

Secure Network Operation: UCTE role and achievements

**13th Florence Forum
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- II. A specific concern: integration of wind into a reliable system operation.**
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UCTE Security Package

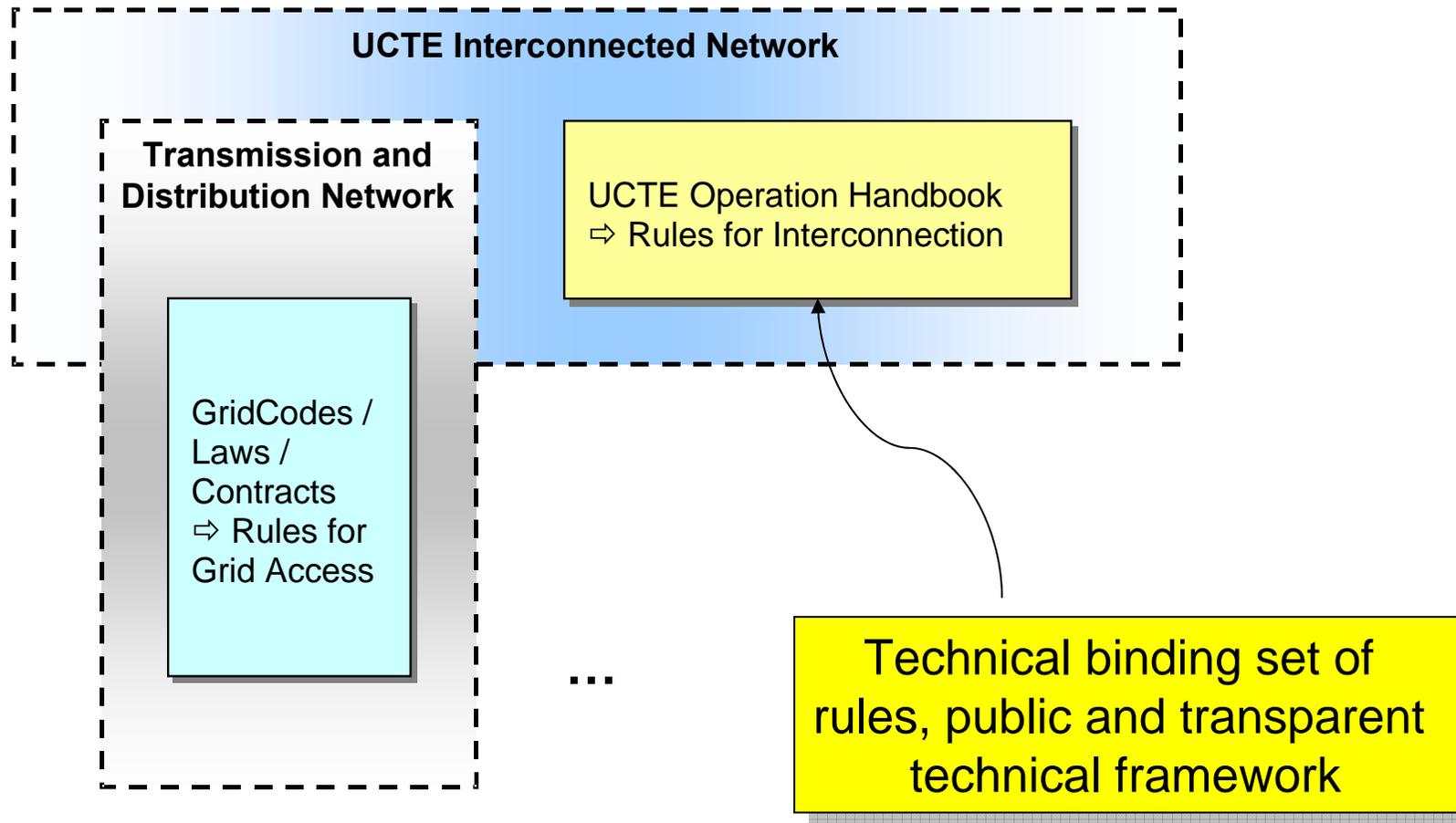
**UCTE Operation
Handbook (OH)**

**Multilateral
Agreement (MLA)**

**Compliance Monitoring &
Enforcement Process (CMEP)**



The basic Handbook Setup



Operation Handbook – current status (1)

-Phase 1-

- 1. Load-Frequency Control and Performance**
- 2. Scheduling and Accounting**
- 3. Operational Security**

- Phase 2 -

- 4. Coordinated Operational Planning**
- 5. Emergency Operations**
- 6. Communication Infrastructure**
- 7. Data Exchanges**
- 8. Operational Training**



Operation Handbook – current status (2)

- **„Phase 1“ (P1, P2, P3)**
- **„Phase 2“ (P4, P5, P6, P7)**
 - Development of policies 4, 5, 6 and 7
 - Development of new concepts regarding e.g. geographical distribution of reserves, n -1 issues from a regional approach
 - Trial period for CMEP
- **„Phase 3“**
 - **Development of P 8**
 - **Revision of the OH aiming at including recently investigated issues (e.g. precision of n-1 security criteria) scheduled for the year 2007**
 - **Start of regular CMEP**

