



European Network of
Transmission System Operators
for Electricity

ENTSO-E WORK PROGRAM

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1. INTRODUCTION

The preparation of an annual Work Program is one of the key deliverables required from ENTSO-E under the EU's 3rd Energy Package. As the Package has now begun its implementation phase (which will be complete in March 2011), ENTSO-E has decided to publish a Work Program *now* such that we can make best use of the implementation period to test the 3rd Package processes and to progress those issues of most interest to stakeholders, regulators and the European Commission. One goal is that formal work on network code developments can progress rapidly after March 2011. The formal process can only begin after the Agency for the Cooperation of Energy Regulators ACER can execute its tasks 18 months after the Electricity Regulation takes effect, as the code process includes major ACER tasks such as framework guidelines. Nonetheless we believe it essential that as much preparatory work as possible be carried out between now and Spring 2011 as this should be in the best interests of all concerned.

We have therefore structured our Work Program into the following sections:

- **Pilot code**
- **Preparing other priority code areas**
- **Further key areas of TSO cooperation**
- **Conclusion**
- **Indicative schedule**

Network codes are very important deliverables of ENTSO-E. The 3rd Package defines the code development process in great detail and lists 12 topic areas for network codes (see below). More importantly, Comitology procedures are foreseen to make ENTSO-E's network codes binding not only for TSOs but also for other affected market participants. The involvement of the European Commission, the Member States, ACER and extensive consultation will ensure that the codes are well balanced. Making the codes binding for others remedies a difficult shortcoming of the European energy market before the 3rd Package, i.e. that TSOs could make their operational rules binding for themselves through instruments such as Operation Handbooks and Multilateral Agreements, but that no one could impose these rules on other market participants whose cooperation is often crucial for operational security and market integration.

Sections 2 and 3 motivate the choices of priority network code areas: wind connection (pilot code), transparency, preparations for market integration-related codes, general generation connection, load flow management, balancing tools/ancillary services, and standardized coordination methodology/procedures.

Other outstanding priorities that are also required of ENTSO-E in the 3rd Package are highlighted at the beginning of section 4, i.e. the Ten-Year Network Development Plan, a consolidated R&D plan, and measures for improved operational coordination.

2. PILOT CODE

The pilot code for wind generation connection conditions will experiment the process of framework guidelines and code drafting and the associated consultations according to the Regulation's Article 6 even before ACER's tasks are in force. It is to demonstrate the efficiency and the practical benefits for the new approaches made possible by the 3rd Package's network code processes.

For the pilot code topic, wind generation connection conditions were chosen by ENTSO-E and ERGEG, with support from the European Commission and the Florence Forum: Identifying and developing European rules harmonizing Grid Code requirements particularly relevant to connecting wind generators to transmission networks across Europe. Harmonising wind generator connection rules is a relatively new issue and is urgent not only in the perception of TSOs, but also of ERGEG, the European Commission, stakeholders including the European Wind Energy Association EWEA, and of the European Wind Integration Study (EWIS). The available EWIS outputs provide a valuable starting point for these codes.

This pilot code will relate to a planned ERGEG framework guideline which will cover the network connection issue as a whole and which will also be pushed forward in the time before March 2011. ENTSO-E and ERGEG have already begun to coordinate these two mutually dependent pilot projects closely.

Compared to the present situation of having wind-generator-to-network connection requirements specific to each EU Member State, there are a number of benefits that result from harmonisation across Europe:

- Common standards facilitate adoption of best practices across Europe and thereby facilitate the achievement of policy goals (i.e. with respect to security/quality of supply, economic efficiency and environmental objectives).
- Manufacturers and developers of wind turbine generators would be able to reduce costs by standardising the design of wind generator equipment, protection and controls (rather than needing to meet the specific requirements of each Member State).

- Wind generation developers and network operators would benefit from lower costs of interfacing standardised turbines (i.e. reduced costs in connection design, commissioning/compliance testing and implementing operational requirements).
- A European harmonisation mechanism for grid code *structures* and harmonisation of technical content would increase transparency and bring benefits to every affected party. With *structures*, we mean that all EU Member states would have a wind power grid code that uses the same format and definitions including the requirement for criteria to relate to the point of common coupling between a wind park and the network.

