Transmission Load Service (TLS)

Overview

Dialogue & Planning

ATC Method Changes

Cluster Study and Expansion Process

Initial TLS Implementation

TRANSMISSION LOAD SERVICE

NT LOAD SERVICE	ATC METHOD	NOS REDESIGN	QUEUE PROCESSING
GOAL: Plan Based Upon Load & Resource Forecasts (OATT 28.2)	GOAL: Streamline Method And Align With NOS, Planning And Operations	GOAL: Design A Robust, Repeatable And Transparent Process That Reflects BPA Capital Constraints	GOAL: Support NOS Processes, While Reducing The Length Of Time Requests Are PENDING
Annual Dialogue Process Regarding Customer Forecasts Encumber Transmission Capacity Based On Customer Load & Resource Forecasts Define Requirements for Financial Commitments For Build Implement Redispatch Of Designated Network Resources (OATT 30.5)	Remove Long-Term Contract Accounting ATC Change From ATC Methodology Margin (AMM) to Transmission Reliability Margin (TRM) * Merge Long-Term/ Short-Term Methods * Longer Term Efforts	Updated Process Design Proactive vs Reactive Financial Provisions	Update Queue Processing Policies • Partial Policy • Conditional Firm Policy • 1-5 Year Requests (No Rollover) Reassess Requirements For Submittmal of TSRs

REASSESS GENERATION DISPATCH MODELING ASSUMPTIONS

Sept. 28, 2015

Transmission Load Service – Overview

- Enhance the foundational processes that customers use to access NT and PTP transmission service.
  - Design an iterative dialogue process with NT Customers to allow BPA to plan for their forecasted load and resource needs.
  - Changes/updates to the ATC Method and underlying assumptions (like the modeled FCRPS dispatch) to streamline the method and align calculations with: cluster study, shorter term market studies, and Planning & Operations studies.
  - Cluster Study and Expansion process to implement a repeatable and transparent process that reflect BPA's capital constraints.
  - Queue processing policies and procedures support study processes while minimizing the time requests spend in the long-term queue.

NT Planning Dialogue

- As a Transmission Provider, under section 28.2 of the Tariff, BPA has the responsibility to plan the transmission system for the future load and resource needs of its customers taking NT Service.
  - To enable this responsibility, NT Customers are required to provide 10-year load and resource forecasts. [section 31.6 of the Tariff]
- Load and resource forecast, provided by NT Customers, are key inputs into BPA's planning and ATC studies.
- Historically, BPA has made the default assumption that as NT Customer loads grow, the FCRPS is the forecasted resource which will meet that load growth.
- As NT Customers are increasingly relying on non-federal generation to serve NT load, BPA will be placing more emphasis on 10-year resource forecasts to inform its planning and ATC studies.
  - BPA has a robust load forecasting process and dialogue with customers, but has not historically placed an emphasis on the NT Customer 10-year resource forecasts.

NT Planning Dialogue – Overview

- BPA will be developing an annual dialogue process to work with NT Customers in developing and reviewing the 10-year resource forecasts.
- The dialogue is anticipated to:
  - Provide BPA with information about the NT Customer forecasted resource plans serving forecasted loads, over a 10-year horizon;
  - Provide NT Customers with information about transmission impacts of their forecasted resources and whether transmission upgrades are needed; and
  - Enable BPA to evaluate and encumber capacity based on 10-year resource forecasts.
- BPA will leverage existing processes and forums to conduct, on an annual basis, the NT Planning Dialogue.

Long-Term ATC Method Changes
Background

- Current “hybrid” method in use on BPA’s Internal Network was largely developed in 2002
- Method merges a “Contract Accounting” calculation with a Powerflow for calculation of Existing Transmission Commitments (ETC)
  - Contract Accounting ETC calculation uses PTDFs (derived from powerflows) to approximate the impact on flowgates resulting from a summing of the long-term firm (LTF) PTP contract demands, NT load forecasts, LTF non-Federal generation rights, and an assumed FCRPS dispatch
  - Planning ETC calculation uses a powerflow to approximate the impact on flowgates resulting from inputs of load forecasts (for both PTP and NT), LTF non-Fed generation rights and an assumed FCRPS dispatch which is then “backed off” to ensure load/resource balance

