

BPA Attachment K Planning Process

Planning Meeting II

November 19, 2020



Agenda

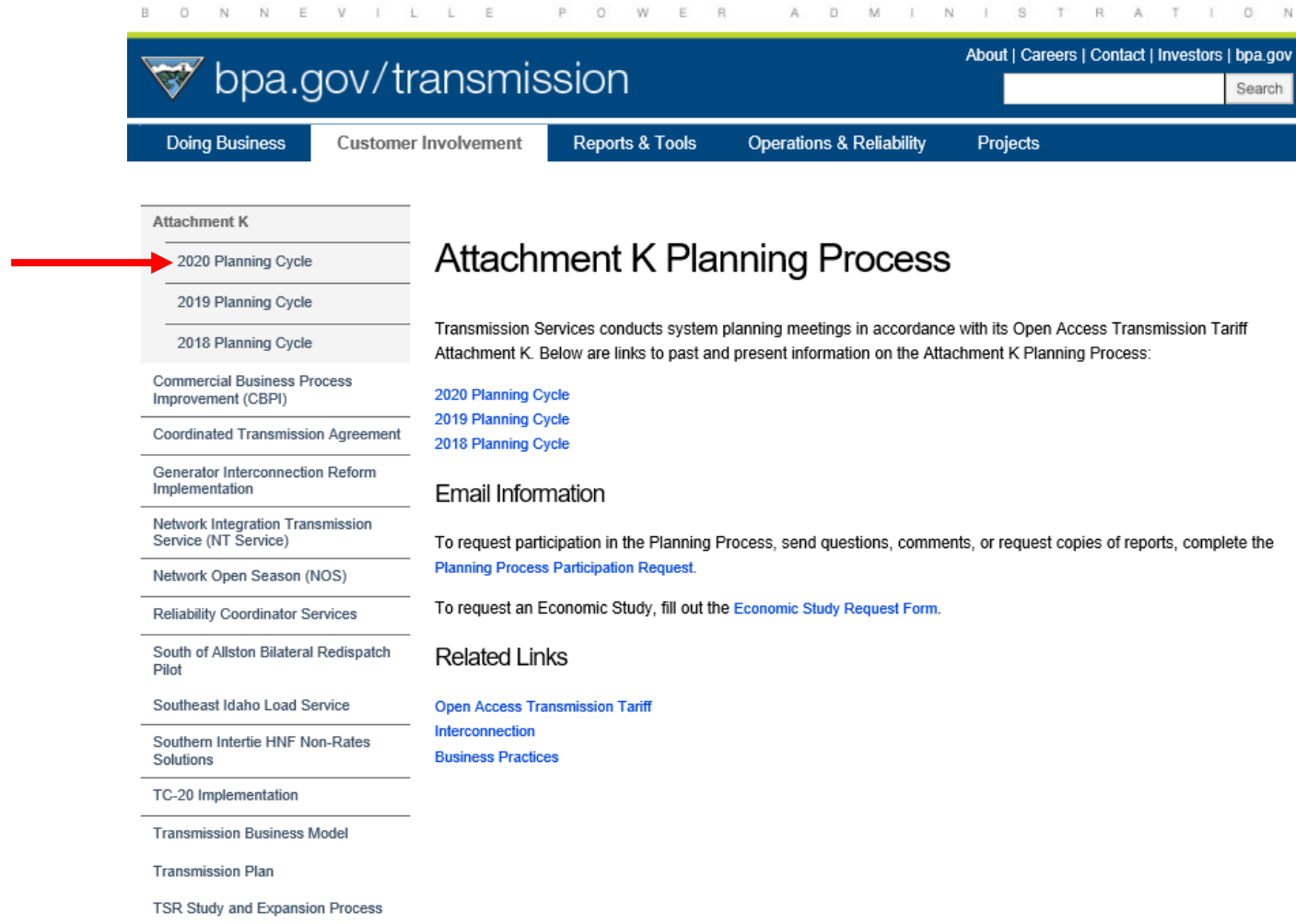
- Introductions
- Attachment K Planning Cycle – 2020
- Attachment K Website
- Economic Study Requests
- Draft Plans of Service for Transmission
- Project Updates
 - Significant Energized Projects
 - Significant Planned Projects
- Next Steps

