



Long-Term Commercial Update BPA Transmission Services

January 31, 2019

2018-19 Commercial Milestones

- Long-term ATC Methodology
 - Significant update to assumptions
 - Focus on South of Allston
- Commercial Assessment Update
 - Improved access for both PTP and NT
 - For NT load service, the majority of NT forecasts have been accommodated
- TSEP Update:
 - Updates on previously-studied (2016 and earlier) requests
 - 2019 Cluster Study Preview and Next Steps
- Conditional Firm Update

LONG-TERM ATC METHODOLOGY

Changed Assumptions for ATC Calculations in 2018

- ATC Base cases: 2023 & 2028 January, May, and August
 - Previously studied 2 year out conditions – now using 5 and 10 year cases
 - Allows for forecasted geographical growth factors, rather than regional average
 - Models upcoming coal plant retirements, while accounting for remaining long term firm transmission rights
 - Reflects long term unit outages at Upper Columbia resources
 - Seasonal de-rate of peak generating capability for some thermal resources
 - Reduction in flows to California for scenarios with limited generation
- Updated commercial long term firm Total Transfer Capability (TTC):
 - North of John Day (+400 MW)
 - South of Allston (+115 MW to BPA's allocation of this shared path)
 - West of John Day (+230 MW)
 - West of McNary (+730 MW)
 - West of Slatt (+470 MW)

COMMERCIAL ACTIVITIES

Commercial Assessment

- The new study-based Commercial Assessment process takes into consideration all known information about each TSR; for example:
 - In the case of many NT forecasts, the load and generation had already been modeled in ATC calculations, so no impact to queued parties resulted from accepting these forecasts
- This study-based approach, in conjunction with ATC changes, resulted in some offers of transmission service and encumbrance of ATC for NT forecasts made possible without infrastructure upgrades

Commercial Activities

- 1,593 MW of service encumbered for NT load and resource forecasts across the FCRTS
- 1,465 MW of transmission service awarded to PTP requests
 - 900 MW of redirects
 - 452 MW of “firmed up” Conditional Firm
 - 113 MW of new service
- Evaluated all pending requests and identified the need for the next cluster study
 - Requests previously studied and awaiting a plan of service remain in the queue
 - Sub-grid constraints continue to require further analysis

TSR STUDY AND EXPANSION PROCESS (TSEP)

Updates on previously-studied (2016 and earlier) requests

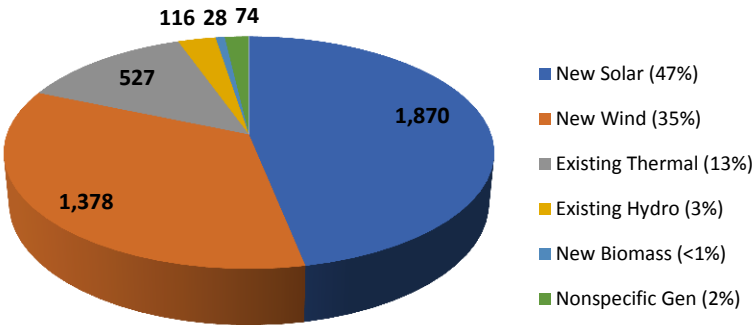
- Since the conclusion of the 2016 study, BPA has offered and Customers have executed Preliminary Engineering Agreements for 1,028 MW of incremental service.
- Additionally, 100 MW of incremental service await completion of the Puget Sound Area Study Team upgrades as identified in previous ColumbiaGrid and BPA Cluster Study reports.

2019 Cluster Study Overview

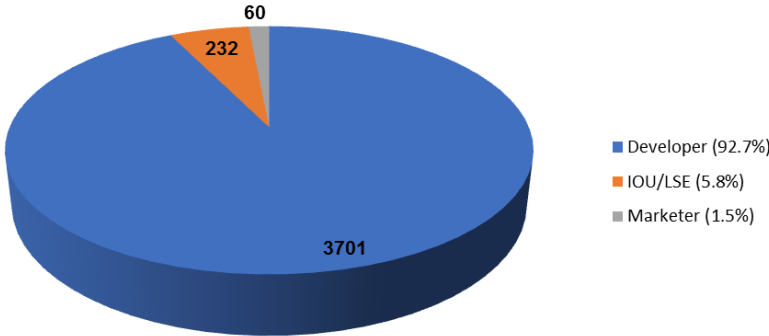
Customers		
17		
TSR Count		MW Total
105		3,993
Original	98	3,797
Redirect	7	196
Of the 105 TSRs, 104 are for Point-to-Point service		

