

Arlington Battery Energy Storage System and Clean Energy Campus Improvements

Project Narrative

Public Utility District #1 of Snohomish County (Snohomish PUD or PUD) plans additional development on PUD-owned land at 17601 59th Ave NE in Arlington, WA (tax parcels 31052200405500 and 31052200405400).

Snohomish PUD intends to construct a new substation, transmission line, and relocate a portion of the existing solar array to support growth in the Arlington area and prepare for a battery energy storage system (BESS) at this site. The work will maintain and improve current uses, including Lineman Training, storage of electrical equipment and poles, and the new North County Office. Additionally, the work prepares PUD's North County site for the eventual construction of 63rd Ave NE as a public roadway.

Site preparation work is expected to begin in late 2023 or early 2024. BESS construction is planned to start in mid- 2024, with expected completion in fall of 2025.

New Substation and Transmission Line

The new 1.2- acre Crosswind substation will be constructed in the southeast corner of the site. This substation is required for the Battery Energy Storage System to work and will provide additional capacity to the Arlington electrical grid to accommodate increasing electrical use and future development in the area. The new substation will connect to a new planned overhead transmission line entering the site from 59th Ave. along the south property line. The new transmission line on the North County site will consist of six 85' ductile iron and/or steel poles. The Crosswind substation will accommodate two power transformers, however only a single transformer is planned to be on-site and in service at the time of project completion. This transformer will contain nearly 8,200-gallons of mineral insulating oil. The insulating oil is highly refined mineral oil that is essentially equivalent to food grade oil except for color. Substation components will include:

- Metalclad switchgear
- 12kV disconnect switch
- 115kV circuit switcher
- Aluminum bus
- Neutral reactor
- 28 MVA Power transformer
- 2- Dead End Structures
- 1 – 70 ft. Ductile Iron Pole with Data Radio Antenna (for Distribution Automation/SCADA/metering)

Substation construction will also include fencing, pole-mounted lighting and security, and stormwater and oil containment infrastructure for the substation transformer. Grading work may be required for proper function of the stormwater/oil containment infrastructure.

Battery Energy Storage System

A 25-megawatt, 100 megawatt-hour battery energy storage system (BESS) will be constructed on the site on the land currently occupied by the north half of the existing 500 kW solar array. The BESS will cover approximately 1.5 acres. Visually, the BESS will have a similar appearance to a substation, with

small modular utility structures and a gravel pavement base, surrounded by a fence meeting the PUD's standards for substation fencing. This will be evaluated under a future SEPA review and permit package.

Solar Panel Relocation

A portion of the existing 500-kilowatt solar array at the site associated with the Arlington Microgrid Project will be relocated to accommodate the battery system. To create the required space adjacent to the substation, the four northernmost rows of panels will be relocated on the same site, just west of the future 63rd Ave. south of the existing Clean Energy Center and Modular Data Center. The relocated panels will be arranged in seven rows, approximately 250' long.

Gravel roads will be constructed between each row of panels to give access for maintenance and repairs, resulting in approximately 1500 feet of gravel roads. These roads will be infrequently used (less than 10 times a year). Poles for street and area lighting will be installed around the perimeter of the relocated solar array.

This project will also include installation of conduits under 63rd Ave NE to connect the relocated solar panels to the existing electrical equipment on the east side of 63rd Ave NE.

Fencing and Screening

Currently, 63rd Ave NE, which runs through this site, is a private street, but the City of Arlington intends to make 63rd Ave a public street. The PUD intends to install fencing along 63rd Ave NE prior to the opening of 63rd as a public street. PUD also plans to install screening along 63rd Ave (on both sides) sufficient to provide screening compliant with City of Arlington regulations for all proposed uses on the site.

Perimeter Roads and Lighting/Security Improvements

To support access throughout the site, and to improve security through the site as additional infrastructure is created, PUD plans to install additional roads, pole-mounted lighting, and security cameras through the eastern portion of the site. The proposed roads would include a north/south road along the east property line, along with extensions of the three existing east/west roads on the east parcel of the site so that those roads would intersect with the proposed north/south road.

Regrading existing east/west roads on the eastern half of the site may be required to ensure proper alignment with entrances to the substation and BESS.

Future Training Area Expansion

Snohomish PUD has dedicated the NE portion of the site to essential line crew training activities. These operations cover approximately 6 acres, including construction equipment training, pole installation training, commercial vehicle driver's license training, and other training activities as needed. The training area consist of two trailers, a cul-de-sac, an earthmoving area, and electrical poles with non-energized power lines.

Future plans for the training area include two new buildings (approximately 5000 sq ft each) to replace the existing trailers. Design may begin after 2025. Per agreement with the City of Arlington, the PUD will defer detailed planning and review of this expansion until design is ready to begin.