



सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केंद्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युत प्रणाली योजना एवं मूल्यांकन प्रभाग- II

Power System Planning & Appraisal Division-II

सेवा में /To

As per list of Addresses

विषय/Subject: Minutes of the meeting to discuss the issue of provision of NGFW in respect of installation where such a provision does not exist in the TSAs – regarding.

महोदया (Madam) / महोदय (Sir),

A meeting to discuss the matter of Next Generation Firewall (NGFW) in respect of installation where such a provision do not exist in the Transmission Service Agreements (TSAs) was held on 12th April, 2024 at CEA, New Delhi. Minutes of the meeting are enclosed herewith.

भवदीय/Yours faithfully,

Pranay
24/4/2024

(प्रणय गर्ग/Pranay Garg)

उप निदेशक/Deputy Director

Copy to: SA to Member (PS), Central Electricity Authority

List of Addresses:

1.	Member (Power System), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	2.	Chief Engineer (PCD division) Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.
3.	Chief Operating Officer, CTUIL, Saudamini, Plot No. 2, Sector-29, Gurgaon – 122 001.	4.	CMD, Grid Controller of India, B-9, Qutub, Institutional Area, Katwaria Sarai, New Delhi – 110010
5.	Shri Suman Sah, Project Director, Kallam Transmission Ltd.	6.	Shri Ashutosh Garg, Vice President, Rajgarh Transmission Limited (A subsidiary of G R Infraprojects Limited)
7.	Shri Arvind Khare (GM), Project Incharge, Powergrid Neemuch Transmission System Limited	8.	Shri Amit Kumar, Gadag Transmission Ltd. Gadag II-A Transmission Ltd. (Subsidiaries of ReNew Transmission Ventures Pvt. Ltd.)
9.	Shri Anoop Singh (ED), CMG Powergrid Corporation of India Ltd	10	Shri Balaji Sivan, Director- Policy & Regulatory Affairs, Mumbai Urja Marg Limited (erstwhile Vapi-II North Lakhimpur Transmission Ltd., a subsidiary of Sterlite Power Transmission Ltd.)

**Minutes of the meeting to discuss the matter of Next Generation Firewall (NGFW)
in respect of installation where such a provision does not exist in the TSAs
held on 12th April, 2024 at CEA, New Delhi**

A meeting to discuss the matter of providing the Next Generation Firewall (NGFW) in respect of installation where such a provision does not exist in the Transmission Service Agreements (TSAs) was held on 12th April, 2024 at CEA, New Delhi. The list of participants is enclosed at **Annex-I**.

1. Member (Power Systems), CEA welcomed the participants. He requested Chief Engineer (PSPA-II), CEA to take up the agenda.
2. Chief Engineer (I/C) (PSPA-II), CEA stated that several references have been received from Transmission Service Providers (TSPs) mentioning that in some of the transmission schemes, provision of Next Generation Firewall (NGFW) are not provided in the Transmission Service Agreement (TSA). However, CTUIL is mandating it at the time of signing of connectivity agreement (CONN-CA-5) and consequently facing issues in first time charging (FTC) from RLDCs. As some of the projects are to be commissioned soon, there is a need to provide clarity on this matter.

He added that CEA had issued Guidelines on Cyber Security in Power Sector in October, 2021 which provides that Information Security Division of responsible entity shall deploy cyber security elements like Intrusion Detection System, Intrusion Prevention System, perimeter security, etc. are to be complied with. He further stated that CEA is coming up with the Cyber Security regulations shortly. Representative of Grid-India stated that Cyber Security Guidelines mention about various cyber security aspects, however, not specifically mentioning NGFW.
3. It was opined that the devices that meet the Guidelines criteria may be suitably considered to design the cyber security architecture within the Electronically Secured Perimeter (ESP) of the responsible entity and installed accordingly.
4. Representative of CTUIL stated that Next Generation Firewall (NGFW) provides one of the cyber security features mandated in the Guidelines on Cyber Security in Power Sector issued by CEA. CTUIL further stated that they had approached CERT-Trans (POWERGRID) and an immediate solution for protecting the communication data was finalized as one of the cyber security solutions. Thus, NGFW evolved as a quick solution to be implemented for cyber security at all upcoming ISTS sub-stations. The technical specifications (TS) of NGFW were also finalized after consultation with CERT-Trans. Accordingly, the same is being mentioned in the RFP inputs for ISTS projects /GNA intimations/connection agreement since 17.11.2021. Thus the RFPs inputs provided to CEA after 17th Nov 2021, provision of Next Generation Firewall is included for the proposed ISTS sub-stations
5. Representative from Grid India stated that in the present scenario of the Cyber threats landscape, the attacks on the Power Sector have grown and are also frequent. The

