, Forest and Climate Change.

SJVN is also implementing several Hydro Projects viz, Luhri HEP Stage-I (Main Unit 2X80 MW, Auxiliary Unit 2X25), Sunni Dam HEP (Main Unit 4X73 MW, Auxiliary Unit 1X17MW & 1X73MW), Luhri HEP Stage-II (Main Unit 4X32 MW, Auxiliary Unit 1X12MW & 1X32MW), Reoli Dugli HEP (Main Unit 4X107 MW, Auxiliary Unit 3X10 MW) etc.

Considering additional investment by the developers for the optimum utilization of the mandatory environmental release of water, Regulations regarding how the Declared Capacity will be finalized for the whole plant, how the scheduling would be made by RLDC/SLDC / procedure for the Optimum Utilization of this type of Schemes may be incorporated in the IEGC Regulations 2022 for the smooth operation of the Main Units as well as the Auxiliary units and to avoid any spillage of water in the river.

It is therefore submitted that the Hon'ble Commission may notify Suitable Regulations in the upcoming IEGC Regulations, 2022 regarding:

Suitable Regulations for scheduling/ Declared Capacity / Plant Availability Factor (PAF) of Auxiliary Units along with Main units during Lean season / Non Monsoon - Non Lean Season may also be incorporated for the smooth operation of these types of Hydro

		<p><i>Electric Projects (i.e. HEPs having both main Units as well as Auxiliary units) for the Optimum Utilization of the water resources.</i></p>
<p>New Clause for</p> <p><i>Treatment of mismatch in date of commercial operation:</i></p>		<p>Following treatment of mismatch in date of CoD between Generating Station and Transmission System is proposed:</p> <p><i>Where the generating station has not achieved the commercial operation as on the date of commercial operation of the associated transmission system (which is not before the SCOD of the generating station) and the Commission has approved the date of commercial operation of such transmission system, the generating company shall be liable to pay the transmission charges of the associated transmission system to the transmission licensee till the generating station or unit thereof achieves commercial operation:</i></p> <p><i>Where the associated transmission system has not achieved the commercial operation as on the date of commercial operation of the concerned generating station or unit thereof (which is not before the SCOD of the transmission system), the transmission licensee shall make alternate arrangement for the evacuation from the generating station at its own cost, failing which, the transmission licensee shall be liable to pay the Generation charges to the generating company as determined by the Commission.</i></p>