The resulting network code will need to go through the formal steps again after the Agency's tasks are in force, but should pass through them much faster, leading to swift submission to – and passage through – the Commission's Comitology process. This will not only lead to speedier completion of one specific urgent network code, but would also provide a much firmer basis for future swift adoption of network codes building on improved common understanding of the network code establishment process.

3. PREPARING OTHER PRIORITY CODE AREAS

In addition to the reasons given in the Introduction, the importance of network codes also stems from the extensive list of operations, development and market-related problems they are to cover according to Article 8 (6) of the Electricity Regulation:

- 1) Operations-related code topics:
 - (a) network security and reliability rules including rules for technical transmission reserve capacity for operational network security;
 - (e) interoperability rules;
 - (f) operational procedures in an emergency;
 - (j) balancing rules including network-related reserve power rules;
- 2) Development-related code topics:
 - (b) network connection rules;
 - (l) energy efficiency regarding electricity networks;
- 3) Market-related code topics:
 - (c) third-party access rules;
 - (d) data exchange and settlement rules;
 - (g) capacity allocation and congestion management rules;
 - (h) rules for trading related to technical and operational provision of network access services and system balancing;

- (i) transparency rules;
- (k) rules regarding harmonised transmission tariff structures including locational signals and inter-transmission system operator compensation rules.

Together, these codes have the potential to become the framework of consistent detailed rules needed for the secure operation of the European power systems and to implement the liberalized Europe-wide electricity market according to the 3rd Package.

However, the flip side of this important role is that policy must be clear before network codes can implement policy. Although the 3rd Package specifies yet more policy questions than the 2nd Package, several important policy issues remain open, e.g. related to renewable energy support and cost assignment questions, or to cross-border markets under conditions of network congestion and differently structured power markets or exchanges.

For example, the output by the Project Co-ordination Group (PCG) to the Florence Forum in June 2009 was the presentation by ERGEG of a generic Target model for cross border congestion management. The target model is set to cover forward, day-ahead, intraday and balancing markets as well as capacity calculation and governance issues. The model received broad support from ENTSO-E and other stakeholders at the Forum. The conclusions of the Forum state that work should continue to develop a road map including a concrete action plan for the regional and inter-regional implementation. Furthermore, the Forum stressed the importance of wider consultation through the need for greater coordination between the work of the PCG and the broader work being undertaken in the regional initiatives. The PCG was tasked with reporting back to the next Florence Forum in December 2009. This report is expected to provide a basis for further consideration about network code development.

ACER's framework guidelines also are to solve such policy questions as a prerequisite for successful network code development. And especially important for the prioritization in the ENTSO-E and ACER work Programs: The process of framework guideline and network code development in a given area should only begin once the policy choices are formulated clearly enough. This is necessary because of the tight 6 and 12 month timelines for framework guidelines and network codes, respectively.

ENTSO-E's network code priorities for 2009-2010 are thus based on the importance for secure network operation, integration of renewable energy sources and market integration, and on the other hand on enough clarity and consensus between TSOs, regulators and market participants on goals and methods. From this perspective, some of the most

important market integration codes need to be postponed until the Florence Forum's Market Integration Design Project (MIDP) concludes. Similarly, some pan-European operational codes require prior work on definitions and on the analysis of the current state of the art in the different regions. The inclusion of these market and operational work areas in the section on priority codes reflects the high priority work that has already started but does not indicate that complete draft codes can be expected before the end of 2010. The priority of operational codes is also influenced by the fact that each of the five synchronous areas in the EU has a decades-old history of operational rules that have proven to work well.

