CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No. 18 /SM/2023

Coram: Shri Jishnu Barua, Chairperson Shri I. S. Jha, Member Shri Arun Goyal, Member Shri P.K. Singh, Member

Date of Order: 18.12.2023

In the matter of:

Removal of difficulties (Second Order) in giving effect to certain provisions of Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2023.

<u>ORDER</u>

The CERC (Indian Electricity Grid Code) Regulations, 2023 (hereinafter referred to as "Grid Code") were published on 11.07.2023, in the Gazette of India Extraordinary (Part-III, Section-4, No. 488). The provisions of the Grid Code have been notified to come into effect from 01.10.2023.

2. The Commission issued removal of difficulties (first order) on 30.09.2023 in giving effect to certain provisions of the Grid Code based on the representations received from various stakeholders.

3. Grid-India, vide its letter dated 24.11.2023, NLC India Limited (NLC), vide their letter dated 03.10.2023 and 14.11.2023, NTPC Ltd. vide letters dated 13.11.2023 and 14.12.2023, NEEPCO, vide e-mail dated 24.11.2023 and NLC Tamilnadu Power Limited (NTPL) vide letter dated 18.11.2023 have submitted that they are facing certain difficulties with regard to the various provisions as stipulated in the Grid Code 2023. Further, Govt. of HP, vide its letter dated 4.10.2023 has raised



issues regarding scheduling of free power under the GNA Regulations and Grid Code. The difficulties indicated by the Grid-India, NLC, NTPC, NEEPCO, NTPL and Govt of HP have been addressed in this Order in light of their specific facts and circumstances regard. The issues raised and their treatment are detailed herewith in subsequent paragraphs.

Issue No. 1: Issue of Minimum turndown Schedule

4. Grid India has submitted that some beneficiaries (Discoms/ States) who avail of full requisition against their entitlements by 0800 hrs of 'D-1' day surrender their entitlements on the day of operation ('D' day) and close to real time (1.5 hour to 2 hours before the delivery period on 'D' day). This sometimes results in the generators getting schedules below the minimum turndown level on 'D' day and may lead to the units(s) going under unit shutdown (USD) when there is a system level requirement during non-solar hours.

5. NLC has brought out similar issues as pointed out by Grid-India about revision of schedules by beneficiaries to below the Minimum turn down level on 'D' day. NLC has submitted that in Lignite fired Boilers, running the plant below the minimum turndown level is very unsafe and often results in furnace instability and tripping of the Boiler/Unit. However, with schedule less than the minimum turndown level, if the units are kept in operation at minimum turndown level owing to the safety aspects, the stations face huge losse due to over injection or trading of excess power at rates less than ECR during low demand period. In the NLC's NNTPS plant on 01.10.2023, with one unit in service there were seventeen instances of schedule lower than the minimum turndown level (55%) due to last moment downward revision of schedule by the beneficiaries as shown below

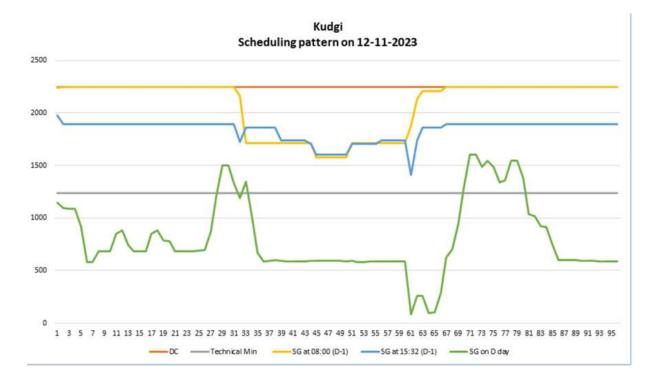
Block	DC (MW)	ISGS(MW)	AS (MW)	RTM (MW)	SCH (MW)	% SCH
41	420	252.39	0	0	252.39	53.84
42	420	252.39	0	0	252.39	53.84
43	430	230.31	0	0	230.31	49.13
44	430	230.31	0	0	230.31	49.13
45	430	230.31	-42.35	70	257.96	55.03
46	430	230.31	-42.35	70	257.96	55.03
47	430	230.31	0	23.81	254.12	54.21
48	430	230.31	0	0	230.31	49.13
49	430	230.31	0	0	230.31	49.13
50	430	230.31	0	0	230.31	49.13
51	420	228.69	0	0	228.69	48.79
52	420	228.69	0	0	228.69	48.79
53	420	228.69	0	0	228.69	48.79

