

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 007/SM/2014

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri A.K. Singhal, Member**

Date of Hearing: 22.5.2014

Date of Order : 29.1.2016

In the matter of

Non-compliance of Commission`s direction dated 26.9.2012 in Petition No. 168/MP/2011.

And

In the matter of

Northern Region

1. SLDC, Delhi Transco Ltd.
SLDC Building, 2nd Floor,
33 Kv sub-station, Minto Road
New Delhi -110002
2. Aravali Power Company Ltd.
NTPC Bhawan, Scope Complex,
7 Institutional Area, Lodhi Road,
New Delhi 110 003
3. SLDC, Power Development Deptt.
SLDC Building, Narwalbala,
Gladini, Jammu – 180016.
4. THDC India Limited
Ganga Bhawan, Pragatipuram,
Bypass Road, Rishikesh- 249201.
5. AD Hydro Electric Power Limited
V.P.O. Prini Manali
Dist. Kullu H.P. 175143
6. Lanco Budhil Hydro Electric Project
Plot no. 397, Phase-III Udyog Vihar ,
Gurgaon- 122016

7. Malana Hydro Electric Power Ltd.
Bhilwara Tower, A-12
Sector-1, Noida- 201301

Western Region

8. Electricity Department, Government of Goa,
Vidyut Bhawan,
Pananji Goa- 403001

9. Electricity Department, Dadar Nagar Haveli,
U.T. Silvassa -396230

10. Electricity Department, Daman and Diu,
Power House Building 2nd floor,
Daman -396210.

Eastern Region

11. Energy and Power Deptt.
Govt. of Sikkim, Kazi Road,
Gangtok -737101

12. Jharkhand State Electricity Board
ULDC, Kusai Colony,
Ranchi- 834002

13. Maithon Power Limited
MA-5, Gogna Colony,
PO- Maithon Dam, District- Dhanbad,
Jharkhand- 828207.

Southern Region

14. Karnataka Power Transmission Corporation Ltd.
Bangalore -560009

Northern Eastern Region

15. Tripura State Electricity Corporation Ltd.
Bidhut Bhavan, Banamalipur,
Agartala, Tripura

16. Department of Power,
Govt. of Arunachal Pradesh,
Itanagar 791111

17. Department of Power and Electricity
Govt. of Mizoram,
Aizwal -796001

18. Department of Power
Govt. of Nagaland,
Kohima -797001

19. Department of Power
Govt. of Manipur,
Imphal -795001

Following were present:

Shri S.K. Soonee, POSOCO
Shri V.K. Aggarwal, NLDC
Shri P.K. Aggarwal, NLDC
Shri S.S. Barpanda, NLDC
Ms. Jayantika Singh, SRLDC
Shri Rajiv Porwal, NRLDC
Shri Debasis De, NRLDC
Ms. Supriya Singh, NRLDC
Ms. Jyoti Prasad, POSOCO
Ms. Shri Harish Kumar Rathwal, NLDC
Shri A. Mani, NRLDC
Shri S.P. Barnwal, ERLDC
Shri V.Kaikhochin, NERLDC
Shri Harish Patel, WRLDC
Ms. Anushree Bardhan, Advocate THDCIL
Shri J.K.Hatwal, THDCIL
Shri Anil Raghuvanshi, THDCIL
Shri D.S. Chauhan, THDCIL
Shri L.P. Joshi, THDCIL
Smt. Swapna Sheshadri, Advocate KPTCL
Shri K.N. Madhusoodan, Advocate, Mizoram
Ms. Kavita K.T., Advocate, Mizoram
Shri Sreenivasan G, KSEB.
Shri Darshan Singh, SLDC, Delhi
Shri N.N Sadasivan, NTPC

ORDER

The Commission via order dated 19.12.2013 in Petition No. 56/SM/2013 had directed as under:

"17. We are at pains to observe that despite the Commission's sustained initiative for the implementation of the statutory mandate, the progress achieved is far from satisfactory. We

are constrained to place on record that the overall scenario is very precarious. Accordingly, we issue the following directions:

(a) POWERGRID shall complete the telemetry on all its sub-stations within six months of the issue of order failing which action under Section 142 of the Act may be initiated. After six months, NLDC/ RLDC shall submit status report in this regard.