Besides the pilot code which addresses 2b above, ENTSO-E's 2009-2010 network code development priorities thus include:

- a. Transparency (3i above): With the 3rd Package, additional progress has become possible on transparency of market information. Transparency is an important aspect of well functioning European wholesale markets. It is also an area where a lot of preparatory work has already been done and rapid progress towards European rules can be made. The Market Committee will develop as a first initiative an ENTSO-E transparency policy on what information should be published, by when, how and where. In coordination with ERGEG/ACER and the European Commission, ENTSO-E will start code preparation in relevant areas. Moreover, the Market Committee will develop ETSOVista further to meet the needs of the market and to ensure high quality and easy accessibility of data. Potentially it can become a compliance tool regarding the official requirements of TSO data publication.
- b. Design for market integration (3g above): The highest priority of the Market Committee and its most important preparatory work for future network codes concerns designs for market integration. This topic is being discussed in the Market Integration Design Project (MIDP) which is mandated by the Florence Regulatory Forum to develop a Target Model and Road Map for how congestion management and other market aspects could converge for a true European Internal Energy Market. Significant progress is still needed in the MIDP and also in the Regional Initiatives before principles and important details are clear enough to begin framework guideline and network code work. ENTSO-E will continue contributing vigorously to these discussions. Guided initially by key TSO contributions to the MIDP, the Market Committee will also contribute to Guideline and code preparation in priority areas and prepare ENTSO-E positions in other key areas such as cross border capacity incentives. Likely priorities for later codes include congestion management, capacity calculation and integration of cross border electricity markets in the day-ahead and intraday timeframes. Apart from these preparations for later codes, ENTSO-E will support and implement forthcoming Guidelines on Inter-TSO-Compensation (ITC) and tariffs and be prepared to ensure a temporary ITC mechanism for 2010 if needed.
- c. General generation connection conditions (2b above): Partly because of the large number of existing power plants retiring over the next decade, of the large number of distributed resources coming on-line, and of the need for consistency between wind generation connection and the connection of other plants, this is close in priority to the pilot code. This code will depend on policy choices in the same framework guideline on connection; this will help ensure consistency. Preparatory work can begin in late 2009

- and code development is to begin in 2010 (to be repeated more rapidly and more formally after ACER's tasks are in force in 2011, similar to the pilot code).
- d. Load flow management (1a and 1e above): This is particularly urgent because increasing amounts of fluctuating renewable energy make load flow management an more and more difficult challenge. The preparatory work will analyze the existing, proven load flow management rules from the five synchronous areas and derive as many as possible aspects that can be formulated as pan-European rules. As other operational codes, this one is thus needed to ensure a high standard of operability, reliability and security of the European electricity transmission systems within the framework of liberalised energy markets.
 - e. Use of balancing tools and of ancillary services (1j above): This also is urgent because of fluctuating renewable energy growth, as those can lead to higher balancing and ancillary services needs. This tends to make balancing and ancillary a more expensive part of overall transmission costs. The preparatory work will analyze the existing rules from the five synchronous areas and derive as many as possible aspects that can be formulated as pan-European rules. This work will be closely related to the MIDP and to similar operations-focused work on clear, Europe-wide definitions of the functions the different market actors fulfil.
 - f. Standardized coordination methodology/procedures (including coordination in emergency situations) (1e and 1f above): Both in routine and in emergency situations neighbouring TSOs need to be aware not only of each others' equipment settings and procedures, but also of load flow data forecasts and numerous other operational data. This is made more urgent because of fluctuating renewable energy which potentially leads to much more frequent surprises about load flows in neighbouring systems and the increasing volume of intraday trading. Much progress is being made in different regions, and the pan-European code preparatory work will build on that progress.

This list illustrates that ENTSO-E intends to propose network codes as much as possible at Pan-European level, and as few as needed at regional level. In general, more detailed regional codes would of course follow the respective Pan-European codes. The code development process will be designed in such a way that it best copes with the diversity and number of requested codes in the priority list consulted with the European Commission and regulators. A basic issue to settle early is the definition, clarification (where needed) and consistent use of terminology related to the TSO business; this task should derive from the analysis by TSOs of their activity and from the functional definitions of the different actors relevant for the transmission sector.

