



## UCTE activities – An overview



## Presentation outline

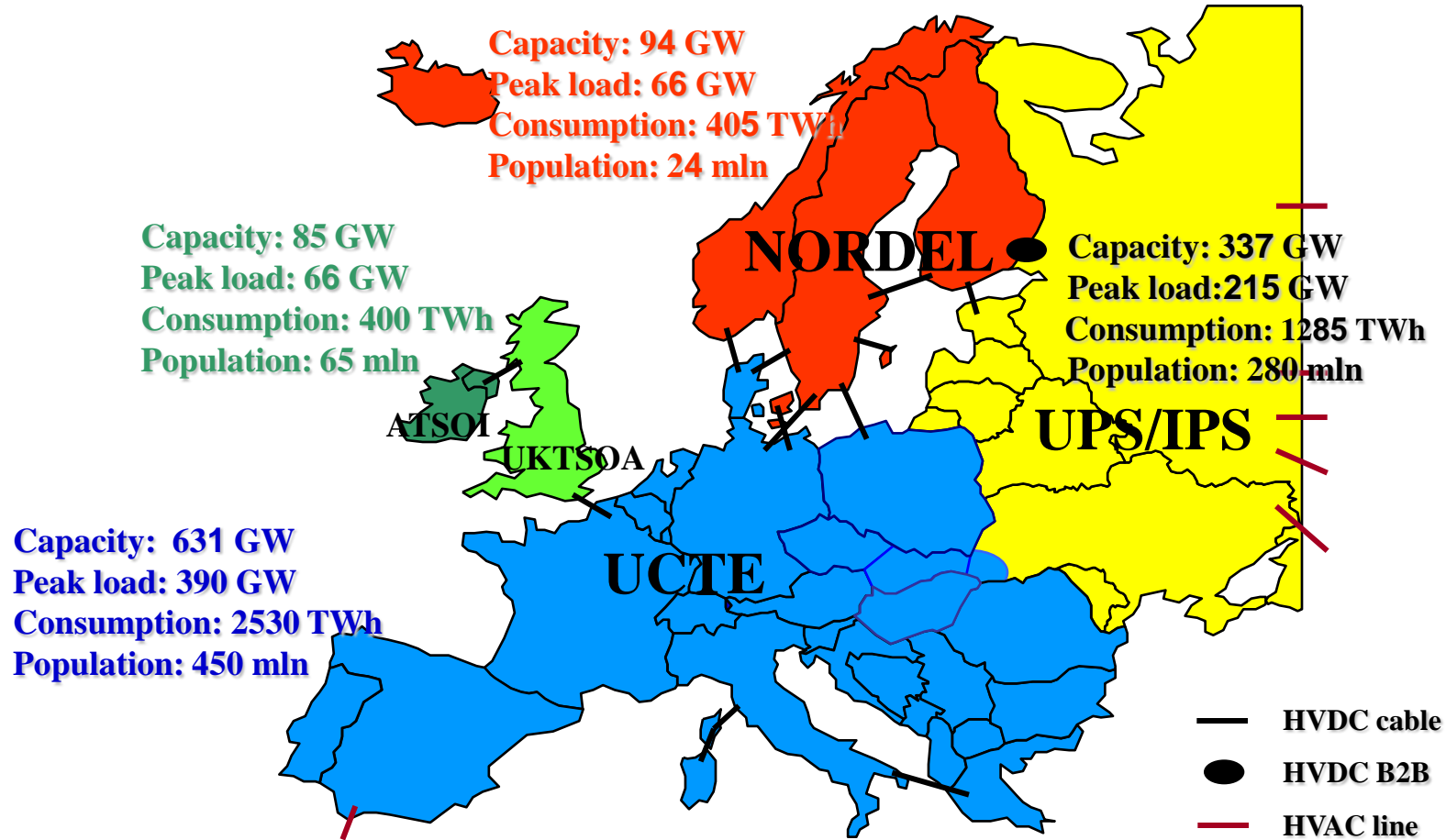
- UCTE mission and structure
- UCTE Activities and Products