- Six customers account for 84% of requested MW demand
- Five customers account for 82% of all TSRs

Composition, by Resource Type

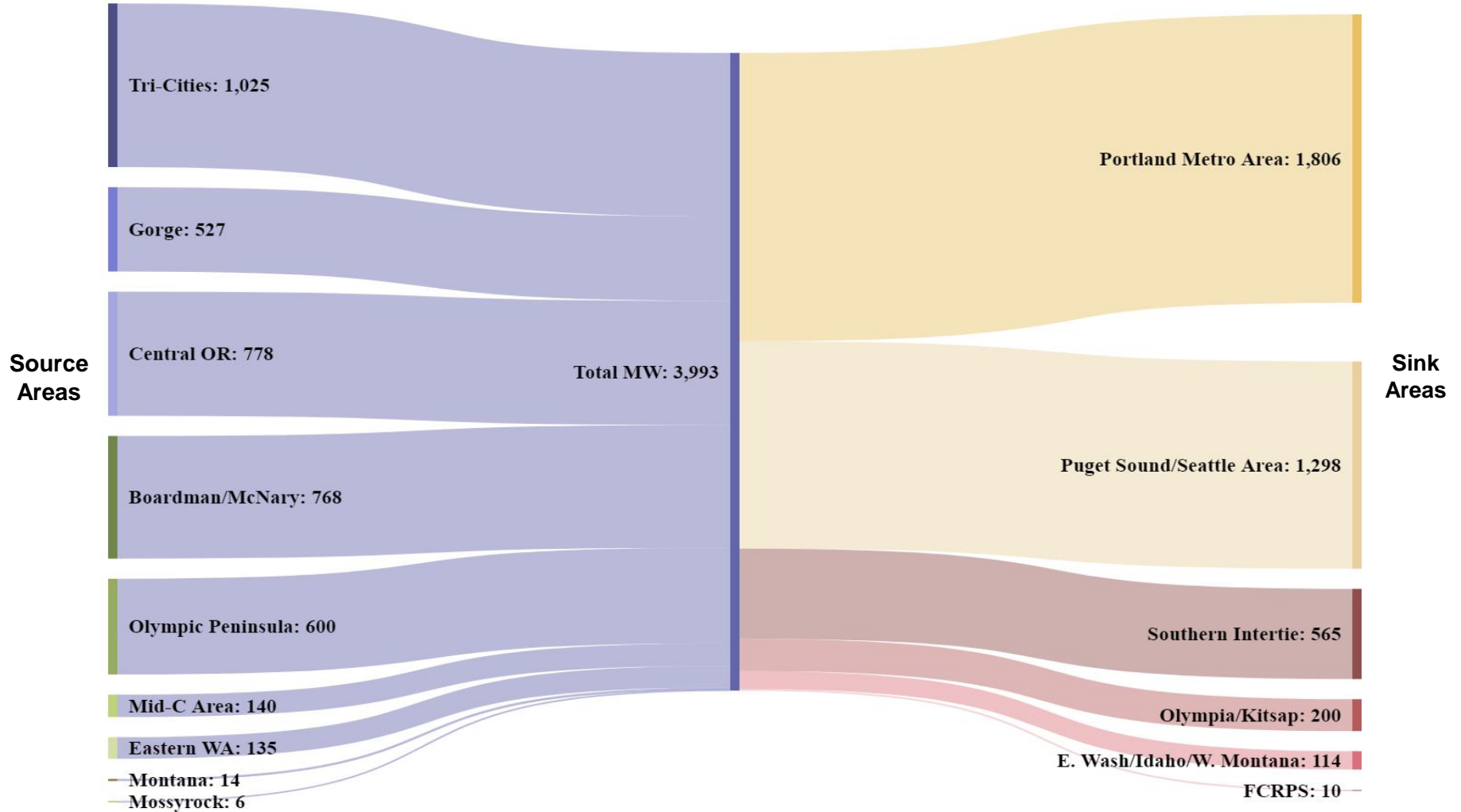


Composition, by Customer Class



Note – this presentation does not include previously-studied TSRs

2019 Source & Sink Areas (by Proportionate MW)



Geography of Source & Sink Areas (> 90% of Demand)