Due to inherent specificities of synchronous areas, the current regional operational rules differ widely in terms of scope, content and applied technical solutions. The System Operations Committee will compare the approaches and develop common terminology, ensuring the same understanding of technical terms used in different synchronous areas. Such common understanding is a prerequisite for further work related to pan-European Network Codes, in both operational and market areas.

4. FURTHER KEY AREAS OF TSO COOPERATION

Finally, among the other activities and products to be developed by ENTSO-E the Ten-Year Network Development Plan (TYNDP) and the Research and Development (R&D) Plan for TSO needs rank clearly among the most important for the entire association given the very high expectations already voiced by stakeholders.

- a. Ten-Year Network Development Plan (TYNDP): Besides the network codes, the TYNDP is indeed the most important *new* task given to TSOs and ENTSO-E by the 3rd Package.

The main challenge of the Plan consists doubtlessly in combining the bottom up approach underpinning national or regional investment plans with a top-down designed policy goals laid down in scenarios (e.g. 20-20-20 targets). As long term forecasting tool, TYNDP will identify capacity gaps and bottlenecks requiring quick action on the demand and the supply sides reflecting the evolution of political contingencies and technological progress. The combination and consolidation of both a.m. approaches will be performed by ENTSO-E; however it will be crucial that investment projects not yet reflected either in national investment or regional investment plans are duly notified to ENTSO-E together with the relevant market information in order to perform such a consolidation under a clear European perspective. The first releases of TYNDP will bring to evidence whether without formal obligation on all grid users to provide necessary information (backed by a strong commitment of TSOs to ensure due confidentiality protecting commercial interests of market players), the underlying main objectives of the plan (i.e. drawing an as accurate as possible picture of the investment needs) can be achieved. The ENTSO-E objective in this Work Program is to issue a first release of the TYNDP in 2010, aiming also at experimenting the development process of the Plan, including the consultation with stakeholders and methodology work.

Ultimately, all stakeholders should be able to rely on a common and consolidated non-binding vision for the development of the Pan-European high voltage transmission infrastructures, derived from expected needs of system users (including the announced new power plants) but also from the expected contribution of the transmission grids to fulfill several key objectives of European energy policy. The TYNDP will be the first plan for the continent not just assembled bottom-up from projects planned by each TSO, but also tested as an integrated plan against the 2020 energy policy goals. As such, the TYNDP will play a major role for the achievement of the energy policy goals, in particular the integration of the ambitiously targeted amounts of renewable energy, because a lot of new transmission infrastructures will be needed to transport that energy to the load centers.

The 1st TYNDP will propose: a generation adequacy outlook; the modeling of integrated networks taking advantage of the inputs of the EWIS study in order to assess most probable power flow patterns; an identification of investment gaps and investment projects, particularly with respect to the development of cross-border capacities; an assessment of the resilience of the proposed reinforcements; a review and discussion of barriers - arising from approval procedures and practices - to developing transmission infrastructures and increasing cross-border capacities. Related to TYNDP questions, the System Development Committee will play a leading role in the definition of a concrete roadmap towards the development of offshore wind generation and the related grid infrastructure as addressed within the framework of the Project of the EU Coordinator for “Connection to offshore wind power in Northern Europe”.

- b. A consolidated R&D Plan for TSO needs: The System Development Committee will prepare a consolidated R&D Plan for TSO needs and contribute to the process launched by the European Commission for a Strategic Energy Technologies Plan. This R&D Plan will define priority research fields as a basis for ENTSO-E's active participation in the new EU guidance structure on smart grids. ENTSO-E will ensure the cross-functional coordination over all TSO research subjects. ENTSO-E will define and monitor a portfolio of TSOs' R&D innovation projects covering system design and technology, optimization and assets, system operation, market facilitation and system technology. ENTSO-E may need to engage both in promoting common R&D actions and projects among TSOs and also in direct participation in pan-European R&D initiatives, if appropriate.

