

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

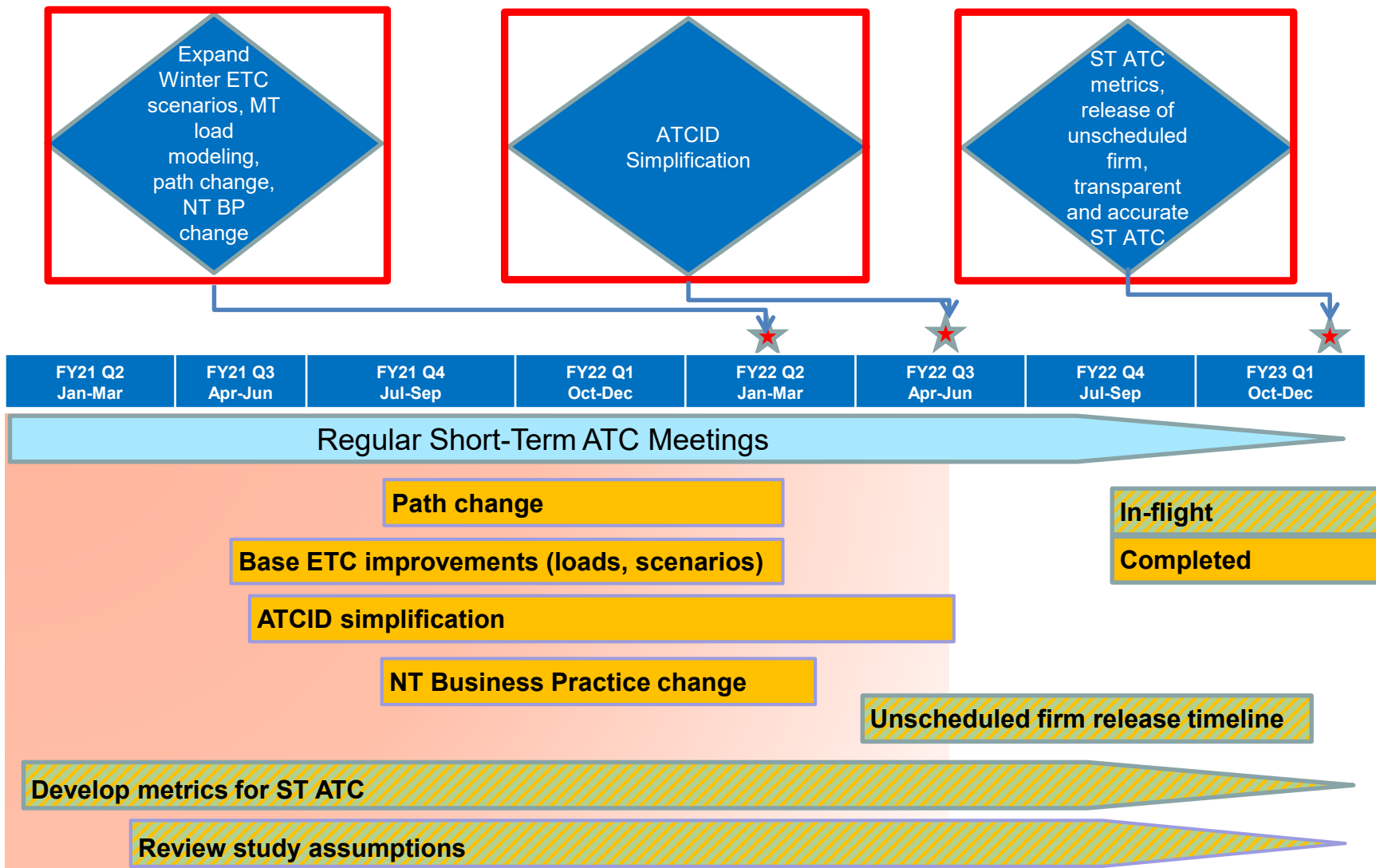
May 17, 2022



Agenda

1. ST ATC Grid Mod Project Timeline
2. Completed ST ATC Improvements
3. In-flight ST ATC Improvements
4. Proposed ST ATC Improvements
5. Wrap up
6. Appendix – ATC Formulas (NERC Time Horizon)

Short-Term ATC Project Timeline



Completed ST ATC Improvements



Completed ST ATC Improvement #1

Description: Updated generation data for the Willamette Valley projects

1. Willamette Valley projects include Big Cliff, Cougar, Detroit, Dexter, Foster, Green Peter, Hills Creek, Lookout Point, and Lost Creek
2. BPA has transitioned to a monthly fleet-aggregate lower 10th percentile of Heavy Load Hour block generation forecast from the planning period of record for these projects
 - a. This forecast method replaces the seasonal values from the low water year of 2001 previously used in the heavy load base ETC cases
3. This was a needed accuracy improvement, as BPA had a static, seasonal generation assumption for these projects
4. Change was completed on February 16, 2022

Completed ST ATC Improvement #2

Description: Expanded winter heavy load base Existing Transmission Commitment (ETC) studies to include Canadian Entitlement Return (CER) off scenarios

1. The additional scenarios model when CER will not be delivered to Canada in the winter months and are applied to the current cases stressing the Federal hydro zones and toggling the wind on/off
 - a. Scenario expansion is driven by observed usage on BPA's system
 - b. Improvement allows us to fully account for the firm rights that may be used in these scenarios
 - c. The scenarios are already included in spring/summer base ETC studies
2. Change was completed on February 16, 2022

