CIGRE Study Committee C1

PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP[1]

WG N° C1.41	**Name of Convenor:** Phil Southwell (Australia) **E-mail address**: phil.southwell.cigre.c1@gmail.com
Strategic Directions #[2]: 4	**Technical Issues #[3]: 10**
The WG applies to distribution networks[4]: Yes	
Potential Benefit of WG work #[6]: 1 and 2	
Title of the Group: Closing the gap in understanding between stakeholders and electrical energy specialists	

Background:

Global climate change initiatives have driven a massive increase in intermittent generation, often in a distributed form. There are now significant numbers of customers who own generation in the form of roof top solar panels and more recently battery storage, in order to save money or reduce CO2 emissions. Their requirements for electricity supply are therefore changing and yet the level of understanding by stakeholders of the technical challenges facing the power system is limited. Further, the issues are often clouded by competing ideologies or political drivers, which may make it more difficult for the 'layman' or non-technical person (both at the consumer and business level) to fully understand the true implications of issues. In this context there is a need to bridge the gap in understanding between the technical specialists and the various stakeholders that have a vested interest in the electricity product. This is particularly important where the changes are leading to rising costs and potential significant changes in jurisdictional policy and energy strategy which impacts not only the consumer but also the broader industry environment and economy.

Scope:

This working group will examine the gap in understanding amongst the various stakeholders of the range of technical issues from a planning perspective related to the changing nature of the power system and how this has developed. It will review how stakeholders perceive this gap and what is being done across the world to improve the level of understanding, particularly of the non-technical stakeholders. It is intended that the working group members be technical and non-technical personnel, with the latter ideally having a speciality in communication and/or stakeholder engagement.

(Note: we are not trying to define a "good stakeholder engagement process". Instead, we are trying to make concrete steps towards improving understanding, both in sector specialists' understanding of what stakeholders want from them and stakeholder understanding of some key issues).

The WG will focus on the following stakeholder groups:

- Energy policy decision makers (including politicians)
- Regulators
- Business leaders
- Environmental leaders

- Customers

Electrical energy specialists include the following:

- Engineers
- Economists
- Scientists

Tasks

1. Confirm the given set of stakeholders and determine which are most important to different industry sector participants/CIGRE members in different countries:
    a. Stakeholders they are obliged to communicate with;
    b. Stakeholder they believe they should be in communication with.
2. Define the communication gap in terms of
    a. The communication channels:
        i. Which channels currently exist between electrical energy specialists and stakeholders?
        ii. In the opinions of CIGRE members and stakeholders, which of them work well and or less well?
        iii. Which channels should be improved or created?
    b. Content: what information is lacking, or is lacking in ways that can be understood and used?
        i. In the opinion of CIGRE members in respect of what stakeholders appear to know.
        ii. In the opinion of stakeholders in respect of what they would like to learn from electrical energy specialists
        iii. Consider how to reach agreed technical specialist positions to ensure consistency.
    c.
3. Carry out surveys to identify:
    a. The issues on which electrical energy specialists believe that stakeholder understanding is lacking *and* those stakeholders are seeking information.
    b. The issues that Non Technical stakeholders and participants have in acquiring the appropriate non-biased factual information on which they can base their decisions and policy development.
4. For the issues identified in task 3, identify existing material available within the electrical energy sector that may help understanding.
5. Identify existing material or approaches in sectors other than the electrical energy sector that may provide models for useful forms or channels of communication.
6. If time and resources permit:
    a. Develop new material and/or information channels with the aim of helping understanding of the issues identified in task 3. This includes suitable:
        i. Language

ii. Analogies or metaphors
iii. Infographics
iv. Improvements to existing glossaries of terms used in the industry.

b. Test the identified and newly developed material with a limited set of stakeholders.

Deliverables:

☒ Interim report in Sept 2019 to check progress, refine scope and confirm final deliverables.

☒ Technical Brochure and Executive summary in Electra

☒ Electra report

☒ Tutorial[5]

Time Schedule: start: Nov 2018 **Final Report**: Nov 2020

Comments from Chairmen of SCs concerned:

Six SCs provided specific comments:

SCB2 would like to contribute to this work and noted TB 274 "Consultation models for OHL projects" was issued in 2005. They also noted this is an essential theme in projects and can decide about yes or no. It is strongly related to communication and electrical energy specialists can/need to learn from communication experts.
SCA1 would also like to collaborate/contribute and noted the changing nature of the power system is either directly affecting or being affected by utilities, equipment manufacturers and equipment standards.
SCD2 noted the WG topic really makes sense and suggested steps be taken to refine/improve the glossary in order to help bridge the gap in understanding between the technical specialists and stakeholders.
SCC5 commented that this work is important but difficult, that the WG needs to ensure that task 6 is delivered to make this really worthwhile and that all SCs should be willing to help.
SC C6 commented that this is a really interesting and timely topic and that all SCs should be happy to contribute, as the results will provide benefits to CIGRE as a whole on how to communicate with different stakeholders.
SCC3 commented that it is an interesting topic and they are happy to support if necessary.

All six comments offer strong support for the work with several offering to contribute to the work and one suggesting all SC's should contribute. In response to this it is proposed that the WG Chair will circulate drafts to all SC's for comment at critical points and will include them in any surveys that are carried out. Improvement to existing glossaries of terms has been added to section six, which will be dependent on time and resources. As noted, the scope will be reviewed in about 12 months to check on its appropriateness. Also it may be necessary to partition some of the work to a subsequent WG if the topic scope is demonstrated to be too broad.

Approval by Technical Committee Chairman:	Marcio Szechtman
Date: October 28th, 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