Powering Seattle through the 21st Century

Denny Substation Project

QUARTERLY REPORT

2ND QUARTER | 2015

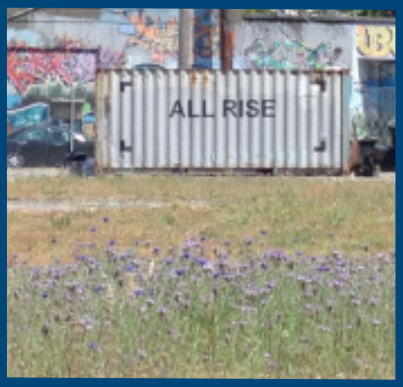
Seattle City Light is building an electrical substation, its first in 30 years, near the intersection of Denny Way and Stewart Street. In addition to the new substation, the Denny Substation Project will include an underground distribution network to deliver power and a transmission line to feed the electricity to the substation. This necessary upgrade to our electrical infrastructure will ensure reliable power to meet current and future electrical needs, support economic growth, and provide system flexibility for the north downtown/South Lake Union area and beyond.

DID YOU KNOW?

The substation will generate some of its own electricity through solar power.

This report provides a closer look at the equipment that makes it possible for City Light to deliver electricity to its customers. Also included is a construction update: where it will occur and what to expect.

FEATURE: ALL RISE



Over 40 goats grazed the Denny Substation site to make way for a new ALL RISE art project.

INSIDE:

INSIDE THE DENNY SUBSTATION - CONSTRUCTION - PROJECT TIMELINE

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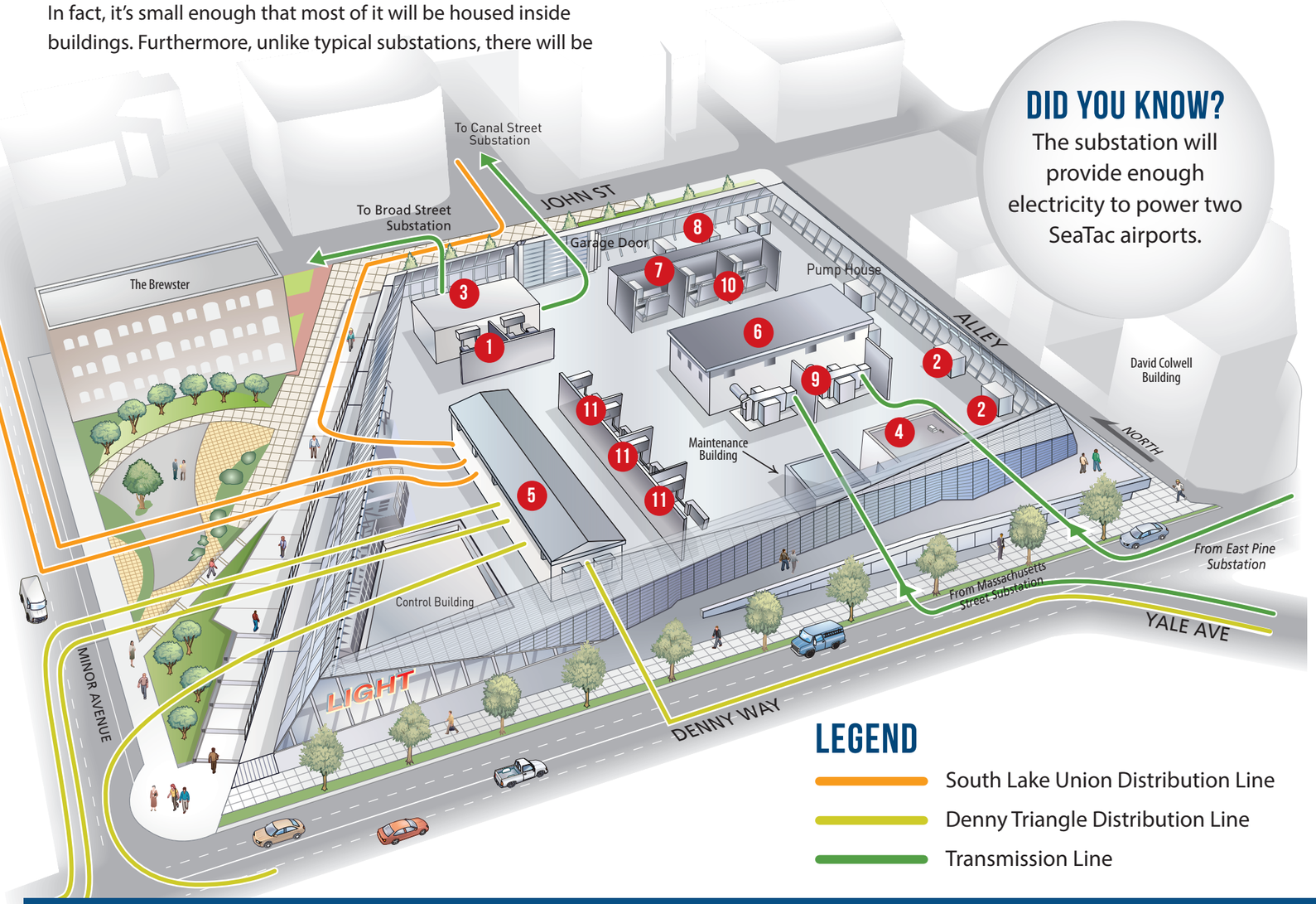
A Look Inside The Denny Substation

