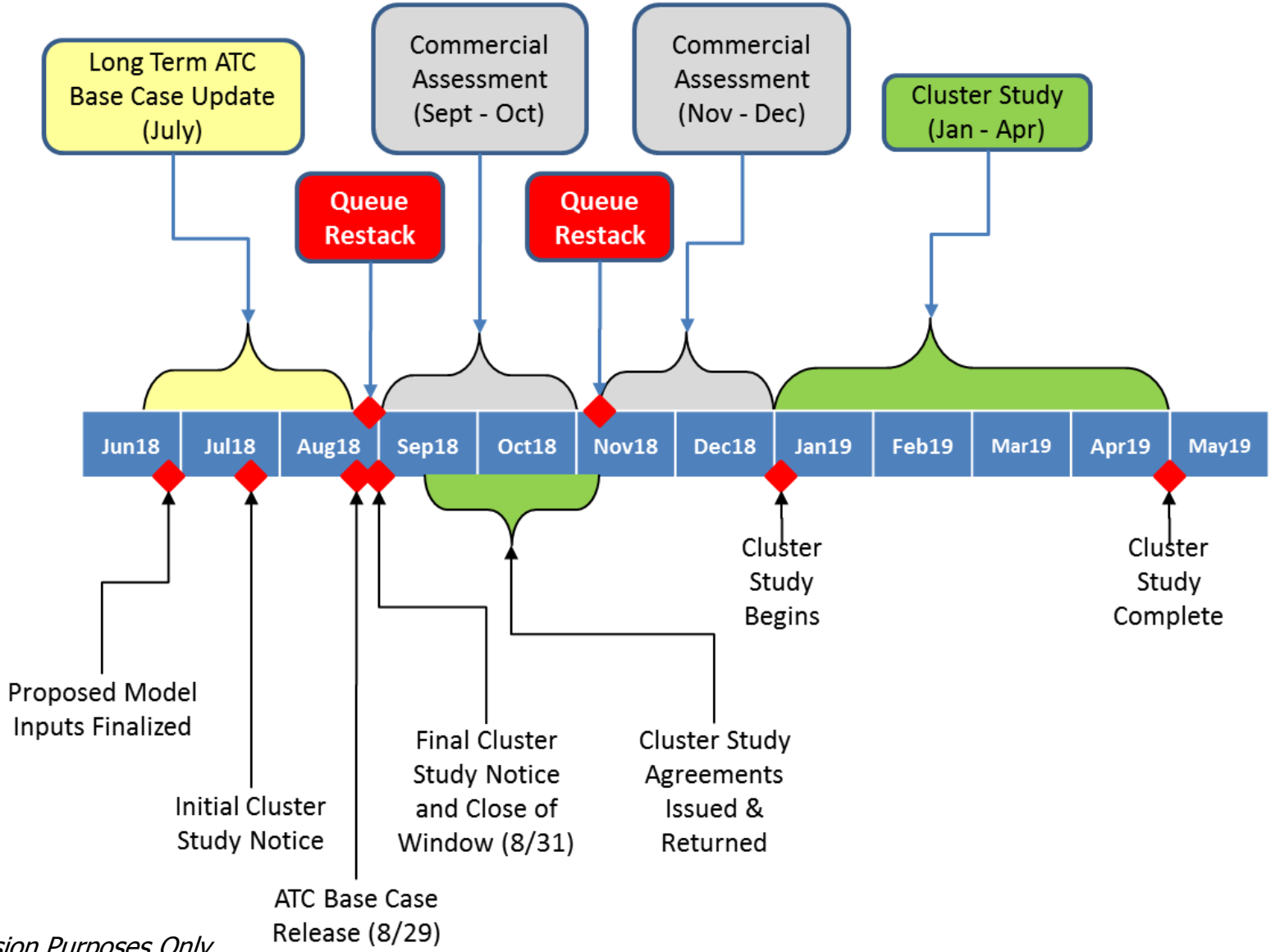
2018 Long Term Available Transfer Capability (ATC) Update

August 29, 2018

Commercial Activity Timeline



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Scenarios in the 2018 ATC Update

- Long Term ATC Base Case
  - Covers the post 13 month time horizon
  - Completed annually to meet BPA's obligation under the Long Term ATC Methodology to perform an annual update
- No Changes in the scenarios used to produce Existing Transmission Commitment (ETC) values