Priority research fields which may be included in the R&D plan and subsequently in R&D projects managed by ENTSO-E members and monitored in the ENTSO-E R&D Working Group, and which are to begin during 2010 and 2011, include the following: architecture and planning tools for the Pan-European network, tools to prove the efficiency of critical technologies aiming at increasing both the flexibility and the security of operation of the transmission system, new tools based on simulation techniques that will give rise to new market design options. The specific R&D products will likely extend from advanced tools for designing the future energy scenarios, tools for a Pan European network behavior monitoring for better transmission adequacy assessments, tools for better surveys of Pan-European markets, new tools for market modeling taking into account the rapidly increasing penetration of renewable energy sources, complementary tools for facilitating the specific market integration of these renewable energy sources as well as planning tools dedicated to take into account active demand.

- c. Common operational tools: As a first initiative towards “common network operation tools to ensure co-ordination of network operation in normal and emergency conditions”, the System Operations Committee plans to engage in working out a list of functionalities to be made available in control centers, also indicating which specific network code requirements these functionalities are relevant to; a basic procedure for enhancing the

interface compatibility between the different specific software tools used in different control centers is also planned.

The already existing processes to forecast possible congestions e.g. the Day Ahead Congestion Forecast (DACF) will be further developed and made compatible for European wide application.

The System Operations Committee will also promote a co-operation framework for regions providing a forum for addressing the operational and reliability aspects of the regions, especially in terms of interoperability and co-ordination between those regions. It will provide proposals for harmonization of operational standards on a Pan-European level and promote operational coherence among regions as well as short and long term actions aiming at harmonization of existing regional Network Codes.

- d. Position papers on future transmission technology, EMF and licensing procedures: The development of electricity infrastructure is of crucial national and European importance. Many electricity infrastructure projects face severe obstacles during the authorization phase. The complexity, duration and ineffectiveness of authorization procedures and the lack of acceptance by civil society are among the main reasons for delays in completing high-priority electricity infrastructure projects across Europe. In this context, ENTSO-E position papers will propose common visions on the modalities of using innovative technologies, develop argumentation lines for speeding up licensing procedures, and prepare contributions to any debate on electro-magnetic fields (EMF). They will take account of the need for shorter-term developments to fit into longer-term system development strategies.
- e. Long-term strategy for system development: Based partly on ongoing developments - processing of already received requests for synchronous operation, other foreseeable system extension issues, and new DC connections - and enriched by considerations how these developments serve the further integration of the European electricity market, a longer term strategy for the development of European grids will be developed under very close consultation with the European Commission.

In order to evolve towards a more market based planning approach, the development of market simulation models and tools will be considered and intensified over the first Work Programs so that the market benefits of new investments can be better evaluated and consequently the alternative grid reinforcements prioritized.

- f. Technical document on operational reserves (methodology for its determination and monitoring, risk assessment and analyses): The approach to definition and calculation of the operational reserves differs not only between the regions but for historical reasons even among TSOs within the same region. First the System Operations Committee will

make an overview of applied terminologies and methodologies, and then it will propose principles for coordinated approaches. This aspect has both operational and market dimensions; therefore coordination with the Market Committee is necessary to define appropriate products.