Attachment K Planning Cycle - 2020

- **Customer Meeting I** **April 14, 2020**
 - 2019 Transmission Plan
 - Planning Assumptions, Criteria, Methodology
 - Economic Study
- **Posting I** **August 2020**
 - Summary of 2020 System Assessment Results and Conceptual Solutions
- **Customer Meeting II** **November 19, 2020**
 - Draft Plans of Service and Costs
 - Economic Study Requests
- **Posting II** **December 2020**
 - Draft Transmission Plan for 2020
 - Final Transmission Plan for 2020

BPA's Attachment K Planning Process Website

<https://www.bpa.gov/transmission/CustomerInvolvement/AttachmentK/Pages/default.aspx>



Attachment K

- 2020 Planning Cycle
- 2019 Planning Cycle
- 2018 Planning Cycle
- Commercial Business Process Improvement (CBPI)
- Coordinated Transmission Agreement
- Generator Interconnection Reform Implementation
- Network Integration Transmission Service (NT Service)
- Network Open Season (NOS)
- Reliability Coordinator Services
- South of Allston Bilateral Redispatch Pilot
- Southeast Idaho Load Service
- Southern Intertie HNF Non-Rates Solutions
- TC-20 Implementation
- Transmission Business Model
- Transmission Plan
- TSR Study and Expansion Process

Attachment K Planning Process

Transmission Services conducts system planning meetings in accordance with its Open Access Transmission Tariff Attachment K. Below are links to past and present information on the Attachment K Planning Process:

- [2020 Planning Cycle](#)
- [2019 Planning Cycle](#)
- [2018 Planning Cycle](#)

Email Information

To request participation in the Planning Process, send questions, comments, or request copies of reports, complete the [Planning Process Participation Request](#).


To request an Economic Study, fill out the [Economic Study Request Form](#).

Related Links

- [Open Access Transmission Tariff](#)
- [Interconnection](#)
- [Business Practices](#)

Navigating BPA's Attachment K Planning Process Website

<https://www.bpa.gov/transmission/AttachmentK/Pages/2020-Planning-Cycle.aspx>


[bpa.gov/transmission](https://www.bpa.gov/transmission)

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[Projects](#)

Attachment K

2020 Planning Cycle

2019 Planning Cycle

2018 Planning Cycle

Commercial Business Process Improvement (CBPI)

Coordinated Transmission Agreement

Generator Interconnection Reform Implementation

Network Integration Transmission Service (NT Service)

Network Open Season (NOS)

Reliability Coordinator Services

South of Allston Bilateral Redispatch Pilot

Southeast Idaho Load Service

Southern Intertie HNF Non-Rates Solutions

TC-20 Implementation

Transmission Business Model

Transmission Plan

TSR Study and Expansion Process

2020 Planning Cycle

Transmission Services conducts system planning meetings in accordance with its Open Access Transmission Tariff Attachment K. These meetings provide customers and interested parties the opportunity to discuss and provide input to the studies and development of the plans of service.

This page provides information about the Transmission Services Attachment K process including notifications of meetings, results of planning studies, plans of service and other reference information. To request participation in the Planning Process, complete and email the [Participation Request form](#).

Meetings

[November 19, 2020](#)
[Agenda](#)

[April 14, 2020](#)
[Agenda](#)
[Planning Meeting I 2020](#)
[Transmission Plan 2019-2018 Project Comparison List](#)

Economic Studies

To request an Economic Study, fill out the [Economic Study Request Form](#).