(b) Notice under section 142 of the Electricity Act, 2003 be issued against utilities which have not responded to NLDC as contained in the **Annexure** to this order."

2. Based on the direction of the Commission by its order dated 19.12.2013 in Petition No. 56/SM/2013, vide order dated 25.4.2014 the respondents were issued show cause notice under Section 142 of the Act for non-compliance of directions of NLDC and the Commission's order dated 26.9.2012 in Petition No. 168/MP/2011.

3. Reply to show cause notice has been filed by THDC India Limited, Karnataka Power Transmission Corporation Limited, Kerala State Electricity Board Ltd., Malana Power Co. Ltd., Power and Electricity Department, Govt. of Mizoram, Aravali Power Company Pvt. Ltd., Electricity Department , Govt of Manipur, AD Hydro Power Limited and Delhi Transco Limited and Tripura State Electricity Corporation Ltd. However, SLDC, Power Development Department, Govt. of Jammu and Kashmir, LANCO Budhil Electric Project, Electricity Deptt. Govt. of Goa, Electricity Deptt. Dadar Nagar Haveli, Electricity Department, Daman and Diu, Energy and Power Department, Govt. of Sikkim, Jharkhand State Electricity Board, Maithon Power Ltd., Department of Power, Govt. of Arunachal Pradesh and Department of Power, Govt. of Nagaland have not filed their replies to the show cause notice. Respondents in their replies have requested to discharge them from notices issued under Section 142. Reply filed by the respondents is discussed briefly as under:

(a) THDC India Limited (THDC), vide its affidavit dated 13.5.2014, has submitted that it has already submitted the status of implementation of telemetry

system to the Commission under affidavit dated 17.7.2013 and to NLDC. THDC has further submitted that the telemetry system has been operational at its generating stations, namely Tehri HPP (1000 MW) and Koteshwar HEP (400 MW) since 2006-07 and 5.3.2013 respectively.

(b) Karnataka Power Transmission Corporation Limited (KPTCL), vide its affidavit dated 10.6.2014, has submitted that SCADA is being installed by Udupi Power Company Limited (UPCL). However, UPCL has not installed the SCADA on the pending points. KPTCL has requested issue appropriate direction to UPCL in this regard. KPTCL has submitted that SLDC Karnataka shall ensure that telemetry is provided in all generating stations/ sub-stations and the same would be maintained in good condition.

(c) Kerala State Electricity Board Ltd. (KSEBL), vide its reply dated 22.5.2014, has submitted that the existing SCADA is not sufficient to meet all the requirements of the Grid Code. The new SCADA system is being implemented by M/s Alstom through PGCIL and is expected to be implemented by October, 2014. KSEBL has further submitted that the integration of the data from all the generating stations and configuration of these generating stations in the SCADA of SLDC would require some more time and is expected to be completed by December, 2014.

(d) Malana Power Company Ltd. (MPCL), vide its reply dated 16.5.2014, has submitted that it is operating a 86 MW Malana HEP at district Kullu in Himachal Pradesh which is connected with the grid of Himachal Pradesh. MPCL has

further submitted that entire data is being transferred through SLDC, Himachal Pradesh.

(e) Power and Electricity Deptt. Govt. of Mizoram, vide its affidavit dated 15.5.2014, has submitted that in the 13th NERPC/TCC meeting held on 10.7.2012, it was resolved that up-gradation/expansion of SCADA/EMS system for SLDC would be implemented by PGCIL. Telemetry is one of the main integral components of SCADA system. Power and Electricity Deptt. Govt. of Mizoram has further submitted that apart from action taken by PGCIL, it has simultaneously undertaken that PGCIL would lay Optical Power Ground Wire (OPGW) between vital sub-stations within the State. The physical progress of erection on live line of OPGW for data and voice communication link over the existing 132 kV line between Aizawl (Zuangtui) 132 kV sub-station to Lunglei (Khawiva) 132 kV sub-station via Serchhip (Bukpui) 132 kV sub-station is virtually completed. Implementation of telemetry is ongoing project and is purely as per the schedule of implementing agency i.e. PGCIL. Power and Electricity Deptt. Govt. of Mizoram has submitted that all possible steps are being taken to comply with the directions of the Commission.

