

BPA Attachment K Planning Process

Planning Meeting II

November 15, 2022



Agenda


- Introductions
- Attachment K Planning Cycle – 2022
- 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 - 2022

- **Customer Meeting I** **April 28, 2022**
 - 2021 BPA Transmission Plan
 - 2022 Planning Assumptions, Criteria, Methodology
 - Economic Study Requests
- **Posting I** **Summer 2022**
 - Summary of 2022 System Assessment Results and Conceptual Solutions
- **Customer Meeting II** **November 15, 2022**
 - Draft Plans of Service and Cost
- **Posting II** **End of Year 2022**
 - 2022 BPA Transmission Plan

BPA's Attachment K Planning Process Website

<https://www.bpa.gov/energy-and-services/transmission/attachment-k>


Energy & services
Environmental initiatives
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Transmission Services ▾
Energy Efficiency ▾
Rate & tariff proceedings ▾
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Doing Business

Becoming a Transmission Customer

Acquiring Transmission ▾

Business Practices ▾

Notices

Open Access Transmission Tariff

Attachment K Planning

Transmission Business Model

Customer Training

Standards of Conduct

Commercial Business Process Improvement

Attachment K Planning

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.

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](#).

Planning Cycles

2022 Planning Cycle	+
2021 Planning Cycles	+
2020 Planning Cycle	+



BPA's Attachment K Planning Process Website

Planning Cycles

2022 Planning Cycle -

CLICK on Planning Cycle for details

2022 Planning Cycle

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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 15, 2022

[Agenda](#)

April 28, 2022

[Agenda](#)

[Planning Meeting 1](#)

[BPA Transmission Plan 2020-2021 Project Comparison List](#)

Reference Information

[2022 System Assessment Summary \(August 2022\)](#)

[2022 System Assessment Assumptions and Methodology](#)

2021 Planning Cycles

+

2020 Planning Cycle

+

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.
- **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 was one Economic Study Request received during the study cycle which closed on October 31, 2022. This request will be processed during the upcoming (2023) Planning cycle.

CFR Customers

BPA provides 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



Lower Valley Energy

New customer for the 2022 System Assessment

Draft Plans of Service (2022 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 (2022 Planning Cycle)

- BPA's 2022 System Assessment for the load areas was based on current and qualified past studies from 2020 and 2021 as allowed by the NERC TPL Reliability Standard
- The transmission system was divided into 27 load service areas and 16 paths/interties
- There were three new corrective action plans (plans of service) and one modified plan, identified from the 2022 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 2022 System Assessment

Portland Area

Project

Schedule

Keeler 500 kV Expansion

2027

- Add 500 kV breakers at Keeler substation, and reconfigure the Keeler 500 kV bus layout to breaker-and-a-half

Keeler 500/230 kV Transformer Addition

2027

- Add second 500/230 kV Transformer bank at Keeler substation.

