



OHROS Consulting Group

Asset Renewal Study



COMPANY

A leading European Transmission System Operator (TSO) with over 70,000 kilometers of high-voltage connections, generating over €3 billion in revenues annually, and serving more than 290 terawatt-hours (TWh) of transmitted electricity.



CHALLENGE

The TSO encountered various challenges, including shifts in the regulatory framework, energy transition, resilience, and digitalization.

The company faces the risk of not complying with the right amount of renewal, and not being efficient in renewal planning to stay ahead of the dynamic journey TSOs are facing. OHROS Consulting Group was asked to provide:

- Insights for qualitative and quantitative data in renewal planning



- Understanding trends and practices on Energy Transition and Digitalization



- Overview of incentives in the different Regulatory Systems



- Analysis of asset renewal practices between peers





Solution

The OHROS Consulting Group Project team reviews different regulatory frameworks and renewal strategies across European countries. OHROS analyzed the whole renewal planning process, from data collection to prioritization of projects. OHROS gave insights into the impact of the different regulatory frameworks in renewal planning in addition to renewal drivers and their impact (energy transition; digitalization; resilience)

OHROS Consulting Group conducted different interviews with experts in the regulatory area and renewal planning. In parallel a benchmark with quantitative data was conducted, to calculate KPIs in order to understand replacements waves between peers.



Executive Summary

- Energy transition-driven changes and capacity expansion increase renewals' competition for resources. End-of-life extension supported by risk assessment and condition monitoring are the most practiced solutions.
- Capacity increase and digitalization drive the replacement of aging assets with their new equivalent, meaning more capacity, increased digital tech, and shorter technical lives
- The increase of renewals due to evolving drivers will create materials shortages and a limited pool of technical staff used by peers, creating pressure on TSO's supply chains. Portfolio Management, clustering and/or deferral are used to alleviate these constraints
- TSOs within mature TOTEX frameworks engage with regulators highlighting opportunities to improve incentive mechanism and co-develop solutions for future regulatory periods
- Tensions between opportunities to modernize vs customer value proposition on digital investments and open data standards vs cyber security risks