(f) Aravali Power Company Pvt. Ltd.(APCPL), vide its affidavit dated 13.1.2014, has submitted that it has already submitted a complete report on 9.4.2013 to the Commission to establish telemetry system at its generating station IGSTPP (3x500 MW) Jhajjar. The process of issuance of Monthly Energy Accounting (for REAs) by RLDC/RPC is working smoothly and no issue with regard to data transfer by the telemetry system has been raised. APCPL has

further submitted that intermittent/occasional disruptions reported by RLDC are found to be pertaining to the backup/alternate channel only and that too at DTL end only. The system at Jhajjar has been found working satisfactorily.

(g) Manipur State Power Company Ltd.(MSPCL) on behalf of the Department of Power, Government of Manipur, vide its affidavit dated 14.5.2014, has submitted that Manipur has implemented UFR based load shedding in four stages of 5 MW each at 49.2 Hz, 49.00 Hz, 48.8 Hz and 48.6 Hz respectively which are in operation. MSPCL has further submitted that being a small State with lesser transmission network, no islanding scheme was recommended for Manipur. MSPCL has submitted that with the establishment of ambitious scheme of SLDC facility to provide reliable/ efficient speech, data communication and data exchange, supervision/ control of State transmission system in line with interface requirement with RLDC shall be available shortly.

(h) A.D. Hydro Power Limited (ADHPL), vide its affidavit dated 16.5.2014, has submitted that it has installed the telemetry system through SLDC, Himachal Pradesh at the time of commissioning of generation station till such time the connectivity by PGCIL is finally provided at CTU Nalagarh. ADHPL has further submitted that it has taken all possible steps for functioning of telemetry system for transfer of data from generating station through PGCIL, Nalagarh.

(i) Delhi Transco Limited (DTL), vide its affidavit dated 7.5.2014, has submitted that all four generating stations and thirty three 400 kV / 220 kV sub-

stations are integrated. DTL has further submitted that telemetry system in upcoming sub-station is expected to be established shortly.

(j) Tripura State Electricity Corporation Limited, vide its affidavit dated 19.5.2014, has submitted that the status report with regard to RTU Tele-metering under Tripura State Control as under:

RTU Stations	Status	Remarks
Rokhia GTP	Functioning	
Baramura GTP	Functioning	
Gumti HEP	Non-functioning	From 1.1.2012 till date, efforts are being taken to restore.
132 kV GSS, 79 Tilla	Functioning	
66 kV Badharghat sub-station	Non-functioning	From May 2009 till date, efforts are being taken to restore.
132 kV Banduar sub-station	Functioning	
132 kV PK Badi sub-station	Functioning	
132 kV Dharmanagar sub-station	Functioning	

4. The matter was heard on 22.5.2014. During the hearing on 22.5.2014, learned counsel of KPTCL and the representative of THDC submitted that KPTCL and THDC have complied with the directions of the Commission and NLDC with regard to implementation of telemetry system, which was confirmed by National Load Despatch Centre (NLDC). National Load Despatch was directed to submit the status with regard to implementation of telemetry system by various utilities and publish the same on its website. NLDC, vide its affidavit dated 28.5.2014, has placed on record the status of region-wise summary of telemetry status.

Analysis and Decision:

5. We have considered the submissions of the respondents. Regulation 4.6.2 of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations,

2010 (hereinafter “the Grid Code”) which mandates the provision of telemetry system provides as under:

"4.6.2. Reliable and efficient speech and data communication systems shall be provided to facilitate necessary communication and data exchange, and supervision/control of the grid by the RLDC, under normal and abnormal conditions. All Users, STUs and CTU shall provide Systems to telemeter power system parameter such as flow, voltage and status of switches / transformer taps etc. in line with interface requirements and other guideline made available by RLDC. The associated communication system to facilitate data flow up to appropriate data collection point on CTU's system shall also be established by the concerned User or STU as specified by CTU in the Connection Agreement. All Users/STUs in coordination with CTU shall provide the required facilities at their respective ends as specified in the Connection Agreement."

