

No.14/6/2015-Trans  
Government of India  
Ministry of Power  
Shram Shakti Bhawan, Rafi Marg,  
New Delhi-110001  
\*\*\*\*

Dated 16<sup>th</sup> September,2015

Office Memorandum

Subject: Minutes of the meeting chaired by Secretary (Power), Govt. of India on Reliable Communication and Data Acquisition System upto 132 kV Sub Stations by PGCIL and below 132 kV level upto 33 kV level by CEA.

The undersigned is directed to forward herewith a copy of the minutes of meeting chaired by Secretary, Ministry of Power on 24.7.2015 on the subject cited above, for information and further necessary action.

CL  
(S.Venkateshwarlu)  
Under Secretary (Trans)  
E-mail: [transdesk-mop@nic.in](mailto:transdesk-mop@nic.in)  
Tele-fax: 23325242

SS/CMD  
21/09/15

- To,
1. Chairperson, CEA, New Delhi
  2. CMD, Power Grid Corporation of India Ltd. (PGCIL), Gurgaon (Haryana).

Copy to: PPSs to Secretary (Power)/JS (Trans)/Director (Trans), Ministry of Power, New Delhi.

10  
21/09/15

21/9/15



67

**Minutes of the meeting taken by Secretary (Power) on 24.7.2015 regarding Reliable Communication and Data Acquisition System for sub-stations of (i) upto 132 kV level; and (ii) below 132 kV and upto 33 kV.**

List of participants is at Annex-I.

2. Secretary (Power) initiated the discussions. The need for reliable communication at 33 kV, 66 kV and 132 kV substations was felt in the wake of devastation caused by Hudhud cyclone in AP in October, 2014. Ministry of Power had entrusted the work of upto 132 kV to PGCIL and below 132kV upto 33kV voltage level to CEA. Secretary (Power) asked CEA to present its point of view on providing reliable communication system for substations of below 132 kV and upto 33 kV.

3 (i) Chairperson, CEA initiated the presentation and informed that based on MOP's letter dated 28.1.2015, CEA had prepared a proposal/Scheme of V-SAT communication network at each 33kV and 66kV substation and broadband connectivity over existing copper telephone connections at the substations, wherever the same is available, with estimated cost of Rs. 2445 crore. Subsequently, the then Special Secretary, MOP advised CEA to modify the proposal in a way that primary connectivity should be optical fiber based communication, backed up by V-SAT connection at each 33kV & 66kV substation. The Scheme was prepared with estimated cost of Rs. 26,178 crore. However, CEA opined that such large expenditure may not be optimally utilized, as large bandwidth provided by optical fiber may remain unutilized.

(ii) CEA informed that cost of about Rs. 27,000 crore of the revised scheme covers laying of optical fiber of about 5 lakh km line length, connecting around 30,000 substations of 33kV & 66kV voltage level. It was stated that depending on requirement, different communication means e.g. Optical fiber, V-SAT, GPRS, leased telephone connection, MPLS-VPN connection, etc. may be required at 33kV & 66kV substations across the country. Therefore, instead of implementing one form of communication system across the country, actual requirement of communication system at different 33kV & 66kV substations of States/UTs be considered. Regarding grid management, it was informed that with the proposed availability of optical fiber at 132kV level, the power flow at outgoing 33kV feeders from 132kV substations can be monitored in real time. After detailed deliberations, it was decided that actual requirement of communication system at different 33kV & 66kV substations of States/UTs be considered by CEA. The State power utilities need to assess their communication requirements and CEA would collate all the requirements and inform MOP to decide further course of action within 2 months.

(Action : CEA, States/UTs)

(iii) Provision of reliable communication system at 33kV & 66kV substations across the country would be based on actual requirement of communication system at different 33kV & 66kV substations, as assessed by the States/UTs.

(Action : CEA, States/UTs)

4. As regards to Reliable Communication and Data Acquisition System for sub-stations of 132 kV level and above, JS(Trans) informed that Detailed Project Report

68



24/7/15

has been prepared by PGCIL. The importance of reliable communication from sub-stations was highlighted at the level of 132 kV sub-stations for not only "grid management" but also for restoration of normalcy during emergencies situations arising due to natural disasters. A presentation was made by PGCIL and the following points emerged:

(i) PGCIL informed that around 1,09,313 kms of Fiber Optic(OPGW) network is envisaged in DPR for providing reliable communication from 3561 nos. sub-stations upto 132 kV level along with RTUs and DC Power Supply as per requirement at an estimated cost of Rs. 4.234 crore.

