

## CEPS position document:

# Expansion of the ENTSO-E continental power system

Synchronously interconnected power systems in continental Europe cover the whole of Western and Central Europe from Portugal to Poland and from Denmark to Greece. Four possible projects for the expansion of this system eastward are currently under consideration: 1. Interconnection with the IPS/UPS (countries of the Commonwealth of Independent States + the Baltic countries) system; 2. interconnection with the Baltic countries system; 3. interconnection with the Ukrainian and Moldovan systems; and interconnection with the Turkish system. ČEPS supports the expansion of the continental system provided that the safety and reliability of system operation is maintained. In view of this condition, an alternative type of interconnection with Eastern European systems via DC lines is seen as preferable since it will prevent the spread of potential power system outages.

### Analysis of the current situation

Activity relating to the interconnection of continental power systems with systems in Eastern Europe has been on the increase in recent years motivated both politically – the integration of power networks within Europe has always preceded economic and political integration, and economically – the increasing lack of primary fuel sources in EU countries and the fact that electricity prices charged in the continental systems differ from those of Eastern Europe and, consequently, power companies and electricity traders in Eastern Europe see a potentially enormous business opportunity.

Following EU-Russia energy dialogue, an extensive study was launched in 2004 under UCTE guidance with the aim of identifying the technical and operational preconditions for **the interconnection of the two largest European power systems – UCTE and IPS/UPS**. The possibility of the interconnection of the two systems, which would allow for direct technical and commercial cooperation in the field of electric power, was investigated at the request of RAO UES, the Russian power company. Particular attention was devoted to the future stability of potential interconnected network operation, the prevention of crisis situations and the legal aspects of such interconnected operation. The results of the study essentially proved the possibility of such interconnection which, however, would entail huge investment costs and the necessary fulfilment of a range of operational, commercial and legal conditions.

**The connection of the Baltic countries** (Lithuania, Latvia and Estonia) is motivated by both the political and economic reasons for creating an integrated electricity market. A LitPol Link project is currently underway which is looking into the possibility of interconnecting the Polish and Lithuanian power systems via a 500 – 1000MW DC line.

In parallel with this study, **partner power companies in the Ukraine and Moldova applied for the connection of the power systems of the two countries to the interconnected continental**

**systems** with the intention of fulfilling all the relevant technical criteria and becoming full members of this prestigious association. Compliance with all the standards defined in the Operation Handbook would naturally entail massive investment in the power sectors of both countries and require a new approach to the management and control of their power systems. The preparatory stage of the study was completed by ENTSO-E in cooperation with ČEPS; the study proper will be launched following a decision on funding.

The test operation of the synchronous **interconnection of the Turkish power system with the “southern wing” of the continental interconnected systems** has been underway since 18 September 2010. The second stage of synchronous operation commenced in February 2011. It is anticipated that test operation will be completed in 2012 following which standard synchronous operation can commence.

### **ČEPS's position**

ČEPS supports all measures leading to the enhancement and expansion of the European electricity market provided that no compromises concerning the safety and reliability of system operation are made. The Company, as well as other partners in the ENTSO-E Association and IPS/UPS members, welcomes discussion on synchronous interconnection with Eastern European power systems via DC lines; this would be the best solution in terms of operational safety and, in addition, would allow for the efficient control of power exchanges via tie lines between the two interconnected systems.