

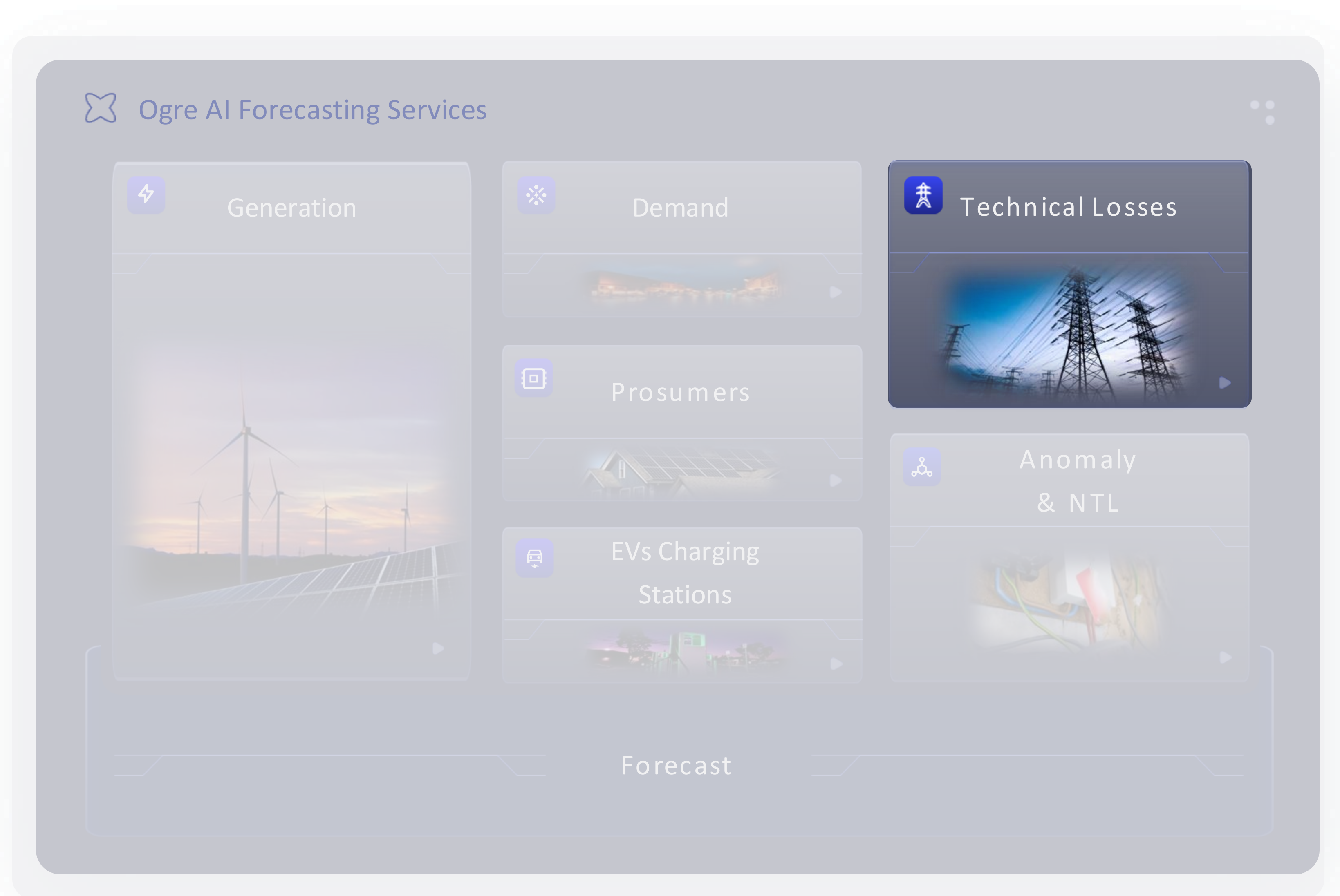


Cutting-edge AI Technical Losses Forecast

Boosting the energy transition

Forecasting Technical Losses for Optimized Grid Performance.