2018 ATC Update			
Season	**Stress**	**Wind**	**CER**
May/August	Lower C	Off	Off
August	Lower C	Off	On
May/August	Lower C	On	Off
August	Lower C	On	On
May/August	Lwr Snk	Off	Off
August	Lwr Snk	Off	On
May/August	Lwr Snk	On	Off
August	Lwr Snk	On	On
May/August	Upper C	Off	Off
August	Upper C	Off	On
May/August	Upper C	On	Off
August	Upper C	On	On
January	Lower C	On	On
January	Lwr Snk	On	On
January	Upper C	On	On
21 Scenarios			

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Assumptions in the 2018 ATC Update

- 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

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More Assumptions in the 2018 ATC Update

- Modest increase (115 MW) in the commercial long term firm Total Transfer Capability (TTC) for SOA N>S -- BPA
- No new major infrastructure or generating resource additions
- Minimal new long term transmission commitments made since the 2016 ATC Update
- Regional (Area 40) load growth from 2019 to 2023 & 2028 respectively:
  - 1499 MW & 2280 MW load increase in August cases
  - 1457 MW & 2340 MW load increase in May cases
  - 2120 MW & 3130 MW load increase in January cases

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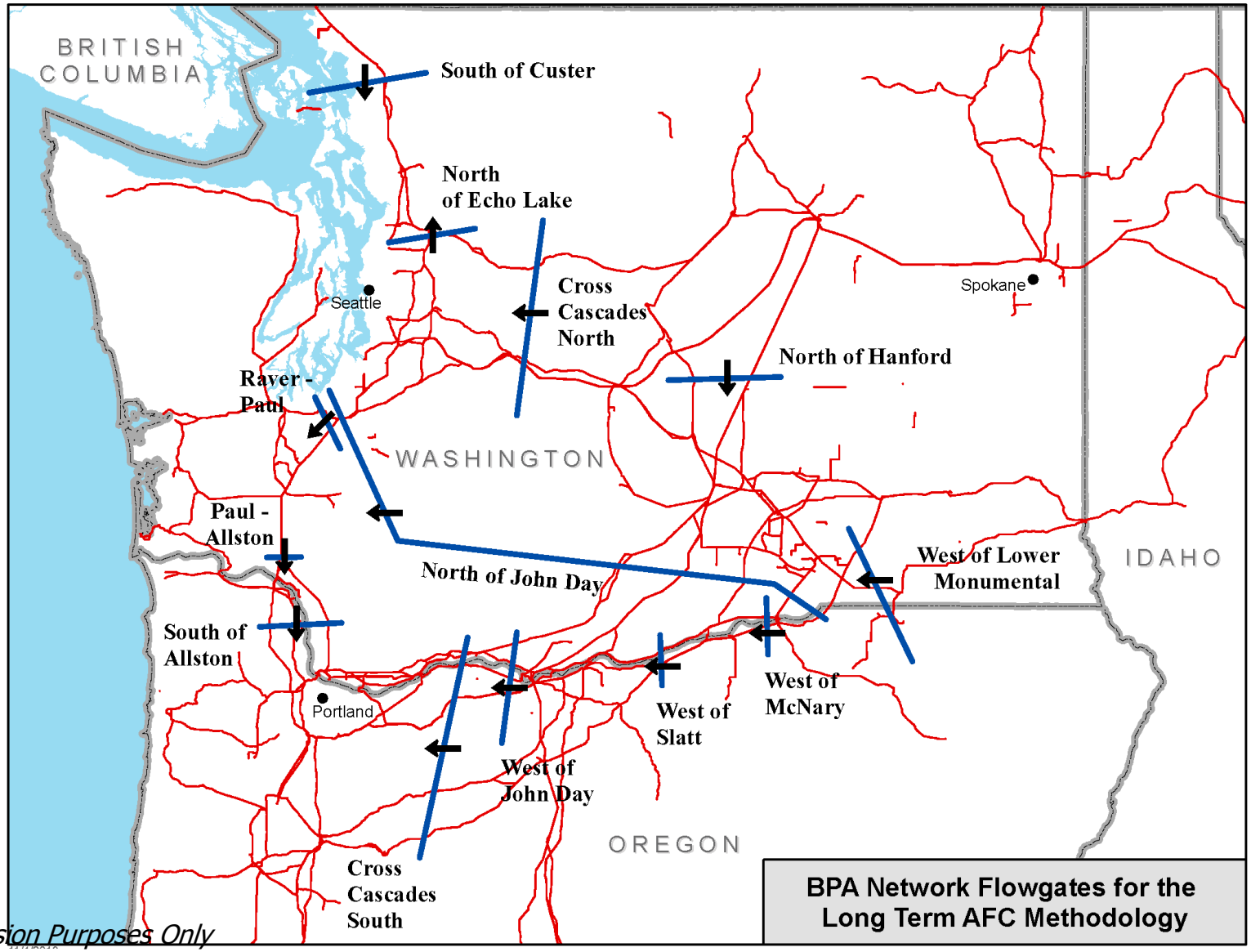
BPA Network Flowgates