As per the above provisions, the real-time visibility of the generating stations and the sub-stations to the Load Despatch Centre is necessary for the reliable grid operation and security of the electrical power system.

6. Regulation 6 (3) of the Central Electricity Authority (Technical Standard for Connectivity to the Grid) Regulations, 2007 provides as under:

"6(3). The requestor and user shall provide necessary facilities for voice and data communication and transfer of operational data, such as voltage, frequency, line flows, and status of breaker and isolator position and other parameters as prescribed by Appropriate Load Despatch Centre."

7. NLDC has submitted the status of telemetry (as on 30.6.2014) by various utilities and the region-wise summary of telemetry as under:

Region-wise summary of telemetry status as on 30.6.2014:

S.No.	Region	Total Nos of stations		Telemetry not provided		Telemetry intermittent		Total non-availability of data in % (telemetry not provided plus telemetry intermittency)	
		GS	SS	GS	SS	GS	SS	GS	SS
1	Northern Region	123	633	12	183	25	77	30%	41%
2	Western Region	112	465	2	43	13	95	13%	30%
3	Southern Region	136	348	4	1	3	7	5%	2.3%
4	Eastern Region	80	217	4	27	6	31	13%	27%
5	North Eastern Region	23	113	3	18	3	43	26%	54%
	Total	474	1776	25	272	50	253	16%	30%

*GS – generating station, SS – sub-station

8. NLDC has submitted a comparison of telemetry status as on 30.6.2014 with respect to the status on 25.9.2013 as under:

(a) Comparison of region-wise telemetry status as on 30.6.2014 with respect to the status as on 25.9.2013:

S. No	Region	Total Nos of stations		Status submitted on 25.9.2013				Status as on 30.6.2014 of same stations			
				Telemetry not provided		Telemetry Intermittent		Telemetry not provided		Telemetry Intermittent	
		GS	SS	GS	SS	GS	SS	GS	SS	GS	SS
1	Northern Region	114	579	14	175	25	91	11	163	14	51
2	Western Region	106	428	2	49	3	21	2	37	1	10
3	Southern Region	136	347	13	4	0	0	4	1	0	0
4	Eastern Region	75	213	5	31	6	41	4	27	6	21
5	North Eastern Region	23	93	3	7	4	22	3	5	3	17
	Total	454	1660	37	266	38	175	24	233	24	99

(b) Region-wise status of percentage improvement as on 30.6.2014 with respect to the status on 25.9.2013:

Percentage improvement as on 30.6.2014 with respect to status on 25.9.2013				
Region	Telemetry not provided		Telemetry Intermittent	
	GS	SS	GS	SS
Northern Region	21%	7%	44%	44%
Western Region	0%	24%	67%	52%
Southern Region	69%	75%	-	-
Eastern Region	20%	13%	0%	49%
North Eastern Region	0%	29%	25%	23%
TOTAL	35%	12%	37%	43%

Perusal of the above status reveals that there is improvement of 35% in the provision of telemetry in respect of generating stations and 12% in respect of sub-stations. Similarly, there is also an improvement by 37% in generating stations and 43% in sub-stations in the intermittency of the telemetry as on 30.6.2014 w.r.t. status on 25.9.2013.