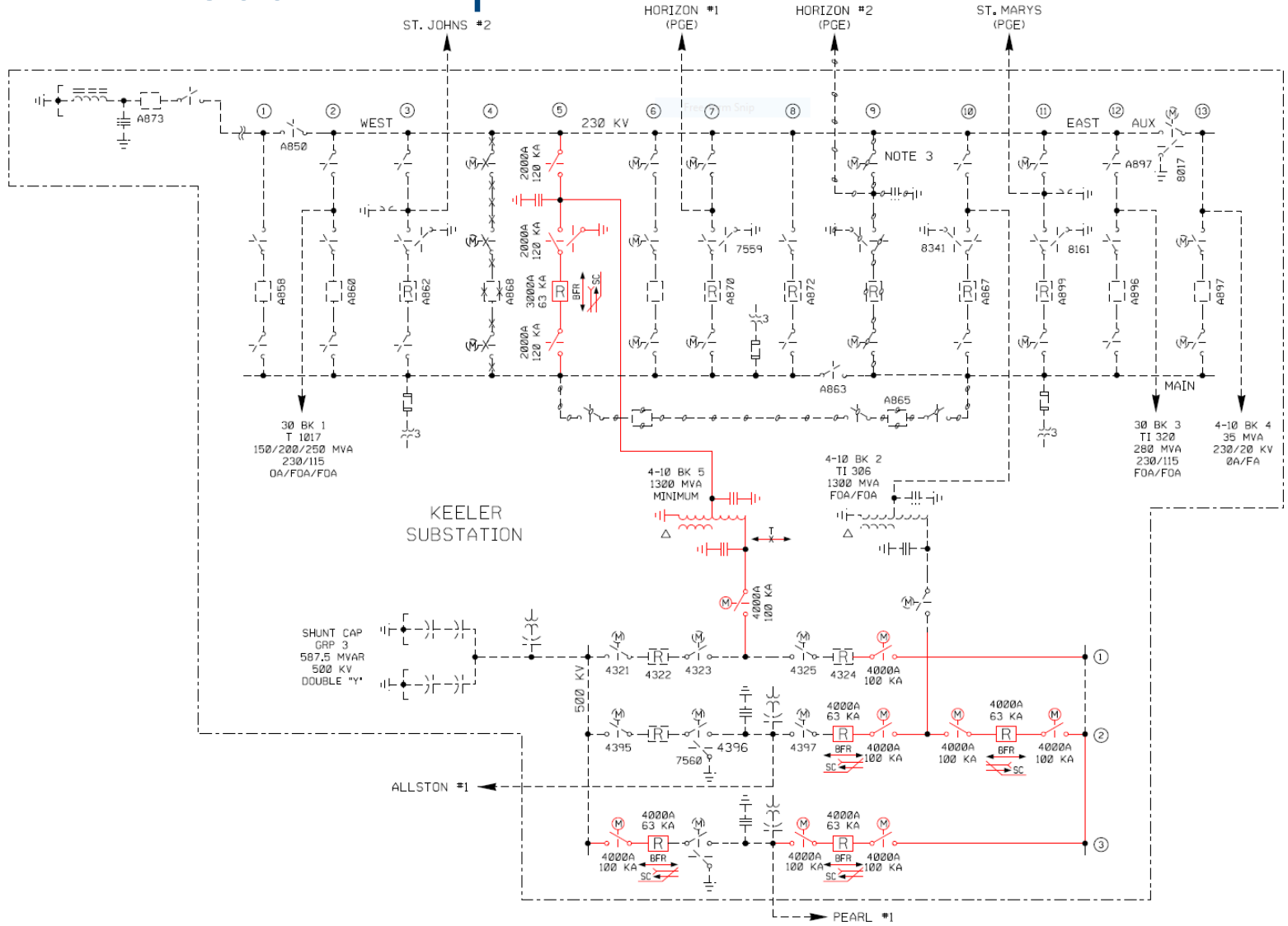
Pearl-Sherwood 230 kV Corridor Reconfiguration

2027

- Split existing BPA/PGE Pearl-Sherwood #1 and #2 230 kV into separate bays. Split existing BPA/PGE Pearl-Sherwood-Mcloughlin 230 kV 3-terminal line into a new Pearl-Sherwood #3 230 kV line and a new Pearl-Sherwood-Mcloughlin three terminal line. Add a series 230 kV bus sectionalizing breaker at Pearl.