(ii) PGCIL further informed that around 40,000 kms of OPGW network has already been established by them under ULDC, Microwave Replacement and Fiber Optic Expansion Projects. Further, around 50,000 kms OPGW network is under implementation under various projects for data and voice communication for SCADA/EMS, PMU, WAMS applications. PGCIL suggested the implementation strategy for the project as proposed in DPR i.e. implementation of OPGW network by concerned State for their respective portion and PGCIL to execute the Central Sector portion. In both the cases, implementation needs to be completed within 36 months from the date of investment approval.

(Action : PGCIL, States/UTs)

(iii) For Reliable Communication upto 132 kV level, POWERGRID informed that OPGW based Fiber Optic Communication is most suitable communication for meeting the requirement of Power System Communication as OPGW replaces existing earthwire. Further, it uses available right of way, providing enormous bandwidth. As regards implementation strategy, it was agreed that methodology proposed by POWERGRID is acceptable. However, for few States having issues in taking up the OPGW network implementation, POWERGRID need to extend the technical support.

(Action : PGCIL, States/UTs)

(iv) Secretary (Power) advised that necessary action may be initiated for project approval and funding. It was decided that funding options through PSDF and Multilateral funding with funding from the States, may be explored.

(Action :MOP/ CEA / States)

(v) POWERGRID expressed the view that considering importance of reliable communication in various applications and difficulties in installation of OPGW under O&M stage, the provision of OPGW in place of one of the earthwire(s) should be kept in all the upcoming lines so that OPGW is installed during construction of line. The same was agreed upon and Secretary (Power) advised Chairperson, CEA to issue necessary guidelines in this regard urgently.

(Action :PGCIL, States/UTs)

5. The meeting ended with vote of thanks to the Chair.



मन

Date/time of the meeting: 24.7.2015 at 10.00 am  
Venue: Ministry of Power, Conference Room, Shram Shakti Bhawan,  
New Delhi-110001.

**List of Participants**

**Ministry of Power**

1. Shri Pradeep Kumar Pujari, Secretary (Power) - In the chair
2. Smt. Jyoti Arora, Joint Secretary (Trans)
3. Shri Ghanshyam Prasad, Director (Trans)
4. Shri S. Venkateshwarlu, Under Secretary (Trans)

**Central Electricity Authority (CEA)**

5. Shri Major Singh, Chairperson
6. Shri ShyamDhar Dubey, Member (PS)  
Email : [memberpscea@nic.in](mailto:memberpscea@nic.in)/[ceahpi@yahoo.com](mailto:ceahpi@yahoo.com)  
Mobile: 8527243555
7. Dr.Somit Das Gupta, Member (E&C)  
Email : [somit.d@nic.in](mailto:somit.d@nic.in)/Mobile: 9810172297
8. Shri Pankaj Batra, CE(RA)  
Mobile: 9350981062/ Email: [pan\\_batra@hotmail.com](mailto:pan_batra@hotmail.com)
9. Shri Naresh Bhandari, Director (PCD)  
Mobile: 9899061449/Email: [nbnareshbhandari@gmail.com](mailto:nbnareshbhandari@gmail.com)

**Power Grid Corporation of India Limited (PGCIL)**

10. Shri I.S.Jha, Director (Projects)  
Phone : 0124-2571730/Fax:0124-2571932
11. Shri Sunil Agrawal, GM (LD&C)  
Email : Mobile: 7042195068
12. Shri H.H. Sharan, Addl. GM (LD&C)  
Mobile: 9873549014/Email: [sharan@powergridindia.com](mailto:sharan@powergridindia.com)

**World Bank**

13. Ms. Mohua Mukherjee  
Mobile: 9810561075
14. Shri Rajendra Singh  
(When in Delhi) Mobile: 9968291293, Phone : +12022500504
15. Smt. KavitaSaraswat  
Mobile: 9811108572

\*\*\*\*\*

