CIGRE Study Committee A1

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

WG* N° A1.41	**Name of Convenor :** FERNAGUT Vincent (FRANCE) **E-mail address**: vincent.fernagut@edf.fr
Technical Issues # (2): XXXXX	**Strategic Directions # (3): 2**
The WG applies to distribution networks (4): No	
Title of the Group: Inventory of main maintenance interventions on turbo generators	

Scope, deliverables and proposed time schedule of the Group :

Background :

The nominal design life of a generator is generally about 30 years for turbo generators. Turbogenerators built in 70s have already reached the end of their planned life and many show various technical problems caused by aging. The purpose of this working group is to establish an inventory of main maintenance interventions such as main components replacement to extend the life of existing generators (e.g., stator bars rewinding, core restacking) or even their complete replacement with due consideration to the time in which the machine is out-of service.
The investigation is necessary to get a view of all main interventions done on the turbogenerators and duty cycles experienced before these interventions. This investigation has also to identify the reasons of the interventions, their duration and the way these machines were operated.

Scope :

1. Listing generators with power and date of first start
2. Establishing a questionnaire to know the main operations done on the generator, date of intervention, duration, reasons
3. Data gathering and establishing a list of generators, their main maintenance interventions, the delay to realise these interventions and the way these machines were operated
4. Synthesis report

Deliverables : Report to be published in Electra or technical brochure with summary in Electra

Time Schedule :

- TOR submitted for approval in July 2013
- Draft questionnaire by October 2013
- Comments by members and experts – SC A1 Colloquium Romania 2013
- Final questionnaire – December 2013
- Survey – Answers – March 2014
- Draft report – May 2014
- Comments by members and experts – June 2014
- Presentation of status in Paris 2014
- Final Survey – Answers – March 2015
- Final draft report – May 2015
- Comments by members and experts – June 2015
- Final report – August 2015
- Approval of final document – SC A1 Colloquium Spain 2015
- Technical Brochure or Report ready for publication – February 2016

Comments from Chairmen of SCs concerned :

Approval by Technical Committee Chairman : M. Waldron
Date : 16/07/2013

(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