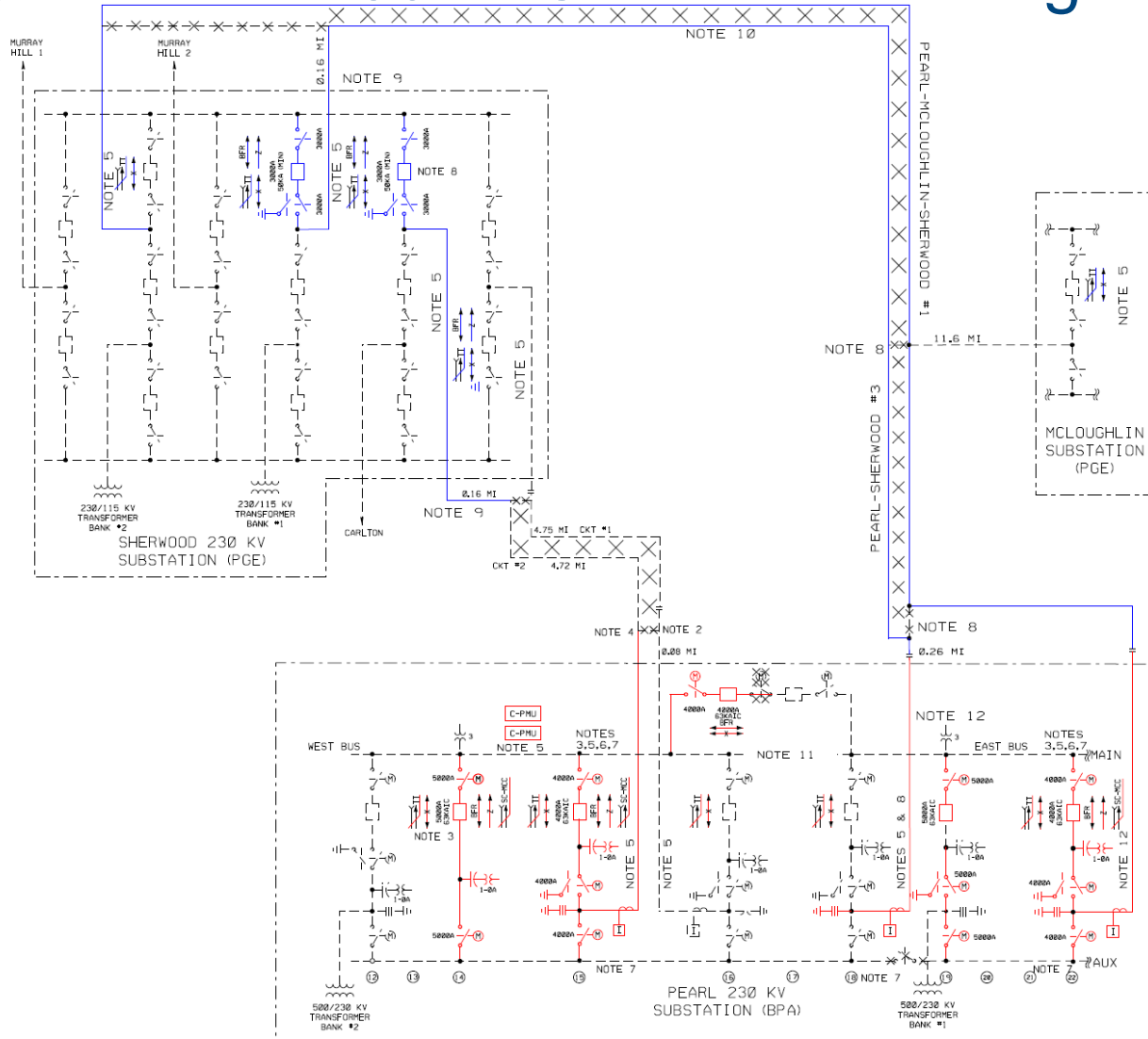
Draft Plans of Service

Keeler 500 kV Expansion & Transformer Addition



Draft Plans of Service

Pearl-Sherwood 230kV Corridor Reconfiguration



Project Updates

Seattle/Tacoma Area

Project

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

Tacoma 230 kV Series Bus Section Breaker Addition

Monroe-Novelty 230 kV Line Upgrade

Schedule

Completed

Completed

2023

Centralia/Chehalis

Project

Silver Creek 230 kV Bus Section Breaker Addition

Schedule

2025

Project Updates

Portland Area

<u>Project</u>	<u>Schedule</u>
Carlton 230 kV and 115 kV Breaker Additions (O&M Flexibility)	2023
Troutdale 230 kV Series Bus Sectionalizing Breaker Addition	2025
Forest Grove-McMinnville 115kV Line Upgrade (O&M Flexibility)	2023
Keeler 230 kV Bus Sectionalizing Breaker Addition	2026

Eugene Area

<u>Project</u>	<u>Schedule</u>
Alvey 115 kV Bus Section Breaker Addition (O&M Flexibility)	Completed
Alvey-Dillard Tap 115 kV Line Rebuild (O&M Flexibility)	2027

Project Updates

Olympic Peninsula Area

Project

Kitsap 115 kV Shunt Capacitor Relocation

Shelton-Fairmount 115 kV No.1 Line Upgrade

Shelton-Fairmount 115 kV No.2 Line Upgrade

Schedule

2023

2025

Completed

Mid-Columbia Area

Project

Columbia-Rapids 230 kV Line Construction

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

Schedule

2023

2023

Project Updates

Walla Walla Area

Project

Tucannon River 115 kV Shunt Reactor (15 Mvar) Addition

Schedule

2025

Umatilla Area

Project

Jones Canyon 230 kV Shunt Reactor (40 Mvar) Addition

Morrow Flat 230 kV Shunt Reactor (40 Mvar) Addition

Schedule

2025

2024

Fossil / DeMoss Area

Project

Condon Wind RAS

Schedule

Completed

Project Updates

Southeast Idaho/Northwest Wyoming Area

Project

Spar Canyon 230 kV Reactor (25 Mvar)
Addition (O&M Flexibility)

Schedule

2024

North Idaho Area

Project

Troy 115 kV Shunt Capacitor (12.6 Mvar) Addition

Schedule

2025

Project Updates

South Oregon Coast Area

Project

Fairview 115 kV Shunt Reactor Addition

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

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

Schedule

Completed

2024

2024

Okanogan

Project

Grand Coulee-Foster Creek 115 kV Line Upgrade

Schedule

2023

Project Updates

Raver to Paul

Project

Schedule

St. Clair-South Tacoma 230 kV Disconnect Switch Upgrade **See Note**

Note: This switch is being retired, therefore the upgrade is not needed.

