



cigre

For power system expertise

SC D2 Information Systems Telecommunications and Cybersecurity

5th December 2024

Jianing Li CIGRE UK D2 Regular Member

What is CIGRE Study Committee D2

D2 provides guidance, shares knowledge, and develops best practices and publications for the application of information technology to the critical and core business systems in the electricity supply chain, including smart meters, asset performance monitoring and management, energy management systems (EMS), internet of things (IoT) and machine learning/ big data.



Study Committee D2 Members 2024-2026

New member
or role

Chairperson



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TAN
Australia

Secretary



Marcelo
ARAUJO
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- New in 2024



Study Committee D2 Members 2024-2026

Chairperson



Victor
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Australia

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Brazil



- WG Conveners
- SAG Members

Working Groups' Conveners

Alexandre PINHEL Brazil WG D2.44	Bruce LARGE Australia WG D2.51	Kunlun GAO China WG D2.52 WG D2.55	Zhengyun SUN China WG D2.53	Ugo FINARDI Italy WG D2.54	Elena RAGAZZI Italy WG D2.54	Qinglai GUO China WG D2.56	Roman BOGOMOLOV Russia WG D2.57	Bongani SHEZI South Africa WG D2.58

Akshat KULKARNI U.K. B2/D2.72	Patrick PICHER Canada A2/D2.65	Nicolaie FANTANA Germany B3/D2.62

Strategy Advisory Group

Olga V. SINENKO Russia SAG	Gareth TAYLOR U.K SAG	Carolina VILLASANTI Paraguay AG D2.01 WG D2.49	Giovanna DONDOSSOLA Italy AG D2.02	Zwelandile MBEBE South Africa AG D2.03

Africa Task
Force Lead



Thuthukani
BIYELA
South Africa

Paris Session 2024

- Workshop
 - Joint C5/C6/D2 workshop on **“Consumer-Side Energy Resource Management – Market, Control and Information Systems”**, with more than 120 attendees.
- Tutorial
 - **“5G Application for Power Utilities”** by Kunlun Gao (CN) and Yi Wang (CN)
- Poster session
 - Moderated by Olga Sinenko (RU) and Zwelandile Mbebe (ZA), where 75 posters were presented to more than 1000 people.
- Group discussion meeting
 - PS1: IT/OT solutions to improve the efficiency and resilience of electric power systems
 - PS2: Cybersecurity in emerging application domains and technologies for securing energy organisations
 - PS3: Meeting the challenges of energy transition with reliable, scalable, and efficient telecommunications networks

Working Groups Reports

WG	Title	Convener	Supervising AG	2020		2021		2022		2023		2024		2025		2026			
				S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2		
WG D2.44	Usage of public or private wireless communication infrastructures for monitoring and maintenance of grid assets and facilities	A. PINHEL (BR)	AGD2.03	Convener changed in 2023															
JWG D2/C6.47	Advanced consumer side energy resource management systems	A.A. NEBERA (RU)	AGD2.01															Published in April 2024	
JWG D2/C2.48	Enhanced information and data exchange to enable future transmission and distribution interoperability	G. TAYLOR (GB)	AGD2.01																
JWG B2/D2.72	Condition Monitoring and Remote Sensing of Overhead Lines	Y. CHEN (CN) A. KULKARNI (GB)	AGD2.01															No report in 2023	
WG D2.49	Augmented reality to support EPU's operation and maintenance	C. VILLASANTI (PY)	AGD2.01	Convener changed in 2023															
WG D2.51	Implementation of Security Operations Centers (SOC) in Electric Power Industry as Part of Situational Awareness System	Br. LARGE (AU)	AGD2.02	Convener changed in 2023															
WG D2.52	AI Application and Technology on Power Industry	KUN LUN GAO (CN)	AGD2.01																
WG D2.53	Technology and Applications of Internet of Things in Power Systems	ZHENG YUN SUN (CN)	AGD2.01																
WG D2.54	Regulatory approaches to enhance EPU's cybersecurity frameworks	E. RAGAZZI (IT) U. FINARDI (IT)	AGD2.02	Convener changed in 2022															
WG D2.55	Application of 5G Technology to Smart Grids	KUN LUN GAO (CN)	AGD2.03	created in 2022															
WG D2.56	Interdependence and Security of Cyber-Physical Power System	QINGLAI GUO (CN)	AGD2.01	created in 2022															
WG A2/D2.65	Transformer Digital Twin – concept and future perspectives	P. PICHER (CA)	AGD2.01	created in 2022															
WG B3/D2.62	Life-long Supervision and Management of Substations by use of Sensors, Mobile Devices, Information and Communication Technologies	N. FANTANA (DE)	AGD2.01	created in 2022															
WG D2.57	CIM (Common Information Model) Methodology	R. BOGOMOLOV (RU)	AGD2.01	created in 2022															
WG D2.58	Monitoring, Maintenance and Control of Packet Networks & Services – From Situational Awareness to Network Control	B. SHEZI (ZA)	AGD2.03	created in 2023															

TB 929
TB 936

- At least 5 TBs are expected to be produced by the end of 2024.
- It is not needed to wait the conclusion of a TB to share that knowledge in a tutorial or workshop.

Working Groups Reports

- Restarted in 2024:

Number	Title	UK Member/Status
D2.44	Usage of public or private wireless communication infrastructures for monitoring and maintenance of grid assets and facilities	Restarted
D2.49	Augmented reality to support EPU's operation and maintenance	Restarted
D2.51	Implementation of Security Operations Centers (SOC) in Electric Power Industry as Part of Situational Awareness System	Restarted

- Proposals and ideas:

- Cybersecurity of Energy Operators Supply Chain – ToR drafted
- An assessment of EPU digital certificate management schemes – ToR drafted

- Approved in 2024:

Number	Title	UK Member/Status
D2.59	Intelligent Computing for Power Industry	Approved
D2.61	High Voltage Power Line Carrier Communications Current State and Future Application	Approved

- D2.51 - Implementation of Security Operations Centres (SOC) in Electric Power Industry as Part of Situational Awareness System

Country Report



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Future Events

CIGRE Symposium 2025 in Trondheim, Norway, 12-15 May 2025

- **Symposium theme**

- The topic for this Symposium will be **CHANGES NEEDED IN THE POWER SYSTEM** – for the Energy Transition. The aim of the CIGRE Symposium 2025 is to provide a forum for recent research results, planning and system operations experience related to the changes the power system is undergoing because of the energy transition.

- **Participating Study Committees**

- SC A3 Transmission and distribution equipment
- SC B1 Insulated cables(co-lead)
- SC B2 Overhead lines
- SC B3 Substations and electrical installations
- SC B4 DC systems and power electronics
- SC B5 Protection and automation
- SC C2 Power system operation and control
- SC C3 Power system sustainability and environmental performance
- SC C4 Power system technical performance (co-lead)
- SC C6 Active distribution systems and distributed energy resources
- SC D2 Information systems telecommunications and cybersecurity



Follow Up

- CIGRE UK Mailing List

<https://cigre.org.uk/contact-us>



- CIGRE UK SC D2 Mailing List

<https://mailchi.mp/97d89d5c75b8/cigre-uk-sc-d2>