## Main mission of UCTE

Providing a reliable market base through:

- Technical and operational co-ordination in the synchronous area
- Controlling the short-term security of the system with regard to load-frequency control and stability
- Monitoring the medium to long-term adequacy between generation and load (3, 5, 10 years)
- Responsibility for the extension of the UCTE synchronous area

## European synchronous areas



## UCTE overview: Key figures

● Transmission System Operators	29
● European Countries	24
● Customers	450 mil.
● Installed capacity	631 GW
● Electricity consumption/year	2530 TWh
● Electricity exchanges betw. countries/year	290 TWh
● Length of high voltage lines	230.000 km

## From a „club“ to a „system association“

- **1951:** UCPTTE members were representatives of electricity vertically integrated companies
- **1996:** UCPTTE membership changed to interconnected companies
- **1999:** „P“ was dropped and UCTE became a TSO organisation
- **2001:** UCTE gained civil status transforming itself to an International Association (AISBL acc. to Belgian law) with a permanent secretariat in Brussels

## New environment for TSOs - What has changed? (1)

### **Before liberalization**

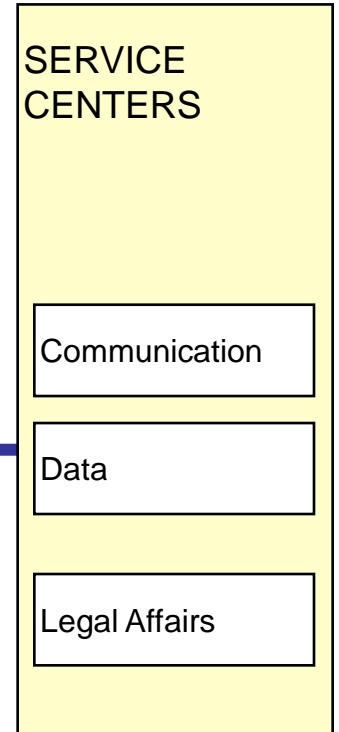
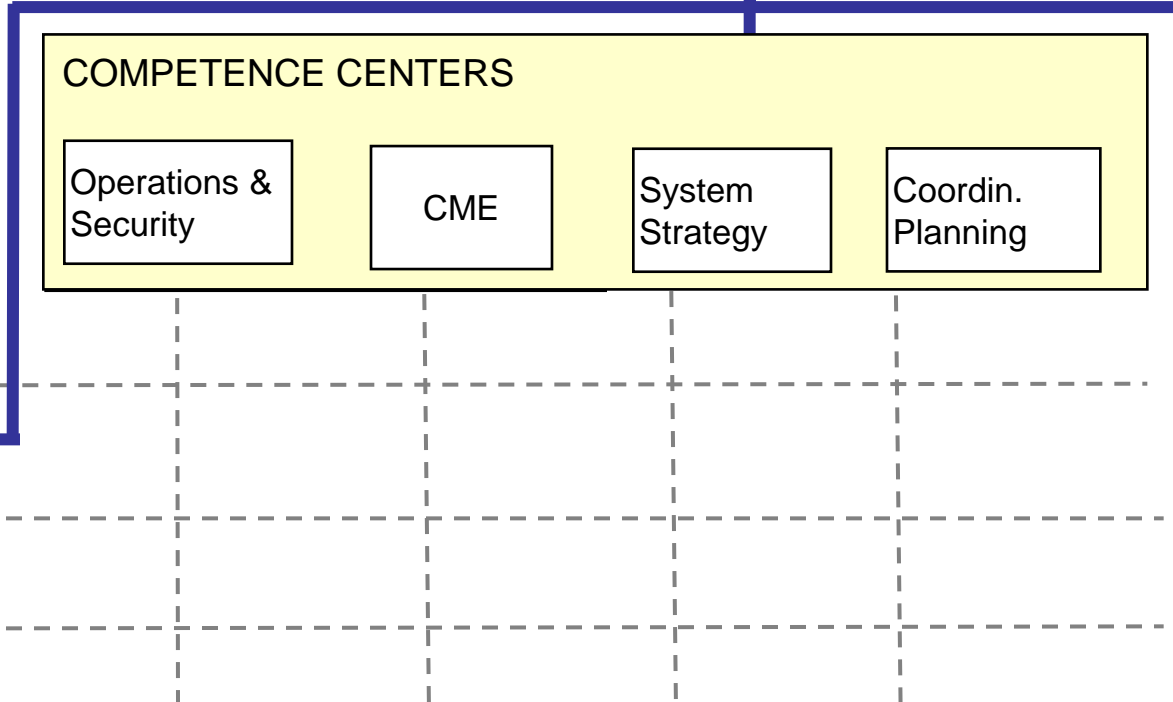
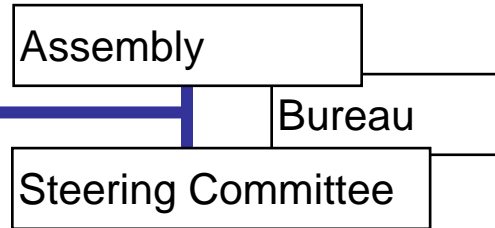
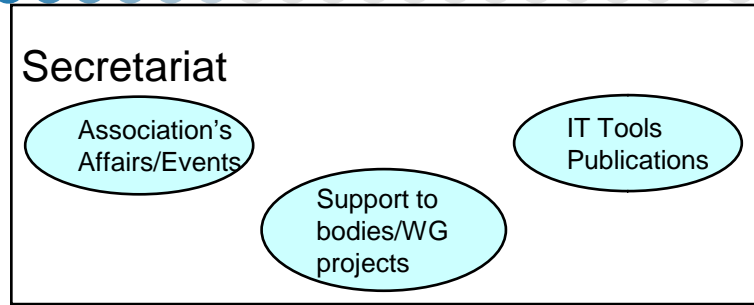
- Vertically integrated companies
- Investments models were based on global system considerations (long-term contracts plus security considerations)
- System operation was primarily driven by security criteria and not by trading optimization criteria
- UCTE role was limited to establish/extend interoperability of smaller interconnected areas without a need for stricter coordination and harmonization of the national legal and regulatory frameworks