Reference Information

[2019 Transmission Plan](#) (December 2019)
[2020 System Assessment Assumptions and Methodology](#)
[2020 System Assessment Summary](#) (August 2020)

Related Links

[FERC Order 1000](#)
[FERC Order 890](#)
[NERC Reliability Standards](#)
[Open Access Transmission Tariff \(includes Attachment K\)](#)
[Planning Studies](#)
[WECC Reliability Criteria](#)

BPA's Attachment K Planning Process Website

- **E-mail Information**
 - PlanningParticipationRequest@bpa.gov
 - PlanningEconomicStudyRequest@bpa.gov
- **Meetings**
 - Meeting announcements, agendas, etc.
- **Economic Studies**
 - Requesting and Tracking Economic Studies
- **Reference Information**
 - Materials associated with the Planning Process, participation forms, etc.
- **Related Links**
 - Links to information related to the Planning Process

Economic Study Requests

- What is an Economic Study?
 - Studies may be requested to address congestion issues or the integration of new resources and loads.
- How are Requests for Economic Studies submitted?
PlanningEconomicStudyRequest@bpa.gov
- Requests may be submitted any time...
Requests submitted after October 31 will be considered in the next prioritization process.
- BPA will complete up to two Economic Studies per year at its own expense.
- There were no Economic Study Requests received during the study cycle which closed on October 31, 2020.

CFR Customers – New for 2020

BPA is providing contracted Transmission Planning services for the following NT customers who have Coordinated Functional Registrations (CFR) with NERC.



Klickitat County PUD



Lewis County PUD



Northern Wasco
County PUD



Pend Oreille PUD



Umatilla Electric
Cooperative



Whatcom PUD

Draft Plans of Service (2020 Planning Cycle)

- Most of the draft plans of service on the following slides, have been developed to maintain compliance with the applicable planning reliability standards and criteria
- The following standards and criteria were applied in development of the proposed corrective action plans:
 - **NERC Reliability Standard TPL-001-4**
(North American Electric Reliability Corporation)
 - **WECC Reliability Criteria TPL-001-WECC-CRT-3.2**
(Western Electricity Coordinating Council)
- The remaining plans of service provide needed equipment upgrades or improve Operational or Maintenance Flexibility

Draft Plans of Service (2020 Planning Cycle)

- BPA's 2020 System Assessment for the load areas was based on current studies and did not rely on past studies
- The transmission system was divided into 27 load service areas and 18 paths/interties
- There were six corrective action plans (plans of service) identified from the 2020 System Assessment
- Several of the projects identified from previous System Assessments have updated schedules
- These updates are shown on the following slides
 - Bold text** indicates a schedule or status change compared with last year's update.

Draft Plans of Service

from the 2020 System Assessment

Portland Area

Project

Schedule

Troutdale 230 kV Series Bus Sectionalizing Breaker Addition 2025

- Adds a series bus sectionalizing breaker at Troutdale

Project

Schedule

Pearl 230 kV Series Bus Sectionalizing Breaker Addition 2029

- Adds a series bus sectionalizing breaker at Pearl

Draft Plans of Service

from the 2020 System Assessment

Olympic Peninsula Area

Project

Shelton-Fairmount 115 kV No.1 Line Upgrade

- Increases Maximum Operating Temperature of the line

Schedule

2022

Project

Shelton-Fairmount 115 kV No.2 Line Upgrade

- Increases Maximum Operating Temperature of the line

Schedule

2021

Draft Plans of Service

from the 2020 System Assessment

Walla Walla Area

Project

Schedule

Tucannon River 115 kV Shunt Reactor (15 Mvar) Addition

2025

- Adds a 15 MVAR reactor
- Needed to alleviate post-contingency high voltages

Umatilla Area

Project

Schedule

Jones Canyon 230 kV Shunt Reactor (40 Mvar) Addition

2025

- Adds 40 MVAR reactor
- Needed to alleviate local area high voltages

Project Updates

Seattle/Tacoma Area

Project

Tacoma 230 kV Bus Tie and Auxiliary Bus Section
Disconnect Switch (O&M Flexibility)

Raver 500/230 kV Transformer Addition

Tacoma 230 kV Series Bus Section Breaker Addition

Monroe-Novelty 230 kV Line Upgrade

Schedule

2021

2022

2021

2021

Project Updates

Portland Area

Project

Schedule

Carlton 230 kV and 115 kV Breaker Additions (O&M Flexibility) 2022

Eugene Area

Project

Schedule

Alvey 115 kV Bus Section Breaker Addition (O&M Flexibility) **2022**

Project Updates

Olympic Peninsula Area

Project

Kitsap 115 kV Shunt Capacitor Relocation

Schedule

2023

Longview Area

Project

Longview 230/115 kV Transformer Bank Addition

Schedule

2021

Mid-Columbia Area

Project

Columbia-Rapids 230 kV Line Construction

Schedule

2022

Columbia 230 kV Bus Tie and Bus Section Breaker Addition
(O&M Flexibility)

