PROJECT PROFILE

ESS Control System with Islanding Capability

PUGET SOUND ENERGY

Outcomes:

1. Automatic outage management of critical loads.
2. Improved grid flexibility through regulation and load following services.

Challenge

Glacier is a small remote community near Mt. Baker – a 20 mile drive to the Mt. Baker Ski Area. There are 1,048 PSE customers on the GLA-12 circuit, including a number of local businesses. Glacier suffers from frequent outages that are generally quite long (approximately 2.8 outages per year at 7.5 hours average duration). The outages are primarily due to faults on the long and exposed Kendall-Glacier 55kV transmission due to dense vegetation. Several small hydro generation facilities interconnect to this circuit and lose revenue during outages. Few good options exist for increasing the reliability on this line. This was one of the poorest performing transmission lines within PSE's territory.

Doosan GridTech Solution

PSE deployed a 2MW/4MWh BYD lithium ion battery with the Doosan GridTech Intelligent Controller as the brains of the system. Doosan GridTech worked closely with PSE to configure the DG-IC to address the following use cases and needs:

- Energy shifting
- Energy shifting from peak to off-peak on a daily basis
- System capacity to meet adequacy requirements
- Grid Flexibility
- Regulation services
- Load following services
- Improving distribution system efficiency
- Load shaping
- Deferment of distribution system upgrades
- Outage management of critical loads