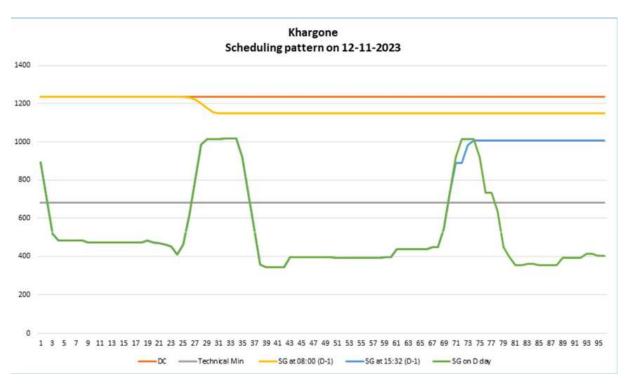
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54	420	228.69	0	0	228.69	48.79
55	430	230.31	0	0	230.31	49.13
56	430	230.31	0	70	300.31	64.07
57	430	230.31	0	0	230.31	49.13

Hence, NLC has requested to make minimum turndown level schedule protection for generators during day of operation (D) in the interest of grid security and safe operation of generating stations. NTPL has also made similar submissions.

6. NTPC has submitted that as per the provision under Regulation 49(4)(b) of the Grid Code 2023, the downward revision of schedule is allowed subject to the provisions relating to SCUC under Regulation 46. It is observed that beneficiaries are providing full schedule on D-1 day but are revising the same on real time basis that too below minimum turndown level(MTL) leading to infeasible schedules for the generators. This is forcing the generators to over inject in the grid wherever SG is less than MTL causing grid violations and bearing huge DSM. The scheduling pattern of beneficiaries on D-1 and on D Day is shown as under:





Due to the full schedule on 'D-1' day, the generator is not able to bid the URS in DAM, restricting the participation of the unit in SCUC provisions/MOD stacking of stations and also USD planning on D-1 day. Therefore, the downward revision of the schedule by the buyers be limited up to the Minimum turn down level.

7. We have considered the submissions of NLC, NTPC, NTPL and Grid-India. The Regulations 49(1)(f) (i), 49(4)(b)(ii) and 49(4)(c) of the Grid Code provide as under:

"49. PROCEDURE FOR SCHEDULING AND DESPATCH FOR INTER-STATE TRANSACTIONS

(1) The following scheduling related activities shall be carried out daily for regional entities, on day ahead basis, 'D-1' day, for supply of power on 'D' day, as follows:

(f) Requisition of schedule by the buyers which are GNA grantees:

(i) Based on the entitlement declared in accordance with sub-clause (b) of clause (1) of this Regulation, SLDC on behalf of the intra-State entities which are drawee GNA grantees, shall furnish time block-wise requisition for drawal to the concerned RLDC in accordance with the contracts, by 8 AM of 'D-1' day.

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(4) Revision of schedules on request of buyers which are GNA grantees:

(b) The request for revision of scheduled transaction for 'D' day, shall be allowed subject to the following:

(ii) Request of buyers for downward revision of schedule from the generating stations, whose tariff is determined under Section 62 of the Act shall be allowed in any time block subject to the provision relating to SCUC under Regulation 46



of these regulations.

(c) Based on the request for revision in schedule made as per sub-clauses (a) and (b) of this clause, 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."

As per the above, the beneficiaries are allowed to revise schedule downwards for 'D' day which shall be effective from 7th /8th time block.

8. As submitted by the different stakeholders as well as Grid-India, it is observed that the beneficiaries are providing schedules above minimum turndown level on 'D-1' day but revising the same on 'D' day to below minimum turndown level. The generating station in such a situation can sell the surplus power in RTM. However, in case such power does not get sold, it is forced to over-inject to sustain operation up to the minimum turndown level, so that it is able to supply power during the peak demand period of the day. Such over-injection might lead to a higher frequency in Grid, and could also lead to other situations when a generating station might go under , which might result in depletion of on-bar capacity and hence reserves in the system. On the other hand, the beneficiaries are also required to be provided flexibility to revise schedules to manage their portfolio of RE and conventional generating stations within the State control area and in RLDC control area. There is, therefore, a need to balance the technical requirement of the generation stations and the need of the beneficiaries to manage their portfolio of purchases commensurate with the demand in their areas of supply.