2022

Project Updates

Southwest Washington Coast

Project

Holcomb-Naselle 115 kV Line Upgrade

Schedule

2021

Centralia / Chehalis

Project

Silver Creek 230 kV Bus Section Breaker Addition

Schedule

2022

Project Updates

Southeast Idaho/Northwest Wyoming Area

Project

Spar Canyon 230 kV Reactor Addition (O&M Flexibility)

Schedule

2022

North Idaho Area

Project

Libby FEC 115 kV Shunt Capacitor Replacement

Schedule

2023

Project Updates

South Oregon Coast Area

Project

Schedule

Fairview 115 kV Shunt Reactor Addition

2023

Toledo 230 kV and 69 kV Bus Tie Additions (O&M Flexibility)

2023

Wendson 115 kV Bus Tie Breaker Addition (O&M Flexibility)

2023

Okanogan

Project

Schedule

Grand Coulee-Foster Creek 115 kV Line Upgrade

2022

Project Updates

Raver to Paul

Project

St. Clair-South Tacoma 230 kV Disconnect Switch Upgrade

Schedule

2022

Puget Sound to Canada Path

Project

Monroe 500 kV Line Re-terminations

Schedule

2021

West of Cascades North (WOCN) Path

Project

Schultz-Raver 500 kV No. 3 and No. 4 Series Capacitors

Schedule

Beyond 2029

Significant Energized Projects

South Tacoma-St Clair 230 kV Line

Description

This project re-sagged the limiting spans of the South Tacoma-St.Clair 230 kV line from 80 deg C MOT to 100 deg C MOT. This increased the line's capacity by approximately 200 A.

Energization

The project was energized in November 2019.

Project Cost

The project cost was \$260,000.

Significant Planned Projects

Tri-Cities Reinforcements

Description

The Tri-Cities Reinforcements consists of the following projects:

- McNary-Paterson Tap 115 kV Line
- Richland-Stevens Drive 115 kV Line
- South Tri-Cities Reinforcement

McNary-Paterson Tap – This project adds a new 115-kV breaker at McNary and a new McNary-Patterson Tap 115 kV line (approximately 2-miles).

Richland-Stevens Drive 115 kV Line – This project constructs a new 115 kV line from Richland to Stevens Drive switching station (approximately 3 miles).

South Tri-Cities Reinforcement - This project reinforces the South Tri-Cities Area to address near-term operations and maintenance issues as well as planning reliability issues in the Tri-Cities area, Washington. The area is compliant with planning standards for the loss of any single element. However, loss of two sources to the area may result in substantial loss of load. This hinders the ability to take any transmission facilities in the area out for maintenance since plans must be in place to address the potential loss of a second element.