West of Cascades North (WOCN) Path

Project

Schedule

Schultz-Raver 500 kV No. 3 and No. 4 Series Capacitors 2025

Significant Energized Projects

Tacoma 230 kV Series BSB and Bus Tie Addition

Description

This project adds a series bus sectionalizing breaker and a bus tie breaker to Tacoma 230 kV substation

Energization

Completion in Process.

Project Cost

The project cost was \$12,200,000

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

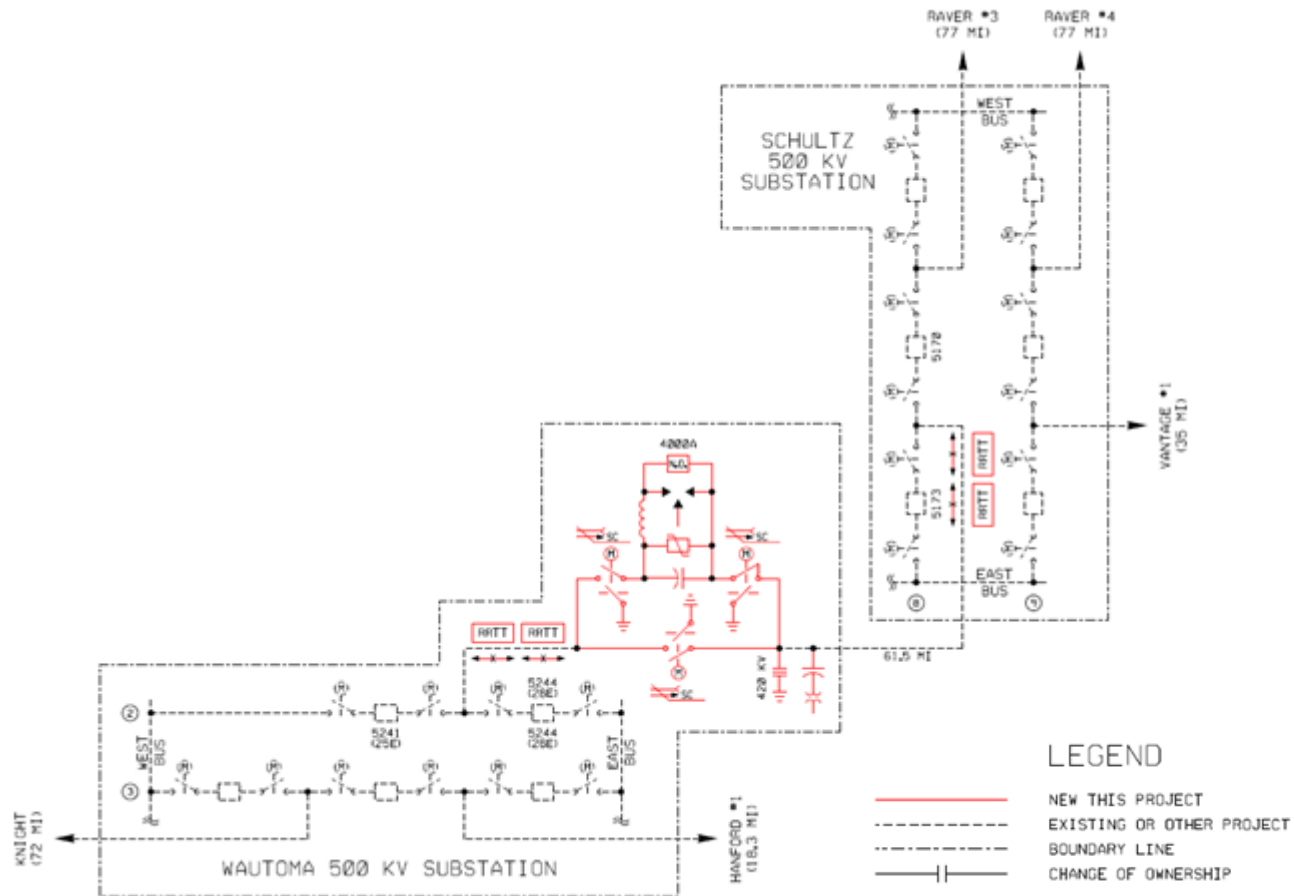
2023

Estimated Cost

\$30,000,000

Significant Planned Projects

Schultz-Wautoma Series Capacitors



Significant Planned Projects

Tri-Cities Load Area Projects

Description

The following projects are planned for the Tri-Cities Load Area:

- McNary-Paterson Tap 115 kV Line
- Red Mountain–Horn Rapids 115 kV Line Reconductor
- Richland-Stevens Drive 115 kV Line
- South Tri-Cities Reinforcement

McNary-Paterson Tap – This project adds a new 115 kV bay at McNary and a parallel 115 kV line from McNary to Paterson Tap (2 miles).

