CIGRE Study Committee D2

PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP

WG [1]N° D2.54	**Name of Convenor/co-convenor:** Elena Ragazzi (IT) / Ugo Finardi (IT) **E-mail address**: elena.ragazzi@ircres.cnr.it / ugo.finardi@ircres.cnr.it
Strategic Directions #[2]: 1	**Sustainable Development Goal #[3]: 9**
The WG applies to distribution networks: ☒ Yes / ☐ No	
Potential Benefit of WG work #[4]: 3	
Title of the Group: Regulatory approaches to enhance EPU's cybersecurity frameworks	

Scope, deliverables and proposed time schedule of the WG:

Background:

Views differ on the need to regulate cyber-risk. One view is that the evolving nature of cyber-risk is not amenable to specific regulation and that cyber issues can be handled with existing regulation relating to technology and/or operational risk. The other view is that regulatory structure is needed to deal with the unique nature of cyber-risk, and given the growing threats resulting from an increasingly automated energy sector.

For jurisdictions that already have specific regulatory requirements, debate continues about the level of prescriptiveness. Some jurisdictions favor a principle-based approach while others apply a more prescriptive framework. In either case, no open source literature can be found that compares the two approaches and examines the issues from a regulators point of view. Of particular interest to the EPUs, is how regulators should/do determine the cost of cybersecurity protection and the metrics needed to justify the cost.

Scope:

1. Review the open literature to identify applicable standards, guidelines, and reports that address, or could be used to address, regulatory approaches to enhance EPU's cybersecurity frameworks.
2. Conduct a global survey to solicit EPU recommendations on their preferences, and to better understand their needs for improved regulatory guidance. If possible, include regulators in the survey to better understand their needs.
    a. Newton-Evans is best equipped to perform this survey.
    b. Reach out to Agency for the Cooperation of Energy Regulators (ACER) and the European Network and Information Security Agency (ENISA) for advice and priority topics, e.g., what works and what does not work.
    c. Reach out to National Association of Regulatory Utility Commissioners (NARUC) to identify and prioritize regulatory needs.
3. Document the findings from the literature search and survey to establish a basis for continued work.

Joint work with other SCs: Representative member from SC C5 will be invited.

Deliverables:

☒ Technical Brochure and Executive Summary in Electra
☒ Electra Report
☐ Future Connections
☐ CSE
☒ Tutorial
☒ Webinar

Time Schedule: start: July 2021 **Final Report**: December 2024

Approval by Technical Council Chairman:

Date: April 11th, 2021

Notes: [1] Working Group (WG) or Joint WG (JWG), [2] See attached Table 1, [3] See attached Table 2 and CIGRE reference Paper: Sustainability – at the heart of CIGRE's work. [4] See attached Table 3

Table 1: Strategic directions of the Technical Council

1	The electrical power system of the future reinforcing the End-to-End nature of CIGRE: respond to speed of changes in the industry by preparing and disseminating state-of-the-art technological advances
2	Making the best use of the existing systems
3	Focus on the environment and sustainability (in case the WG shows a direct contribution to at least one SDG)
4	Preparation of material readable for non-technical audience

Table 2: Environmental requirements and sustainable development goals

	CIGRE selected the 7 SDGs that are the most relevant to CIGRE. In case the WG work refers to other SDGs or do not address any specific SDG, it will be quoted 0.
0	Other SDGs or not applied
7	**SDG 7: Affordable and clean energy** Increase share of renewable energy; e.g. expand infrastructure for supplying sustainable energy services; ensure universal access to affordable, reliable, and modern energy services; energy efficiency; facilitate access to clean energy research and technology
9	**SDG 9: Industry, innovation and infrastructure** Facilitate sustainable infrastructure development; facilitate technological and technical support
11	**SDG 11: Sustainable cities and communities** Increase attention on sustainable and resilient buildings utilizing local (raw) materials, power for electric vehicles, strengthening long-line transmission and distribution systems to import necessary power to cities, developing micro-grids to reinforce the sustainable nature of cities; protect and safeguard the world's cultural and natural heritage; reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and waste management
12	**SDG 12: Responsible consumption and production** E.g. Promote public procurement practices that are sustainable; address reducing use of SF6 and promote alternatives, encourage companies to adopt sustainable practices and to integrate sustainability information into their reporting cycle, address inefficient fossil-fuel subsidies that encourage wasteful consumption
13	**SDG 13: Climate action** E.g. Increase share of renewable or other CO_2-free energy; energy efficiency; expand infrastructure for supplying sustainable energy; strengthen resilience and adaptive capacity to climate-related hazards and natural disasters; integrate climate change measures into national policies, strategies and planning; improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
14	**SDG 14: Life below water** E.g. Effects of offshore windfarms; effects of submarine cables on sea-life
15	**SDG 15: Life on land** E.g. Attention for vegetation management; bird collisions; integration of substations and lines into the landscape

Table 3: Potential benefit of work

1	Commercial, business, social and economic benefits for industry or the community can be identified as a direct result of this work
2	Existing or future high interest in the work from a wide range of stakeholders
3	Work is likely to contribute to new or revised industry standards or with other long term interest for the Electric Power Industry
4	State-of-the-art or innovative solutions or new technical directions
5	Guide or survey related to existing techniques; or an update on past work or previous Technical Brochures
6	Work likely to contribute to improved safety.