9. Regulation 46(4) of the Grid Code provides as follows:

"(c) After 1430 Hrs, the NLDC in coordination with RLDCs shall prepare the final list of such generating units that are likely to go below their minimum turndown level and such generating units shall be stacked as per merit order, that is, in the order of the lowest energy charge to the highest energy charge. The generating units so identified shall be considered for undertaking SCUC.

(d) If the NLDC in coordination with the RLDCs, after considering the bid results as finalized and available from DAM-AS, anticipates shortfall of reserves in D day due to (i) extreme variation in weather conditions; (ii) high load forecast; (iii) the requirement of maintaining reserves on regional or all India basis for grid security; (iv) network congestion, NLDC may schedule incremental energy from the generating units in the list referred to in sub-clause (c) of this clause , so as to bring such units to their minimum turndown level in order to maximize availability of on- bar units, by 1500 Hrs. of D-1 day and update the list on the respective RLDC website:

Provided that in respect of such generating station or unit thereof which has been brought to its minimum turndown level by the NLDC under this clause, downward

revision by the beneficiary shall not be allowed."

As per above, NLDC shall prepare the list of generating stations after 1430hrs on 'D-1' day that are likely to go below their minimum turndown level and accordingly consider them for taking under SCUC. The generating stations, which are provided a schedule above the minimum turndown level up to 1430 hrs on 'D-1' day, cannot be considered under day ahead SCUC as they are considered on bar. When such generating stations which were considered on-bar on 'D-1' day while running SCUC go under shutdown due to below minimum turndown level schedule on 'D' day, it leads to an anomalous situation of not having a true picture of the generating stations which could have been considered for SCUC on 'D-1' day. This renders the whole exercise of SCUC in 'D-1' day infructuous resulting in the inadequacy of reserves with respect to inertia and otherwise. We observe that a careful balance needs to be maintained between RE and conventional sources to ensure adequacy of power availability for a full day, including non-RE hours and peak demand.

10. Keeping in view the difficulties expressed by the Grid-India with respect to SCUC and generating stations, we are of the considered view that while the beneficiaries/buyers shall have full flexibility to decide on their requisition from a generating station up to 1430 hrs on 'D-1' day, (their right to revision of schedules in the said generating station for 'D' Day shall be subject to the condition that such revision of schedule for 'D' Day shall not be below their respective share of minimum turndown level in the respective generating station. This shall enable a realistic SCUC exercise and help ensure adequacy of reserves in the system, while at the same time enabling the beneficiaries/buyers to undertake advance planning and optimal portfolio management of their power purchases.

Issue No. 2: Revision of Declared Capacity for Partial Loading

11. NLC has submitted that although revision of DC is allowed only twice in a day in spite of best efforts the equipment outages and variations in fuel parameters normally require more revisions to avoid deviation charges. Further variations in lignite quality mainly during monsoon require frequent revisions. DC revision should be permitted as per the earlier procedures or at least a minimum of 185 revisions per month for NLCIL Lignite fired thermal power stations as under:

No. of DC revisions in Sept. 2023							
Station	No. of DC revisions						
TPS-1 E	119						
TPS-2	139						
NNTPS	214						
TPS-2 E	267						
Average per month	185						

12. NEEPCO has submitted that only 2 nos. of allowed DC revision have been causing a lot of problems. Capacity may change within a day many a time considering various factors e.g. outage of machines, and change in the gas network parameters, which cannot anticipated a day in advance. Therefore, more DC revisions may be allowed.

13. NTPC has submitted 2 DC revisions, are insufficient, particularly for stations having 6-7 units. Operation of thermal stations involves running several auxiliary systems in tandem, and unit capability is affected due to various factors beyond the control of the generator, e.g. breakdown of auxiliaries, changes in weather conditions, variations in the coal quality etc., which require DC revisions. Moreover, there are situations when the generators want to raise the DC to supply power to the grid but are unable to do so because of the said DC restriction. In view of the same, at least 60 (sixty) revisions may be allowed in a month, and the generating stations having 4 or more Units be allowed 90 (ninety) revisions of DC per month.

14. Grd India has submitted that having the correct On-bar DC is essential for the purpose of reserve assessment, SCED, SCUC and ancillary services. Further, the Late Payment Surcharge Rules 2022, notified by the Ministry of Power and the IEGC 2023, envisage the sale of any surplus power in the market (DAM/ RTM). In order to prevent potential gaming, the number of changes in On-bar DC may be restricted to 4 revisions in a day.