Red Mountain-Horn Rapids 115 kV Line Reconductor: This project will reconductor the Red Mountain–Horn Rapids 115 kV section of BPA’s Red Mountain–White Bluffs 115 kV transmission line (4 miles).

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

South Tri-Cities Reinforcement - This project constructs a 500 kV substation on the Ashe-Marion #2 500 kV line with a 500/115 kV transformer, and a 115 kV line to Badger Canyon (17 miles).

Significant Planned Projects

Tri-Cities Load Area Projects – continued

McNary-Paterson Tap is an approved project in design. The estimated project cost and schedule will be refined as the project progresses through design.

Estimated Schedule: Mid-2024

Estimated Cost: \$ 5,200,000

Red Mountain-Horn Rapids 115 kV Line Reconductor is an approved project in design. The estimated project cost and schedule will be refined as the project progresses through design.

Estimated Schedule: Spring 2024

Estimated Cost: \$ 3,600,000

Richland-Stevens Drive 115 kV Line is an approved project in design. The estimated project cost and schedule will be refined as the project progresses through design.

Estimated Schedule: 2024

Estimated Cost: \$ 11,000,000

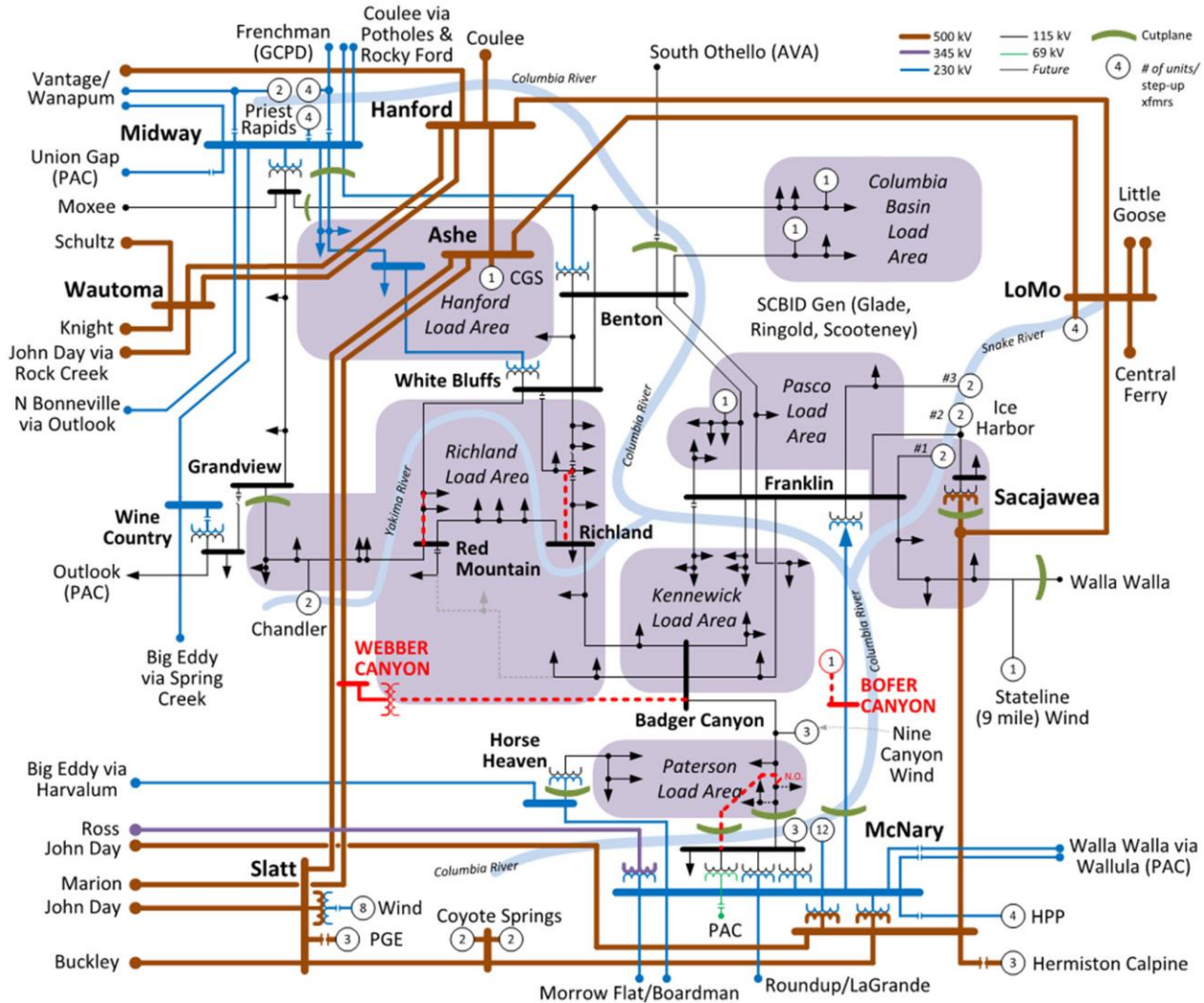
South Tri-Cities Reinforcement is presently in the scoping phase. The estimated project cost and schedule will be refined as the project progresses through scoping.

