



CIGRE Study Committee D2

PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP¹

WG N° D2.46	Name of Convenor: Dennis Holstein (US) E-mail address: holsteindk@ocg2u.com
Strategic Directions #²: 1	Technical Issues #³: 10
The WG applies to distribution networks⁴: Yes	
Potential Benefit of WG work #⁶: 3	
Title of the Group: Cybersecurity: future threats and impact on Electric Power Utility organizations and operations	
Scope, deliverables and proposed time schedule of the Group:	
Background: The cybersecurity threat landscape is rapidly evolving. EPU's need a prediction of the evolution of these threats, the corresponding changes to local laws and regulations, and the need for standardization. The planning horizon for these estimates should be divided between the near term (next 10 years) and the long term (next 20 years). The assessment of the impact should include recommended changes to EPU cybersecurity policies, procedures and organizational directives, and recommended solutions to improve the security posture of EPU organizations and operations.	
Scope: <ol style="list-style-type: none">1. Review existing standards, CIGRE technical brochures and open source documentation to characterize the evolving threat and imposition of local laws and regulations over the near term (next 10 years) and long term (next 20 years) planning horizon.2. For the two planning horizons estimate the impact on EPU cybersecurity policies procedures, and organizational directives that will require attention.3. Associated with each impact recommend solutions to improve the security posture of EPU operations. For example, in the near term identify the architecture and capabilities needed to implement an integrated security operations centre (ISOC), and the technical skills of personnel assigned to the ISOC.	
Deliverables: <input checked="" type="checkbox"/> Technical Brochure and Executive summary in Electra <input checked="" type="checkbox"/> Electra report <input checked="" type="checkbox"/> Tutorial ⁵	
Time Schedule: start: April 2018	Final Report: March 2020
Approval by Technical Committee Chairman: 	
Date: 23/02/2018	

Notes: ¹ or Joint Working Group (JWG), ² See attached Table 2, ³ See attached Table 1, ⁴ Delete as appropriate, ⁵ Presentation of the work done by the WG, ⁶ See attached table 3

Table 1: Technical Issues of the TC project “Network of the Future” (cf. Electra 256 June 2011)

1	Active Distribution Networks resulting in bidirectional flows
2	The application of advanced metering and resulting massive need for exchange of information.
3	The growth in the application of HVDC and power electronics at all voltage levels and its impact on power quality, system control, and system security, and standardisation.
4	The need for the development and massive installation of energy storage systems, and the impact this can have on the power system development and operation.
5	New concepts for system operation and control to take account of active customer interactions and different generation types.
6	New concepts for protection to respond to the developing grid and different characteristics of generation.
7	New concepts in planning to take into account increasing environmental constraints, and new technology solutions for active and reactive power flow control.
8	New tools for system technical performance assessment, because of new Customer, Generator and Network characteristics.
9	Increase of right of way capacity and use of overhead, underground and subsea infrastructure, and its consequence on the technical performance and reliability of the network.
10	An increasing need for keeping Stakeholders aware of the technical and commercial consequences and keeping them engaged during the development of the network of the future.

Table 2: Strategic directions of the TC (ref. Electra 249 April 2010)

1	The electrical power system of the future
2	Making the best use of the existing system
3	Focus on the environment and sustainability
4	Preparation of material readable for non-technical audience

Table 3: Potential benefit of work

1	Commercial, business or economic benefit 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 direction
5	Guide or survey related to existing techniques. Or an update on past work or previous Technical Brochures
6	Work likely to have a safety or environmental benefit