BPA Attachment K Planning Process

Planning Meeting I

April 25, 2025

9:00 AM – 11:00 AM

Agenda

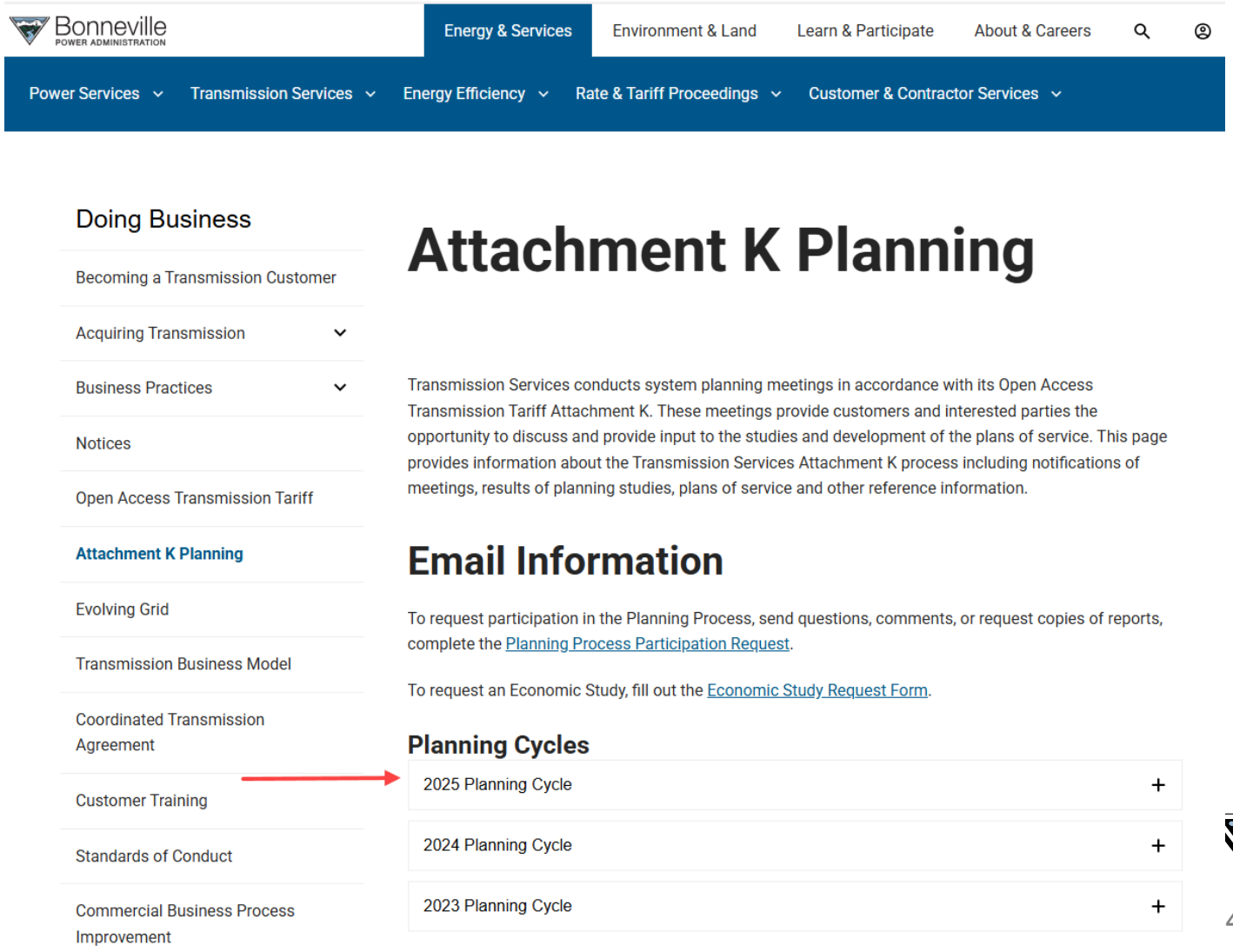
- Introductions
- BPA's Attachment K Planning Cycle – 2025
- BPA's Attachment K Website – 2025
- Economic Study Requests
- 2025 Planning Assumptions, Methodology, and Criteria
- 2024 BPA Transmission Plan
- Next Steps

