

PRESS RELEASE : ENTSO-E and DSO Entity signed today the Declaration of Intent for developing a Digital Twin of the European Electricity Grid.

Brussels, 20 December 2022

This joint declaration marks the initiation of the development of a “Digital Twin” of the European Electricity Grid aiming at coordinating investment to foster the digitalization of the energy system.

The declaration was signed by Vincenzo Ranieri, President of EU DSO Entity and Hervé Laffaye, President of ENTSO-E Assembly in presence of European Energy Commissioner Kadri Simson.

Digital technologies will be instrumental to support the decrease of Europe’s dependence on external supply of fossil fuels ensuring at the same time the affordability and sustainability of an access to energy for all and also to enable the participation of a larger span of consumers. To meet this goal, the European Commission stressed the need to build a smarter and more interactive energy system to optimise resources efficiency and implement decarbonization, electrification, sector integration and the decentralization of the energy system.

The EU Action Plan “Digitalizing the Energy System” proposed by the EU Commission in October 2022 outlined a series of measures to be taken and to be invested in to enable a swift transition where the EU Green Deal and the Digital Decade EU Policy programme for 2030 go hand-in-hand.

In this regard, ENTSO-E and DSO Entity signed today the official Declaration of Intent to develop jointly the Digital Twin of the EU electricity grid as suggested in the EU Action plan from last October.

The digital twin will be a sophisticated virtual model of the European electricity grid which aim is to enhance the efficiency and smartness of the grid throughout the energy system as a whole and through continuous investment and innovation efforts for years to come. It will ensure the development of innovative solutions and coordination of investment in five areas:

1. observability and controllability;
2. efficient infrastructure and network planning;
3. operations and simulations for a more resilient grid;
4. active system management and forecasting to support flexibility and demand response;
5. data exchange between TSOs and DSOs.

In parallel, and liaising with regulatory authorities, it will provide guidance and support for network operators on sustainable and cost-effective smart investments by the development of a tailored set of “Smart Grid Indicators” (SGI). These SGIs will help to foster investments in smartening the grid for enhanced capacity and flexibility, geared to empowering consumers to take part in energy transition.

ENTSO-E and DSO Entity will kick start the set-up of a common Task Force which will work out an implementation plan and identify joint actions and deliverables covering the five areas composing the Digital Twin of the electricity network.

Hervé Laffaye, President of ENTSO-E Assembly “ENTSO-E and DSO Entity are already successfully collaborating in various areas to ensure a common approach for the European electricity grids. Today’s event marks the path to a new activity to the common working endeavour of which we are very proud of.”

Vincenzo Ranieri, President of EU DSO Entity: “Based on this Declaration of Intent, DSO Entity and ENTSO-E will closely cooperate to provide further guidance to grid operators to optimize their investments into smartening the network. This will optimize the way grid operators manage their network, unleashing resiliency and flexibility potentials. In that way, the European Power System can effectively evolve as an enhanced open grid which will empower consumers to take an active part in the energy transition.”

Kadri Simson, European Commissioner for Energy commented “Looking back at the past three years of this Commission’s mandate and our cooperation, one can only be amazed at how much has changed, and how much higher the stakes have become. But what is constant: the digitalisation of the energy system is instrumental to achieve our energy and climate goals.”



Mr. Vincenzo Ranieri, President EU DSO Entity and Mr. Hervé Laffaye, President of ENTSO-E Assembly signing the Declaration on Intent in presence of European Commissioner for Energy Kadri Simson and Joachim Vanzetta, Chair of the Board of ENTSO-E.

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