Estimated Schedule: 2025

Estimated Cost: \$ 107,000,000

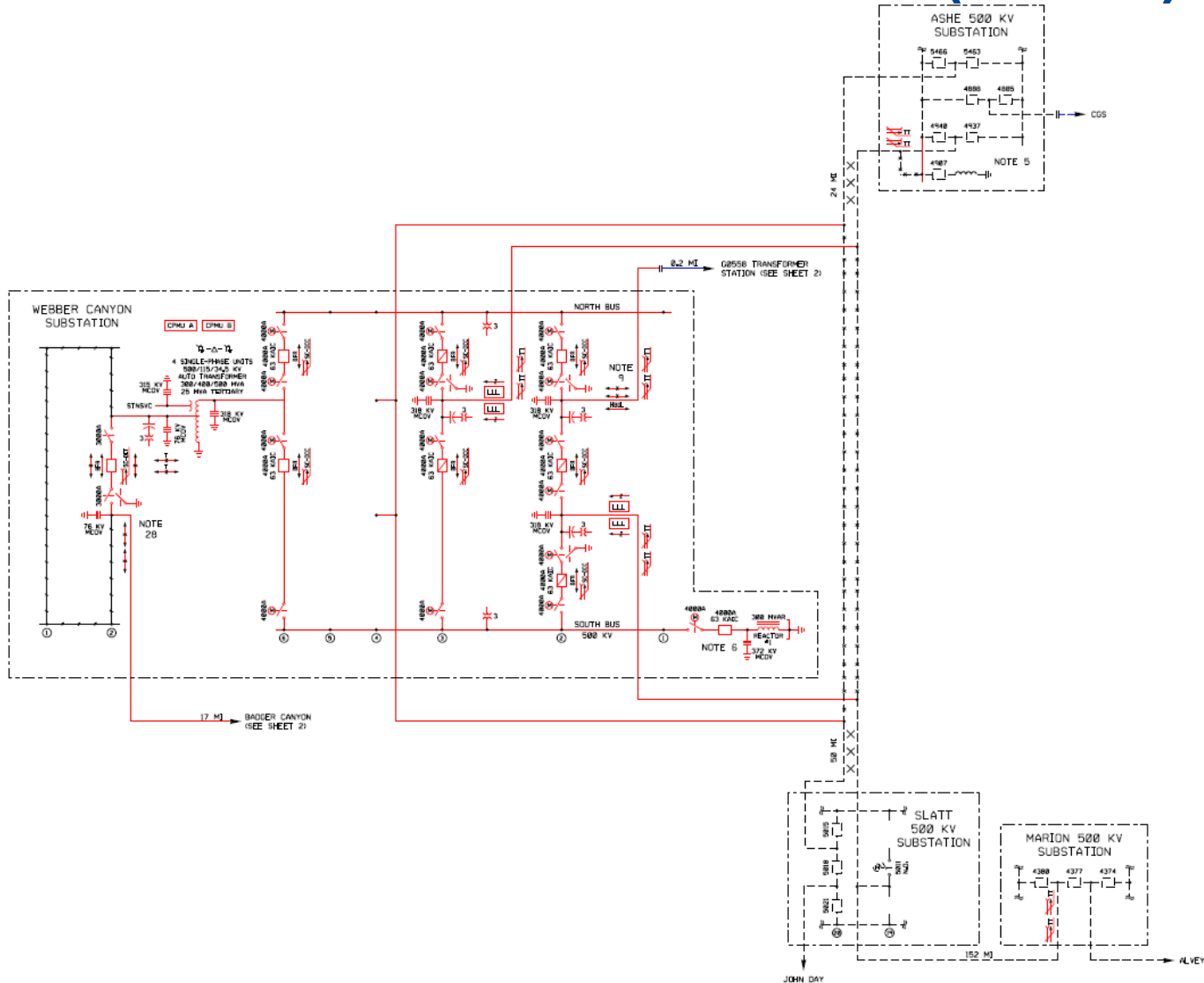
Significant Planned Projects

