



एसजेवीएन लिमिटेड

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(भारत सरकार एवं हिमाचल प्रदेश सरकार का संयुक्त उपक्रम)

A Mini Ratna & Schedule "A" PSU

आईएसओ 9001:2008 प्रमाणित कम्पनी

कॉरपोरेट वाणिज्यिक एवम प्रणाली प्रचालन विभाग,

एसजेवीएन कॉरपोरेट कार्यालय परिसर, शनान, शिमला – 171 006

फोन : 0177- 2660210 फैक्स : 0177-2660211,

ई-मेल: gmcsojvn@gmail.com / sjvn.cso@sjvn.nic.in

संदर्भ : एसजेवीएन/सीएवंएसओ (05)/003/ २३२३

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सचिव

केंद्रीय विद्युत नियामक आयोग

3 और 4 मंजिल, चंद्रलोक बिल्डिंग

36, जनपथ, नई दिल्ली - 110001

Sub: Comments/Suggestions on "Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Fifth Amendment) Regulation, 2016

महोदय,

The Hon'ble CERC vide public notice no. L-I/18/2016- CERC dtd. 09.12.2016 has made draft Regulations on the Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Fifth Amendment) Regulation, 2016. Further, Hon'ble CERC invited comments/ suggestions/ objections from the stakeholders and other interested persons on the draft Regulations by 31.01.2017.

In this regard, SJVN has prepared comments/ suggestions on the draft Regulations on the Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Fifth Amendment) Regulation, 2016 and are attached as Annexure-I for kind consideration please.

सधन्यवाद,

एसजेवीएन लिमिटेड की ओर से,
भवदीय,


महाप्रबंधक (सी एंड एसओ)

संलग्न: यथोक्त

Amendment proposed in the draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Fifth Amendment) Regulation, 2016.

PART-6 SCHEDULING AND DESPATCH CODE:

a) Regulation 6.4 Demarcation of responsibilities:

Clause 17:

*While making or revising its declaration of capability, except in case of Run off the River (with up to three hour pondage) hydro stations, the ISGS shall ensure that the declared capability during peak hours is not less than that during other hours. **However, exception to this rule shall be allowed in case of tripping/re-synchronisation of units as a result of forced outage of units.***

Proposed amendment in Regulation 6.4 (17):

However, exception to this rule shall be allowed in case of tripping/re-synchronisation of units/ as a result of forced outage of units or exigent conditions compelling ISGS to stop the unit(s)/station to prevent an imminent damage to a costly equipment in consultation with NRLDC.

Comments:

- i) It is submitted that two Power Projects of Himachal Pradesh viz 1500 MW Nathpa Jhakri Hydro Power Station (NJHPS) and 412 MW Rampur Hydro Power Station (RHPS), are located on Satluj River and attain peak discharge during summer from June to September every year due to melting of glacier. During this time, NJHPS operates continuously round-the-clock on account of large inflow/availability of water. During exceptional circumstances only, these two projects are sometimes forced to be put under shut-down due to reasons of high silt/ reservoir flushing or opening of silt flushing gate in NJHPS, or in the upstream hydro power projects such as Karcham Wangtoo Hydro Power Station (KWHPS). Such high silt/silt flushing/reservoir flushings are immediately intimated to NRLDC as per the provisions of Grid Regulation.
- ii) The aforesaid phenomena of high silt/reservoir flushing is an event beyond the control of the generator and therefore shut-down of its generating units are required despite that the machines are available for generation. Such a shut-down is imminent

to avoid any damage to the power plant/equipment and to prevent silt water entering into the tunnel beyond the permissible limit. The above event is not attributable to the generator and in such circumstances the shut-down of the machines should be viewed as on account of water being not available for generation of electricity and not for any defect or deficiency in the machines or power plant system maintained by the generator.

b) Regulation 6.5 Scheduling and Despatch procedure for long-term access, Medium – term and short-term open access:

Clause 12: Run-of-river power station with pondage and storage type power stations are designed to operate during peak hours to meet system peak demand. Maximum capacity of the station declared for the day shall be equal to the installed capacity including overload capability, if any, minus auxiliary consumption, corrected for the reservoir level. The Regional Load Despatch Centers shall ensure that generation schedules of such type of stations are prepared and the stations despatched for optimum utilization of available hydro energy except in the event of specific system requirements/constraints.

