



टीएचडीसी इंडिया लिमिटेड THDC INDIA LIMITED

(भारत सरकार एवं उ.प्र.सरकार का संयुक्त उपक्रम)
(A Joint venture of Govt. of India & Govt. of UP)

CIN : U45203UR1988GOI009822

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टीएचडीसीआईएल/टिहरी /ओ एंड एम /ओपीएन/एफ -27/ 3059

दिनांक: 31.08.22

सेवा में,

सचिव,

केंद्रीय विद्युत विनियामक आयोग
तृतीय एवं चतुर्थ तल, चंद्रलोक भवन
36 जनपथ, नयी दिल्ली -110001

विषय: Tehri HPP inputs/ suggestion on Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022.

महोदय,

With reference to above subject matter the inputs/ suggestion of Tehri HPP on Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022 are attached herewith for kind consideration.

धन्यवाद |

भवदीय

Arvind
31/08

(डी.एस.चौहान)

उप-महाप्रबन्धक(ओएंडएम)

संलग्न: उपरोक्तानुसार

Inputs/Suggestions on Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulation, 2022:

1) Regulation 30 clause 10(h): All generating stations mentioned in Table-4 (under clause (g) of this Regulation) shall have the capability of instantaneously picking up to a minimum 105% of their operating level and up to 105% or 110% of their MCR, as the case maybe, when the frequency falls suddenly and shall provide primary response. Any generating station not complying with the above requirements shall be kept in operation (synchronized with the regional grid) only after obtaining the permission of the concerned RLDC.

The hydro generators with large reservoir variation generally run on part load below its rated head. Further, during low head conditions the declared DC is less than the 100% IC (less AEC) and generator is declaring the DC as per their ex-bus capability.

For example: in case of Tehri HPP the declared DC varies from 480 MW to 1064 MW (i.e. 120 MW per unit at low head condition & 266 MW at High Head Condition per unit) according to the available head whereas the installed capacity of plant is 1000 MW (i.e. 250 MW per unit at rated head). Therefore, when DC is between 480 MW to 988 MW (approximately from January to July) i.e. DC is less than the 100% of IC (less AEC) the provision of keeping primary reserve margin is not applicable and these margins should be maintained by RLDCs. Hence ***the provision of keeping primary reserve margin is not applicable if DC is less than the 100% of IC (less AEC). In such condition these reserves may be maintained by RLDC through scheduling.***

Reference in this context shall be taken from SOR of CERC (IEGC) Regulations 5th amendment, 2017 as decided by the commission:

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S.No 13.2.2: *“This provision of keeping primary reserve margin is not applicable to units which have declared DC less than the 100% of IC (less AEC).*

2) Regulation 45 clause 8(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.

Provided that in case of REGS or ESS the available capacity shall be declared by such regional entity generating station.

The declaration of generating capacity beyond 100% MCR including overload capacity is the prerogative of generators. ***Limiting it to 100 % MCR will not only impact the calculation of PAF but will further demoralise the generators in utilizing their overload capacity for rendering mandatory 5% primary response.***

For example: Tehri HPP declare the DC more than 100% MCR from mid August to mid January due to available head more than the rated one. During this period Tehri HPP runs on overload capacity and also provides maximum primary response.

Reference in this context shall be taken from Clause no 13.2.8 of SOR of CERC (IEGC) Regulations 5th amendment, 2017 *“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 as stated by the Commission”*

3) Regulation 47 Clause no 2(b): Margins for primary response:

For the purpose of ensuring primary response, RLDCs and SLDCs, as the case may be, shall not schedule the generating station or unit(s) thereof

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beyond ex-bus generation corresponding to 100% of the Installed capacity of the generating station or unit(s) thereof. The generating station shall not resort to Valve Wide Open (VWO) operation of units, whether running on full load or part load, and shall ensure that there is margin available for providing governor action as primary response.

A) The hydro generators with large reservoir variation run on part load below its rated head during low head conditions the declared DC is less than the 100% IC (less AEC) and generator will declare the DC as per their ex-bus capability hence the provision of keeping primary reserve margin is not applicable if DC is less than the 100% of IC (less AEC). In such condition these reserves may be made available by RLDC through scheduling.

For example: in case of Tehri HPP the declared DC varies from 480 MW to 1064 MW (i.e. 120 MW per unit at low head condition & 266 MW at High Head Condition per unit) according to the available head whereas the installed capacity of plant is 1000 MW (i.e. 250 MW per unit at rated head). Therefore, when DC is between 480 MW to 988 MW (approximately from January to July) i.e. DC is less than the 100% of IC (less AEC) the provision of keeping primary reserve margin is not applicable and these margins should be maintained by RLDCs.

Reference in this context shall be taken from SOR of CERC (IEGC) Regulations 5th amendment, 2017 as decided by the commission:

S.No 13.2.2: *“This provision of keeping primary reserve margin is not applicable to units which have declared DC less than the 100% of IC (less AEC).”*

- Further if the DC is above 100% of IC (Less AEC) the above regulation is suitable.

A. Khan

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(Khan)

- Hence it is requested to provide the clarification that the reason explained in SOR of CERC (IEGC) Regulations 5th amendment, 2017 S.No. 13.2.1 & 13.2.2 are still valid in respect of these new draft IEGC regulations for reservoir based Hydro generators.

B) Regulation 5.3 of CERC (Ancillary Services), Regulations, 2022 states "The mechanism of procurement, deployment and payment of Primary Reserve Ancillary Services (PRAS) shall be specified in the Grid code or under these regulations to be notified separately, as the case may be."

CERC (DSM) Regulations, 2022 there is penalty for over injection above 2% of scheduled generation.

Further, in accordance with CERC (Draft IEGC) Regulations, 2022 the generators are obligated to ensure minimum 5% primary reserve margin. Hence it is proposed that all these regulations should be in line with new IEGC regulations to avoid any financial implications on generators for providing primary response.

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