



CIGRE Study Committee D2

PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP (1)

WG* N° D2.34	Name of Convenor: Herwig KLIMA (AT) E-mail address: herwig.klima@verbund.at	
Technical Issues # (2): 5, 10	Strategic Directions # (3): 1	
The WG applies to distribution networks (4): Yes		
Title of the Group: Telecommunication and Information Systems for Assuring Business Continuity and Disaster Recovery		
<p>Scope, deliverables and proposed time schedule of the Group:</p> <p>Background: The occurrence and impact of natural catastrophe in recent years has proved that even the most prepared electrical power utilities experience unexpected difficulties facing these extraordinary situations. On the other hand, the ever increasing reliance of all aspects of the modern society upon the continuous flow of electrical power render necessary a high degree of disaster-preparedness. The power system operation and in particular its recovery from disastrous failure relying extensively on communications, it is essential for power utilities to have available particularly robust and resilient telecommunication infrastructures, fast deployment communication facilities, and adequate work processes for these emergency situations. This working group aims to provide comparison of experiences and emergency systems and procedures among Utilities in order to set guidelines and best practices for the power community.</p> <p>Scope : The scope of the Working Group shall include the following aspects which may be treated concurrently through parallel workshops or sequentially by the whole Working Group depending upon the number of participants and their complementarities. In any case, work shall be organized in such a way as to allow partial contributions and participations:</p> <ul style="list-style-type: none"> ⇒ Influence of increased Grid intelligence and reliance on intelligence on the nature/ extent of disaster impacts. How to “resist to / recover from” major disasters <ul style="list-style-type: none"> • Types and levels of disaster with respect to impact on infrastructure and failure characteristics, Gradual or Catastrophic Collapse • Recovering from disasters including Cyber-disaster ⇒ Communications of Back-up Power Control Centre ⇒ Back-up for telecom network management and Operation Support System ⇒ Disaster-time resources: <ul style="list-style-type: none"> • Satellite channels and telephones, private mobile radio • Shared infrastructure with other companies, • Fast deployment mobile telecom units ⇒ System Assessment Tools: Information Systems with “What if” scenarios ⇒ Power Supply – Diesel Generators, Battery systems, solar cells, autonomy issues ⇒ Scheduled and on-demand testing of Back-up system ⇒ Restoring the system from backup facilities <p>Disaster Recovery Plan/ Defense Plan, Coordination across EPU, and with National Authorities</p> <p>Deliverables: Technical brochure with summary in Electra, and possibly report in Electra.</p>		

Time Schedule: start: January 2012

Final report: December 2013

Comments from Chairmen of SCs concerned:

Approval by Technical Committee Chairman: Klaus Fröhlich

Date:30/03/2012

- (1) Joint Working Group (JWG) – (2) See attached table 1 – (3) See attached table 2
- (4) Delete as appropriate

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 within distribution level and to the upstream network.
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 (cf. 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	Interactive communication with the public and with political decision maker