Generation Zones

- A. Tri-Cities (1,025 MW – 26%)
- B. Central Oregon (778 MW – 20%)
- C. Boardman/McNary (768 MW – 19%)
- D. Olympic Peninsula (600 MW – 15%)
-All existing resources
- E. Gorge (527 MW – 13%)

Portland-area Deliveries

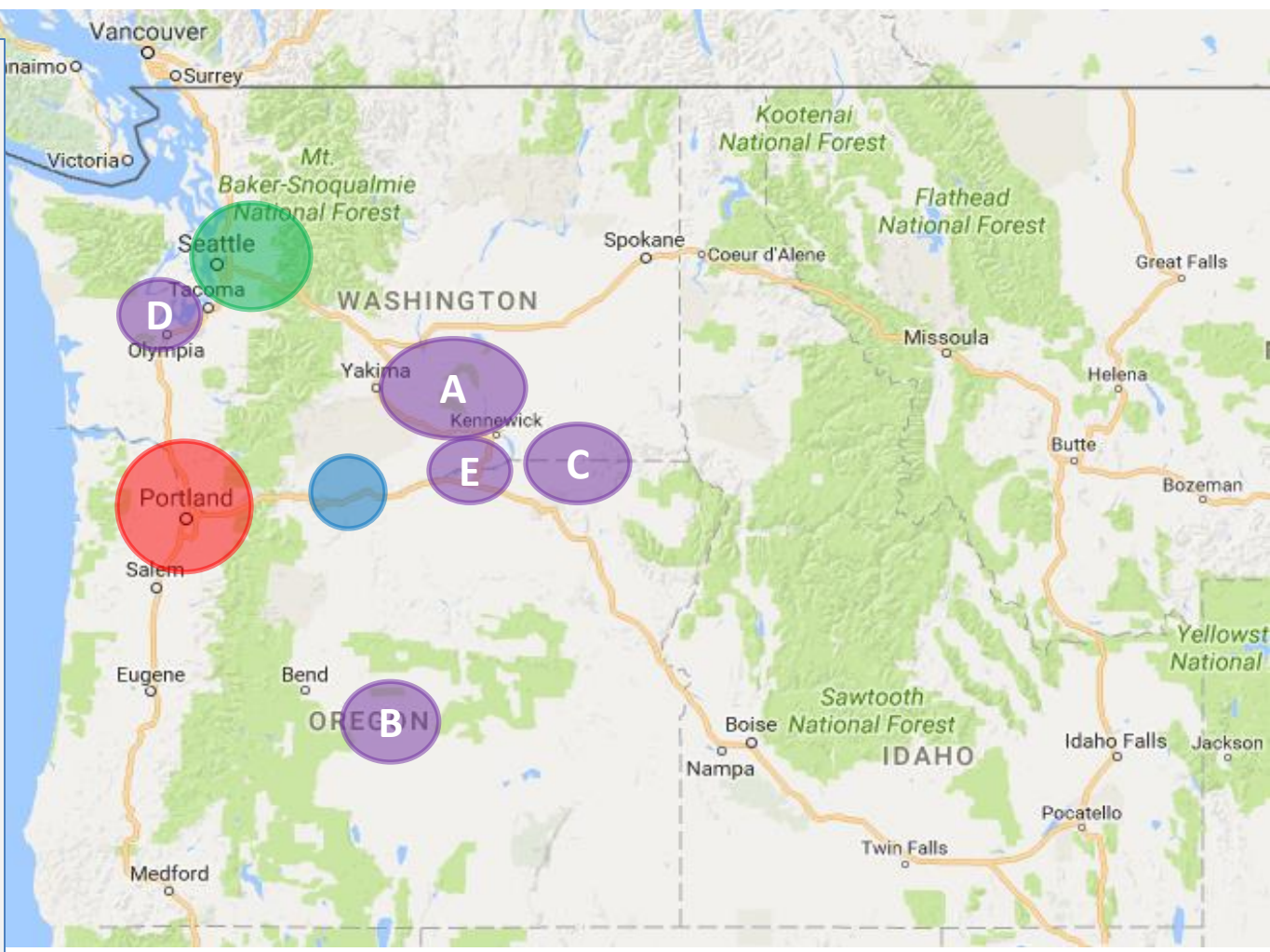
- 1,806 MW of requested demand (approximately 45% of all study demand)