## New environment for TSOs - What has changed? (2)

### After liberalization

- Electricity market participants today are various but no longer integrated (generators, distributors, traders); they use the system primarily for trading purposes claiming “thinner” security margins
- While investments in generation seem to respond to market signals, investments in transmission are stuck under legal/political obstacles (problems with authorization procedures for needed new transmission infrastructures)
- System operators are perceived as responsible for a system that they no longer control as a whole
- This results in severe limits of enforceability of reliability standards towards both TSOs and market participants

# UCTE corporate structure activities

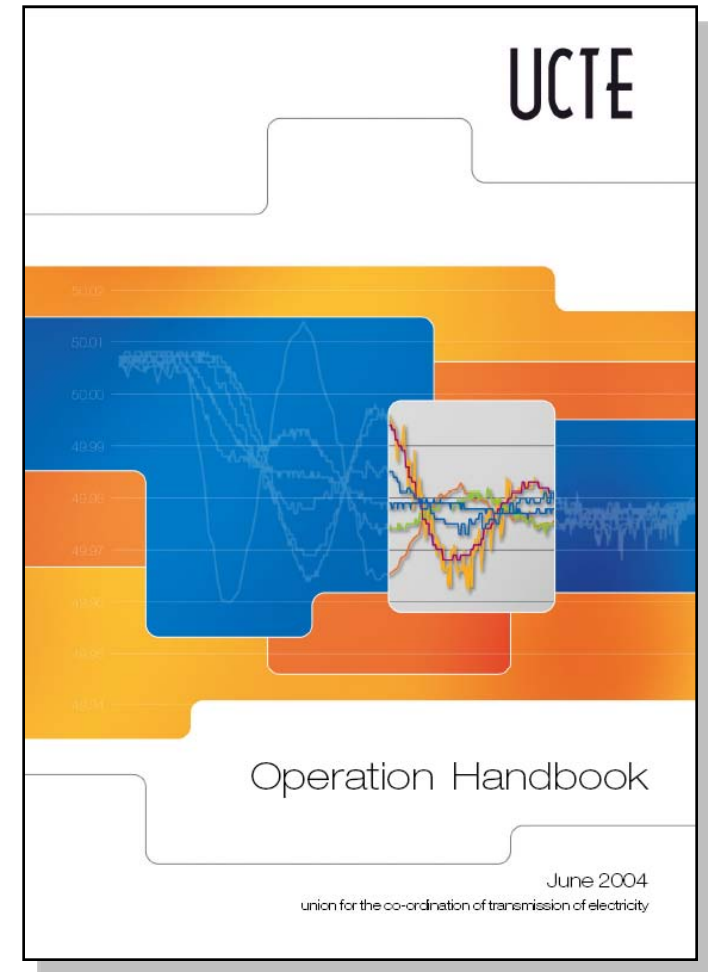


## Presentation outline

- UCTE mission and structure
- UCTE Products

The UCTE Security Package is a 3-fold package:

- **Operation Handbook** as the **compendium of technical standards** related to the UCTE interconnected system
- **Multilateral Agreement** with the Operation Handbook as the cornerstone for the **legal framework ensuring the security** of the interconnected systems
- **Compliance Monitoring Process** as a **permanent process** evaluating the implementation of the rules



## UCTE's basic needs for the Handbook

- Need for **clear and precise** technical rules
- **Comprehensive and structured** summary of all existing documents
- More **rapid establishment** and review of rules
- **Adaptation** to new regulatory and market environment
- Additional **measures and monitoring** criteria required
- **Binding** security and reliability standards and **legal enforceability**

## Operation Handbook – Set of Policies

- 1. Load-Frequency Control and Performance**
- 2. Scheduling and Accounting**
- 3. Operational Security**
- 4. Coordinated Operational Planning**
- 5. Emergency Operations**
- 6. Communication Infrastructure**
- 7. Data Exchanges**
- 8. Operational Training**

## Enforceability of UCTE Rules: MLA

- The Multilateral Agreement (MLA) as **first step** towards a set of binding European reliability standards that involves first all TSOs came into force on 1 July 2005
- In a **second step** and in close co-operation with regulators, these reliability standards shall be made also binding to both TSOs and grid users
- The Operation Handbook is an annex to the MLA

## Why monitoring compliance ?

- Definition of security standards in the Operation Handbook implies a procedure to **recurrently monitor** their compliance
- This procedure enables the implementation of **preventive measures** to ensure the highest level of security in the UCTE system
- This tool aims at strengthening the **transparency and credibility** of TSO's performance within the community as well as towards stakeholders
- Regular process from 2007 on
- Design is based first on a self-assessment by TSOs

## UCTE system extension: new aspects

- The extension issues become more complex – under liberalized market conditions, UCTE can only assess the technical feasibility and the related legal/regulatory boundary conditions of such extensions; this UCTE assessment is only one of the 3 pillars (market and environmental issues should be addressed as well) on which the industrial implementation of any request will be decided. The question is HOW and by WHOM?
- **UCTE Priority:** not to jeopardize the present performance of the UCTE systems with respect to system security and reliability

## Review of the on-going UCTE Studies/Projects for System Extension:

- Interconnection of IPS-UPS System with UCTE
- Interconnection of Turkey System with UCTE
- Interconnection of Ukraine-Moldova Systems with UCTE
- Mediterranean Ring
- Interconnection of Baltic Systems with UCTE (comming)

