Demo B - Technical factsheet

FARCROSS

Introducing the EUROPAN platform for improved planning, operation and resource utilization on a TSO level.

This demonstrator outlines the architecture and development of EUROPAN, a forecasting platform that TSOs can utilize for more efficient, secure and sustainable operation of their assets. Through extensive data acquisition and analysis, EUROPAN will upgrade the existing coordination and communication schemes employed, achieving flexible and sustainable performance.

Major Impact Factors:

- EUROPAN platform will be able to provide extensive forecasting of:

    - Weather conditions
    - Generation and demand
    - Losses and reserves
    - Hazardous system conditions
    - Available transmission capacity
    - Congestion status

- Greek, Bulgarian and Romanian TSOs will be the first to test EUROPAN, to pursue more efficient cross – border and regional capacity utilization, optimized asset performance on a network and market level

DEMO LEADER

EUROPEAN DYNAMICS

ROMANIA

BULGARIA

GREECE

"This demonstrator will reveal new cross-border collaboration possibilities and optimized power flows in the SEE region"

- George Boultadakis, European Dynamics

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Technology Types:

FORECASTING MODULE
- Standard weather and extreme conditions (Ice, Storms)
- RES and load demand
- Overhead Line (OHL) capacity

NETWORK ANALYSIS MODULE
- Localized power flow analysis
- Congestion and capacity analysis
- Contingency analysis

INTERFACES
- EUROPAN interface
- TSO SCADA interface
  - Data Exchange

Fields of Application:

- **Points of Interest (POI)** selected on cross - border and regional congestion, as well as Renewable Energy capacity criteria. Various assets proposed in 3 countries (Greece, Bulgaria, Romania):
  - ➢ **OHLs:** internal and cross - border connections (200 kV interconnection and 400 kV **critical** lines).
  - ➢ **Wind and Solar (PV)** plants.
  - ➢ **Consumption (Load) areas.**

Components:
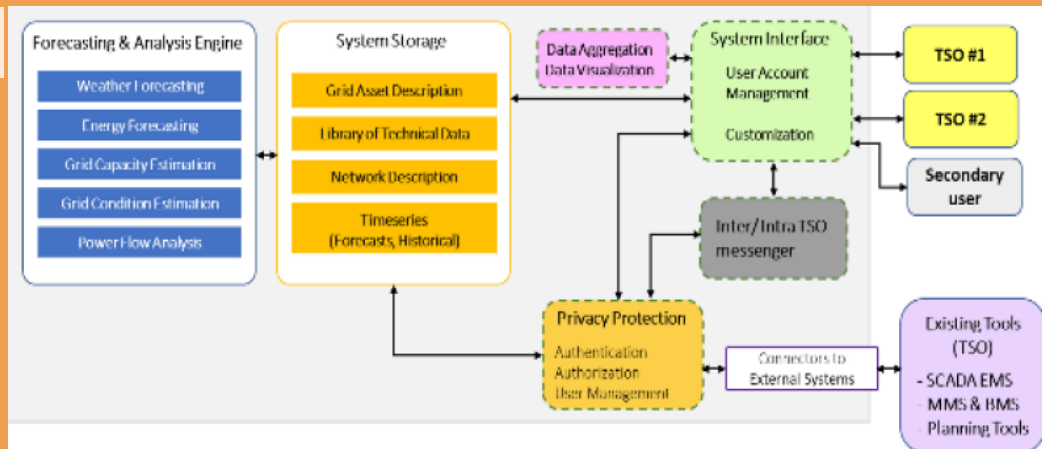
Expected Benefits:

- Reliable and provident determination of energy reserve requirements, and thus more responsive transmission asset performance.
- Improved cross – border transmission congestion management and utilization of cross – border transmission capacity.
- Optimized cross – border energy market coupling.
- Safer and more robust transmission asset operation, through wider fault prediction schemes.

Technology Readiness Level (TRL):

- The locations for the weather and energy generation, transmission and consumption data acquisition, as well as the overall system architecture and service distribution has been completed. Thus, a **TRL 5** has been achieved. The aim is to achieve a TRL 7 by the end of the FARCROSS project.