

How power from the I-5 Project will get to you

August 2010

The I-5 Corridor Reinforcement Project has a direct link to keeping the lights on and serving the energy needs of homes and businesses from Longview, Wash., to points south of Portland, Ore. Over 80 percent of the power flowing through the proposed I-5 Corridor Reinforcement Project would be used to serve local needs in Clark and Cowlitz counties and the greater Portland area.

It is difficult to see how electricity makes its way from large 500-kilovolt power lines to homes and businesses. Electrons on a high-voltage grid are a lot like cars on a major interstate highway. When you enter a major highway like Interstate 5, you are surrounded by some cars on short local trips and others on longer journeys. The 500-kilovolt system is similar, because it moves large amounts of electrons from where power is generated to where it is needed. The Bonneville Power Administration's 500-kilovolt substations are like the freeway off-ramps to local areas.

Clark Public Utilities and Cowlitz County PUD get the majority of their power through BPA's transmission system. Electricity is delivered to homes and businesses by lower-voltage feeder lines connected to BPA's existing 500-kilovolt system. The majority of the power consumed in the area comes from sources outside the southwest-Washington and northwest-Oregon area and must travel on BPA's 500-kilovolt system to the lower voltage system. That is why having adequate transmission capacity in the I-5 Corridor area is so important.

The map on the back indicates where the numbered substations are to show how power from the I-5 Corridor Reinforcement project would be connected to the lower voltage system to help serve customers of Cowlitz PUD and Clark PUD.

Clark Public Utilities receives most of its power from the main grid 500-kilovolt system that runs through the I-5 Corridor. The proposed line would reinforce that system. The new Castle Rock (1.) substation north of Longview would connect to BPA's existing Allston (2.) substation through the 500-kilovolt system, where power would be transformed into 230 kilovolts, and delivered to Clark Public Utilities at the Ross (5.) and Sifton (6.) substations.

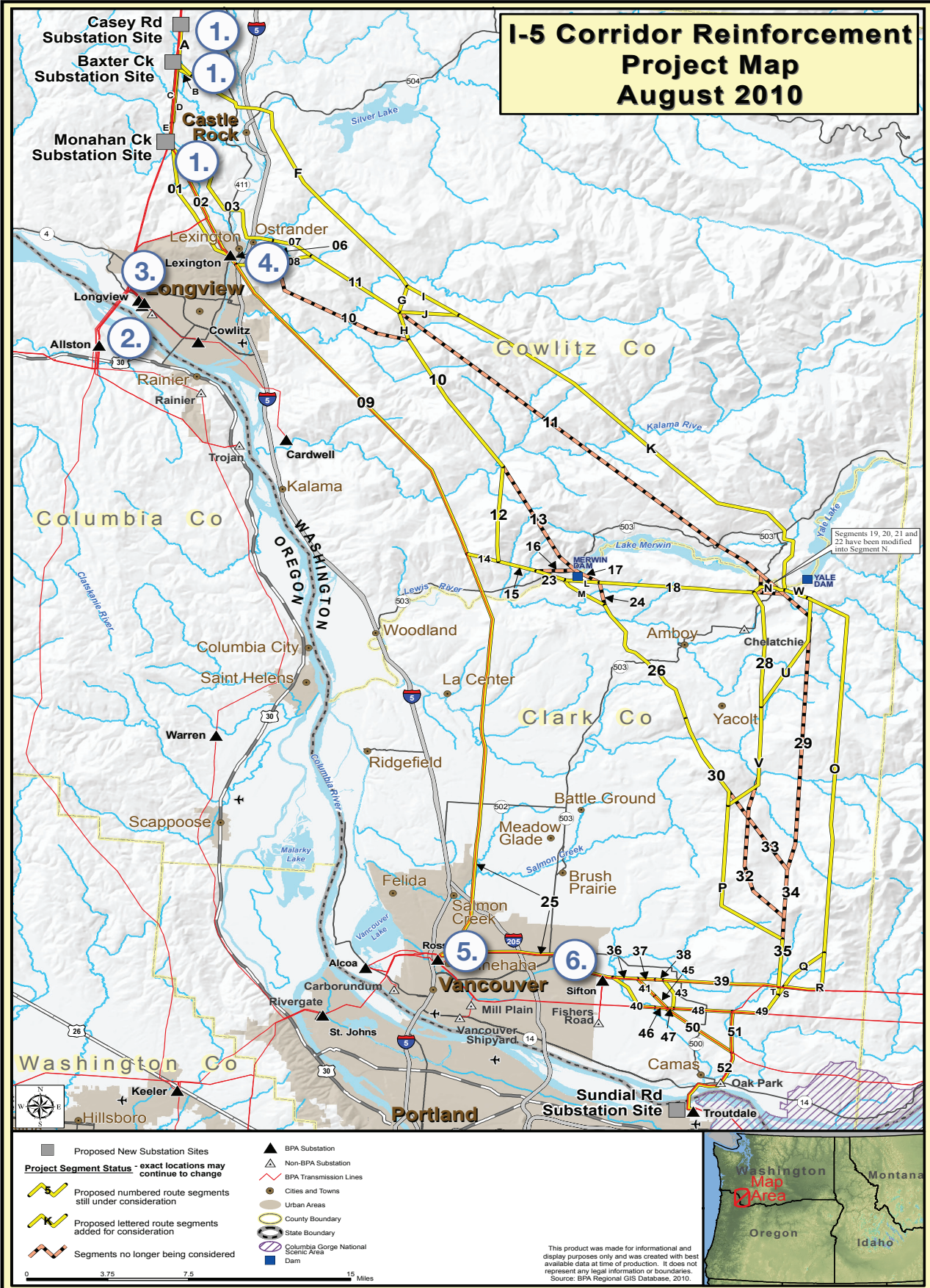
Clark County also receives power from an existing 115-kilovolt network connected to the Troutdale substation, so the new substation would reinforce the southern portion of the energy loop into Clark County as well.

Cowlitz County Public Utility District receives nearly all of its power from BPA's 500-kilovolt and 230-kilovolt system. The newly proposed Castle Rock substation would reinforce the system, ensuring that Cowlitz PUD would have the necessary access to BPA power and the energy marketplace. The new substation (1.) would be connected to Allston (2.) where the power would be converted into 230-kilovolts at BPA's Longview (3.) and Lexington (4.) substations to feed into Cowlitz PUD's network.

As important as this project would be for Clark and Cowlitz counties, the I-5 Corridor Reinforcement Project will benefit utilities throughout the southwest-Washington and northwest-Oregon area. The primary purpose of this project is to keep pace with the increasing energy needs in the project area. In the event of outages on the existing 500-kilovolt system, this reinforcement would allow energy to flow along another path and allow Cowlitz PUD and Clark Public Utilities to adequately serve their customer's energy needs.



I-5 Corridor Reinforcement Project Map August 2010



- Proposed New Substation Sites
 - ▲ BPA Substation
 - △ Non-BPA Substation
 - BPA Transmission Lines
 - Cities and Towns
 - Urban Areas
 - County Boundary
 - State Boundary
 - Columbia Gorge National Scenic Area
 - Dam
- Project Segment Status - exact locations may continue to change**
- Proposed numbered route segments still under consideration
 - Proposed lettered route segments added for consideration
 - Segments no longer being considered

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