

Short-Term Available Transfer Capability (ST ATC) Project Update

December 15, 2022



Agenda

1. Ex Parte Notice
2. Completed ST ATC Improvement
3. In-flight ST ATC Improvements
4. Proposed ST ATC Improvements
5. Wrap up
6. Appendix – ATC Formulas (NERC Time Horizon)

Ex Parte Notice

We want to make sure that everyone participating today is aware that the BP-24 and TC-24 proceedings are underway and that the procedural rules for the proceedings prohibit ex parte communications with BPA about the merits of the issues in those proceedings.

That means that BPA will not be talking about issues in BP-24 or TC-24 today and cannot listen to comments about the issues. Please direct any comments on issues in BP-24 or TC-24 to the proceedings themselves.

Completed ST ATC Improvement



Completed ST ATC Improvement #1

Description: Reorganized the Acquiring Transmission and ATC Methodology pages of BPA's website

1. Goal was to improve the clarity of these webpages
 - a. Links were added to allow easier access to pertinent information
 - b. Outdated information was removed and archived
 - c. Changes took effect on November 29th, 2022
2. BPA will go over the Acquiring Transmission and ATC Methodology pages during this portion of the meeting
 - a. [Acquiring Transmission - Bonneville Power Administration \(bpa.gov\)](https://www.bpa.gov/acquiring-transmission)
 - b. [ATC Methodology - Bonneville Power Administration \(bpa.gov\)](https://www.bpa.gov/atc-methodology)

In-flight ST ATC Improvements

(previously discussed in earlier meetings)



In-flight ST ATC Improvement #1

Description: Development of ST ATC metrics

1. BPA is continuing work on ST ATC metrics
2. The current focus is on the development of a report to identify large ST ATC swings
 - a. Report will allow BPA to identify large ST ATC swings and their drivers (e.g. there has been a TTC de-rate versus a system issue)
 - b. BPA has made progress on a basic version of the report
 - c. BPA is exploring whether additional data needs to be collected to help in the analysis efforts
 - d. More work remains to be done on this effort

In-flight ST ATC Improvement #2

Description: Account for the shared ownership of the Cross Cascades North (CCN) path in the base Existing Transmission Commitment (ETC) studies for the path

1. The CCN path definition includes both BPA-owned lines and a Puget Sound Energy-owned line
2. BPA is party to an allocation agreement across this path
 - a. In the NERC time horizon (0-13 months), BPA has been allocating Total Transfer Capability (TTC) across Cross Cascades North per the allocation agreement
3. Beginning with November 2022, BPA has started to account for the shared ownership of this path within the base ETC studies
 - a. BPA is accomplishing this by modeling only the BPA-owned lines in the CCN path definition

In-flight ST ATC Improvement #2 (cont.)

4. BPA is phasing in this change as the monthly base ETC studies for this path are updated
 - a. The November through February monthly base ETC studies were updated with this change and implemented to OASIS on October 19, 2022
 - b. Overall, it will take BPA to mid-May 2023 to fully implement this change into all the monthly base ETC studies

In-flight ST ATC Improvement #3

Description: Update generation data for the Headwater federal hydro projects in the heavy load base ETC cases

1. BPA is working to update the generation data for the Headwater projects that is used in BPA's heavy load base ETC cases
 - a. The Headwater projects are Libby, Hungry Horse, Dworshak, and Albeni Falls
 - b. BPA had not established a methodology to update these generation in the heavy load base ETC cases, and therefore these values have remained static from year to year
 - c. The ST ATC team wants to establish a process to automatically refresh this generation data at the time that BPA is performing its base ETC studies, so that the data better reflects the time period studied

In-flight ST ATC Improvement #3 (cont.)

2. BPA recommends using the 90th percentile (P90) rate case generation methodology for these projects
 - a. These forecasts already exist
 - b. Simple forecast method that allows BPA to update these values in a repeatable way
 - c. BPA compared the P90 and mean rate case generation values, and found that the P90 values correspond with the 1-hour maximum values while the mean values mostly correspond to the heavy load hour averages
 - d. BPA desires to stress the transmission system in the base ETC studies, and since the P90 data corresponds to the 1-hour maximum values, this assumption better represents a stress scenario

In-flight ST ATC Improvement #3 (cont.)