9. NLDC, vide its letter dated 9.12.2015, has submitted the latest region-wise status of telemetry as on 30.11.2015 with respect to the status on 25.9.2013 as under:

(a) Comparison of region wise telemetry status as on 30.11.2015 with respect to the status as on 25.9.2013:

S. No.	Region	Total Nos of stations		Status submitted on 25.9.2013				Status as on 30.11.2015 of same stations			
				Telemetry not provided		Telemetry Intermittent		Telemetry not provided		Telemetry Intermittent	
		GS	SS	GS	SS	GS	SS	GS	SS	GS	SS
1	Northern Region	114	579	14	175	25	91	4	109	1	28
2	Western Region	106	428	2	49	3	21	0	6	1	9
3	Southern Region	136	347	13	4	0	0	1	0	0	0
4	Eastern Region	75	213	5	31	6	41	3	18	4	18
5	North Eastern Region	23	93	3	7	4	22	3	5	3	14
	Total	454	1660	37	266	38	175	11	138	9	69

(b) Region wise status of percentage improvement as on 30.11.2015 with respect to the status on 25.9.2013:

Percentage improvement as on 30.11.2015 with respect to status on 25.9.2013				
Region	Telemetry not provided		Telemetry Intermittent	
	GS	SS	GS	SS
Northern Region	71%	38%	96%	69%
Western Region	100%	88%	67%	57%
Southern Region	92%	100%	-	-
Eastern Region	40%	42%	33%	56%
North Eastern Region	0%	29%	25%	36%
TOTAL	70%	48%	76%	61%

10. Perusal of the above status reveals that there is improvement of 70% in the provision of telemetry on generating stations and 48% on sub-stations. Similarly, there is an improvement by 76% in generating stations and 61% in sub-stations in the intermittency of the telemetry as on 30.11.2015 w.r.t. status on 25.9.2013. However, there is need for further improvement in availability of the telemetry.

11. According to NLDC, the following users in different regions have not provided the 100% telemetry in their generating stations and sub-stations as on 30.11.2015:

Status of Telemetry not provided in Northern Region as on 30.11.2015				
User Name	Total No. of Stations		Telemetry not provided	
	GS	SS	GS	SS
Punjab	17	172	1	100
Haryana	5	65	-	18
Rajasthan	17	129	0	16
UP	20	114	0	8
Uttarakhand	10	36	1	20
HP	9	19	1	0
JK	4	9	1	1
IPP/JV/Others	6	4	-	3

Status of telemetry not provided in Western Region as on 30.11.2015				
User Name	Total No. of Stations		Telemetry not provided	
	GS	SS	GS	SS
Maharashtra	32	195	0	12
Chattisgarh	8	95	0	8
Gujarat	25	121	-	1
Goa	-	7	-	2
DNH	-	4	-	4

Status of telemetry not provided in Southern Region as on 30.11.2015				
User Name	Total No. of Stations		Telemetry not provided	
	GS	SS	GS	SS
NTPC	3	-	1	-

Status of telemetry not provided in Eastern Region as on 30.11.2015				
User Name	Total No. of Stations		Telemetry not provided	
	GS	SS	GS	SS
OPTCL	36	53	1	2
BSEB	2	37	-	11
WBSETCL	15	50	2	2
JSGB	3	16	-	4
IPP	7	-	1	-

Status of telemetry not provided in North-Eastern Region as on 30.11.2015				
User Name	Total No. of Stations		Telemetry not provided	
	GS	SS	GS	SS
Nagaland	1	3	1	-
Mizoram	2	7	2	6
Manipur	-	9	-	5
Ar. Pradesh	-	7	-	7

Perusal of the above data submitted by NLDC reveals that in Southern Region only NTPC, Talchar generating station has not provided telemetry. However, in other four regions, there are number of utilities/generating stations which have not provided telemetry till 30.11.2015.

12. NLDC, vide its letter dated 9.12.2015, has submitted the status of PGCIL's telemetry as under:

Region	Total no. of SS	Telemetry not provided as on 30.11.2015 in SS	Telemetry Intermittent as on 30.11.2015 in SS	Telemetry Intermittent as on 30.6.2014 in SS	Telemetry Intermittent as on 25.9.2013 in SS
Northern Region	65	--	11	21	18
Western Region	44	--	2	5	2
Southern Region	46	--	5	7	0
Eastern Region	37	--	7	11	5
North Eastern Region	19	--	3	1	0
Total	211	--	28	45	25

13. Perusal of the above data reveals that PGCIL has provided telemetry facilities in their all sub-stations. However, there is no satisfactory improvement in the intermittency of telemetry in the sub-stations of PGCIL. In fact, in Eastern Region and North Eastern Region, the intermittency in telemetry has increased. We are not satisfied with the improvement in the intermittency in telemetred of PGCIL's system. Despite our repeated instructions, PGCIL has not made sincere efforts to improve the problem of intermittency in its telemetry. We direct PGCIL to undertake effective monitoring of telemeter data and to minimize the intermittency in telemetry in all regions within six

months from the issue of the order. NLDC is directed to submit status of PGCIL's telemetry within one month thereafter.

