



National Webinar

On

“OT Cybersecurity in Thermal Power Stations”

31st July, 2024



आयोजक / Organised By



Metering and Utility Automation Division (MUAD)

केंद्रीय विद्युत अनुसंधान संस्थान / Central Power Research Institute

(भारत सरकार की सोसाइटी, विद्युत मंत्रालय) / (Govt. of India Society, Ministry of Power)

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वेब /Web: www.cpri.res.in

About National Webinar:

This webinar will address ISO/IEC 27001:2022 Information Security Management System (ISMS), how to secure operational technology (OT) while addressing their unique performance, reliability, and safety requirements in thermal power stations. OT encompasses a broad range of programmable systems and devices like Remote terminal Unit (RTU), Intelligent Electronic Devices (IEDs), programmable logic controller (PLC), Distributed Control System (DCS) & Supervisory Control and Data Acquisition System (SCADA) and interact with the physical environment. This webinar will also be focusing on overview of OT and typical system topologies, identifies common threats and vulnerabilities to these systems, risk assessment and provides recommended security countermeasures to mitigate the associated risks in thermal power stations. The importance of OT Cybersecurity Audit will also highlighted.

The following topics will be covered in the National webinar:

- ISO/IEC 27001:2022 Information Security Management System
- Cyber security testing compliance of Remote Terminal Units(RTU)
- OT Cybersecurity in Thermal Power Stations

The Participant should have good internet connection and good quality headphone/speaker set with Laptop/Desktop. The participant should also have notepad/pen to note down important points.

Who should attend?

The National webinar is aimed at Engineers, Managers responsible for the operation and maintenance of Thermal Power Stations, Transco's, Transmission & Distribution Planners, Consultants, Officers of Power Utilities/Corporations, State Govt./SEBs, Policy makers, Entrepreneurs, Energy Planners, Private Entrepreneurs, Manufacturers, Research/Academic Institutions and Financial Institutions, etc.

Registration

No Registration Fee

Registration form, a part of this brochure, complete in all respect shall be sent to the National webinar Coordinator.

Kindly use separate form for each participant, Downloaded/ Photo copies of Registration form are acceptable.

Metering and Utility Automation Division (MUAD)

The division is equipped with state-of-the-art technology instrumentation to cater the needs of testing and calibration services to customers from India & abroad at the following laboratories.

- Energy Meter Testing Laboratory (EMTL)
- Metering Protocol Laboratory (MPL)
- Calibration Laboratory

Energy Meter testing laboratory caters the services for various customers in Type test, Acceptance test, Tamper test and additional tests as per tender specification of utilities. CPRI has established a comprehensive test facility for Energy Meters at Bangalore and Bhopal. Both laboratories are equipped with State of Art Technology which complies with the requirements of National & International Standards and conforms to ISO/IEC 17025:2017 standard. CPRI has also established Energy Meter Testing lab at Noida.

Metering Protocol Laboratory renders DLMS/COSEM Protocol testing for Static Energy Meters/Smart Meters. By using latest version of Conformance Test Tool - CTT and Functional Evaluation Tool - FET both Static Energy Meters and Smart Meters are verified for their compliance to DLMS/COSEM (IEC 62056) protocol requirements and for their Parameter verification respectively. Also lab conducts communicability tests for Smart Meters. Both the above laboratories are recognized by Bureau of Indian Standards.

The Calibration laboratory is accredited by NABL as per ISO/IEC 17025:2017 standard for both at lab and at site. The calibration laboratory is equipped with high precision Energy Comparator of 0.01 class accuracy to calibrate reference energy meter up to 0.02 class accuracy. The laboratory has facility to calibrate Power source, reference standard energy meter, multi-function meter and power analyzer.

CPRI'S Profile

Central Power Research Institute (CPRI) set up in 1960 by the Government of India, functions as a National organization for applied research in power sector and also serves as an Independent Laboratory for testing and certification of power equipment. CPRI is a member of STI (Short Circuit Testing Liaison) of Europe and is accredited by M/s ASTA of UK. CPRI also provides consultancy services on various facets of power sector. CPRI has expertise in the area of Simulation, Diagnostics, System Analysis and Testing. CPRI laboratories have modern equipment needed for Power system simulation, Short circuit testing, Diagnostics of equipment, Materials engineering, Seismic qualification etc. CPRI has experienced faculty in different subjects concerned to power sector with practical experience in their areas of interest, as well as extensive experience in presenting courses/seminars.

Over the period, CPRI officers have gained lot of practical knowledge concerning to testing and operational problems of the industry. CPRI is a leading provider of Training and Continuing Education to Utilities, PSUs across the country for the past 50 years. CPRI is continually setting new standards in training and continuing education from basic theoretical information to practical hands-on electrical equipment training. CPRI courses have made substantial impact on the level

of training and education to India's electricity utilities, manufacturing companies, transmission and distribution companies. By upgrading the occupational skill of technical workers, CPRI training courses have improved the career path of many electrical personnel as well as contributed to an improvement in electricity efficiency, plant productivity, electrical system reliability an overall competitiveness of Indian industry.



Webinar Organizers:



Dr Kaliappan Perumal, PhD (NIT, Tiruchirappalli), presently he is holding the post of Joint Director and Head of the Division of Metering and Utility Automation Division of Central Power Research Institute (CPRI), Bangalore, Ministry of Power, A Govt. of India Society. He has 30 years of experience working in the field of Power System Protection, Numerical Protection IEDs, Smart Grid Technology and Applications, Synchrophasor, Wide Area Measurement System (WAMs), Wide Area Monitoring, Protection and Control (WAMPAC) and Renewable Energies: Wind Farm-Solar Plant. His areas of researches are Adaptive Relaying, Computer Relaying, Protection issues in Distributed Generation and DERs, MicroGrid Protection, Assessment of compliance of both M class & P class

Synchrophasor, Synchrophasor for Power system Protection and Control applications, Internet of Things (IoT) Enabled Smart Grid, Renewable Energies: Wind Farm, Solar Power and Hybrid Wind Farm-Solar Plant.

Cyber Security for Power Sector, Cyber Physical System Security for the Smart Grid, Information Security Management System for Industrial Control System, Cyber Security for Power Station, Cyber Security for SCADA System, Cyber Security Requirements for Industrial Control System, IT-OT Convergence, OT Cyber security, Cyber Security for Digital Substation, Cyber Security Compliance for IEDs, Cyber Security for Substation Automation, IEC 61850 Cyber Security Compliance, Cyber Security for Synchrophasor, Cyber Security for WAMs, Cyber Security for WASA, Cyber Security for WAMPAC, Cyber Security for Data and Communication system, Cyber Security for Renewable Energies, Cyber Security for Wind Farm, Cyber Security for Solar Plant, Cyber Security for MicroGrid, Cyber Security for DERs, Cyber Security for DERMs, Cyber Security for Smart Distribution System, Cyber Security for Smart Meters, Cyber Security for Advanced Metering Infrastructure, DLMS/COSEM Cyber Security, Cyber Security Standards and CEA Guidelines for Cyber Security in Power Sector.

He has organized more than 119 events including Smart Grid and Cyber Security domain. He has also delivered around 370 expert lectures in PSU, Central, IISc, IITs, NITs and reputed academia colleges/Universities. He is a IEEE Senior member, ISA Senior Member and Fellow IE. **Mobile: +91 94491 49924, Email: kaliappan@cpri.in**



Smt S.Sudha, Joint Director, is working in Metering and Utility Automation Division (MUAD) of CPRI. She has graduated in B.E Electrical from R.V.College of Engineering, Bangalore. She started her career as Engineering Officer Grade1 in CPRI. She has 26 years of experience in the field of Energy Meter testing as per IS & IEC Standards, Calibration of Reference standard Energy Meters and other measuring instruments. She has conducted pre dispatch inspection on Test Benches and Reference Standard Meters at manufacturer's premises abroad. Having experience in both testing and calibration she has conducted many seminars & conference on Metering & communication technology, Calibration and measurement uncertainty. She has provided consultancy services to state electric city boards & conducted Third Party Inspection at various manufacturer's premises on behalf of power utilities. Her areas of Research interest include Smart Grid, Smart Meter, Cyber Security, Renewable Energy (RE) and Power Quality.

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Shri Dhanavath Shankar, Engineering Officer Gr.2, working for Metering Protocol Laboratory of MUAD – CPRI, Bengaluru in the area open protocol DLMS/ COSEM Testing and Certification of Static and Smart Energy Meters for Conformance to IEC 62056 and Compliance as per ICS BIS formulation: IS 15959 series of Standards pertaining to Data Exchange for Electricity Meter Reading, Tariff and Load Control. Providing technical assistance for product development to various stake holders in the country for Static & Smart Energy meter implementations as per IS 15959 and IS 16444 series over the past 8 years. Experienced in the areas of testing the Energy Meters for their Open protocol, communicability & functional requirements through various software's like the Conformance Test Tool (CTT), Functional Evaluation Tool (FET), DLMS Explorer and DLMS Meter Explorer.

Registration form shall be sent by E-mail to

Smt S.Sudha,

Joint Director/QAC/Metrologist/IEEE Senior Member

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Metering and Utility Automation Division

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