

Springfield Utility Board's Glenwood Substation Powering Redevelopment in Glenwood

Statistics

Project Name: Glenwood Substation

Anticipated Completion Date: Fall 2022

Initial Peak Capacity: 28 MVA

Purpose of Project: The substation will provide additional power to Glenwood in anticipation of the area's growing residential, commercial and industrial needs. It will also provide extra reliability for SUB customers on the west side of Springfield. The substation will be constructed for seismic resiliency, reducing damage and limiting costly repairs in the event of an earthquake.

Timeline

2000 SUB acquires Alvey-Springfield 115kV transmission line from BPA

2001 SUB acquires Glenwood territory from EWEB

2012 City of Springfield adopts Glenwood Refinement Plan

2015 SUB acquires Papé property for future substation site

2015 Lane County/Springfield/Eugene updates Public Facilities and Services Plan

2016 SUB worked with the City and property owners to establish the conceptual plan for constructing the substation and aligning the transmission line. Completed Wetland Delineation study.

2017 SUB develops the substation Site Plan and explores transmission routes and design

2018 - 2109 SUB to acquire rights and prepare for transmission line construction and finalize Site Plan with the City

2020-2021 SUB to construct transmission line, distribution connections and substation

2022 SUB to bring substation online

Frequently Asked Questions

What does a substation do? Why does it need a transmission line?

Substations convert high-voltage electricity down to a voltage that can be safely distributed in populated areas. The Glenwood substation will convert high-voltage 115kV power as received from Bonneville Power Administration ("BPA") down to 20.8kV, the voltage required for SUB's primary distribution lines. Local transformers bring the distribution voltage down to the service voltage (usually 120/240V) for each individual site. A transmission line will be constructed to bring BPA's high-voltage electricity to the substation. The line will be routed through the substation and continue to downtown Springfield where it will deliver power to the next substation.

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Why did SUB select this substation location?

Substations are critical facilities that have unique siting and safety requirements; therefore, SUB considered many factors before purchasing the Papé property on E. 22nd Ave in 2015. After discussions with multiple property owners and visits to multiple sites, the Papé site was chosen for its many strategic advantages. For example the property is not directly adjacent to residential property, has limited visibility from surrounding lands, and is zoned to allow a substation.

Why did SUB select this transmission route?

First, SUB had to determine the endpoints of the transmission line. The substation site served as one endpoint and the closest transmission line to that substation (our Alvey-Springfield line, about ¼ mile away) served as the other. After the endpoints were established, several routing options were explored. The proposed design is based on the cost of construction, the complexity of regulatory requirements and an evaluation of existing land use zoning codes. The design incorporates best practices for transmission construction, which provides for two physically separate lines. This reduces the likelihood that a single incident will de-energize the substation and also allows for flexibility during ordinary maintenance and operations.

Have there been opportunities for public input?

Yes, public hearings and notifications to nearby property owners were part of the approval process for the Springfield Glenwood Refinement Plan and the Metropolitan Public Facilities and Services Plan, of which the substation and transmission lines are a part.

What is the environmental impact of this project?

The substation footprint does include wetlands, and appropriate protections as required by law have been incorporated into the substation design. This includes constructing the substation with an oil containment system, which will protect against soil and water contamination in the event of a catastrophic transformer failure. The transmission line construction and maintenance requires that tall growing vegetation is kept away from lines.

How many trees will be removed?

SUB's intent is to remove the fewest number of mature trees necessary for the construction and safe maintenance of the transmission lines. Prior to any tree removal, SUB will obtain the necessary Tree Felling permits as required by the City, as well as any additional approvals required by local or state agencies.

Will the hillside be affected?

Although trees and vegetation must be removed to safely construct and maintain the transmission lines, SUB plans to leave tree stumps and associated root structure in place to keep the hillside stable. SUB has applied for the proper City permits, including a hillside overlay permit that details our plan to protect the hillside from erosion. SUB is currently in the permit approval process.