Long-Term ATC Method Changes Background

- <u>Industry standard formula:</u>
  - ATC = TTC – ETC – TRM, where:
  - TTC (or TFC) is the capability of the BPA-owned lines and facilites comprising a flowgate; and
  - TRM is the transmission reliability margin held aside for uncertaint(ies), which BPA does not currently use
- <u>BPA-unique formula:</u>
  - ETC = Contract Accounting ETC – Delta + AMM, where:
  - Delta = Contract Accounting ETC – Planning ETC; and
  - AMM is the “ATC Methodology Margin” that BPA implemented instead of TRM, generally calculated as 10-25% of the Delta + a unique MW value, as necessary on each flowgate; resulting in:
  - ETC = Planning ETC + AMM

Long-Term ATC Method Changes

- To streamline the LTF Internal Network ATC calculation and align with other studies, BPA has decided to cease use of the Contract Accounting ETC, Delta, and AMM – instead, BPA will use the Planning ETC calculation and TRM
  - BPA plans to calculate a range of Planning ETC values, based on varying scenarios of generation dispatch and load levels
  - These scenarios will be developed with customer and other external stakeholder input
  - Variation in ETC outputs will inform the TRM selected for each time horizon
  - BPA's initial scenario selection and development of the TRM calculation process will take place this fall and winter
    - BPA currently plans at least three public meetings between October 2015 and February 2016
    - Public comment will be sought, likely in early December 2015

Long-Term ATC Method Changes

- BPA has decided to encumber capacity for NT resource forecasts, as approved through the Dialogue and Planning process.
- Design for the integration of resource forecasts into the ATC formula is still in progress.
- Goal is to reach out for public feedback on process design and finalize no later than May 2016.

Future Study and Expansion Process - Influencers

- Changes in drivers for BPA's expansion policies since creation of Network Open Season
  - Capital and cost/debt burden considerations
  - Risks inherent in long-term transmission assets, given evolving utility industry
  - BPA's tariff and regulatory strategy
- Existing tariff compliance driver to respond to customers' transmission requests when there is no available capacity
  - More pervasive need to operate within the existing *pro forma* study and expansion provisions within BPA's tariff
  - Results in customer-driven, phased process (i.e., sequential Cluster Study, Preliminary Engineering/Design, Environmental Review, and ultimately Construction)
  - Each phase funded or secured by requesting customer(s)
- BPA expects to conduct its next cluster study in the Fall of 2016, and will work with customers to implement the necessary changes by Spring 2016

Future Study and Expansion Process – Scope

Objectives: (1) Where possible, integrate Strategic Intent elements on BPA's role in regional expansion, and (2) deliver a repeatable, frequent and reliable study and expansion process that meets BPA's tariff obligations

I. Financial Provisions	II. Queuing and Encumbering	III. Alternative Study Considerations	IV. Process Design and Contract Structure
Focus: Integrate Strategic Intent financial components into BPA's "Commercial Expansion" future state Primary Concepts: 1. Re-evaluate rate determination assumptions; 2. Integrate evaluation of non-BPA ownership and financing methods into process (likely longer-term)	*Focus*: Incorporate policies to optimize use of the existing transmission system prior to expanding Primary Concepts: 1. Evaluate queuing policies to provide as many offers of existing capacity as possible; 2. Plan and encumber for the needs of study/expansion Participants	*Focus*: Incorporate additional information other than customer-supplied data in determining system upgrade needs and solutions Primary Concepts (longer-term): 1. Ability to provide advance guidance based on regional information, BPA existing system topology, etc.; 2. Integrate the capability to identify/evaluate non-build alternatives into expansion decision-making process	*Focus*: Establish transparent polices, contracting process and procedures for customer participation Primary Concept: 1. Provide customers with transparent process and procedures for its approach to study and expansion (i.e., business practice provisions and customer outreach/engagement)

Initial TLS Implementation

- In the upcoming Long-Term ATC Base Case update, BPA will include incremental encumbrances on flowgates informed by NT resource forecasts.
  - ATC Base Case update results will shared in October/November 2015 along with small updates and general clarifications to related ATC documents.
  - The incremental shifts in capacity are anticipated to be small.
- BPA anticipates that the formal annual NT Planning Dialogue, with all NT Customers, will commence in FY 2016.

Proposed Public Process

- BPA will present TLS concepts and alternatives and solicit feedback on the various elements
  - TLS Workshop in late October
  - TLS Conference Call in mid-November (if necessary)
  - TLS Workshop in early December
  - TLS Conference Call in mid-January (if necessary)
  - TLS Workshop in early February
- Goal is to incorporate public feedback on resource encumbrance process design, ATC Methodology revisions, TSR study and expansion design, and potential queuing policy changes and finalize no later than May 2016
- BPA anticipates the formal annual NT Planning Dialogue will begin in FY 2016
- BPA anticipates initiating the TSR study and expansion process in May of 2016 with the cluster study beginning in September of 2016