South Tri-Cities Reinforcement



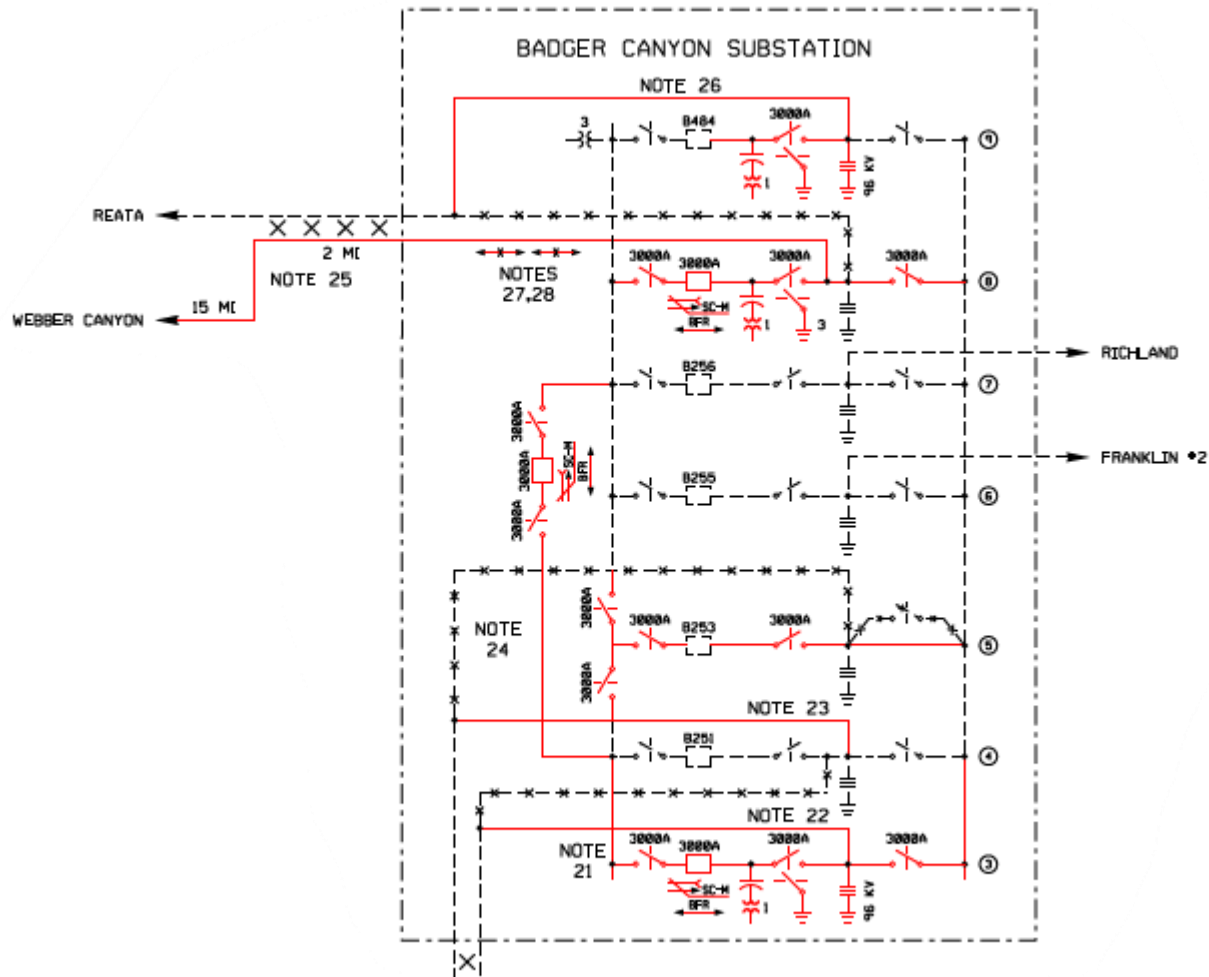
Significant Planned Projects

South Tri-Cities Reinforcement (sheet 1)



