IIA and Input for the FG on System Operation

Results of first Discussion and Inputs from System Operation Expert Group

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- Background information
- Establishment and members of the System Operation Expert Group
- Discussions and results so far
- Next steps

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IIA and Input for FG on System Operation - Background

- System Operation (cf. Article 8 of the Regulation) is one of the three areas (together with Grid Connection and CACM) where ERGEG will conduct IIA and provide Input for the FG during the Interim Period (until March 2011)
- Grid Connection (Pilot Project) and CACM project under way after the EU Commission invitation letter on 26 March 2010
- System Operation project first phase started ➔ EC requested on 23 April 2010 a common position of ERGEG and ENTSO-E at the XVIII Florence Forum
- First exchange of views with ENTSO-E on 10 May 2010 ...

... Initial Needs and Priorities

- Some issues need to be addressed with priority, e.g.:
  - Scheduling and schedule management
  - Arrangements between TSOs (before it was e.g. MLA in UCTE)
  - Compliance monitoring and enforcement
  - Inter-synchronous-areas issues
  - Congestion Management issues (flow-based in the future, etc.)
- A roadmap and feasible plan needed
- Existing essential technical rules (e.g. P-f control, emergency control, restoration procedures) should not be “opened” without a clear goal and objective
- ERGEG: essential and important input expected from the System Operation Expert Group

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System Operation Expert Group

- In February 2010, ERGEG invited applications for System Operation Expert Group
- Candidates have been selected according to pre-defined criteria and qualifications:
  - System operation from expert's viewpoint e.g. academia, consultant or network operators, preferable at the transmission / EHV level (beyond 110 kV) and/or TSOs' operational cooperation at least within one synchronous area;
  - R&D experience either from System Operators, Generators or Academics side;
  - Knowledge of the contents of and discussions on the Guidelines of Good Practice on Operational Security recently publicly consulted on by ERGEG;
  - Electric power engineering and energy economics background is an advantage;
  - Activity in the development of national grid codes is an advantage.

SO Expert Group Members

- Marek Zima, Italy (Alba Soluzioni)
- Michael Zoglauer, Austria (TIWAG)
- Eckart Lindwedel, Germany (Fichtner)
- Javier Paradinas, Spain (Iberdrola Generacion)
- Guido Cervigni, Italy, (LECG Consulting)
- Jörg Teupen, Germany (E.On Netz)
- Steve Drummond, UK (SMD Consulting)
- Peter Wibäk Christensen, Denmark (Vestad Wind Systems A/S)
- Carlo Sabelli, Italy (TERNA)
- Juan Rodriguez Garcia, Spain (RED Electrica)
- Jonathan O'Sullivan, Ireland (EirGrid)
- Rudolf Baumann, Switzerland (Swissgrid)
- Chrisoph Schneiders, Germany (Amprion)
- Peter Rasch, Germany (Transpower)

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SO Expert Group
Kick-off 30 March 2010

- In preparation for the meeting, the experts have been asked to consider the following questions (related to IIA) and prepare their inputs:
  - Problem identification: (i) What is the issue / problem; (ii) What are the underlying drivers; (iii) Who is affected; (iv) How would problem evolve if there is no change
  - Objectives of FG for SO: (i) General; (ii) Specific; (iii) Operational
- The inputs by experts were used by the ERGEG SO project team in preparation of the first draft of Chapters 2 (Problem Identification) and 3 (Objectives) of the IIA
- This first draft intended for discussion at the second meeting on 12 May 2010

SO Expert Group
2nd Meeting 12 May 2010
Questions & Problems identified

General

- Enforceability
- Integration of new technologies (DC-links, supergrids / off-shore, etc.)

Generation

- Insufficient performance in normal and emergency operation (ramping, dynamics, etc.)
- Uncertainty if instructions are followed
- Reliability – uncertainty in announced performance
- Lack of information, communication
- Different priorisation in dispatching
- Provision of ancillary services not standardized

Questions & Problems Identified by SO Expert Group *(cont'd)*

Generation *(cont'd)*

- Intermittent generation: uncertain behaviour, missing observability, weak participation and insufficient controllability in power system control
- Distributed generation: lack of clarity in relation to power system control, performance / restoration
- Need of conventional backup for wind (power and energy …)
- Discrepancy between market order and network requirements

Interconnections

- Discrepancy between physics and market operations (increased loop flows)
- Increased cross-regional exchange (DC links)
- Different behaviour of interconnection with third countries (e.g. non-EU countries in SEE)

Questions & Problems Identified by SO Expert Group *(cont'd)*

TSO-TSO

- Increased interdependence of control areas
- How to enhance / introduce responsibility for overall security?
- Issues on system status: Are (n-1) criteria still valid? Their definition and usage?
- How to enhance awareness of roles and responsibilities?
- Enhance collaboration framework (e.g. distribution of cost/benefits)

TSO-DSO

- Behaviour of DSOs impacts system security (e.g. switching actions, transparency)
- Restoration ➔ unclear and/or uncoordinated contribution of DSOs; no black-start contribution needed from DSOs below 110 kV
- Roles & responsibilities on e.g. load-shedding between TSOs and DSOs

Traders / market participants

- Lack of detailed information (e.g. just aggregated schedule, no detailed data on generation and load)

Initial Objectives Proposed by SO Expert Group

- Align product definitions with operational requirements
- Ensure compliance of grid codes, incentives and compliance monitoring
- Set correct / adequate standards
- Define and improve processes
- Clear rules to apply to all
- General standards for participation in ancillary services
- Framework for cross-border regional exchange
- Optimisation of reserves

Initial Objectives Elaborated by SO Expert Group *(cont'd)*

- Better data quality and forecasting (enforcement?)
- EU harmonisation of specific issues
- Services and characteristics (e.g. fault ride through, reactive power management) of RES generators have to be defined
- Controllability closer to real time
- Adjust rules for high penetration of intermittent and distributed generation
- Install reactive power compensation
- Clear cooperation process for restoration

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Next Steps

- Exchange of detailed views – based on experts‘ inputs – with ENTSO-E and preparation of a common paper
- Presentation and discussion at the XVIII Florence Forum
- Discussion and agreement with the EC and ENTSO-E on the action plan and project organisation / cooperation

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- Adjustments & refinement of the draft of Problem Identification and Objectives, taking into account expert inputs
- Final Problem Identification and Objectives to be discussed at the third SO Expert Group meeting on 05 July 2010
- Continue with preparation of the IIA and then FG

Next Steps *(cont'd)*

- IIA to address all problems & objectives and elaborate the necessary / preferred policy options
- FG input draft also to tackle (as far as possible) all the issues of importance for System Operation
- The first SO Code to address the priority issues (scheduling, TSO agreement, inter-synchronous areas' issues, congestion management, compliance monitoring and enforcement) and aim at enhancing the existing essential technical rules in terms of more details and consequent implementation at the synchronous area level
- Common agreement and roadmap / plan with EC, ERGEG and ENTSO-E on further code evolution in the issues where long testing, scientific analyses, etc. are needed
- Commitment of all parties is essential (legal framework !)

Thank you for your attention!

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