The Denny Substation will serve new and expanding companies and institutions and bring critical improvements to the transmission grid. The "engine" of the substation — the equipment that manages and distributes electricity — is state of the art, and it's more compact and less obtrusive than at most substations. In fact, it's small enough that most of it will be housed inside buildings. Furthermore, unlike typical substations, there will be no aboveground power lines. Instead, both the outgoing power distribution and incoming transmission lines will be underground and out of sight. The Denny Substation will begin serving existing customers in 2018 and has been designed to meet long-term demand for reliable power as the city continues to grow.



DID YOU KNOW?

The substation will provide enough electricity to power two SeaTac airports.

EQUIPMENT

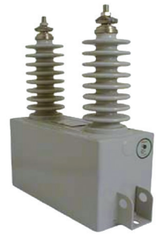
1 115 kV Inductors
2 13.8 kV Capacitor
3 115 kV Gas Insulated Switchgear
4 230 kV Gas Insulated Switchgear
5 15 kV Air Insulated Switchgear
6 115 kV Gas Insulated Switchgear
7 26 kV Air Insulated Switchgear
8 26 kV Capacitor
9 230 kV to 115 kV Oil Transformer
10 115 kV to 26 kV Oil Transformer
11 115 kV to 13.8 kV Oil Transformer

1 INDUCTOR

An electrical component, usually a wire coil that resists changes in electric currents passing through it, acting like a valve in a pipe. Inductors are used to control and balance electrical power traveling through the regional grid.

2 + 8 CAPACITOR

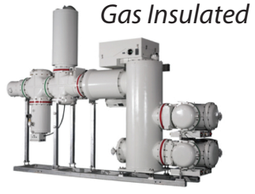
Used to control the level of voltage supplied to the customer by compensating for the voltage loss in the electrical system.



3 - 7 SWITCHGEAR

A switchgear is like a power switch. These switches will help regulate, protect, and control electrical equipment.

Gas Insulated



Air Insulated

9 - 11 TRANSFORMER

A device used to raise or lower the voltage as needed to serve the transmission or distribution circuits. Transformers consist of two or more coils of conducting material, such as a wire, wrapped around a core (often made of iron).

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STARTING FALL 2015
DENNY NETWORK CONSTRUCTION

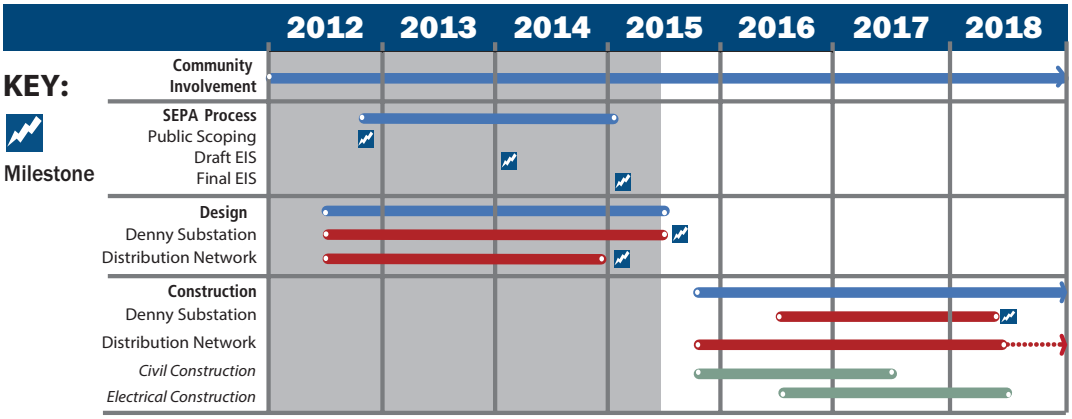
The Denny Network is being built to distribute more reliable power to City Light high-use customers. In fall 2015, network construction will begin on South Lake Union and Denny Triangle streets. Typical impacts will include daytime and nighttime work, parking restrictions, transit and pedestrian detours, dust and noise. There will be lane restrictions and street detours, but streets will typically remain open to traffic during construction. More detailed construction information will become available after a contractor has been selected in late July. Stay up to date on project information by visiting our website and signing up for project emails.

WHAT'S AHEAD:

Fall 2015: Denny Network construction begins

Early 2016: Denny Substation construction begins

Mid-2018: Construction of Phase 1 complete



*Schedule is current as of July 2015

VISIT OUR WEBSITE:
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CALL OUR HOTLINE:
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