systems without adequate security devices at the periphery are prone to be compromised and a possible lateral movement cannot be ruled out which will have an impact on a larger system. Therefore, ensuring a cyber-secured system limiting any possibility of lateral traversal of Malware / exploits through perimeter security needs to be ensured by all responsible entity integrated and/or being integrated to the present interconnected network. Adherence to CEA guidelines on cyber security is an essential requirement in this endeavour. The First Time Charging (FTC) procedure of Grid-India for the Cyber Security aspect has accordingly been prepared based on the CEA guidelines on Cyber Security in Power Sector. The formats for intimation of complying with the same have been prepared accordingly.

6. Representative from POWERGRID stated that they have identified around 270 existing substations where firewall is not installed as they were commissioned before the CEA cyber security guidelines 2021. They have prepared an agenda for installation of firewall in such existing substations and forwarded to CTUIL.
7. CTUIL stated that they are collecting the data for all substations including those implemented under TBCB which require NGFW. A scheme will be formulated after gathering the information.
8. M/s Sterlite stated that for substations where Firewall is not mentioned in the RFP document/TSA there is implication of cost and timelines. Grid-India stated that perimeter security as per provisions of CEA Guideline need to be ensured by the TSPs.
9. Member (Power Systems), CEA stated that a scheme for Firewall installation in existing substations as a measure of perimeter security shall be prepared. He suggested that a Committee may be formed for examination/recommendations on requirement of Firewall / Any additional cyber security elements for the existing substations as well as under implementation substations in which provision is not there in TSAs. Further, in addition to the ISTS sub-stations, the Committee report shall also be shared with STUs for the cyber-attack protection, as STU and ISTS communication systems are interconnected at several nodes to protect ISTS as well as STUs network as per Cyber Security Guidelines.
10. After the deliberations, following was decided:
 - a) For the transmission schemes where NGFW has been mentioned in the TSAs, TSPs are required to install the elements as per TSA provisions.
 - b) For the transmission schemes in which specific provision for NGFW is not mentioned in TSA, CTUIL may mention in connection agreement that provisions of CEA (Cyber Security in Power Sector) Guidelines, 2021 need to be adhered to by the TSPs through suitable measures. First time charging may be allowed by the system operator on compliance of perimeter security by the TSPs and certification towards adherence to provisions of CEA Guideline on cyber security as being followed presently.

- c) A Committee shall be formed under Chief Engineer (Cyber Security Division), CEA for examination and recommendation on requirement of Firewall / Any additional cyber security elements in the existing ISTS system. Members of the Committee may include RPCs, CTUIL, Grid-India, POWERGRID, Pvt TSPs etc.
- d) STUs to be sensitized for Cyber Security measures required as per Committee's recommendations to protect their power system as per Cyber Security Guidelines.

Meeting ended with thanks to the Chair.

List of Participants

Name		Designation
Central Electricity Authority		
1.	Mr. A. K. Rajput	Member (Power System)
2.	Mr. S.K. Maharana	Chief Engineer
3.	Mr. B.S. Bairwa	Chief Engineer (I/c)
4.	Mr. O.P. Suman	Director
5.	Mr. Ashish Kumar Lohiya	Deputy Director
6.	Ms. Priyam Srivastava	Deputy Director
7.	Mr. Pranay Garg	Deputy Director
Central Transmission Utility of India Limited (CTUIL)		
8.	Mr. H.S.Kaushal	Sr. GM
9.	Mr. T.P. Verma	Chief Manager
Grid Controller of India Limited (Grid-India)		
10.	Mr. K Murali Krishna	CISO & ED (Engg)
11.	Mr. A.B.Sengupta	Ait CISO
12.	Mr. Prabhankar Porwal	Manager
Power Grid		
13.	Mr. Anjan kumar Das	GM
14.	Mr. Gaurav Awal	Chief Manager
15.	Mr. Kamlesh Bhoorani	Manager
CSIRT- Power		
16.	Mr. Ashish Goel	DGM
17.	Mr. Mukesh Kumar	DGM
18.	Mr. Mukesh Kumar	Senior Manager
Sterlite Power		
19.	Mr. Sandip Maity	V.P.- Engg.
20.	Mr. Sangeet Attri	Chief Manager
21.	Ms. Anshu Sharma	Chief Manager
G.R. Infraprojects		
22.	Mr. Vivek Pratap Singh	AGM
23.	Mr. Gopal Rakshit	Asst. Manager