## A main global challenge for UCTE

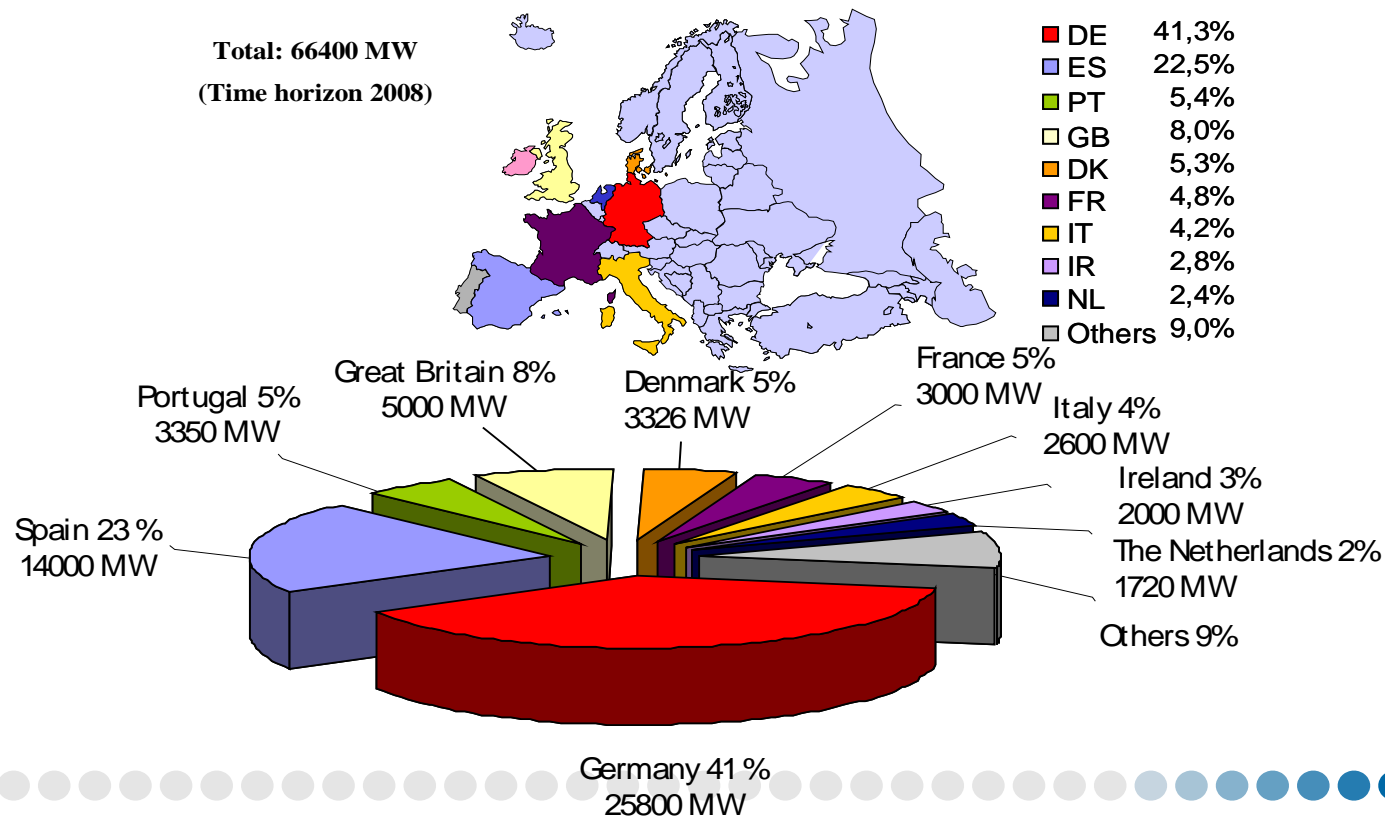
- Are there limits for a reliable single synchronous system on the European continent?
- How to bridge the expectations of external stakeholders with the positions of individual UCTE members?