Puget Sound-area Deliveries

- 1,298 MW of requested demand (approximately 32% of all study demand)

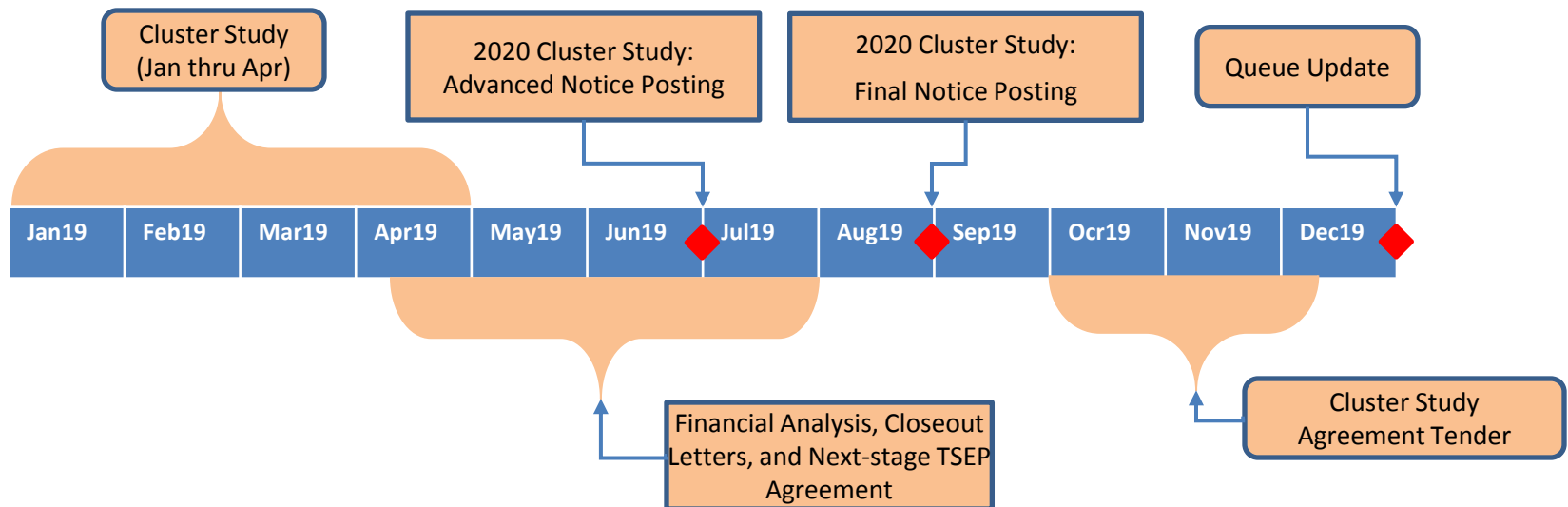
Deliveries to Big Eddy/John Day

- 565 MW of requested demand (approximately 14% of all study demand)



2019 Cluster Study Next Steps

- Cluster Study Agreement execution process and queue update has completed
- BPA has identified the constrained flowgates for the cluster study and is currently identifying the necessary plans of service (i.e., 2019 Cluster Study is underway)
- BPA will update participants with specific plan of service information (cost, schedule) as soon as possible following study completion
 - BPA will also make any possible offers of service following study completion
- BPA expects to begin preparations for a 2020 Cluster Study in late summer 2019, according to the below schedule