3. The aggregated modeling change for the four projects, based on the current inputs and proposed P90 rate case inputs, is as follows:

Total Generation	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Proposed P90 - Current Inputs	-265	-288	-410	-69	-601	-321	-655	-176	-220	-168	146	56

* Note that this chart represents the changes in the starting Headwater generation numbers (and not ETC impacts on any path, which will be a fraction of this and based on what path is being looked at)

In-flight ST ATC Improvement #3 (cont.)

4. Impacts of this change

- a. The path most impacted by this change will be West of Lower Monumental
- b. BPA anticipates an increase in ST ATC across this path in most months, as the current generation assumptions are generally more conservative than the P90 proposal

5. Anticipated implementation date

- a. BPA will begin implementing this change with the June through October monthly base ETC studies, which will be implemented to OASIS in mid-May 2023
- b. Overall, it will take BPA to mid-February 2024 to fully implement this change into all the monthly base ETC studies

Proposed ST ATC Improvements



Proposed ST ATC Improvement #1

Description: Add the North of Grizzly ATC path to manage the transmission system in the Central Oregon area

1. BPA is experiencing load growth and congestion in Central Oregon
 - a. BPA is seeing significant load growth due to data centers, plus Deschutes County population growth of 25% from 2010 to 2020 and 76% from 2000 to 2020
 - b. BPA is seeing an increase in west to east transactions into Idaho
 - c. BPA expects generation growth due to solar
2. Due to this, BPA would like to add congestion management tools and an ATC path to specifically manage the transmission system in Central Oregon
 - a. The proposed path will allow BPA to more precisely conduct curtailments in central Oregon, providing an overall benefit to the system as load growth and new generation resources are brought on-line within the region

Proposed ST ATC Improvement #1 (cont.)

3. The new ATC path will be called North of Grizzly
 - a. The path will consist of the lines of Buckley-Grizzly #1 500-kV, John Day-Grizzly #1 500-kV, John Day-Grizzly #2 500-kV, and Maupin-Redmond #1 230-kV
 - b. Path will be added in both the NERC time horizon (0-13 months) and the Planning time period (beyond 13 months)
 - c. Path will be flow-based and managed like BPA's other flow-based paths
 - d. The implementation of this path will not change the customer interface or scheduling practices on the flow-based or 1:1 paths (no new scheduling points)

Proposed ST ATC Improvement #1 (cont.)

4. Once this ATC path is added, the following changes will occur:
 - a. BPA will calculate and post ATC for this new path for the NERC time horizon (0-13 months) and the Planning time period (beyond 13 months)
 - b. New Transmission Service Requests will require ST and long-term ATC across this path
 - c. BPA will manage congestion across this path
 - d. BPA will update the information and tools found under the [Acquiring Transmission - Bonneville Power Administration \(bpa.gov\)](#) and [ATC Methodology - Bonneville Power Administration \(bpa.gov\)](#) pages
5. BPA anticipates that this new path will be added in the Spring 2023 timeframe – additional details will be communicated as they are known

Proposed ST ATC Improvement #2

Description: Determine appropriate ATC paths to manage the Portland metro and Goldendale areas

1. BPA has identified a need for ATC paths in these two areas
2. The need for the ATC path in the Portland metro area is driven by reliability concerns due to load growth and by new transmission service requests
 - a. BPA is preliminarily referring to this ATC path as North of Pearl
3. The need for the ATC path in the Goldendale area is driven by new transmission service requests due to new generation in the area
 - a. BPA is still working to determine whether to add a new path, use an existing path, or modify the interface definition of an existing path in order to manage this area
 - b. BPA is preliminarily referring to this ATC path as South of Knight

Proposed ST ATC Improvement #2 (cont.)