- g. Technical document on determination of incident classification and methodology of incident analyses (including structure of reports): The System Operations Committee will review the current methods of incident classification and methodologies applied in different synchronous region and will propose a common approach allowing the comparison of incidents and their impacts on the systems.
- h. Ancillary services: The Market Committee will define harmonization and other requirements for enhancing market-based cross-border procurement of various ancillary services. As a first step it is necessary to investigate current best practices and what standards are needed in the long term. In that context, the Market Committee will also analyze and define the commercial products.
- i. TSOs' economic framework: Investment incentive schemes, a work area described in the new Electricity Regulation is also a priority work area for the Market Committee. The objective is to analyze the process of regulation of network investments and revenue regulation schemes with particular focus on incentives for network development and system operation. Similarly, on tariff harmonization, the objective is to assess the compliance of existing pricing structures and assess the possibility for improvements or need for further harmonization. With a longer term perspective, the Market Committee will develop positions on congestion revenues and on issues related to tariff structure. In general, ENTSO-E position papers have the aim to point out main challenges facing TSOs, and to recommend appropriate actions and solutions to regulatory bodies and stakeholders. They are also intended to provide a basis for code development.
- j. Renewable energy sources: Responding pro-actively to the request by a EU Coordinator to propose a "roadmap for the development of offshore wind generation", ENTSO-E will engage in shaping a pragmatic approach towards the offshore and onshore "Supergrid" concept that for offshore cables should be based on the necessary returns on investment under the given regulatory regimes. Market and operational implications of large-scale offshore wind will be analyzed. This should also take into account the different national legal frameworks. With a longer-term view, the Market Committee will engage in analyzing and commenting the current support schemes, methods, models and practices on incentivizing the development of renewable energy sources and their connections to the transmission grids in Europe, which should later lead to recommendations for possible harmonized regulation related to renewable energy sources. An additional task will be to address the future operational needs with substantially more wind power than today injected into the power grids and possibly also offshore grids. The future scenario sets new requirements for forecasting, load flow management, balancing and real-time tools.

5. CONCLUSION

ENTSO-E's first Work Program focuses on the important new tasks assigned to the TSOs at pan-European level: network development planning, R&D, operations coordination, and especially network codes. Because of the importance of network codes and the entirely new and complex process for their development, a pilot code is one of the highest priority projects

to exercise the process together with the European Commission, ERGEG and stakeholders. The urgent topic of wind connection conditions was chosen. There are five additional urgent network codes on which major progress is planned through the end of 2010. In addition, 11 other projects that do not (yet) lead to network codes are high priority and described above, including for example urgent preparatory work on market integration.

In addition to the high priority items listed in this Work Program, ENTSO-E's Committees and groups carry out many other activities, largely in continuation of the work of the prior associations. Examples are statistical and technical data, network maps, electronic data interchange (EDI) standards, critical systems protection, asset implementation and management, requests for extensions of the continental Europe synchronous area, and legal and regulatory issues affecting many work items including network codes. Opinions from the European Commission and ACER on the ENTSO-E Articles of Association (Statutes) and Rules of Procedure according to Article 5 of the Electricity Regulation are only due in 2011 and may also lead to work items fine-tuning those basic ENTSO-E documents. It is therefore important that the ENTSO-E Work Program leaves room for flexibility in work planning within the internal ENTSO-E working structures (Committees and Working Groups) that will reassess their priorities and scheduled actions periodically.

6. INDICATIVE SCHEDULE (CODES)

| Activity | Goal | Work start Qx/yr | Deliverable & completion date end of Qx/yr | Committee / Group in charge | Upon | |
|--|---|-------------------------------|---|---------------------------------------|---|---|
| | | | | | Interaction with other groups | Consultation with (start Qx/yr) |
| Connection of wind generation | Development of the pilot code for wind generation connection | Q3/2009 | Draft pilot code (Q1/2010); input to framework guideline consultation (Q1/2010); pilot code proposal (Q3/2010) | System Development Committee (SDC) | SOC, MC, Legal & Regulatory Group (LRG) | All stakeholders; in particular ERGEG regarding their pilot framework guideline on connection (Q3/2009-Q2/2010) |
| Transparency | Development of transparency - policy - ETSO/vista developmt. - network code | Q3/2009 Q3/2009 Q1/2010 | a) position paper Q4/2009 b) update of platform (Q2/2010) c) network code (Q4/2010) | Market Committee (MC) | Data Expert Group, LRG | All stakeholders (Q4/2009 and again in 2010) |
| Generation connection in general | Development of general generation connection conditions network code | Q2/2010 | Q1/2011 | SDC | SOC, MC, LRG | All stakeholders (2010) |
| Operational network codes | Development of operational network codes: a. load flow management b. use of balancing tools and of ancillary services c. standardized coordination methodology/ procedures | Q4/2009 Q4/2009 Q4/2010 | 1. Terminology (Q2/2010) 2. Comparison analyses (Q3/2010) 3. Network codes (Q4/2010) | SOC | As needed | All stakeholders; in particular ERGEG, EURELECTRIC (beginning in Q4/2009; more intense on the different codes during different quarters in 2010) |