Significant Planned Projects

Tri-Cities Reinforcements – continued

Description

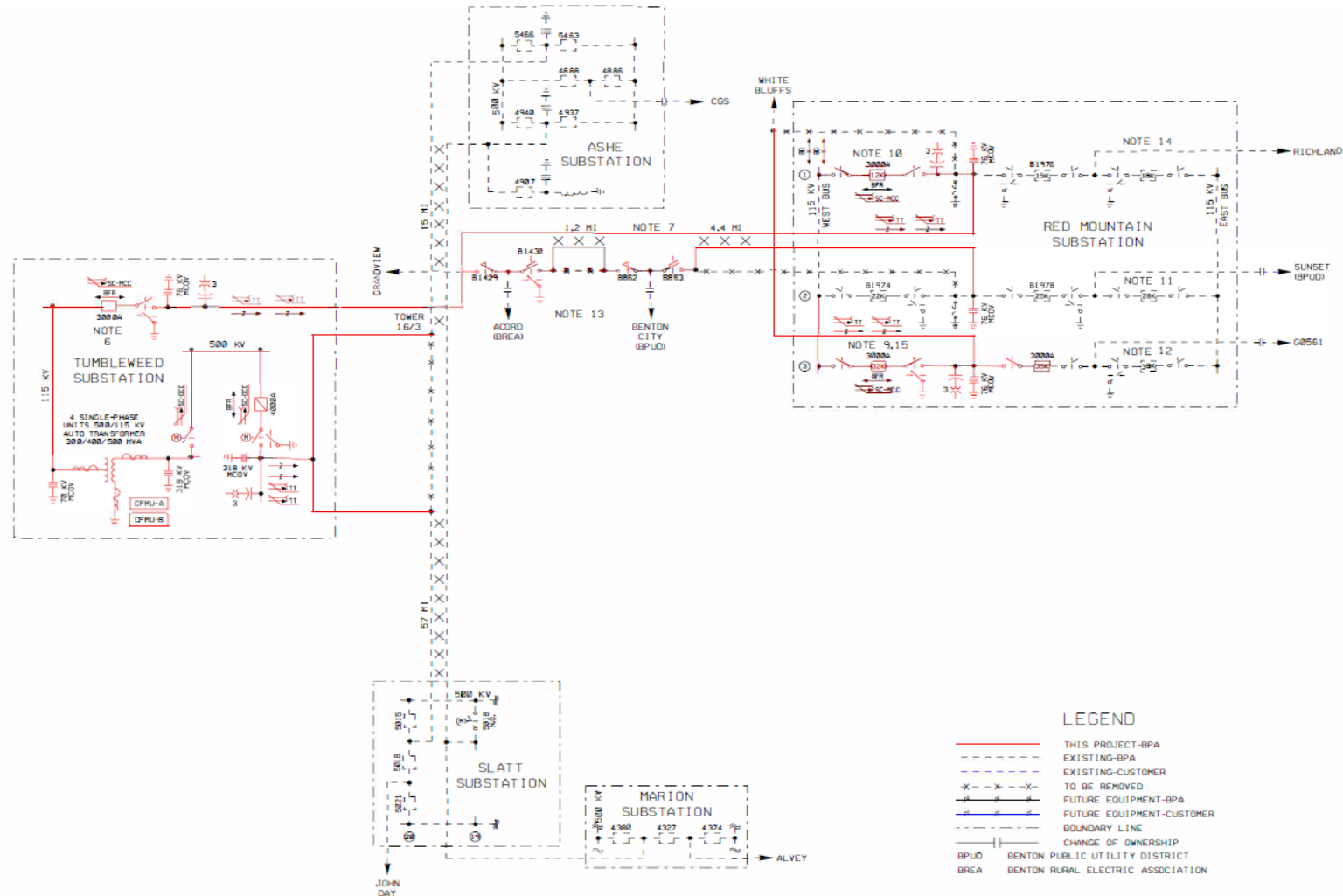
For the South Tri-Cities Reinforcement, the preferred plan of service is to build a new Tumbleweed Substation (formerly East Roza) and tap the Ashe-Slatt No.1 500 kV line creating a three-terminal Ashe-Tumbleweed-Slatt No.1 500 kV Line. A new 500/115 kV transformer at Tumbleweed Substation will connect approximately 6 miles of 115 kV line to Red Mountain substation.

Estimated Cost and Schedule

The Tri-Cities Reinforcements are presently in the scoping phase. The estimated project cost and schedule will be refined as the project progresses through scoping.

Significant Planned Projects

South Tri-Cities Reinforcement



Significant Planned Projects

Schultz-Wautoma Series Capacitors

Description

This project is necessary to increase South of Allston (SOA) available transfer capability and improve operations and maintenance flexibility for SOA and I-5 corridor paths. The project will add a series capacitor on the Schultz-Wautoma 500 kV line at Wautoma Substation.

