

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

WG* N° C5.18	Name of Convenor : Alain Taccoen (France) E-mail address: alain.taccoen@rte-france.com
Technical Issues # (1), (5), (7) and (8).	Strategic Directions # (1) and (2)
The WG applies to distribution networks (4): Yes	
Title of the Group: Market price signals and regulated frameworks for regional coordination of grid investments.	
<p>Scope, deliverables and proposed time schedule of the Group :</p> <p>Background :</p> <p>Large infrastructure investments on the transmission and distribution grids are needed in the coming years to integrate new assets to the network, such as distributed generation and large offshore wind farms, to accommodate, at least in developing countries, the quick growth of demand, and to reach for new opportunities provided by the implementation of new technologies, such as an enhanced Demand Side Management and Advanced Network Management. In this context, several coordination arrangements through market or regulated tools are required to efficiently allocate the limited financial resources under the frequent constraint of strong local acceptability issues.</p> <p>A general trend across power industry over past years has also very often been the unbundling of electric utilities, together with the development of electricity markets and public support to renewable energies and new technologies and with more and more regional approach with a growing number of countries or of transmission owners and operators. Thus, the expansion of the grid and the implementation of new grid control devices are to be coordinated with the development of new assets connected to the grid (such as renewable generation today and new technologies for DSM and storage in the near future).</p> <p>To tackle those challenges, various designs of short or long-term cost allocation are implemented worldwide or under consideration, through for instance central planning, locational signals and cross-border compensation mechanisms.</p> <p>Scope :</p> <ul style="list-style-type: none"> • Grid costs allocation between neighbouring TSOs/RTOs : <ul style="list-style-type: none"> ○ Compensation mechanisms for transit flows / loop flows (vs short term remedial actions) ○ Cost allocation (e.g., proportional to benefits) of for new assets, ○ Cross-border compensation for existing assets. • Price signals for medium and long-term planning for network, generation and new technologies <ul style="list-style-type: none"> ○ Interaction between planning process and market signals/price regulation, locational signals, ○ Role of price signals for long-term coordination between investments (generation, network, new technologies), ○ Case of the regional coordination between several zones with several transmission owners and operators, ○ Organization of call for tenders (possibility for players other than the incumbent to invest into the grid) 	

Deliverables :

- Benchmark of measures implemented worldwide to allow a smoother coordination of investments in the case where several transmission owners/TSOs/RTOs are concerned,
 - Overview of cost allocation and compensation between neighbouring RTOs/TSOs, especially when local policies have consequences on neighbours,
 - Overview of price signals used or under study to coordinate different types of investments (generation, network, new technologies).
 - Overview of what has been proposed by entities such as FERC, ENTSO-E, ACER, (and equivalent entities from other parts of the world to be listed)
- Survey of best practices
Based on the abovementioned benchmarking, the survey will try to identify successful models. As there is no “one fits all” model, the survey will analyse advantages and drawbacks of main models and highlight the conditions and prerequisites for their success.

Time Schedule

Phase 1: Elaboration of questionnaires (Q1 2014)

Phase 2: Collection of information (Q2 2014)

Phase 3: Analysis of information (Q4 2014)

Phase 4: Preparation of benchmarking report, paper in Electra (Q4 2014)

Phase 5: Survey on best practices (Q2 2015)

Phase 6: Publication of a technical brochure and presentation of results (Q3 2015)

Comments from Chairmen of SCs concerned :**Approval by Technical Committee Chairman :****Date :** 19/12/2013

- (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	Preparation of material readable for non technical audience