15. We have considered the suggestions of the generating stations and Grid-India. We observe that considering the technical difficulties expressed by the different stakeholders, the Commission vide order dated 30.09.2023 in Petition No. 14/SM/2023, has already allowed 2 (two) revisions of Declared Capacity and schedule

in a day due to reasons such as partial outage of the unit or variation of water availability for hydro generating stations or variations in supply of gas for gas generating stations. The relevant extract of order dated 30.09.2023 is as follows:

"22. We observe that the generating station should be able to estimate its DC on day ahead basis reasonably. The revision of DC deprives the beneficiaries of the entitled power and may disturb the portfolio management of the beneficiaries. Frequent revisions of DC create uncertainty for the beneficiaries and must be minimised. However, keeping in view of the difficulties expressed by the various types of generating stations and Grid-India, we are of the considered view that generating stations or ESS covered under Regulation 49(7) of the Grid Code shall be allowed 2 (two) revisions of Declared Capacity and schedule in a day due to reasons such as partial outage of the unit or variation of water availability for hydro generating stations or variations in supply of gas for gas generating stations. The revised schedule shall become effective from the 7th time block or 8th time block as per clause (4) of Regulation 49, counting the time block in which the revision is informed by the generator or ESS to be the first one. However, this dispensation is allowed for a period of six months from 1.10.2023. To avoid any misdeclaration of DC by a generating station, we are of the view that the generating station shall keep a digital record of the reason for the revision of DC, which can be independently verified by RLDC or RPC. The reasons for the revision of DC shall be taken up at RPC to minimize such revision. NLDC is advised to submit a report after a period of 3 months reporting the reasons for such revisions to facilitate suitable regulatory directions in this regard."

16.	The actual number of DC revisions in respect of some of the NLC plants for 2022-
23 a	is submitted by the NLC is as under:'

	Month wise DC REVISIONS 2022-23											
Ther	nal Power Stat	ion II (7X 210	Thermal Power Station II Expansion 2 X 250 MW									
Month	Downward	Upward	Total	Downward	ownward Upward							
Apr-22	118	90	208	231	143	374						
May-22	119	98	217	225	141	366						
Jun-22	104	87	191	274	189	463						
Jul-22	103	97	200	256	141	397						
Aug-22	106	107	213	335	247	582						
Sep-22	100	103	203	402	249	651						
Oct-22	113	110	223	562	403	965						
Nov-22	88	76	164	228	194	422						
Dec-22	82	53	135	276	211	487						
Jan-23	52	95	147	301	161	462						
Feb-23	65	65	130	339	227	566						
Mar-23	60	110	170	241	91	332						

Grand 1110 Total	1091	2201	3670	2397	6067
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Further the number of DC revisions in respect of the some of the plants of NTPC, as submitted by NTPC for year 2022-23 are as under:

Singrault DC UP 29 36 29 20 28 38 35 32 27 16 25 31 Tunits DC DOWN 21 29 22 15 22 24 25 37 14 13 18 19 Total 50 65 51 35 50 62 60 63 41 29 43 50 Rhand-I DC UP 46 37 21 47 15 3 22 6 15 3 14 12 2 units DC DOW 64 1 1 7 3 1 1 0 1 1 0 1 1 1 0 1		Month	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Total 50 65 51 35 50 62 60 69 41 29 43 50 Rihand-I DC UP 46 37 21 47 15 3 22 6 15 3 14 12 2 units DC DWN 34 19 13 26 10 2 7 8 7 3 16 6 Dadri-I DC DWN 6 4 1 1 7 3 11 1 0 4 4 4 Dc DVN 6 4 1 1 7 3 1 1 0 4 4 4 Dc UP 13 3 1 8 1 0 2 0 2 1 3 1 0 3 0 4 8 4 0 Dadri-I DC UP 13 3 2 11 2 3 <t< th=""><th>Singrauli</th><th>DC UP</th><th></th><th>-</th><th>29</th><th>20</th><th>-</th><th></th><th>35</th><th>32</th><th>27</th><th>16</th><th>25</th><th>31</th></t<>	Singrauli	DC UP		-	29	20	-		35	32	27	16	25	31
Rhand-I DC UP 46 37 21 47 15 3 22 66 15 3 14 12 2 units DC DOWN 34 19 13 26 10 2 7 88 7 3 100 6 Total 80 56 34 73 25 5 29 144 22 6 24 18 Dadri-I DC UP 5 7 3 5 14 8 1 1 0 17 2 22 4 units DC UP 13 3 1 8 1 0 3 0 4 4 4 De UP 7 33 1 8 1 0 3 0 4 8 4 0 Qunits DC DWN 6 2 11 3 1 0 3 14 1 Qunits DC DWN <t< th=""><th>7units</th><th>DC DOWN</th><th>21</th><th>29</th><th>22</th><th>15</th><th>22</th><th>24</th><th>25</th><th>37</th><th>14</th><th>13</th><th>18</th><th>19</th></t<>	7units	DC DOWN	21	29	22	15	22	24	25	37	14	13	18	19
2 units DC DOWN 34 19 13 26 10 2 7 8 7 3 10 6 Total 80 56 34 73 25 5 29 14 22 6 24 18 Dadri-I DC UP 5 7 3 55 14 8 1 1 0 17 22 22 4 units DC DOWN 6 4 1 1 7 3 1 1 0 4 4 4 Dc DWN 6 2 1 3 1 0 3 0 4 8 4 0 2 units DC DWN 6 2 11 2 0 5 0 36 14 9 VSTPS-I DC UP 7 33 21 24 47 47 29 17 17 31 55 42 Gunit		Total	50	65	51	35	50	62	60	69	41	29	43	50
Total 80 56 34 73 25 5 29 14 22 6 24 18 Dadri-I DC UP 5 7 3 55 14 8 1 1 00 17 2 22 4 units DC DWN 6 44 1 1 7 3 1 1 0 4 4 4 Dadri-II DC DWN 6 44 1 1 7 3 1 1 1 2 2 0 21 65 26 Dadri-II DC UP 13 3 1 8 1 0 3 0 4 8 4 0 Zunits DC DWN 6 2 11 2 0 5 0 36 16 14 9 VSTPS-I DC UP 7 33 21 24 47 47 23 17 17 </th <th>Rihand-I</th> <th>DC UP</th> <th>46</th> <th>37</th> <th>21</th> <th>47</th> <th>15</th> <th>3</th> <th>22</th> <th>6</th> <th>15</th> <th>3</th> <th>14</th> <th>12</th>	Rihand-I	DC UP	46	37	21	47	15	3	22	6	15	3	14	12
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VSTPS-I DC UP 7 33 21 24 47 47 29 17 17 31 55 42 6 units DC DOWN 6 26 15 28 37 36 21 26 19 45 66 30 Sipat-II DC UP 46 14 1 11 2 3 6 5 0 0 2 2 Sipat-II DC UP 46 14 1 11 2 3 6 5 0 0 2 2 2 units DC DOWN 38 14 1 6 2 2 1 3 1 0 4 0 Lara DC UP 44 38 25 28 62 46 14 22 32 41 7 31 2 units DC DOWN 21 9 12 19 49 15 12 11	2 units	DC DOWN	6	2	1	3	1	0	3	0	4	8	4	0
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2 units DC DOWN 4 6 10 9 2 3 3 2 9 2 4 7 Image: Constraint of the stress of th		Total	65	47	37	47	111	61	26	33	59	71	14	5
Total 10 22 25 22 7 8 4 5 23 3 11 19 Khargone DC UP 3 15 7 2 10 1 2 3 8 2 6 11 2 units DC DOWN 3 4 3 3 3 2 2 1 4 3 7 4 2 units DC DOWN 3 4 3 3 3 2 2 1 4 3 7 4 3 7 2 10 5 13 3 4 4 12 5 13 15 Ramagundam- I&II DC UP 25 24 58 98 64 63 22 37 37 20 31 30 6 units DC DOWN 11 19 51 66 55 48 29 35 39 12 18	Gadarwara	DC UP	6	16	15	13	5	5	1	3	14	1	7	12
Khargone DC UP 3 15 7 2 10 1 2 3 8 2 6 11 2 units DC DOWN 3 4 3 3 2 2 1 4 3 7 4 2 units DC DOWN 3 4 3 3 3 2 2 1 4 3 7 4 M C DOWN 3 4 3 3 3 2 2 1 4 3 7 4 M C DOWN 3 4 3 3 3 2 2 1 4 3 7 4 M C DOWN 6 19 10 5 13 3 4 4 12 5 13 15 Ramagundam- I&III DC UP 25 24 58 98 64 63 22 37 37 20 31 30 6 units	2 units	DC DOWN	4	6	10	9	2	3	3	2	9	2	4	7
2 units DC DOWN 3 4 3 3 3 2 2 1 4 3 7 4 2 units DC DOWN 3 4 3 3 3 2 2 1 4 3 7 4 Matrix Total 6 19 10 5 13 3 4 4 12 5 13 15 Ramagundam- I&II DC UP 25 24 58 98 64 63 22 37 37 20 31 30 6 units DC DOWN 11 19 51 66 55 48 29 35 39 12 18 33 6 units DC DOWN 11 19 51 66 55 48 29 35 39 12 18 33 6 units DC DOWN 36 43 109 164 119 111 51 72 76 32 49 63		Total	10	22	25	22	7	8	4	5	23	3	11	19
Total 6 19 10 5 13 3 4 4 12 5 13 15 Ramagundam- I&II DC UP 25 24 58 98 64 63 22 37 37 20 31 30 6 units DC DOWN 11 19 51 66 55 48 29 35 39 12 18 33 Total 36 43 109 164 119 111 51 72 76 32 49 63	Khargone	DC UP	3	15	7	2	10	1	2	3	8	2	6	11
Ramagundam- I&II DC UP 25 24 58 98 64 63 22 37 37 20 31 30 6 units DC DOWN 11 19 51 66 55 48 29 35 39 12 18 33 Total 36 43 109 164 119 111 51 72 76 32 49 63	2 units	DC DOWN	3	4	3	3	3	2	2	1	4	3	7	4
Isli DC UP 25 24 58 98 64 63 22 37 37 20 31 30 6 units DC DOWN 11 19 51 66 55 48 29 35 39 12 18 33 Total 36 43 109 164 119 111 51 72 76 32 49 63		Total	6	19	10	5	13	3	4	4	12	5	13	15
Total 36 43 109 164 119 111 51 72 76 32 49 63		DC UP	25	24	58	98	64	63	22	37	37	20	31	30
	6 units	DC DOWN	11	19	51	66	55	48	29	35	39	12	18	33
Kudgi DC UP 38 29 3 8 2 3 10 1 6 30 6 6		Total	36	43	109	164	119	111	51	72	76	32	49	63
	Kudgi	DC UP	38	29	3	8	2	3	10	1	6	30	6	6
3 units DC DOWN 33 10 2 4 2 2 1 1 2 21 4 2	3 units	DC DOWN	33	10	2	4	2	2	1	1	2	21	4	2
Total 71 39 5 12 4 5 11 2 8 51 10 8		Total	71	39	5	12	4	5	11	2	8	51	10	8
Bongaigaon DC UP 22 12 10 8 12 15 9 5 14 10 26 32	Bongaigaon	DC UP	22	12	10	8	12	15	9	5	14	10	26	32
3 units DC DOWN 18 7 9 8 7 9 8 5 7 7 17 24	3 units	DC DOWN	18	7	9	8	7	9	8	5	7	7	17	24