Expected Energization

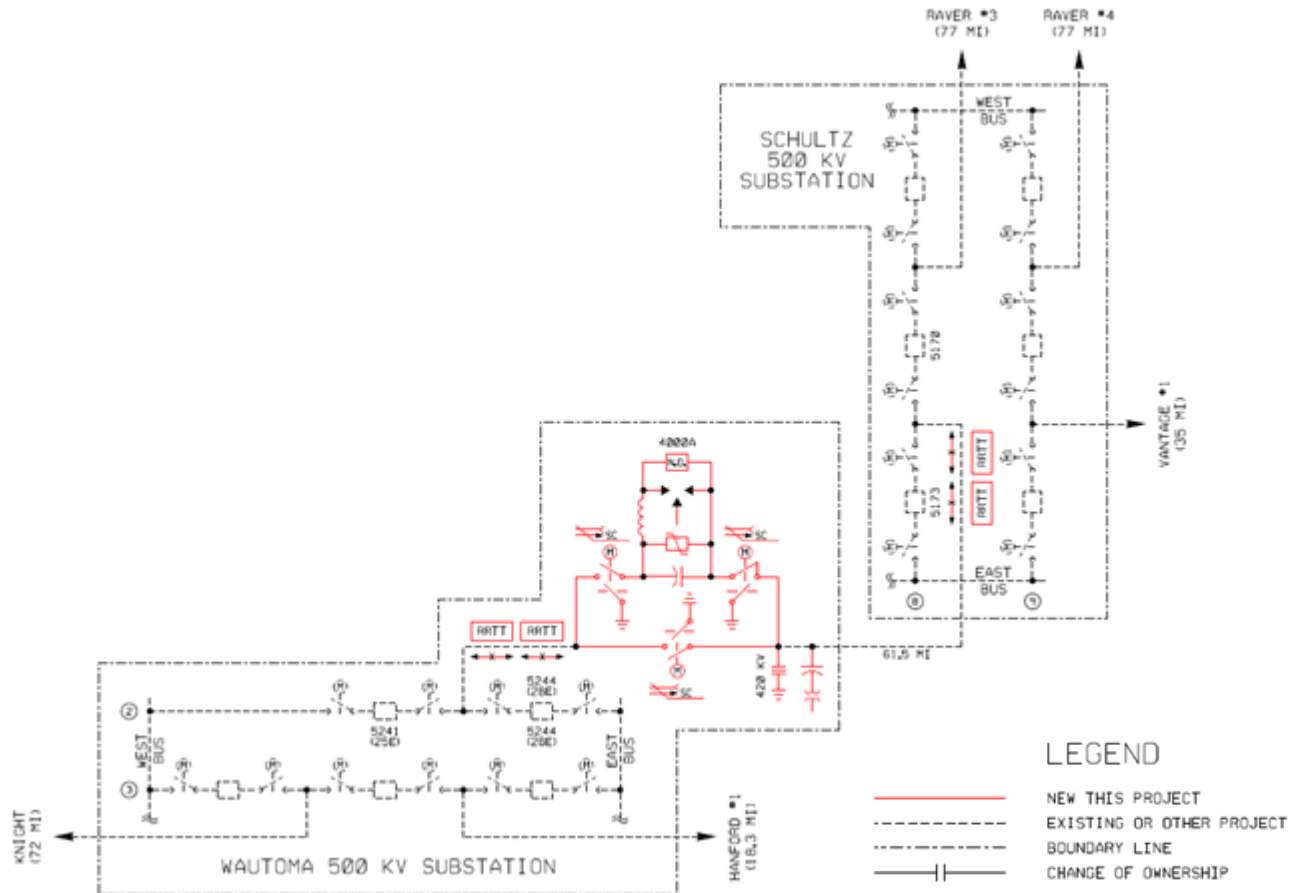
2022

Estimated Cost

\$30,000,000

Significant Planned Projects

Schultz-Wautoma Series Capacitors



Significant Planned Projects

Monroe 500 kV Line Re-terminations

Description

This project increases reliability and operational flexibility in the Puget Sound area. This project adds a new 500 kV bay at Monroe Substation and re-terminates the following 500 kV lines at Monroe: the Chief Jo-Monroe line into bay 5 and the Custer-Monroe No.2 line into bay 4. This essentially reconfigures Monroe into a double-breaker, double-bus layout for improved reliability.

