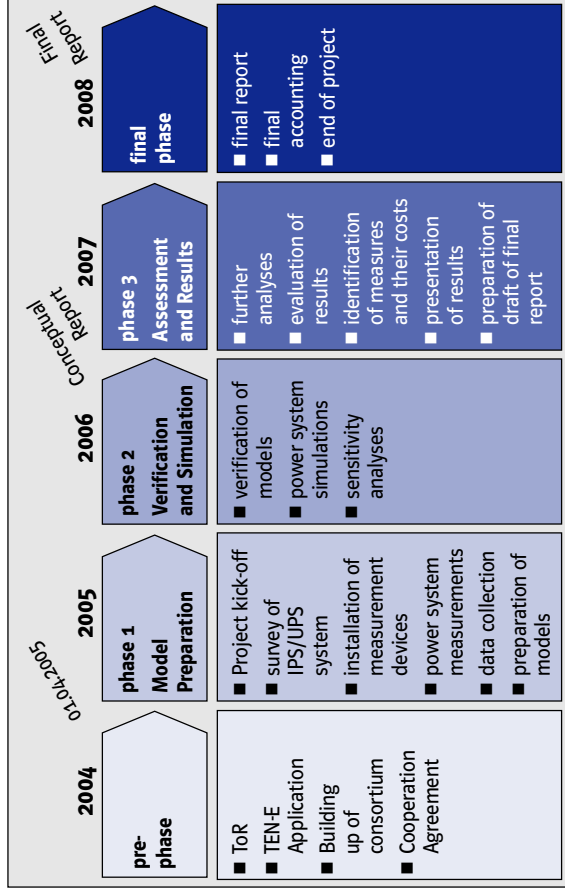


The total project duration of three years - until April 2008 - is globally divided into several main phases such as data collection and modeling, system simulation and verifying and summarizing of results.



*The working schedule: an ambitious time frame for the challenging investigations*

In early 2004 a Cooperation Agreement between the UCTE-Consortium and the IPS/UPS companies has been prepared. The agreement defines – on a legal basis – the overall framework of the cooperation between both parties. The Cooperation Agreement was signed during the project kick-off on 19-20 April 2005 in Brussels.

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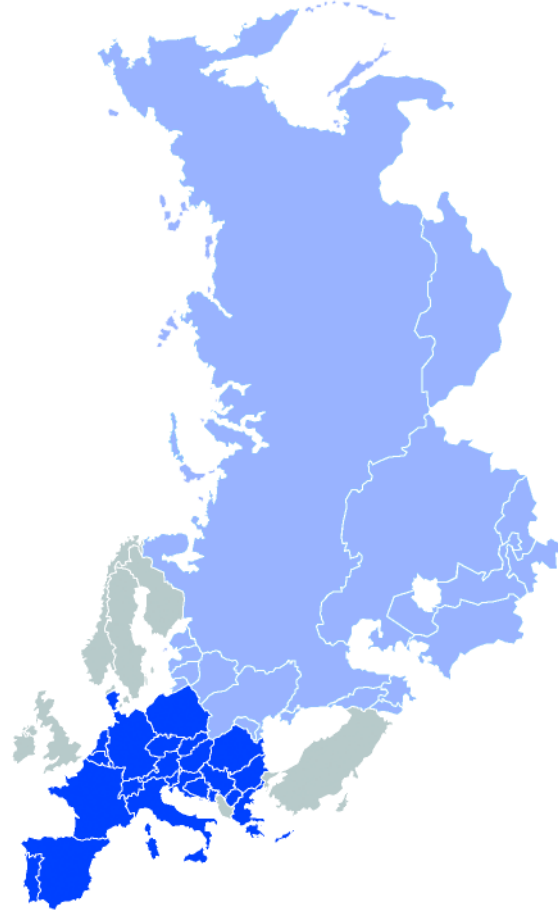
[www.ucte-ipsups.org](http://www.ucte-ipsups.org)

**Supported by:**



Union for the Co-ordination of Transmission of Electricity

**Feasibility Study:  
Synchronous Interconnection of the  
Power Systems of IPS/UPS with UCTE**



Project Profile  
June 2005

## From the beginning ...

In 2002 UCTE<sup>1</sup> received a request from RAO UES Russia acting on behalf of EPC CIS<sup>2</sup> and the Baltic States for a synchronous interconnection of the IPS/UPS<sup>3</sup> power systems with UCTE. After the completion of a pre-feasibility study in 2003 dealing with steady state system analysis, UCTE decided to launch a broad feasibility study in order to answer the three main questions:

- Is a synchronous interconnection of IPS/UPS and UCTE possible?
- What measures have to be taken on both sides?
- What are the associated costs?

The results of the three years project will be used as a basis for further decisions on system extension on both sides.