- EU set ambitious CO2 targets
- Wind power has highest growth potential of all RES (limited predictability and availability)
- Present situation of RES in some regions already affects neighbouring countries
- Impact on security of supply and cross-border trading capacities
- TSO'S repeatedly addressed the necessity of a thorough examination of RES integration on European level
- Up to now only investigations on national level, no common reference study of TSO'S on European level

## Installed wind power in Europe in 2008

(source: EWIS project)

*Substantial wind power increase from 41 GW in 2005 to nearly 67 GW already in 2008 with a concentration in only 2 countries which represent more than 63% of the total installed capacity*

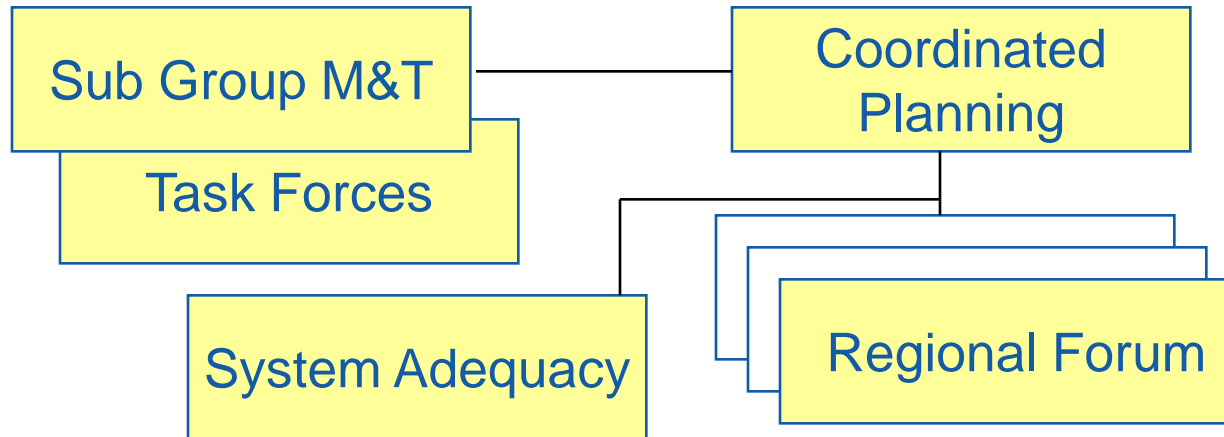