	Total	40	19	19	16	19	24	17	10	21	17	43	56
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As per above, it is observed that the number of revisions vary across stations, with stations having less number of units revising DC up to 60 times in a month. For the month of October 2022, daily revisions of DC have been as follows for two sample stations:

		Singrauli		Rihand-I			
Date	DC Up	DC Down	Total	DC Up	DC Down	Total	
10/1/2022	3	1	4	5	2	7	
10/2/2022	0	0	0	3	0	3	
10/3/2022	3	3	6	2	1	3	
10/4/2022	3	2	5	0	0	0	
10/5/2022	0	0	0	0	0	0	
10/6/2022	1	2	3	0	0	0	
10/7/2022	1	2	3	0	0	0	
10/8/2022	3	0	3	0	0	0	
10/9/2022	0	1	1	0	0	0	
10/10/2022	0	1	1	0	0	0	
10/11/2022	2	0	2	0	0	0	
10/12/2022	6	3	9	0	1	1	
10/13/2022	2	0	2	0	1	1	
10/14/2022	0	0	0	3	0	3	
10/15/2022	1	2	3	4	2	6	
10/16/2022	0	0	0	0	0	0	
10/17/2022	0	0	0	4	0	4	
10/18/2022	0	0	0	1	0	1	
10/19/2022	0	0	0	0	0	0	
10/20/2022	0	0	0	0	0	0	
10/21/2022	1	1	2	0	0	0	
10/22/2022	0	0	0	0	0	0	
10/23/2022	0	0	0	0	0	0	
10/24/2022	0	0	0	0	0	0	
10/25/2022	0	0	0	0	0	0	
10/26/2022	0	1	1	0	0	0	
10/27/2022	1	0	1	0	0	0	
10/28/2022	2	0	2	0	0	0	
10/29/2022	1	3	4	0	0	0	
10/30/2022	5	1	6	0	0	0	
10/31/2022	0	2	2	0	0	0	

As per above, daily revision of DC varies from 2 to 6 in the abovesaid sample stations. This is the data for the period when there were no restrictions on DC revision. Considering the changed regime under GNA and the new Grid Code, generating

stations have reduced DC revisions.