*In charge of the project:  
Dr. Matthias Luther*

On 25 March 2004 Dr. Matthias Luther (E.ON Netz, Germany) was appointed as the Project Manager by the Steering Committee of UCTE. As the first steps after nomination he finalized the Terms of Reference, set up the Consortium and formed the project management team and working groups of experts on UCTE-side.

The project itself is an important part in the context of the EU-Russia Energy dialogue. On 23 April 2004, the Project Management filed an application for funding under the Trans European Network (TEN Energy) Program of the European Commission (EC).

## The challenge: one „heart beat“ from Lisbon to Vladivostok

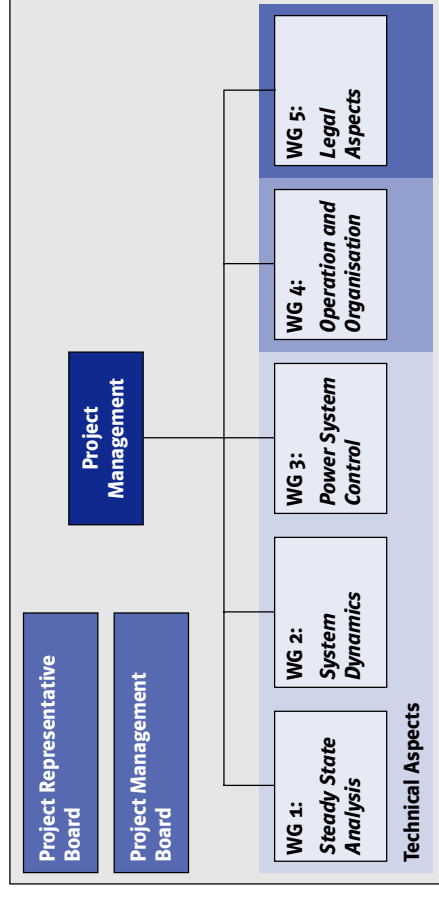
The feasibility study is another milestone in the history of UCTE: the interconnection would finally lead to synchronously interconnected power systems with a total installed capacity of 800 GW spanning 13 time zones and serving about 800 million customers. Presently, there is no existing example in the world which operates in synchronous mode in this extension.

The study will be performed as a joint project under the responsibility of UCTE. More than 100 experts from both sides are involved in the project. This huge amount of personnel resources is an attribute not only to the size of the system to be investigated, but also to the broad aspects of the tasks to be fulfilled: each of the two synchronous systems has been developed independently in technical, organizational and legal terms in the past. The overall project budget amounts to approximately 10 Million €.

## Organisation and time frame

The UCTE-Consortium responsible for the project consists of 11 TSOs from 9 countries, namely: E.ON Netz GmbH (Germany), ELIA System Operator S.A. (Belgium), MAVIR Hungarian Power System Operator Company (Hungary), Natsionalna Elektricheska Kompania EAD (Bulgaria), PSE-Operator S.A. (Poland), Red Electrica de Espana S.A. (Spain), Reseau de Transport d'Electricite (France), RWE Transportnetz Strom GmbH (Germany), Slovenska elektrizacna prenosova sustava, a.s. (Slovak Republic), National Power Grid Company „Transelectrica“ (Romania) and Vattenfall Europe Transmission GmbH (Germany).

On IPS/UPS-side a group of 7 companies have established a joint agreement for the project: Belenergo (Belarus), Eesti Energia (Estonia), Latvenergo (Latvia), Lietuvos Energia AB (Lithuania), Ukrenergo (Ukraine), Moldelctrica (Moldova) and System Operator - Central Dispatch Organisation of Unified Energy System of Russia (RAO UES) which has the leading role for the Eastern partners.



*General project organization: a joint structure from the working to the Board level*

On the working level five working groups deal with the subtasks steady state analysis, system dynamics, power system control, operational and organisational issues and legal aspects. All internal and external activities are coordinated by the project management. Further project entities are:

- a Project Representative Board, which accompanies the project on the political level with representatives from the European Parliament, European Commission, UCTE, Baltic States and CIS countries
- a Project Management Board, which is responsible for steering the project and deciding of further steps as well as of approving of reports. This joint board consists of representatives from UCTE and IPS/UPS.

<sup>1</sup> UCTE: The „Union for the Co-ordination of Transmission of Electricity“ (UCTE) is the association of transmission system operators in continental Europe.

<sup>2</sup> EPC CIS: Electric Power Council of Commonwealth of Independent States

<sup>3</sup> IPS/UPS: Comprises the Power Systems of the Baltic States (Latvia, Lithuania, and Estonia), Armenia, Azerbaijan, Belarus, Georgia, Moldova, Kyrgyzstan, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine and Uzbekistan.