Siemens Energy, Inc.

PSS®ODMS supports CIM Compliance and Model Management at ENTSO-E TSOs and all TSOs and Utilities Worldwide

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The European Network of Transmission System Operators for Electricity (ENTSO-E) is an association of 41 European TSOs from 34 countries whose vision is to become and remain the focal point for all European technical, market and policy issues related to TSOs interfacing with the power system users, EU institutions, regulators and national governments. ENTSO-E's work contributes to the security of supply, to a seamless pan-European electricity market, to a secure integration of renewable resources and to a reliable future-oriented grid, adhering to energy policy goals.

With member organizations this large and diverse, data standardization for exchanging network models is critically important. ENTSO-E has developed a common framework for regional network studies, based on pan-European scenarios and integrated network models following International Electrotechnical Commission (IEC) standards for a common information model (CIM). To deal with the specifics of the European grid and to prepare a long term Transmission Network Plan, ENTSO-E defined its own ENTSO-E CIM Profile in May 2009. A second edition of this profile is currently being created. These profiles will include the required data format to use when exchanging network modeling data between TSO members and the ENTSO-E secretariat in Brussels.

How is Siemens PTI helping?
Siemens PTI's PSS®ODMS is a fully CIM-based technology platform. Over the years it has been a performance leader in the ENTSO-E CIM interoperability tests, having incorporated the experience from active participation and leadership in the respective CIM Working Groups for more than a decade. To respond to the unique ENTSO-E needs, PSS®ODMS has been updated to meet ENTSO-E CIM Profiles and other related requirements. PSS®ODMS is Siemens PTI's official and only solution for CIM-based data exchange among TSOs and/or ENTSO-E based on the ENTSO-E CIM Profile.

PSS®ODMS Single User Edition: CIM Compliance
The Single User Edition of PSS®ODMS is offered to TSOs to create, merge, maintain and exchange network models in ENTSO-E required CIM format. Specifically, PSS®ODMS provides the following important features for the participating members of the ENTSO-E TSOs:

- Converting network models from PSS®E or UCTE to CIM format
- Maintaining the official version of a TSO’s network model in a powerful CIM-based environment
- Building study cases: solve power flow, visualize results, and export directly to PSS®E
- Creating scripts to automate data conversion processes via powerful Python APIs.

All of these features are available in the PSS®ODMS Single User Edition and each facilitates efficient and productive workflows related to maintaining and exchanging CIM compliant planning models for ENTSO-E TSOs.

PSS®ODMS Enterprise Model Management Solution
For ENTSO-E TSOs and other utilities around the world whose model management requirements go beyond just maintaining and exchanging CIM compliant planning models, the PSS®ODMS Enterprise Model Management Solution should be considered. Its features and functions are a superset of those
from the PSS®ODMS Single User Edition. The PSS®ODMS Enterprise Model Management Solution is a unique and proven solution designed to help streamline the modeling work flow. For most utilities, network modeling accuracy and efficiency problems are a result of their transmission planning and operations departments maintaining and using different data models. Each department relies on these models to help plan and execute important business decisions. When there is no consistent, sustainable data sharing approach, day-to-day efficiency and even system reliability can be compromised.

The PSS®ODMS Enterprise Model Management Solution provides a common, CIM-based network modeling platform for planning and operations. Deployment of this solution helps ensure that all departments share a common data model that is reliable and current. With increased accuracy and awareness of network conditions – from near-term operations to long-term planning – better business decisions can be made based upon facts, not assumptions. And that means benefits that go straight to the bottom line.

The breadth of PSS®ODMS’ flexible capability in supporting CIM Compliance for ENTSO-E TSOs and model management for TSOs and utilities worldwide is summarized in the following graphic:

![Figure 1 - PSS®ODMS: CIM - Based Network Modeling](image)