Expected Energization

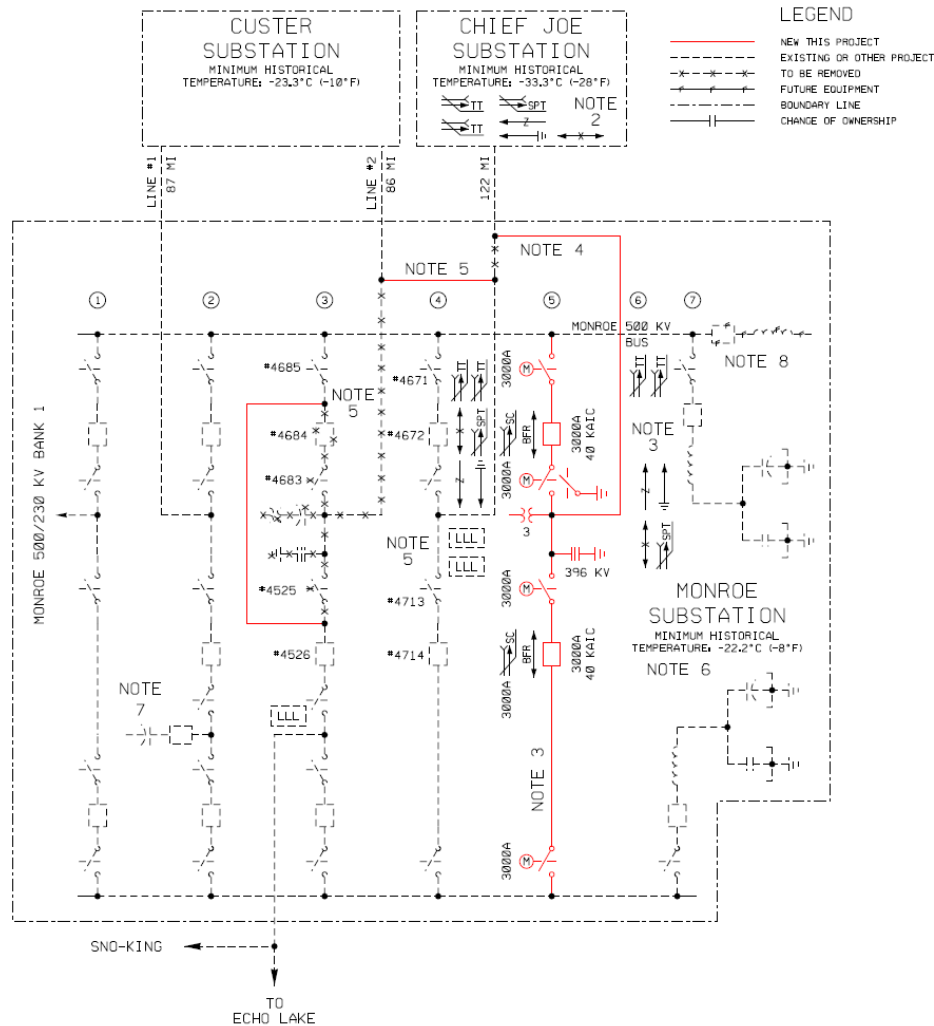
2021

Estimated Cost

The estimated project cost is \$10,800,000

Significant Planned Projects

Monroe 500 kV Line Re-terminations



Significant Planned Projects

Buckley GIS Replacement

Description

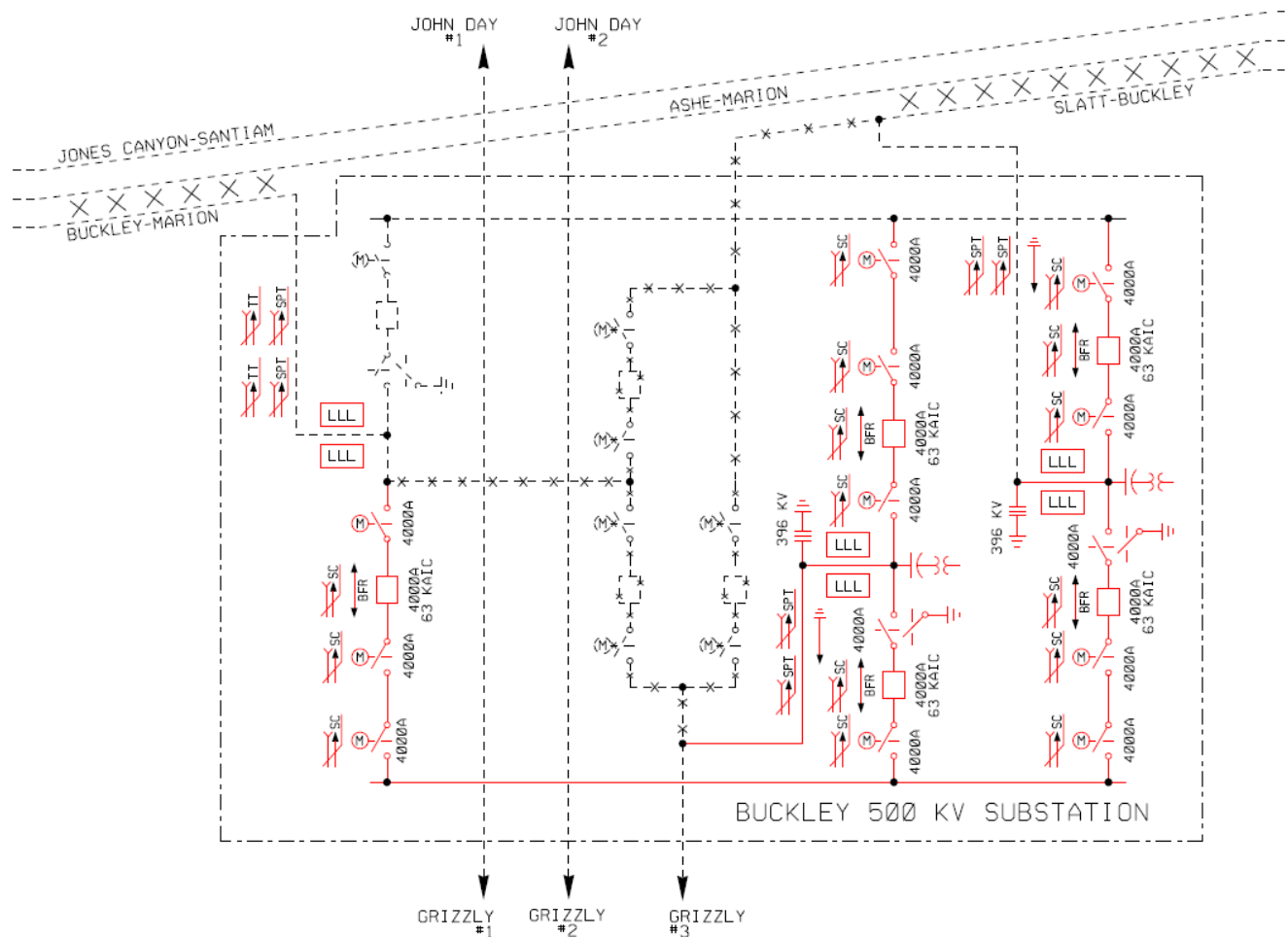
This project is required to replace the Buckley 500 kV Gas Insulated Substation (GIS) with an Air Insulated Substation (AIS). The Buckley GIS has out lived its useful life and will run out of the necessary spare parts to continue its operation in the next 5 years. The long range plan for Buckley is to develop an AIS Substation with three 500 kV bays in arranged in a double breaker double bus configuration for the Buckley-Marion, Slatt-Buckley, and Buckley-Grizzly 500 kV lines.

Estimated Cost and Schedule

This project is under development and will be completed in the longer term planning horizon. The project is presently in the scoping phase. The estimated project cost and schedule will be refined as the project progresses through scoping.

Significant Planned Projects

Buckley GIS Replacement



Next Steps

- **Update the BPA Transmission Plan** based on the 2020 planning cycle and post by the end of December, 2020.
- **Jan.1, 2021 – Begin 2021 Attachment K Planning Cycle**

Sign up to participate in future meetings or receive additional information by:

Filling out the Participation Request form on BPA's Planning Process website and sending it via e-mail to:

PlanningParticipationRequest@bpa.gov