BPA Network Flowgates for the Long Term AFC Methodology

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Results & Observations

I-5 N>S Flowgates: South of Custer, Raver to Paul, Paul to Allston, South of Allston

- Resulting in gains in ATC:
  - Long term unit outages at Upper Columbia resources
  - Seasonal de-rating of thermal resource outputs
  - Reduction in flows to California for scenarios with a lack of additional firm resource availability
  - Increase in the commercial long-term firm Total Transfer Capability for SOA
- 5 and 10 year load forecasts capture increased peaks in Puget Sound area and inform geographical growth factors across 10 year horizon

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More Results & Observations

Central Washington N>S Flowgates: North of Hanford, North of John Day

- Resulting in gains in ATC:
  - Long term unit outages at Upper Columbia resources
  - Reduction in flows to California for scenarios with a lack of additional firm resource availability
  - 5 and 10 year load forecasts inform geographical growth factors across 10 year horizon

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More Results & Observations

Oregon/Washington E>W Flowgates: West of McNary, West of Slatt, West of John Day, West of Lower Monumental

- West of John Day resulted in reduced ATC – Lower flows in the I-5 corridor combined with lower flows to California in resource limited scenarios (this path is winter limited) diverts flows toward Portland rather than California.
  - For the other flowgates, reduction in flows to California for scenarios with a lack of additional firm resource availability resulted in gains in ATC.
  - 5 and 10 year load forecasts inform geographical growth factors across 10 year horizon

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More Results & Observations

Winter Flowgates: Cross Cascades North, Cross Cascades South, North of Echo Lake

- Resulting in gains in ATC:
  - Reduction in flows to California for scenarios with a lack of additional firm resource availability
  - Long term unit outages at Upper Columbia resources
- 5 and 10 year load forecasts inform geographical growth factors across 10 year horizon

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New Long Term ATC Values

ATC For Posting Following Release of 2018 ATC Update										
Path Name	TTC	2020	2021	2022	2023	2024	2025	2026	2027	2028
South of Allston N>S -- BPA	2,115	313	384	462	522	550	586	628	667	703
Cross Cascades North E>W	10,250	625	595	533	444	253	195	135	77	18
West of Lomo E>W	4,200	1137	1145	1155	1165	974	984	994	1004	1014
Cross Cascades South E>W	7,500	810	795	772	696	646	626	573	552	532
North of Hanford N>S	4,450	1802	1766	1732	1688	1563	1487	1456	1423	1391
North of John Day N>S	8,400	1793	1754	1718	1679	1564	1503	1469	1434	1401
Paul-Allston N>S	2,400	1128	1102	1081	1069	1028	998	980	961	942
Raver-Paul N>S	1,450	112	90	76	71	47	29	18	6	0
West of McNary E>W	4,500	1685	1594	1646	1529	1521	1541	1560	1578	1597
West of Slatt E>W	4,200	945	1008	1026	1019	1022	1041	1059	1078	1096
West of John Day E>W	4,300	993	948	903	819	765	721	591	546	501
South of Custer N>S	1,850	716	718	721	723	726	728	731	733	735
North of Echo Lake S>N	2,800	222	198	165	118	82	49	17	0	0

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Immediate Next Steps

- 2018 ATC Update results will be released and applied to all pending long term transmission service requests (TSRs), using the PTDF-based evaluation described in section 8 of the ATC and AFC Methodologies for the Planning Time Period, V14 document
- ETC encumbrances to reflect NT forecasts will continue to be refined
- Postings on the external site will be updated over the next month: https://www.bpa.gov/transmission/Reports/TransmissionAvailability/Pages/default.aspx
  - ATC, AFC and Conditional Firm Inventory
  - AFC/ATC Less Pending Queued Request Inventory
  - Long Term Pending Queue
  - Long Term PTDF Calculator
  - Long Term Power Transfer Distribution Factors (PTDF) Table

Next Steps: Commercial Assessment

- The new study-based Commercial Assessment will be applied to all requests still pending after performance of the PTDF-based evaluation, and will take into consideration all known information about each TSR; for example:
  - Status of generator interconnection and/or historical generation patterns
  - Nature of the load to be served
  - Duplicative requests that may be present in the queue (e.g., multiple TSRs bidding on same RFP (request for proposal))
- Our expectation is that this study-based approach will result in some offers of transmission service made possible without infrastructure upgrades
  - Any offers of transmission service coming out of the Commercial Assessment will be made between September and December this year