14. Under the Grid Code, it is the responsibility of all users, STUs and CTU to provide systems to telemeter power system parameters in line with interface requirements and other guideline made available by RLDC and associated communication system to facilitate data flow up to appropriate data collection point on CTUs system. Telemetry of on-line operational data is not only essential for effective monitoring of grid but also forms key input for effective running of State estimation and other EMS tools at RLDC and SLDCs, which are essential for reliable and secure operation of the grid. In view of the critical importance of telemetry and associated communication system for ensuring reliability in operation of the grid and optimum utilization of the transmission system, there is an imperative need for all users to establish the telemetry and associated communication system in time bound manner so that the power system operation may be most reliable and optimum. Moreover, in view of the requirement of communication system for a generating station and sub-station, the planning should be done in advance by the generating company and transmission licensee to ensure that necessary system are in place before commissioning of generating station or sub-station to take care of the communication requirements even at the time of injection of power infirm by a generating station and sub-station during testing.

15. THDC India Limited, Karnataka Power Transmission Corporation Limited, Kerala State Electricity Board Ltd., Malana Power Co. Ltd., Power and Electricity Department, Govt. of Mizoram, Aravali Power Company Pvt. Ltd., Electricity Department, Govt of

Manipur, AD Hydro Power Limited and Delhi Transco Limited and Tripura State Electricity Corporation Ltd. have submitted that they are complying with the provisions of the Grid Code and directions of the Commission. According to Electricity Departments, Govt. of Mizoram and Manipur, PGCIL is implementing the telemetry system in their State. Taking note of submissions of said respondents that substantial works have been carried out, we are of view that non-compliance of the direction is not made out at this stage for imposition of penalty under Section 142 of the Act.

16. Power Development Department, Govt. of Jammu and Kashmir, LANCO Budhil Electric Project, Electricity Deptt. Govt. of Goa, Electricity Deptt. Dadar and Nagar Haveli, Electricity Department, Daman and Diu, Energy and Power Department, Govt. of Sikkim, Jharkhand State Electricity Board, Maithon Power Ltd., Department of Power, Govt. of Arunachal Pradesh and Department of Power, Govt. of Nagaland (hereinafter collectively as the respondents) have not filed their replies to the show cause notice. We express our displeasure at the conduct of the respondents to ignore the directions of the Commission and NLDC, and non-compliance of the provisions of the Grid Code, especially in such a matter where grid security is involved. We once again direct the above mentioned utilities to up-date status of telemetry in their system within one month of this order with an advance copy to NLDC, respective RLDC and RPC. Based on the replies, respective RLDC will monitor the implementation of telemetry and in case of any difficulty, the matter may be discussed and sorted out in the RPC meetings. If any of these entities does not submit the information, the concern RLDC may file application before the Commission against the said entities under Section 142 of the Act.

17. We further direct all the utilities/generating companies which have to still establish telemeter power system parameters as per details given in para11 above to provide data to RLDCs/SLDCs as per the provisions of the Grid Code and CEA Grid Standards Regulations by 31.7.2016. If the utilities/generating companies do not comply with our directions, it will be construed as non-compliance of the order of the Commission and appropriate proceedings under Section 142 of the Electricity Act, 2003 shall be initiated against such utilities/generating companies. NLDC is directed to submit user- wise latest status of telemetry, by 31.8.2016.

18. NLDC and respective RLDC are directed to up-date the status of telemetry every month at their web-site and persistent non-availability of data from the generating stations/sub-stations be taken up in RPC meetings for appropriate direction and action.

19. The petition is disposed of with the above directions.

Sd/-
(A. K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson