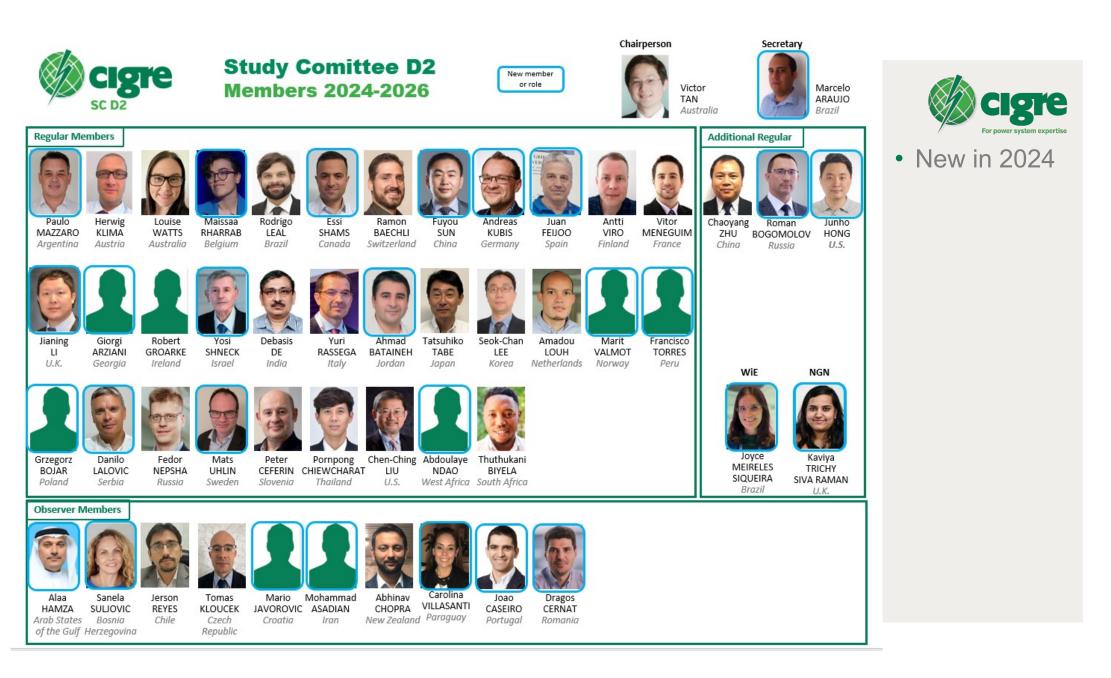


SC D2 Information Systems Telecommunications and Cybersecurity

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 Comittee D2 Members 2024-2026

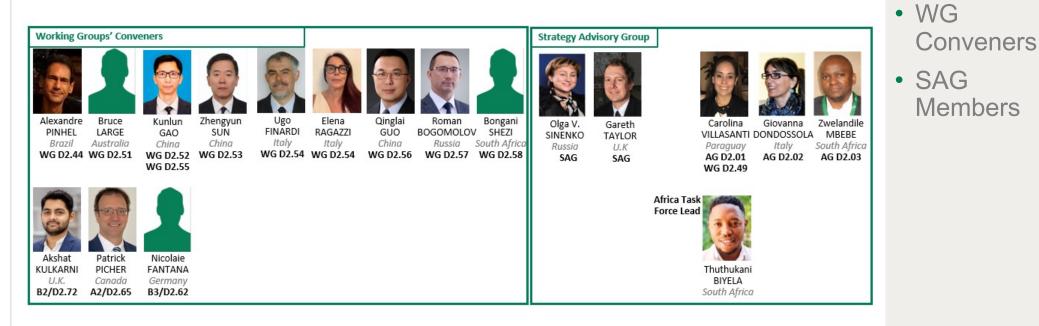
Chairperson











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	Convenor	Supervising AG	2020		2021		2022		20	3 20		24	20	2025		26	
WG				S1	S2	S1	S2	S1	S2	S1	52	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	Con	vener	chang	ed in 2	023										
IWG D2/C6.47	Advanced consumer side energy resource management systems	A.A. NEBERA (RU)	AGD2.01									-	Publi	shed i	n April	2024		TB 929
IWG D2/C2.48	Enhanced information and data exchange to enable future transmission and distribution interoperability	G. TAYLOR (GB)	AGD2.01								+							TB 930
JWG <mark>B</mark> 2/D2.72	Condition Monitoring and Remote Sensing of Overhead Lines	Y. CHEN (CN) A. KULKARNI (GB)	AGD2.01							No rep	icrt ir	2023						
WG D2.49	Augmented reality to support EPUs operation and maintenance	C. VILLASANTI (PY)	AGD2.01	Con	vener	chang	g <mark>ed in 2</mark>	023										
WG D2.51	Implementation of Security Operations Centers (SOC) in Electric Power Industry as Part of Situational Awareness System	Br. LARGE (AU)	AGD2.02	Con	vener	chang	g <mark>ed in 2</mark>	<mark>.023</mark>										
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	ZHENGYUN SUN (CN)	AGD2.01						-									
WG D2.54	Regulatory approaches to enhance EPU's cybersecurity frameworks	E. RAGAZZI (IT) U. FINARDI (IT)	AGD2.02	Con	vener	। <mark>chang</mark> ।	<mark>ged in 2</mark>	022										
WG D2.55	Application of 5G Technology to Smart Grids	KUN LUN GAO (CN)	AGD2.03	crea	ated in	2022												
WG D2.56	Interdependence and Security of Cyber-Physical Power System	QINGLAI GUO (CN)	AGD2.01	cre	ated i	1 202	2											
WG A2/D2.65	Transformer Digital Twin – concept and future perspectives	P. PICHER (CA)	AGD2.01	cre	ated i	n 202	2											
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	cre	ated i	1 202	2											
WG D2.57	CIM (Common Information Model) Methodology	R. BOGOMOLOV (RU)	AGD2.01	cre	ated i	n 202 I	2											
WG D2.58	Monitoring, Maintenance and Control of Packet Networks & Services – From Situational Awareness to Network Control	B. SHEZI (ZA)	AGD2.03	cre	ated i	n 202	3											

- 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:

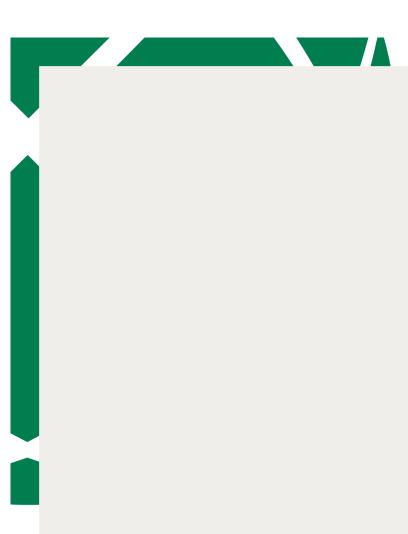
Number	Title	UK Member/Status
D2.44	Usage of public or private wireless communication infrastructures for	Restarted
	monitoring and maintenance of grid assets and facilities	
D2.49	Augmented reality to support EPUs operation and maintenance	Restarted
D2.51	Implementation of Security Operations Centers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

• 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



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



CIGRE UK SC D2 Mailing List
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