Proposed amendment in Regulation 6.5 (12):

The Regional Load Despatch Centers shall ensure that generation schedules of such type of stations are prepared and the stations despatched for optimum utilization of available hydro energy except in the event of specific system requirements/constraints/ tandem operation of projects to avoid spillage of water.

Comments:

- i) SJVN Limited, 412 (6 X 68.67) MW of Rampur Hydro Power Station (RHPS) is being operated in tandem with the upstream project i.e. 1500(6 X 250) MW Nathpa Jhakri Hydro Power Station (NJHPS) and is dependent on the water released from the NJHPS. Satluj water is stored in the DAM/ Reservoir of NJHPS for its generation. RHPS is a unique generating station which does not have its own storage / pondage at all and is operating with water coming out from the Tail Race Tunnel of NJHPS. The water being used for generation in NJHPS is diverted into the Rampur intakes through the TRT pond. The discharge of water released from NJHPS is utilized by RHPS avoiding any spillage of water at TRT of NJHPS.
- ii) Due to tandem operation of aforesaid two projects, if for any reason, one unit of Nathpa Jhakri Project of 250 MW is out of operation and accordingly the proportionate water cannot be utilised for generation of one unit of 68.67 MW of the



Rampur Project. Although all the units of Rampur Project are fully available, but because of non-availability of water from the Nathpa Jhakri Project (due to non-availability of one unit of Nathpa Jhakri Project), water equivalent to one unit for Rampur HPS does not get released till such time the 250 MW of Nathpa Jhakri Project is brought back into operation. Similarly, if one unit of Rampur Project cannot be operated for any reason, the operation of all six unit(s) of Nathpa Jhakri Project and release of water for the purpose would result in the wasteful/spillage of water, due to not being utilised for generation of electricity by Rampur Project for the capacity of one unit of 68.67 MW.

- iii) In the peculiar facts and circumstances mentioned herein above, SJVN Limited could be constrained in the National interest not to release the water for generation of electricity in both the Nathpa Jhakri Project and Rampur Project, under the circumstances where a unit of Rampur Project or the Nathpa Jhakri Project, as the case may be, is not available for generation of electricity, though the unit in the other project is available for generation and supply of electricity. Such a situation is for reasons other than those attributable to SJVN Limited and has been mandated on account of the utilisation of water of the Sutlej River to the maximum extent possible. The above arrangement is beneficial to the Procurers of electricity, especially during the lean season, the water of Sutlej river is stored in the reservoir/pondage maintained upstream of the Nathpa Jhakri Project and gets released only when the generation is possible at both Nathpa Jhakri Project and Rampur Project in tandem.

c) Amendment of Part 5 of Principal Regulations as proposed in draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Fifth Amendment) Regulation, 2016:


- ii) Following para may be added at the end of clause 5.2 (h):

"For the purpose of ensuring sustainable primary response, RLDCs/SLDCs shall not schedule the generating units beyond ex bus generation corresponding to 100% of the Installed capacity.....

Proposed amendment in Regulation:

- ii) Following para may be added at the end of clause 5.2 (h):

"For the purpose of ensuring sustainable primary response, RLDCs/SLDCs shall not schedule the generating units beyond ex bus generation corresponding to 100% of the Installed capacity except for optimum utilization of available hydro energy during high inflow season.....



Comments:

- i) During high inflow season i.e. Summer season from June to September due to glacier melting, water inflow in the Satluj River increases manifold, which is more than enough for generation of all its generating units of NJHPS and RHPS including overload capability. In Such circumstances, water is being spilled out from the reservoir/DAM of Nathpa Jhakri project, which is unavoidable and beyond the control of generator due to excess inflow, by opening of Dam gates. During such period, imposition of scheduling corresponding to Ex-bus installed capacity of plant/unit(s) for the purpose of ensuring sustainable primary response, would lead to more spillage of water which can be utilised by overloading of machine up to some extent.
- ii) Hence during the high inflow season, when inflow in the reservoir is in excess of the design discharge round-the-clock, the generating units may operate on overload capacity to the extent of the capability of machine by utilising more water and thus leading to less spillage of water. The above scheme would not only be a prudent utility practice to be adopted but also in the National interest and more particularly in the interest of the Procurers. Thus, optimum utilization of water from the generating station can meet the power requirement of the Grid and thus overloading may be allowed during the peak season or for system requirements.