Attachment K Planning Cycle 2025

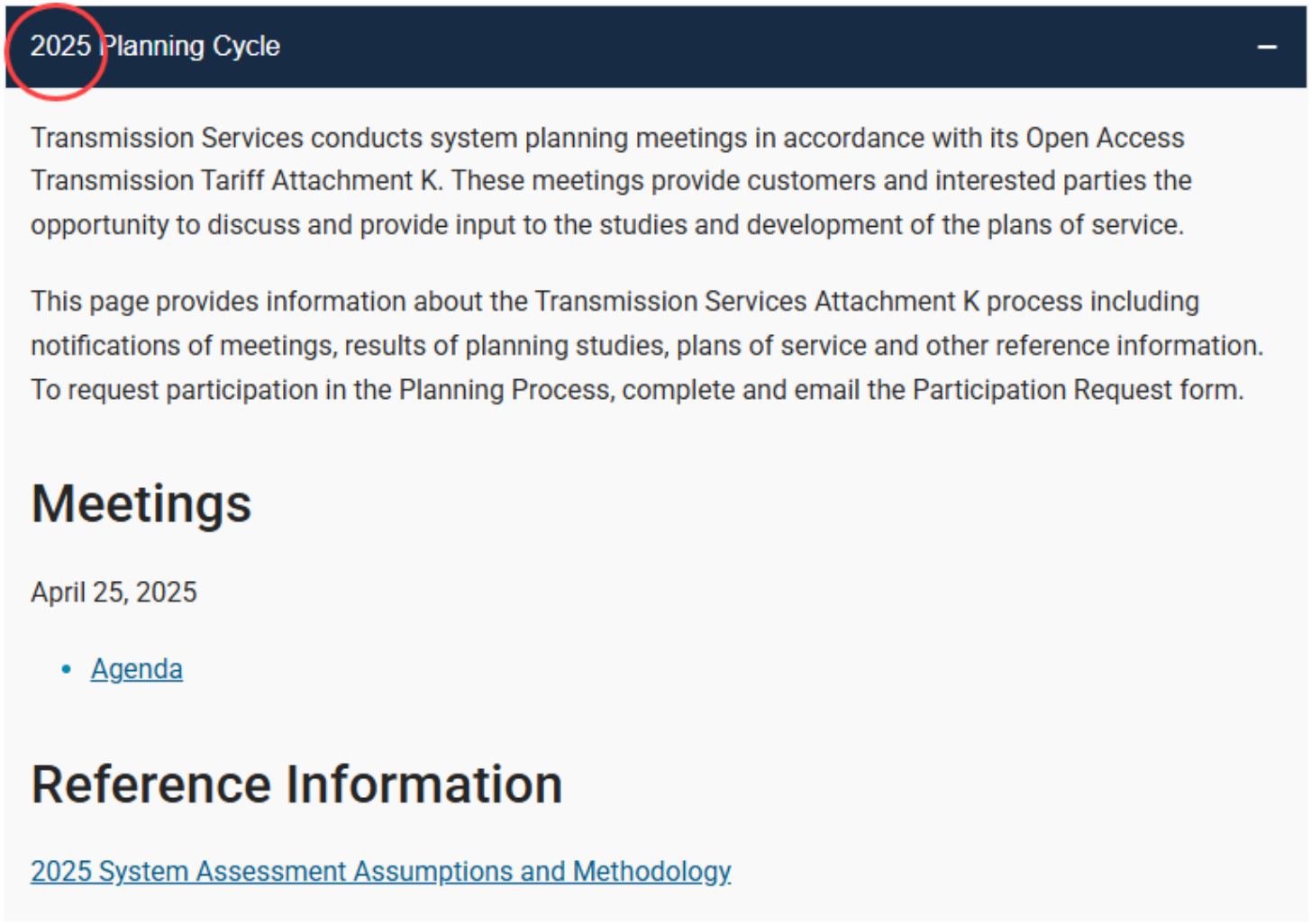
- **Customer Meeting I** **April 25, 2025**
  - **2025 Planning Assumptions, Methodology, Criteria**
  - **Economic Study Requests**
  - **2024 BPA Transmission Plan**
- Posting I Summer 2025
  - Summary of 2025 System Assessment Results and Conceptual Solutions
- Customer Meeting II Fall 2025
  - Draft Plans of Service and Cost
  - Preliminary Economic Study Results
- Posting II End of Year 2025
  - 2025 BPA Transmission Plan

BPA's Attachment K Planning Process Website

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



BPA's 2025 Attachment K Planning Process Website



2025 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

April 25, 2025

- Agenda

Reference Information

2025 System Assessment Assumptions and Methodology

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 expense.
- There were no Economic Study Requests received during the annual cycle ending on 10/31/2024.

Planning Assumptions & Methodology

- System Reliability Assessments may be based on current or qualified past studies as allowed by the NERC TPL Reliability Standard
  - The 2025 System Assessment for **load areas** is based on new studies.
  - The 2025 System Assessment for **paths** is based on new studies.