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Next Steps: TSEP & More

- Any eligible long-term TSRs submitted by 5PM on August 31, 2018 that cannot be offered service through either the PTDF-based evaluation or the study-based Commercial Assessment by October 15th will be offered Cluster Study agreements in order to identify Plan(s) of Service necessary to offer service
- The Cluster Study will begin in January of 2019
  - Cluster Study results will be released May of 2019
  - BPA will then provide close-out letters including preliminary financial analysis for identified Plan(s) of Service, and contract actions to support next steps for customer requests
- BPA will continue to explore additional changes to the Long Term ATC Methodology to conform to a flexible, scalable, and risk informed approach to providing reliable and robust transmission service

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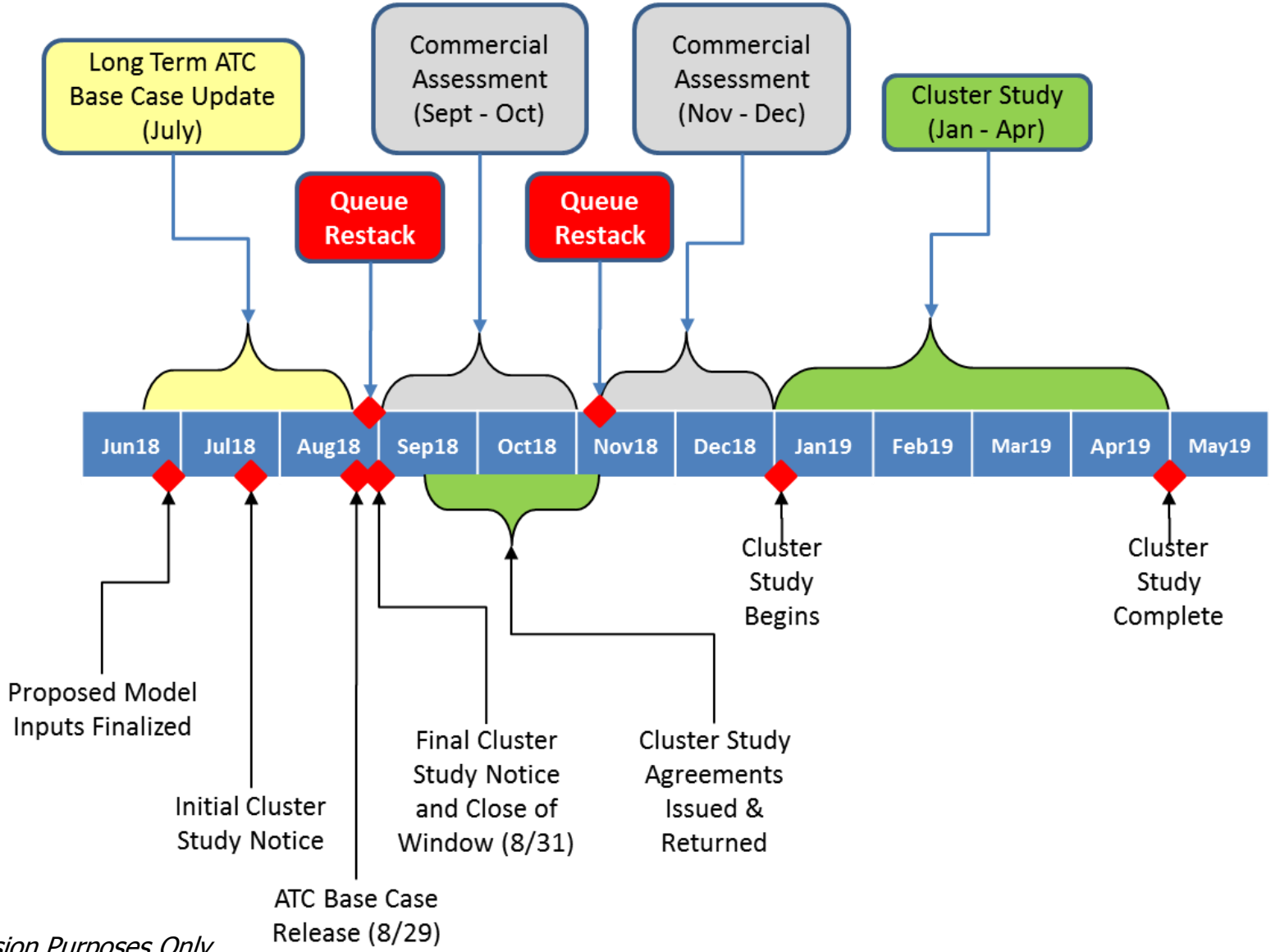

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