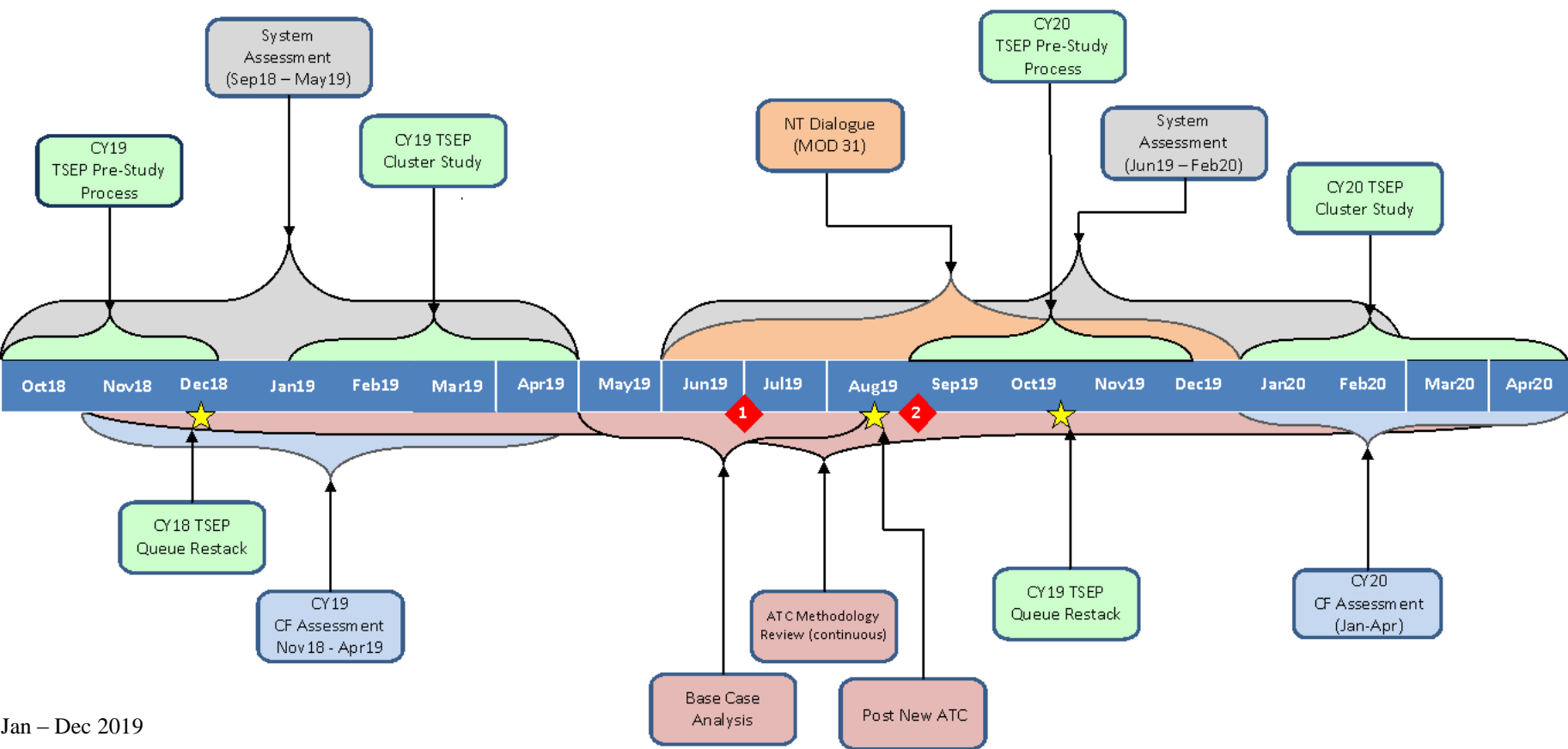
CONDITIONAL FIRM UPDATE

Conditional Firm Service Milestones

- Within the next year, SOA “Mandatory Reassessment CF” and existing SOA-only Bridge will be converted to 7F Firm service.
 - Benefit of Commercial Assessment ATC changes
 - Includes PTP and NT service
- BPA expects to offer CF service over External Interconnections
 - Currently limited to WOG path but exploring other External Interconnections
 - System limitations prevent awards that require CF on both External Interconnections and Network Flowgates
 - Eligibility will be assessed on a case-by-case technical requirements of a TSR
 - CF Business Practice v22 will be posted as final
- BPA is evaluating its capability to offer Reassessment CF, on a case by case basis, beyond the minimum term of two years consistent with FERC guidance

COMMERCIAL NEXT STEPS

DRAFT - Commercial Activity Roadmap



Jan – Dec 2019

- Commercial Assessment will be a continuous process lasting throughout the year
- ATC Methodology Review will be a continuous activity

Mar – Jun 2019

- Scope/Research Intertie Study Process



CS Posting – Advanced Notice



CS Posting – Final

Upcoming Milestones

- 2019 Milestones
 - Spring 2019 – Completion of 2019 Cluster Study
 - Business Practices (e.g. TSEP, CF, NT)
 - Conditional Firm
 - Long-Term ATC Methodology update(s)
- Beyond 2019 (currently)
 - Intertie Studies Scoping
 - Customer election for Conditional Firm as part of system impact study