TEIAS parallel trial interconnection with ENTSO-E’s Continental Europe Synchronous Area started successfully 18 September

On 18 September 2010 at 9h25 (CET) the Turkish power system was synchronized with the interconnected power systems of Continental Europe. The dates thus marks the beginning of the parallel trial interconnection foreseen to last one year. In accordance with ENTSO-E procedures, during that period the security and performance of the interconnected systems will be monitored.

The Turkish power system is connected to the Bulgarian system by two 400 kV lines and to the Greek system by one 400 kV line. The parallel operation within the Continental European Synchronous Area will increase the quality and security of the electricity supply in Turkey, and is foreseen to eventually provide access to the European Electricity Market.

In terms of commercial power exchanges, this trial parallel operation period will be divided into three phases:

1. Stabilization Period with no scheduled exchange of energy. This phase will last two weeks.
2. After the evaluation of the stabilization period, non-commercial energy exchange will be carried out between the Turkish system operator and respectively the Bulgarian and the Greek transmission system operators in both directions and at both borders. Thus, physical electricity exchange will take place without any trading involved. All energy flows will be reversible and the transmitted electricity will be returned to the original tariff zone. The electricity balance will be zero for all TSOs involved. This phase will continue for two weeks.
3. Once these two phases are successfully accomplished, the trial operation period will proceed to Phase 3, in which limited capacity allocation for commercial electricity exchange between Turkey and ENTSO-E’s Continental Europe Synchronous Area will be allowed, according to procedures mutually agreed between Bulgaria, Greece and Turkey, and in line with EU rules and ENTSO-E procedures.

Auction rules for commercial exchanges will be published in due time and will be announced by ENTSO-E separately.

Background

In March 2000 TEAS (a predecessor of TEIAS) made an application to UCTE (a predecessor of ENTSO-E) for synchronous interconnection and membership. A dedicated Project Group was established to work towards such an interconnection.
In this context, two projects have been carried out:

1. Complementary technical studies on the Turkish power system synchronization with the Continental Europe Synchronous Area;
2. Technical Assistance in improving the primary and secondary frequency control performance of the Turkish power system for achieving its synchronous operation with the Continental Europe Synchronous Area.

To fulfill the requirements resulting from the above projects and to comply with the Continental Europe standards and requirements, the Turkish Electricity Transmission Company TEIAS and the Turkish Electricity Generation Company EUAS developed and carried out a Rehabilitation Program in most of their power plants to improve their operation and control systems.

An agreement Procedure Steps and Measures for Achieving the Turkish Power System Interconnection with the Continental Europe Synchronous Area of ENTSO-E was signed in Sofia on 18 December 2009.

In the period from 11 to 24 January 2010 island operation tests of the Turkish power system were successfully carried out under high load conditions, and in the period from 22 March to 5 April such tests were also successfully performed under low load conditions.

The project, including all preparatory work and supervision of the implementation of necessary measures, as well as monitoring of the one-year trial operation is managed by the ENTSO-E Project Group, involving experts from the Transmission System Operators of Bulgaria (ESO), Greece (HTSO), Germany (Amprion), Switzerland (Swissgrid), Italy (Terna), France (RTE), Serbia (JP EMS) and Turkey (TEIAS).