Legal enforceability

- **The Multilateral Agreement (MLA) is a inter-TSO contract making the extended Operation Handbook (P 1-7) enforceable.**
- **The MLA is in force since 1 July 2005.**
- **MLA does not, however, make UCTE standards binding to grid users.**

Compliance Monitoring and Enforcement Process

- **The pilot phase of CMEP has been launched in the beginning of 2006.**
- **Its design is based first on a self-assessment by TSOs.**
- **Within UCTE, it is separated from the standard-setting process.**
- **First results are expected at the end of 2006.**
- **CMEP is a preventive and recurrent process, i.e. not linked to a disturbance in the system.**
- **CMEP is intended to become a regular process from 2007 on.**



Conclusion and outlook

- **The UCTE security package will soon harmoniously integrate:**
 - **the development respective the continuous improvement of reliability standards,**
 - **the inter-TSO enforceability and**
 - **an independent compliance monitoring process.**

- **As such, it brings de facto UCTE closer to a self-regulating reliability organization for the UCTE system.**

II. A specific TSO concern: integration of wind energy into a reliable system operation.

EWIS (European Wind Integration Study)

- A reaction of all TSOs to the discrepancy between a strong wind energy development and the yet not efficiently addressed consequences on transmission systems.
- The European Wind Energy Association (EWEA) is invited to cooperate (as member of the study's Advisory Board).
- The study will be funded by EC.

EWIS: Objectives of the Study

- **Reference Study at European level made by all TSOs (UCTE, ETSO, NORDEL, UK/IRL);**
- **Broad acceptance and support by major players in business and politics;**
- **Expected conclusions: proposals for a generic and harmonized European wide approach towards wind energy issues addressing the interaction between:**
 - **operational/technical aspects including grid connection codes,**
 - **market organizational models and procedures**
 - **regulatory/market-related requirements,**
 - **common public interest issues and even some political aspects impacting the integration of wind energy**

III. System Reliability and requested extensions of the UCTE system (IPS/UPS, Ukraine/Moldova, Turkey, Tunisia/Libya,..)

Key aspects 1)

- UCTE TSOs are not requesting parties; markets and policy-making are the driving forces of the requests;
- The UCTE role of assessing the technical/operational feasibility of request is supported by stakeholders (especially EU);
- But this UCTE assessment is only one of the 3 pillars on which the industrial implementation of any request will be decided. The question is HOW and by WHOM?

Key aspects 2)

- Substantial part of TSO resources in UCTE bound by this task since major projects are run at the same time;
- The TSO environment and subsequently the conditions for system coupling / system integration changed in the last years;
- Main UCTE objective: no decrease of the performance of the UCTE system in terms of system security and reliability;
- Non-discrimination: UCTE does not favor any request or development scenario. However UCTE will have to address potential “limits” of a single synchronous system on the European continent

The requests

- Different types of requests:
 - **Interface solutions**: UCTE-IPS/UPS Study which deals with the feasibility of coupling 2 synchronous blocks without taking over the standards from one system into the other
 - **Full integration** according to UCTE standards and conditions: Turkey, Ukraine/Moldova

Changed TSO environment

- **Problems with authorization procedures for needed new transmission infrastructures;**
- **Uncertainties about system adequacy in several areas;**
- **Substantial increase of long distance transits resulting in infringement of the n-1 rule in 3rd parties control areas, i.e. that are not participating in a transit.**

Changed TSO environment means that:

- For requests about **integration**, UCTE looks today into 4 main aspects:
- Upgrading the requesting system to UCTE reliability standards (incl. specific loadflow and dynamic studies)
- New electrical perimeter of the system (system delimitation);
- Congestion management solutions
- Regulatory framework and contractual aspects

1 **Interface** Project: UCTE-IPS/UPS Study

- The project is a study supported by EC, since embedded in the EU-Russia Energy dialogue;
- This study will assess:
 - the feasibility requirements and the mandatory measures to be taken on both sides;
 - the associated costs.
- **Results expected by the end of 2008**

2 Integration Projects:

- **Turkey integration**: started with a study in 2005, preliminary results of the study expected in March 2007, as a part of the integration assessment process (as such no precise deadline).
- **Ukraine/Moldova**: supported by EC, since the Ukrainian/Moldavian request for integration into UCTE is backed by Memoranda of Understanding between EC and Ukraine respectively Moldova.
- For the purposes of the UCTE investigation the Ukrainian and the Moldovan systems will be considered by UCTE as a single control area (UA interfacing UCTE).

1 **Study** Project Tunisia/Libya (≠ Medring)

- **Following the already realized connection of the Maghreb countries in 1994**
- **Study of a step by step connection of further LEJSL countries.**
- **This exercise does not anticipate separate investigations by UCTE about a complete interconnection ring around the Mediterranean Sea.**

A main global challenge for UCTE & Europe

Are there **limits** for a reliable single
sync. system on the European continent?



If yes, which ones and where?

If no, how to further proceed?



UCTE calls the Forum to:

- **Further support UCTE action as reliability watchdog in the context of requested system developments;**
- **Support a flexible co-funding mechanism by stakeholders (UCTE action on request of markets and policy-makers cannot be born by TSOs alone);**
- **Care for consistency in communication of all involved parties in sensitive political contexts;**
- **Care about the 2 other pillars (reciprocity in environment and markets conditions): Who is doing what? Who will decide on what when it comes to the industrial implementation of projects?**

Backup slide:



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