



SPACE and Owner's Engineer Relevant Experience

Lost Nation Substation Expansion

Client: Eversource (Public Service of NH)

Located in Northumberland, New Hampshire, the Lost Nation Substation Expansion project focused on increasing grid capacity and reliability by adding new key equipment to the existing substation infrastructure. ENTRUST partnered with Eversource to review and support the Protection and Control (P&C) design for this critical initiative. The project involved complex technical requirements, multiple stakeholders, and strict coordination to maintain the project schedule. ENTRUST provided detailed review and input for P&C and other engineering elements, ensuring smooth project execution and alignment with Eversource's objectives.

Key Tasks:

- Reviewed P&C design packages at all stages (10%, 30%, 70%, 100%, IFC, and As-Built).
- Provided input on thermal rating data and assisting with switching sequence development.
- Reviewed O&E plans, P&C descriptions, and ESCC TAB sheets.
- Verified RTU I/O Point Lists and Annunciator Points Lists.
- Reviewed communication drawings, Fiber Utilization drawings, Commissioning Plan, Risk Mitigation Plan, and CASCADE Data Sheets.
- Participated in coordination meetings and provided construction support.
- Reviewed manufacturer drawings, specifications, and meter scaling sheets.

Key Achievements:

- Delivered reviews and engineering support across all P&C design stages, ensuring project quality and precision.
- Completed the substation expansion on schedule in April 2022.
- Facilitated seamless collaboration with stakeholders through regular coordination meetings.
- Supported Eversource with accurate feedback that enhanced system performance.
- Provided construction support to match field execution with the engineering design.

In the Lost Nation Substation Expansion, ENTRUST demonstrated technical agility and effectively managed intricate design reviews while adhering to project timelines.

Revolution Wind Offshore Generation Project

Client: Eversource

Orsted and Eversource are collaborating to deliver the 704 MW Revolution Wind Offshore Generation Project, a groundbreaking initiative providing clean, renewable energy to Rhode Island and Connecticut. This ambitious project integrates state-of-the-art offshore and onshore infrastructure to ensure efficient, large-scale energy transmission. ENTRUST partnered with Eversource to review Protection and Control designs and support project execution, maintaining high standards of reliability and compliance.

The project encompasses a 1,120 MVA offshore gas-insulated substation with four 66 kV switchgears, each connected to three collector circuits plus one spare. These switchgears supply 280 MVA step-up transformers that transition energy to two 65-mile-long, 275 kV cable systems. The cables feed a 960 MVA onshore GIS substation, which includes reactive compensation and filtering equipment to stabilize system performance. The onshore substation's two 480 MVA step-down transformers connect to the Rhode Island Energy transmission system at the 115/34.5 kV Davisville Substation in North Kingstown, RI.

Key Tasks:

- Reviewed Orsted's P&C drawing packages at 30%, 60%, 90%, and IFC stages.
- Conducted additional P&C reviews as directed by Eversource's PM.
- Ensured system compliance and reliability across offshore and onshore components and interconnection points.
- Provided ongoing collaboration to meet challenging technical requirements.

Key Achievements:

- Delivered detailed reviews of P&C design packages, ensuring engineering and operational standards were met.
- Facilitated coordination between offshore and onshore systems, addressing the unique challenges posed by long-distance cable systems and high-capacity substations.
- Enabled reliable integration of the offshore wind infrastructure into the Rhode Island Energy transmission network at the Davisville Substation.
- Completed all work on schedule, supporting the project's successful delivery in 2024.

In this project, the ENTRUST team effectively managed complex offshore and onshore energy systems by using their renewable energy expertise.

In the Lost Nation Substation Expansion, ENTRUST demonstrated technical agility and effectively managed intricate design reviews while adhering to project timelines.