

Update on ATC Calculation Proposed Changes & Alternatives

Transmission Load Service Workshop

March 31, 2016



Load Levels

- Status quo – for those load forecasts BPA produces, 1-in-2 NCP load forecasts are used in:
 - Reliability Planning studies
 - LT and Short-term ETC studies
 - Cluster Studies

- No change is proposed at this time

Non-Federal Resources

- Wind – at least two scenarios will be run: one with wind “off” and backed up using balancing logic for PTP and FCRPS for NT and a second with wind “on” at one of the below levels
 - Contract demand, capped by nameplate (BPA staff preference)
 - Contract demand, capped at 60% of nameplate
 - Historical peaks, capped at contract demand
 - Capacity factors, capped at contract demand
 - Others?
- Non-wind
 - Contract demand, capped by nameplate
 - Historical peaks, capped at contract demand
 - Contract demand, capped at lower of nameplate or historical peaks (BPA staff preference)
 - Merit Order, per production cost models
 - Others?

FCRPS

- Seasonal dispatches to test impact of delivery of the Canadian Entitlement Return
- Three additional seasonal dispatches which separately stress the hydro system at Upper Columbia, Lower Columbia, and Lower Snake. Stress could be derived from:
 - Nameplate output,
 - Adjusted nameplate output (to reflect expected FCRPS generator outages),
 - Historical output,
 - 95th percentile of historical output, or
 - Some combination of the above.
 - BPA Staff have not arrived at a preferred option at this time.

Balancing Logic

- Status quo – Federal and non-Federal hydro decreased to achieve balance
- Merit order – backing off the most expensive resources first, per a production cost model, as is used in the Cluster Studies
- Pro rata – backing off:
 - All resources by percentage needed to achieve balance, which would have resulted in a ~10% drop in the last LT ATC Base Case,
 - All resources, except the stressed FCRPS zone, to achieve balance, or
 - All thermal resources, except the Columbia Generating Station, to achieve balance.
 - One of these will likely be selected, but BPA staff have not reached a preference at this time.

ETC Selection

- Several seasonal cases and/or scenarios will be produced for each LT ATC Base Case, each of which will calculate a possible ETC for each flowgate. Which should be used to determine ATC?
 - The highest calculated value for each flowgate,
 - The median calculated value for each flowgate, or
 - The lowest calculated value for each flowgate.
 - BPA staff preference for the lowest value, coupled with the difference between highest and lowest used as a margin.

Load Growth

- Modify automated tools to calculate impact of incremental load growth, above that including in most recent LT ATC Base Case, using PTDFs (cost and labor intensive)
- Apply the regional average load growth rate to the Planning ETC values (BPA staff preference)

Uncertainty Margin

- Hold aside a percentage of each flowgate's TTC
- To the extent multiple scenarios are run and the “highest of” isn't selected as input to ETC calculations, use the difference between the “highest of” and the selected case as a margin (BPA staff preference)

Releasing Uncertainty Margin

- Hold capacity as encumbered firm until such time as a method for release to the firm market is developed (TBD)
 - This capacity will be released to the non-firm market four months from operations (BPA staff preference)

Encumbering NT Resource Forecasts

- BPA staff propose to continue use of the method implemented as part of the initial TLS transition:
 - Encumber ETC within the LT ATC Base Case for all DNRs
 - Encumber ATC via PTDF calculations for the highest impact on each flowgate for all forecasted resources

Timeline for LT ATC Changes

- April - May 2016: workshop to announce decision(s) & updated ATC Methodology documents posted for written comment period
- May – June 2016: updated ATC Methodology documents finalized
- September 2016: ATC process changes incorporated into LT Base Case Update