# Objectives of the EWIS Project



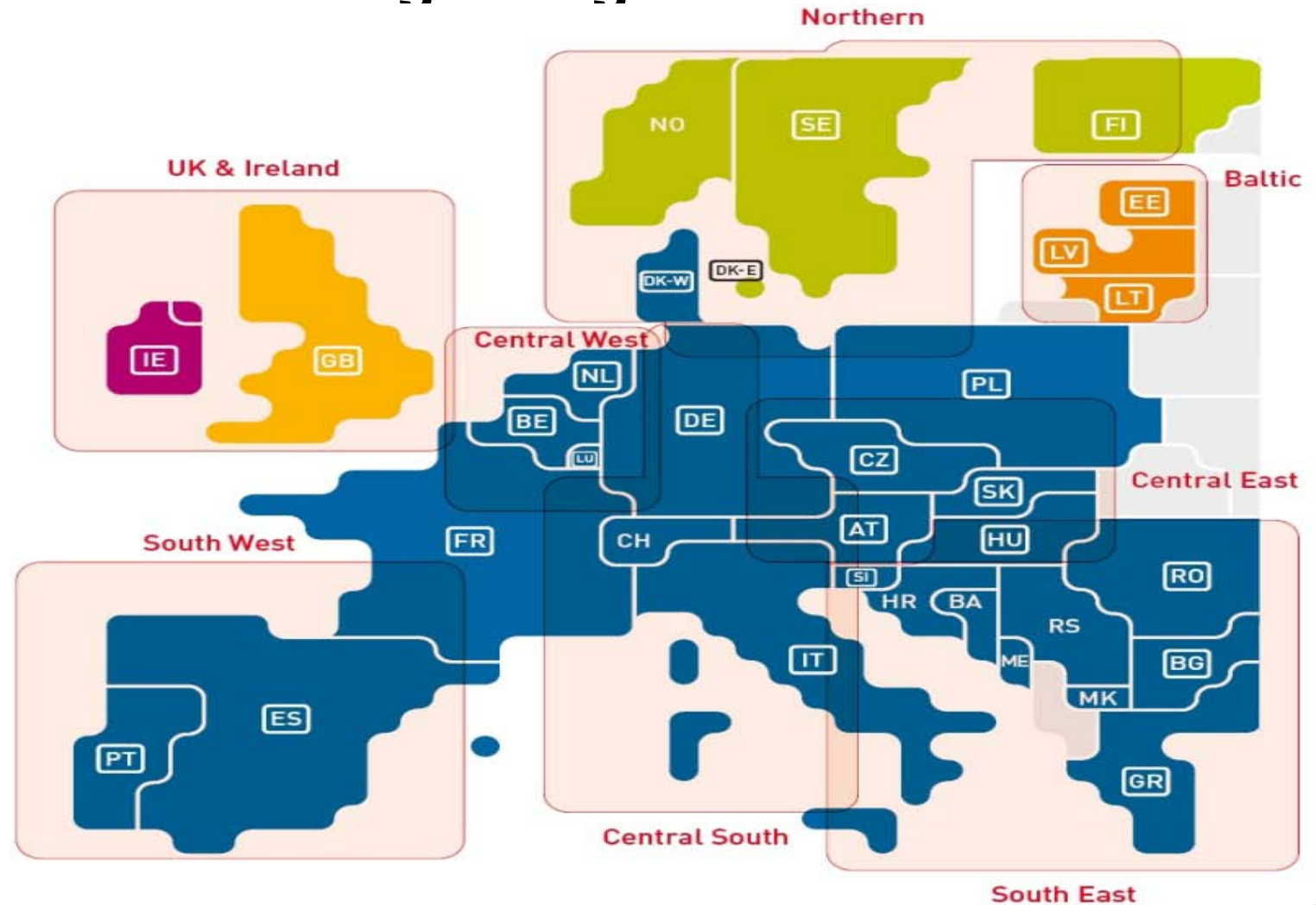
- To address the network issues arising from wind power, particularly as relevant to European TSO interests on wind issues
- To seek proposals for a generic and harmonized European-wide approach towards wind energy issues addressing:
  - operational/technical aspects,
  - market organisational arrangements arising in Europe,
  - regulatory/market-related requirements,
  - common public interest issues and even some political aspects impacting the integration of wind energy

# WG Coordinated Planning – main activities



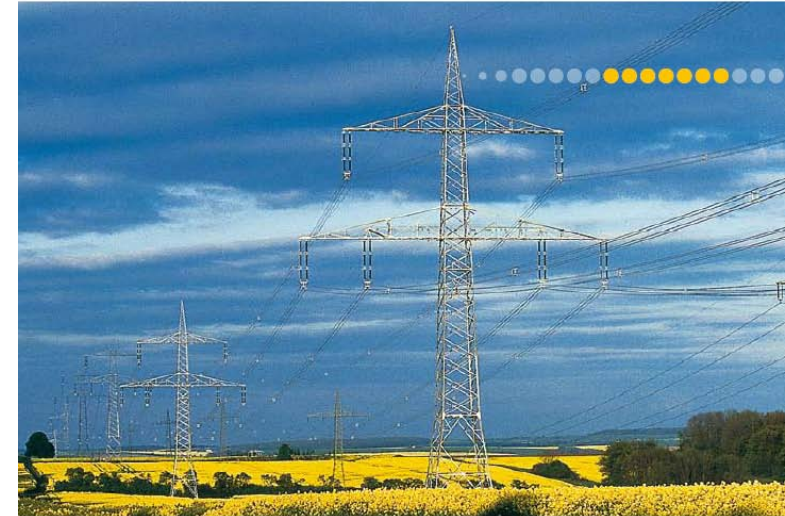
- System Adequacy
- Modelling database - Planning models
- Transmission Development Plan
- Planning Handbook