17. We observe that DC revisions in Lignite based thermal power stations of NLC are much higher than the coal based thermal power stations of the NTPC. The various reasons as cited by the NTPC and NLC, for revisions in their DC include the Mill feeder problem, boiler tube leakage, coal quality issues, HP/LP bypass problem, PA fan problem, lignite quality, ash handling system issue etc. Further, in the case of gas based generating stations having dedicated gas wells, DC may need to be revised based on supply of gas to avoid flaring of gas. In case of hydro generating stations, varying amount of water supply of silt may lead to requirement of revision of DC.

18. As noted in the order dated 30.09.2023, the generating station should be able to reasonably estimate its DC on day ahead basis. The revision of DC deprives the beneficiaries of the entitled power and may disturb the portfolio management of the beneficiaries. Frequent revisions of DC create uncertainty for the beneficiaries and must be minimised. However, keeping in view the difficulties expressed by various types of generating stations and as reported by Grid-India, in partial modification to the Commission order dated 30.09.2023 in suo-moto Petition 14/SM/2023, we are of the considered view that the generating stations or ESS covered under Regulation 49(7) of the Grid Code, except lignite, gas based thermal generating stations and hydro generating stations, shall be allowed a maximum 4 (four) revisions of Declared Capacity and schedule per day subject to maximum 60 (sixty) revisions during a month, due to reasons such as a partial outage of the unit or variation of fuel quality or any other technical reason to be recorded in writing. The lignite based, gas based thermal generating stations and hydro generating stations shall be allowed for 6(six) revisions of Declared Capacity and schedule in a day subject to maximum 120 (One hundred twenty) revisions during a month, due to reasons such as partial outage of the unit or water availability for hydro generating stations, fuel quality or variations in supply of gas for gas generating stations or any other technical reason to be recorded in writing.

19. To avoid any misdeclaration of DC by a generating station, we are of the view that the generating station shall keep a digital record of the reason for the revision of DC, which can be independently verified by RLDC or RPC. The reasons for the revision of DC shall be taken up at RPC to minimize such revisions. NLDC is advised to submit a report after a period of 3 months reporting the reasons for such revisions to facilitate suitable regulatory directions in this regard.

20. The revision of DC as permitted above shall remain in force till suitable provisions are specified in the Grid Code through amendment.

Issue No.3: Schedules under TRAS and SCED on units which are under shutdown

21. NTPC has submitted that in case of schedules below the minimum turndown level, the generating stations may opt to go under USD. In case DC is maintained, this entails supply obligation for the beneficiaries. NTPC has submitted that though the Grid Code envisages the obligation of supply for the unit under shut down only to the beneficiaries of the station these off-bar units are also getting scheduled under TRAS UP and SCED UP by the system operator. The schedule is given to off bar units under TRAS shortfall and SCED up also needs to be stopped immediately.

22. We have considered submissions of NTPC. If such a unit is under shutdown, RLDC should have the status of such units which are under USD so that it has a realistic picture of reserves available on bar. NLDC and RLDC should ensure that any schedule under SCED or TRAS should be given only in units on bar and not for capacity which is not on bar.

Issue No. 4: Scheduling of free power share in the Central Generating Stations

23. Directorate of Energy, Govt of HP has submitted that Govt of HP has an entitled share of free power in various Central Generating Stations situated in Himachal Pradesh, and this share of free power is managed by the Directorate of Energy, GoHP through various avenues of sale such as Power Exchanges (IEX, PXIL, HPX) and Bilateral mode.