Minimize inefficiencies with forecasts that accurately identify technical losses. This solution supports improved grid operations and enhances overall energy system performance.



Technical Losses Forecast Module

This module forecasts technical losses with high precision, considering factors like load flow, network configuration, and equipment efficiency

This module is designed to accurately predict and analyze energy losses in the distribution and transmission network. It provides energy companies with actionable insights to reduce the associated balancing costs and improve overall energy management practices.

Assets · CEF OGRE 1

Select range type

15:00

hh:mm:rrrr

Intraday

15 min

No	Date	Time	P10 (MWh)	P25 (MWh)	P50 (MWh)	P75 (MWh)	P75 (MWh)	
01	31.08.2023	03:00	0	0	0	0	0	
01	31.08.2023	03:00	0	0	0	0	0	
01	31.08.2023	03:00	0	0	0	0	0	
01	31.08.2023	03:00	0	0	0	0	0	
01	31.08.2023	03:00	0	0	0	0	0	
01	31.08.2023	03:00	0	0	0	0	0	
01	31.08.2023	03:00	0	0	0	0	0	
01	31.08.2023	03:00	0	0	0	0	0	
01	31.08.2023	03:00	0	0	0	0	0	
Total	All	All	Total (MWh) 91.349	Total (MWh) 91.349	Total (MWh) 91.349	Total (MWh) 91.349	Total (MWh) 91.349	

Technical Losses Forecast Module



Features

- Accurate forecasting
- Historical consumption data visualization
- Weather integration
- Advanced Machine Learning Algorithms
- Forecast accuracy metrics
- Personalized reporting
- Role-based access control
- Notifications & Alerts
- Continuous Learning

Benefits

Improved financial performance

Less energy needs to be purchased or generated to meet customer demand, directly reducing the cost of energy procurement.

Boosted quality of service

Contributes to the overall reliability of the power supply and helps mitigate scenarios that lead to significant losses.

Improved Grid Reliability

Reducing technical losses contributes to the overall reliability of the power supply.

RES integration support

Enable DSOs and TSOs to better predict and manage losses, facilitating the integration of renewables into the grid.



Background

The client was in urgent need of a forecasting solution to reduce losses from operating the service in its 3 local DSOs. High price volatility as well as high balancing costs affected the business greatly.

Challenge

Historical data problems due to the Covid pandemic and war in Ukraine made it difficult to reach the project KPIs.

Solution

The three DSOs received our demand forecast and technical losses forecast solutions, together with a customized reporting platform built in Tableau.

Results

36% Forecast error reduction

3-7% MAPE 15 mins

1-2% MAPE monthly

Testimonial

"As CEO of a very large DSO, I can attest that the AI application we implemented for reducing technical losses has revolutionized our operations.

Our efficiency has skyrocketed, and we are now leading the way in sustainable energy management."



Monica Hodor
CEO E-Distribuție



Background

Transelectrica wanted to improve its forecasting capabilities for demand and technical losses in order to decrease balancing costs and energy waste. The company was facing great financial losses and risk due to the challenges in energy balancing, increased number of prosumers and a much greater adoption of renewables.

Challenge

Limited data automation and availability for data analytics readiness as well as high operational complexity during shifting regulations. We had to implement a comprehensive data science and management activity in order to have the building blocks for our cutting-edge tech.

Solution

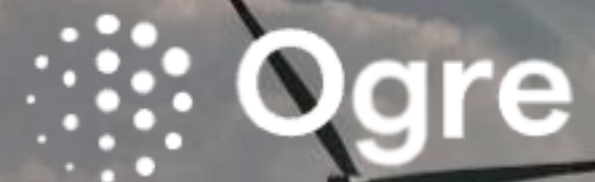
The TSO implemented our demand and technical losses forecast solutions, together with a highly customized reporting tool. The solution greatly improved forecasting accuracy and helped the operator in both reducing operational costs as well as balancing related penalty costs.

Results

25% Forecast error reduction

4-7% MAPE 15 mins

1-2% MAPE monthly



The AI platform for energy management



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