# WG Coordinated Planning – Regional Forums



# First UCTE Transmission Development Plan

- In the coming 5 years UCTE TSOs should devote a total investment of approximately 17000 M€ to the development of interconnections and the main internal transmission grid
- A survey of investments that UCTE TSOs have either approved or are considering

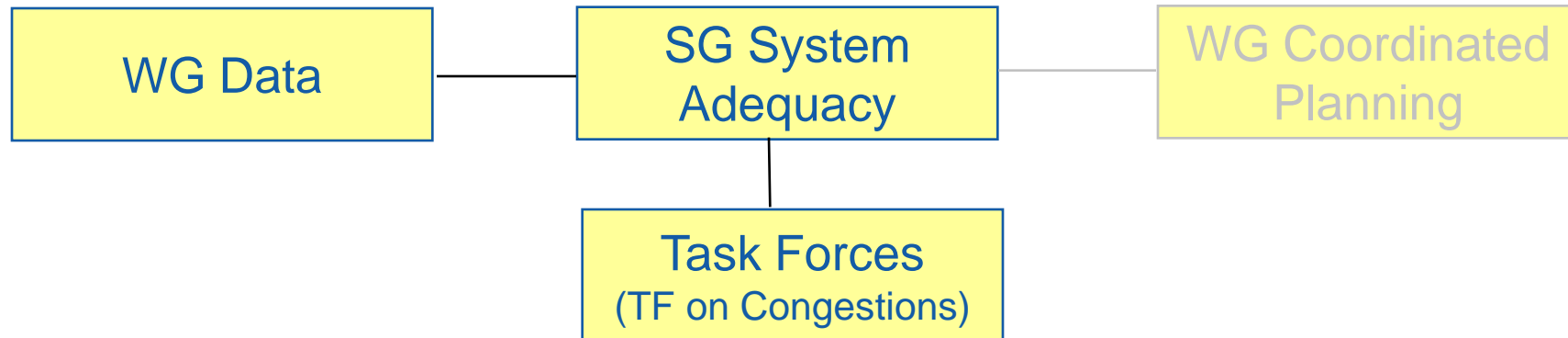


## UCTE Transmission Development Plan

Edition 2008

union for the co-ordination of transmission of electricity

# WG Data – main activities



- Statistical and System Adequacy Data Management

- Definitions
- Methodology
- Collection / IT tools

- Regular reports

- Statistical Yearbook
- Monthly Statistics
- Memo

- System Adequacy (a joint SG with WG CP)

- Data Handbook

- Extension of the scope of data processed

## Publication of the UCTE Data Handbook

- Harmonised and traceable confidentiality policy for all UCTE data
- Development of the new role of „National Data Coordinator“
- Description of all UCTE data processes
- Clear definitions



- Presented to EC and ERGEG in July 2008
- Updated version planned in Spring 2009
- Working on harmonisation with data of other associations in 2008 / 2009 => „heritage of UCTE into ENTSO-E“

## Extension of the scope of data processed

- Dialogue / harmonisation of statistical data handling with NORDEL, COMELEC, ATSOI, UKTSOA, BALTSO
- ...towards ENTSO-E
  - Preparation of a road map to enter into a dialogue with non-UCTE TSOs (start in 2008)