Planning Assumptions

Base Cases

- The base cases for the 2025 System Assessment originated from WECC approved base cases for the Near Term and Long Term Planning horizons and represent both peak and off-peak load conditions. Load forecasts and topology were modified to represent the following years and seasons:

Year	Case	Season	Load Level	Notes
2026	26LSP	Spring	Off-Peak	Near term (1-year expected spring loads
2026	26HW	Winter	Peak	Near term (1-year) expected winter peak
2026	26HS	Summer	Peak	Near term (1-year) expected summer peak
2030	30HW	Winter	Peak	Near term (5 year) expected winter peak
2030	30HS	Summer	Peak	Near term (5 year) expected summer peak
2034	34HW	Winter	Peak	Long-term (6-10 year) expected winter peak
2034	34HS	Summer	Peak	Long term (6-10 year) expected summer peak

Planning Assumptions (Continued)

Base Cases

- Loads in the Northwest Area
  - Peak load forecasts for both winter and summer seasons.
    - Forecasts are provided by Customers for the IOUs and larger utilities (represents approximately 75-80% of loads)
    - Forecasts are developed by BPA's Agency Load Forecasting group if not supplied by customers (represents approximately 20-25% of loads)
- Resources
  - Model existing generating resources, and selected future resources proposed to be online if needed, to meet the forecast loads within the 10 year horizon.
- Update Northwest Area database
  - Update with the latest seasonal peak and off-peak load forecasts
  - Update with the latest network topology
  - Model future resources as needed, network expansion projects, and known commitments for firm transmission service

Planning Assumptions (continued)

- Sensitivity Cases

  Other patterns and conditions may be developed as sensitivities based on:

  - Load level or load forecast
  - Expected transfers
  - Expected in-service dates of new or modified Transmission Facilities
  - Reactive resource capability
  - Generation additions, retirements, or other dispatch scenarios
  - Or other system conditions unique to certain geographical areas

- The 2025 System Assessment considered higher levels of output from renewable resources as a sensitivity for the 2026 light spring, 2030 summer peak and 2030 winter peak cases.
- Additional sensitivities were developed as appropriate to stress specific load areas or paths.

Planning Methodology

- Check network topology and load forecast / load growth assumptions for each area of interest.
- Modify base cases to stress the study area and benchmark with historical data.
- Develop sensitivity cases as needed for worst case generation or transfer patterns.
- Perform steady state power flow simulation of all single contingencies and select multiple contingencies.
- Study a large selection of single and multiple contingencies to evaluate voltage stability and transient stability performance.
- Model RAS as required.

Planning Methodology (continued)

- Identify Potential Problems
  - Compare system performance with NERC and WECC Reliability Standards to determine if there are potential system performance deficiencies.
  - Identify deficient areas for follow up and possible corrective action plans.
  - Problems may include:
    - Steady State - Thermal overloads or Under/Over Voltages
    - Stability
      - Insufficient reactive margin (voltage stability)
      - Large voltage deviation (transient stability)
- Develop Conceptual Solutions
  - Solutions to mitigate potential system performance deficiencies may include transmission expansion projects, facility upgrades, and/or non-wires solutions (e.g. energy efficiency, distributed generation, redispatch, or demand side management).

Planning Methodology (continued)

- Cost Estimates for the Conceptual Solutions
  - Preliminary cost estimates are developed for the conceptual solutions
  - Preliminary estimates are used for comparing cost effectiveness of the conceptual solutions
- Develop a Plan of Service for the Preferred Alternative
  - Draft Project Requirements Diagram (PRD) and circulate for comments
  - Submit Project Initiation Document (PID)
  - Develop the Business Case and request initial capital funding
  - Perform scoping to refine plan, schedule, and cost
  - Finalize the plan of service and PRD
  - Finalize Record of Decision, design, and construction

Planning Criteria

Standards and Criteria used for Planning:

- NERC Standards, WECC and BPA Reliability Planning Criteria
  - NERC (North American Electric Reliability Corporation) TPL-001-5.1 Standard
  - WECC (Western Electricity Coordinating Council) TPL-001-WECC-CRT-4 Regional Reliability Criteria
  - BPA Reliability Criteria

Transmission Needs for Public Policy Mandates:

Are there any transmission needs driven by Public Policy Mandates for consideration in the Planning Process?

2024 BPA Transmission Plan

- Can be found on the 2024 Planning Cycle page under Reference Information
- BPA's Plans for Capital Expansion Projects
- Spans the 10 year horizon from 2024-2034
- Projects categorized by
  - Load Service Areas
  - Paths and Interties
  - Generator Interconnections
  - Line and Load Interconnections
- The following information is provided for each Project:
    - Project Description
    - Purpose
    - High-level Cost Estimate
    - Proposed Energization Date

Next Steps

- Posting I – Summer 2025
  - Summary of 2025 System Assessment Results and Conceptual Solutions
- Attachment K Customer Meeting II – Fall 2025
  - Review Results of 2025 System Assessment including draft plans of service

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