Significant Planned Projects

South Tri-Cities Reinforcement (sheet 2)



Significant Planned Projects

Buckley GIS Replacement

Description

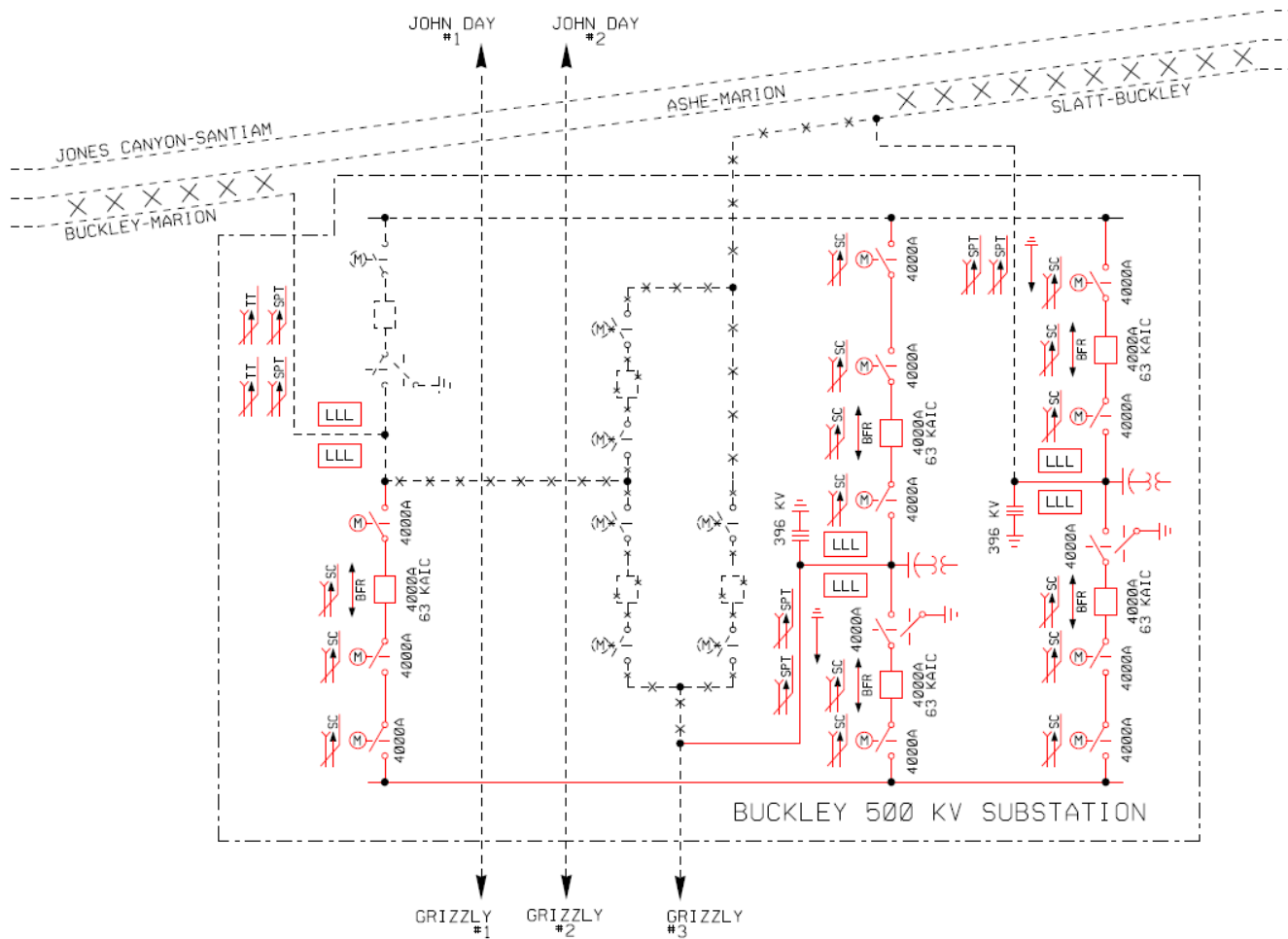
This project is required to replace the Buckley 500 kV Gas Insulated Substation (GIS) with an Air Insulated Substation (AIS). The Buckley GIS has out lived its useful life and will run out of the necessary spare parts to continue its operation in the next 5 years. The long range plan for Buckley is to 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 2022 planning cycle and post by the end of December, 2022.
- **Jan.1, 2023 – Begin 2023 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