Indicative schedule (continued – further key areas of TSO cooperation)

| Activity | Goal | Work start Qx/yr | Deliverable & completion date end of Qx/yr | Committee / Group in charge | Upon | |
|---|--|---|---|--------------------------------|--|---|
| | | | | | Interaction with other groups | Consultation with (start Qx/yr) |
| TSO cooperation on market issues | Design of market integration in MIDP project Later: code development | Before Q3/2009 After Q2/2010 | Proposals for market integration models supporting code development in key day- ahead + intraday market timeframes (Q2/2010) | MC | SDC, LRG | Joint MIDP involving all major stakeholders (now through Q2/2010) All stakeholders for later code development (2010+) |
| TSO cooperation regarding network development and planning | Preparation of a pilot TYNDP (the first draft early 2010) | Q3/2010 | Report (Q2/2010) | SDC | All SDC WGs and RGs; EWIS project, LRG | All stakeholders; in particular ERGEG, EURELECTRIC, EFET, EWEA (Q3-4/2009) |
| TSO cooperation on R&D | Preparation of a consolidated TSO R&D Plan, contributions to EC's Strategic Energy Tech-nologies Plan | Q3/2009 | R&D plan (Q4/2009) | SDC lead, with MC and SOC | SOC, MC, LRG | EC, ERGEG, DSOs (start Q4/2009) |
| TSO cooperation on operational issues | Preparations for common operational tools; coordination of regions for operational issues | Q4/2009 | 1. Operational experience exchange forum (Q1/2010) 2. Congestion forecasting improvements (Q4/2010) 3. Actions aiming at harmonization of regional Network Codes (Q4/2010) | SOC | - | None |
| TSO cooperation regarding network development and planning | Development of position papers on future transmission technology, EMF and licensing procedures | From Q3/2009 to Q4/2010 | Position papers (from Q1/2010 to Q4/2010) | SDC | WG R&D, MC, SOC, LRG | EC, EP, ERGEG (Q3/2009) |

| Activity | Goal | Work start Qx/yr | Deliverable & completion date end of Qx/yr | Committee / Group charge | Upon | |
|--|--|---------------------|---|----------------------------------|----------------------------------|---|
| | | | | | Interaction with other groups | Consultation with (start Qx/yr) |
| TSO cooperation regarding network development and planning | Formulation of long-term strategy / vision for the extension of the Europ. network, possibly with a view to effects on mkt integration | Q4/2009 | System extension strategy (Q4/2011) | SDC | SDC, MC, LRG | EC and other stakeholders (beginning in Q2/2010) |
| TSO cooperation on operational issues | Development of technical document on operational reserves | Q4/2009 | 1. Comparison analyses 2. Proposed common principles for methodology for reserves' determination (Q4/2010) | SOC | MC, LRG | ERGEG, EURELECTRIC , EFET (Q1/2010) |
| TSO cooperation on operational issues | Development of technical document on determination of incident classification and methodology of incident analyses | Q4/2009 | 1. Criteria for incident classification 2. Methodology of incident analyses (both Q4/2010) | SOC | None | None |
| TSO cooperation on market issues | Ancillary services – definition of commercial products and standards | Q3/2009 | Document (Q4/2010) | MC | SOC, LRG | All stakeholders; in particular EURELECTRIC (2010) |
| TSO cooperation on market issues | Economic framework positions - ITC - investment incentives - tariffs | Q4/2009 | Position papers: ITC Q4/2009 Others Q4/2010 | MC | SDC, LRG | All major stakeholders (Q4/2009 and later) |
| TSO cooperation on RES integration issues | 1. Roadmap for the development of offshore wind generation 2. Overview of policies on RES support and grid connection | Q3/2009 | Roadmap and paper (both Q2/2010) | MC lead with LRG, SOC and SDC | - | EC, ERGEG, European coordinator (Q3-4/2009) |