4. BPA anticipates that any ATC paths used to manage these geographic areas will be flow-based
 - a. The paths will be managed like BPA's other flow-based paths
 - b. The paths are needed in both the NERC time horizon (0-13 months) and the Planning time period (beyond 13 months)
5. As this work is in the early stages, BPA will continue discussions with customers and/or owners of facilities regarding these paths
6. Since the paths are in a preliminary phase of development, there is no implementation date at this time

Proposed ST ATC Improvement #3

Description: Streamline the ATC Information section of BPA's OASIS site

1. BPA would like to streamline the links found under the ATC Information section on our OASIS page (see below)

The image shows a screenshot of the BPA OASIS website. On the left is a 'Menu Panel' with a search bar and a list of documents. The 'ATC Information' folder is expanded, showing a list of links: ATC Implementation Document, TRM Implementation Document, ATC Methodology Contact, Load Forecast Descriptive Statement, Postback Methodology, Equivalent ATC/TTC Postings, Data Request Form (MOD-001-1 R9), and TTC Study Report Request Form (MOD-029-1 R4). The main content area on the right features a banner for 'OATI webSmartOASIS' with a background image of power lines. Below the banner is a 'PRODUCTION' button and a link to 'Click here to select your c'. At the bottom of the main content area is a blue banner for 'BONNEVILLE POWER ADMINISTRATION Transmission' with a logo and a photo of two workers in yellow safety gear. The text 'Welcome to BPA Trans' is visible at the bottom right of the main content area.

Proposed ST ATC Improvement #3 (cont.)

2. Per North American Energy Standards Board (NAESB) Wholesale Electric Quadrant OASIS General Posting Business Practice Standard 001-13.1.5, Transmission Providers are required to post the following items under this section:
 - a. Available Transfer Capability Implementation Document - ATCID
 - b. CBM Implementation Document – CBMID
 - c. TRM Implementation Document – TRMID
 - d. ATC Methodology Contact
 - e. Load Forecast Descriptive Statement
 - f. Postback Methodology
 - g. Flowgate Methodology Grandfathered Agreements (only required for Transmission Providers using the Flowgate Methodology)

Proposed ST ATC Improvement #3 (cont.)

3. BPA posts all the information that NAESB requires under this section
 - a. Since BPA does not use CBM or the Flowgate Methodology, BPA does not post a CBMID or a list of Flowgate Methodology Grandfathered Agreements
 - b. BPA's Postback Methodology is found in BPA's ATCID
4. BPA also includes some additional information under the ATC Information section
 - a. Equivalent ATC/TTC Postings
 - b. Data Request Form (MOD-001-1 R9)
 - c. TTC Study Report Request Form (MOD-029-01 R4)

Proposed ST ATC Improvement #3 (cont.)

5. BPA would like to remove the links to the data request forms from the ATC Information section of our OASIS
 - a. The information posted here is also available on BPA's ATC Methodology website
 - b. This is not a common place to find this type of information across the industry
 - c. BPA will remove these additional links from the ATC Information section in early January 2023
6. BPA will keep the link to the Equivalent ATC/TTC Postings

Wrap up

1. BPA will continue to work on the in-flight and proposed ST ATC changes and will update its ATCID prior to implementation of any changes
 - a. BPA will communicate additional information and/or implementation dates via Tech Forum
2. Comments on today's update are due by Monday, January 9, 2023
3. Please send Questions/Comments to techforum@bpa.gov, with a copy to your Account Executive

Appendix – ATC Formulas (NERC Time Horizon)

The firm ATC formula is:

$$\mathbf{ATC_F = TTC - ETC_F - CBM - TRM + Postbacks_F + Counterflows_F}$$

The non-firm ATC formula is:

$$\mathbf{ATC_{NF} = TTC - ETC_F - ETC_{NF} - CBM_S - TRM_U + Postbacks_{NF} + Counterflows_{NF}}$$

Where:

ATC is the firm Available Transfer Capability for the ATC Path for that period.

TTC is the Total Transfer Capability of the ATC Path for that period.

ETC is the sum of existing firm commitments for the ATC Path during that period.

CBM is the Capacity Benefit Margin for the ATC Path during that period.

TRM is the Transmission Reliability Margin for the ATC Path during that period.

TRM_U is the Transmission Reliability Margin that has not been released for sale as non-firm capacity

Postbacks are changes to firm Available Transfer Capability due to a change in the use of Transmission Service for that period, as defined in Business Practices.

Counterflows are adjustments to firm Available Transfer Capability as determined by the Transmission Service Provider and specified in their ATCID.

F subscript refers to Firm; **NF subscript** refers to Non-Firm; **S subscript** refers to Scheduled