Completed ST ATC Improvement #3

Description: Retirement of Paul-Allston path

1. BPA has retired the Paul-Allston path in both the short-term and long-term markets
2. BPA is no longer calculating either short-term or long-term ATC for Paul-Allston
 - a. New requests for service are no longer being evaluated for ATC across Paul-Allston
 - b. BPA is not monitoring Paul-Allston for reliability purposes
3. Retirement of Paul-Allston took place on January 26th, 2022

Completed ST ATC Improvement #4

Description: Available Transfer Capability Implementation Document (ATCID) streamlining

1. BPA has streamlined its ATCID for transparency and clarity
 - a. The streamlined ATCID supports BPA's effort to keep our ACTID current as required by NERC Standard MOD-001, Requirement 3
2. The ATCID streamlining occurred in three phases over past year
 - a. Phase I: Consolidated separate sections on the 1:1 and flow-based paths into one (completed on September 15th, 2021)
 - b. Phase II: Eliminated unnecessary content remaining from BPA's discontinued use of MOD-030-2 (completed on January 7th, 2022)
 - c. Phase III: Streamlined the overall document, with a specific focus on BPA's non-firm ATC calculations (completed one May 3rd, 2022)

Completed ST ATC Improvement #4 (cont.)

3. BPA met with customers to go over phase changes in advance of implementation
 - a. Customer meetings were held on August 24, 2021, December 15, 2021, and April 14, 2022

Completed ST ATC Improvement #5

Description: Improved ST ATC accuracy by amending the demand that customers submit on their long-term Network Integration Transmission Service (NT) TSRs with a Source/Point of Receipt (POR) of FCRPS/BPAPower

1. Previously, NT customers were required to submit TSRs with a Source/POR of FCRPS/BPAPower using a demand of 99999 MW
 - a. This process exposed BPA and customers to inaccurate swings in ST ATC due to manual processes required to manage these TSRs and profile them to reflect a proper demand
2. The NT business practice was revised to require NT customers to submit future TSRs with a Source/POR of FCRPS/BPAPower using a peak MW demand forecast in the MW field of the TSR
3. NT business practice revision was effective on March 21st, 2022

In-flight ST ATC Improvements

(previously discussed in earlier meetings)



In-flight ST ATC Improvement #1

Description: Development of ST ATC metrics

1. The ST ATC project is continuing work on ST ATC metrics
2. The ST ATC team has been primarily focused on metrics surrounding base ETC and TTC data
3. The following slides provide more detail on the work that has occurred over the last several months

In-flight ST ATC Improvement #1 (cont.)

Base ETC metrics

1. We have recently automated the following base ETC reports
 - a. Maximum and minimum base ETC reports
 - i. These reports are used to implement the base ETC data to OASIS and were previously manually built
 - b. Comparison report of base ETCs from current year and prior year
 - i. This report allows the team to analyze the differences in base ETCs from year to year and ensure accuracy of our study results
2. Currently, the team is focusing on expanding the comparison report for base ETCs so that we can more quickly identify the reasons behind ETC swings from year to year

In-flight ST ATC Improvement #1 (cont.)

TTC metrics

1. The ST ATC team automated a report to answer the question of “Should BPA be setting TTC based on an All Lines in Service (ALIS) seasonal limit assumption for beyond 2 to 3 weeks out on the flow-based paths?”
 - a. The report compares the seasonal ALIS TTCs with outage-informed TTCs across each flow-based path
 - b. BPA is continuing to collect data for analysis
 - c. Next step is for BPA to analyze the differences between the seasonal ALIS and outage-informed TTCs to determine next steps for each path

In-flight ST ATC Improvement #1 (cont.)

ST ATC swings

1. The ST ATC team is looking at ways to identify large ST ATC swings and to alert BPA staff to look at these swings
2. We would like to be aware of these types of swings quickly so that we can look into them and identify the drivers (e.g. there has been a TTC de-rate versus a system issue)
3. This is in the very early stage of development

Proposed ST ATC Improvements



Proposed ST ATC Improvement #1

Description: Evaluate whether to change the timing of when unscheduled firm is released to the non-firm market

1. Currently, BPA releases unscheduled firm to the non-firm market at 10 pm of the day prior
 - a. This is a historical practice for BPA
2. BPA has received a customer request to change the release of unscheduled firm to 10 am of the preschedule day
 - a. This would make unscheduled firm available to the non-firm market when BPA opens the non-firm market at 10 am of the preschedule day
 - b. Firm rights holders would still be able to schedule/use their firm rights up until 20 minutes prior to flow
 - c. BPA has heard that this would alleviate seams issues between the preschedule market of BPA and adjacent Balancing Authorities

Proposed ST ATC Improvement #1 (cont.)

3. BPA would like to hear from the region about this potential change
 - a. Do customers support this change or have concerns about it?
 - b. Do customers have additional thoughts/suggestions for the timing of this release?
 - c. Please send Questions/Comments to techforum@bpa.gov, with a copy to your Account Executive

Wrap up & Next Steps

- 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
 - BPA will communicate additional information and/or implementation dates via Tech Forum
- Comments on today's update are due by June 1, 2022
- Please send Questions/Comments to techforum@bpa.gov, with a copy to your Account Executive
- As a reminder, BPA is holding ST ATC Project updates every six months
 - Next meeting will be held in September 2022
 - BPA will schedule additional, topic-specific meetings between now and September 2022, if needed

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