	Detail of Allocation of power from Central Hydro Generating Stations										
Sr.	Name of		cation to	HPSEB	L Share	GoHP Share of					
No.	Hydro Power	H	Р			Free Power					
	Station	(in	(in MW)	(in %	(in MW)	(% age)	(MW)				
		%age)		age)							
01	Nathpa Jhakri	36.47	547	24.47	367	12	180				
02	Chamera-I	14.9	80.46	2.9	15.66	12	64.8				
03	Chamera-II	15.67	47.01	3.67	01.01	12	36				
04	Chamera-III	13	30.03	0.0	0	13	30.03				



05	Baira-Siul	12	21.6	0.0	0	12	21.6
06	Parbati-III	13	67.6	0.0	0	13	67.6
07	Rampur	41.91	172.67	28.91	119.11	13	53.56
08	Koldam	28	224	15	120.00	13	104
	Total				632.38		557.59

As per NRPC allocation orders, the share of free power available from these plants is scheduled to Himachal Pradesh and then sale by DoE, GoHP through its trader at the platform of Power Exchanges/ Bilateral mode. However, in accordance with the Grid Code, Himachal Pradesh is entitled to schedule power from Inter State Generating Stations (ISGS) up to GNA quantum i.e. 1130 MW. The allocated power to HPSEBL (State Discom) from ISGS plants and other arrangements is around 1200 to 1400 MW excluding GoHP free power. GoHP finds it difficult to sell its share of free power in CGS which is 557 MW, without them being scheduled as drawl by HPSEB. As per the Electricity (Removal of difficulty) Third order 2005 dated 08.06.2005 issued by the Ministry of Power, the State Govt. receiving free electricity from Hydro Power Generating Stations shall have discretion to dispose of such electricity in the manner it deems fit according to the provisions of the Act.

Therefore, the the Directorate of Energy, GoHP may be allowed to sell as a separate entity, its share of free power available from the Central Generating Stations situated in Himachal Pradesh at the Generator Periphery/ Ex-Bus of the CGS plants directly, so that the issues regarding non-scheduling/ curtailment of power to the state could be resolved.

24. We have considered the suggestions of Govt of HP. We observe that prior to the Grid Code coming into effect i.e. till 30.09.2023, the power from ISGS hydro generating stations was scheduled to HPSEB at HP State periphery and from HP State periphery, Govt of HP sold its share of free power. In case of revision of DC and schedule of such generating stations, the entitlement of free power at HPSEB periphery also changes for the Govt of HP.

25. We further observe that Govt of HP is not a drawee entity. It is entitled to the free power which it can sell as per the Electricity (Removal of difficulty) Third order 2005 dated 08.06.2005. We find that Govt of HP is a unique case of an entity which is neither a generator nor a trader buying electricity for sale. It would not draw power but would

always have free power for sale.

26. Considering the suggestions and the peculiar circumstances of the Govt of HP, and the fact that Govt of HP cannot directly consume the power, we are of the considered view that Govt of HP or a similar such Govts. of hydro-rich states may sell their entitled share of free power directly from the bus bar of the generating station. We note that there may be some issues with respect to DSM accounting for such generating station and sale of power by the Govt of HP since DSM shall be calculated for the generating station but shall be required to be segregated between the DSM payable/receivable by the generating station and the Govt. selling free power. Accordingly, we direct NLDC to prepare a Procedure to facilitate such accounting in consultation with RLDC, RPC, generating station and the entity to whom such free power has been allocated within a month of the issue of this Order and submit it to the Commission for approval.

Directions under Power to Remove Difficulty

27. Regulation 58 of the Grid Code vests the Commission with the power to remove difficulty under certain circumstances. Regulation 58 of the Grid Code is extracted below:

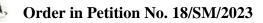
"58. POWER TO REMOVE DIFFICULTY

If any difficulty arises in giving effect to the provisions of these regulations, the Commission may, on its own motion or on an application made before it by the nodal agency, by order, make such provisions not inconsistent with the provisions of the Act or provisions of other regulations specified by the Commission, as may appear to be necessary for removing the difficulty in giving effect to the objectives of these regulations."

Further, the Commission has been vested with the power to issue Suo Moto orders and practice directions from time to time, as per the exigencies, with regard to the implementation of these Regulations and matters incidental or ancillary thereto, as the case may be, as provided under regulation 60 of these regulations.

"60. ISSUE OF SUO MOTO ORDERS AND DIRECTIONS

The Commission may from time to time issue suo motu orders and practice directions with regard to implementation of these regulations and matters incidental or ancillary thereto, as the case may be."



28. Considering the difficulties raised by the stakeholders under the Grid Code, in exercise of our powers under Regulation 58 read with Regulation 60 of the Grid Code, we hereby issue the clarifications and practice directions as discussed above on the issues raised by the stakeholders.

29. Accordingly, Suo Motu Petition 18/SM/2023 is disposed of in terms of the above.

Sd/ (P.K. Singh) Member Sd/ (Arun Goyal) Member Sd/ (I. S. Jha) Member Sd/ (Jishnu Barua) Chairperson

