



*VIA ELECTRONIC MAIL*

February 22, 2024

Philip Augustin, Chair  
WECC Studies Subcommittee (StS)

Doug Tucker, Staff Engineer  
WECC Studies Subcommittee (StS)

**Subject: Cascade Renewable Transmission Project (CRTP) HVDC Transmission Line  
Project: 2024 Annual Supplemental Progress Report**

Dear Mr. Augustin and Mr. Tucker:

This letter is the 2024 Annual Supplemental Progress Report for the Cascade Renewable Transmission Project (CRTP). Cascade Renewable Transmission, LLC has a Phase 3 WECC Path Rating for the CRTP Project.

Cascade Renewable Transmission Project Description

The Cascade Renewable Transmission Project's 1,100 MW Path Rating is based upon the following Plan of Service:

1. CRTP Eastern HVDC Converter Station
  - a. VSC – IGBT based converter rated for 1,100 MW plus line losses for withdrawal at the BPA Big Eddy 500 kV AC substation and conversion to +/- 320 kV<sup>1</sup> DC for transmission.
2. HVDC Transmission Line
  - a. Approximately 98 miles of ±320 kV<sup>1</sup> power cable, symmetrical monopole, in a series combination of submarine and underground cables that connect both the east and west voltage source converter stations.
3. CRTP Western HVDC Converter Station
  - a. VSC – IGBT based converter, +/- 320 kV<sup>1</sup> DC to 230 kV AC, rated for 1,100 MW delivered to the Point of Interconnection, injection to the PGE Harborton Substation at 230 kV AC

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<sup>1</sup> Recent developments in DC cable manufacturing have led to a +/- 400 KV design which may be a viable solution for the CRTP Project. At this stage CRTP is maintaining flexibility to consider both voltage options. The utilization of the +/- 400 KV DC cable would not in any way impact the WECC modeling results for CRTP, however, it may reduce costs. Maintaining flexibility to utilize either voltage may increase cable supplier options, helping to alleviate global supplier constraints.



## Cascade Renewable Transmission Project Status

### Permitting:

As noted in the September 2023 report, a Notice of Intent was filed with the Oregon DOE – EFSC, followed by two public informational meetings. In December 2023, a Preapplication Request was filed with Washington EFSEC, followed by three public informational meetings held in February 2024 in White Salmon, Stevenson, and Washougal, WA. These were sponsored by Washington EFSEC. Oregon DOE - EFSC and the Army Corps of Engineers continue to be fully engaged. CRTP has held two remote all-agency coordination meetings and three agency sub-group meetings (more targeted subject matter) to coordinate the delivery of project information and encourage agency interface. It is likely that US ACOE will be the lead Agency for environmental reviews. CRTP plans to have its major permit applications filed by the second quarter 2024, with a target of receiving all permits in 2026.

### Interconnection – BPA Big Eddy 500 kV substation and PGE Harborton 230 kV substation:

System Impact Studies for each of the two (2) transmission interconnection points have been completed. The results from the preliminary PGE studies have caused BPA to review their previous SIS study, estimated to be completed in Q1 2024. PGE is proceeding with its Facilities Study for CRTP. CRTP will need to see the results from both the PGE and BPA facilities studies to better understand how the CRTP Plan of Service completion date for the end of 2027 fits into the bigger scheme of things. At this stage it is unclear how these estimated dates for completing required system upgrades may impact CRTP's Plan of Service date.

Converter Station Sites: CRTP has initiated discussions with BPA to locate its converter station on land owned by the US Federal Government in close proximity to BPA's Big Eddy Substation. BPA has agreed to initiate its own permitting requirements with respect to that requested site. In addition, CRTP is close to executing an Option Agreement with the Port of Portland for a long-term lease of a parcel of land suitable for the converter station site in close proximity to PGE's Harborton substation.

### WECC Path Rating:

CRTP, being in Phase 3, continues to move forward with development activities, including permitting and interconnection studies as evidenced in this Second Supplemental Progress Report.

### Plan of Service:

The Project was initially planned to have the first elements of the CRTP Project placed in service at the end of 2027. Based on the feedback from both BPA and PGE in the System Impact Study Reports regarding the timing of completing required system upgrades, as well as, anticipated global supply constraints, the current development timeline is pointing towards a planned in service date at the end of 2029.



Contact Information

Any questions about this report or the Cascade Renewable Transmission Project can be directed to:

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Sincerely,

A handwritten signature in black ink that reads "Ernest B. Griggs". The signature is written in a cursive, flowing style.

Ernest B. Griggs  
Cascade Renewable Transmission, LLC

Cc: Enoch Davies, WECC  
Doug Tucker, WECC