

2016 TSR Study & Expansion Process Update

2016 Cluster Study Close-out &
Next Steps

February 22, 2018



Today's Objectives

- Close out the cluster study phase of the 2016 TSEP and provide actionable paths to firm for all studied TSRs (NOS or TSEP)
- Complete the Technical Conference supporting BPA's response to TSRs that need capacity over SOA.
- Provide roadmap to 2018 TSEP

Agenda

TIME	TOPIC	PRESENTER
9 a.m. - 9:10 a.m.	Welcome	BPA
9:10 a.m. - 10:00 a.m.	2016 TSEP <ul style="list-style-type: none"> • 2016 Cluster Study Overview • 2016 TSEP Next Steps 	Anna-Lisa Miller
10:00 a.m. - 12:00 p.m.	SOA Technical Conference <ul style="list-style-type: none"> • I-5 “No-Build” Justification 	Dmitry Kosterev
12:00 p.m. - 1:00 p.m.	Lunch	
1:00 p.m. - 2:00 p.m.	SOA Technical Conference (cont) <ul style="list-style-type: none"> • Interim Service • Reassessment Conditional Firm Overview • System Conditions Defined 	Brad Morrison and Ashley Donahoo
2:00 p.m. - 2:30 p.m.	Roadmap to 2018 TSEP	Bob King and Abbey Nulph
2:30 p.m. - 3:00 p.m.	Recap and Closing	Rich Gillman

TSEP Overview



TSEP Phases

Phase 1: Pre-study

- Customer TSR submittal and ATC assessment;
- Period between close of last TSR deadline and next TSR deadline for Cluster Study participation;
- \$ - TSR deposit and processing fee

Phase 2: Cluster Study

- BPA tenders Study Agreements following TSR deadline;
- BPA commences and completes study (120-day study period);
- Results: preliminary plan of service scope, cost, and schedule;
- \$ - Customer's pro rata share of costs by MW

We are
here



Phase 3: Plan of Service Validation and Preliminary Engineering

- Refinement of cost and scope of Cluster Study results;
- Estimation of Environmental Review scope and costs;
- \$ - Customer's pro rata share of costs by MW

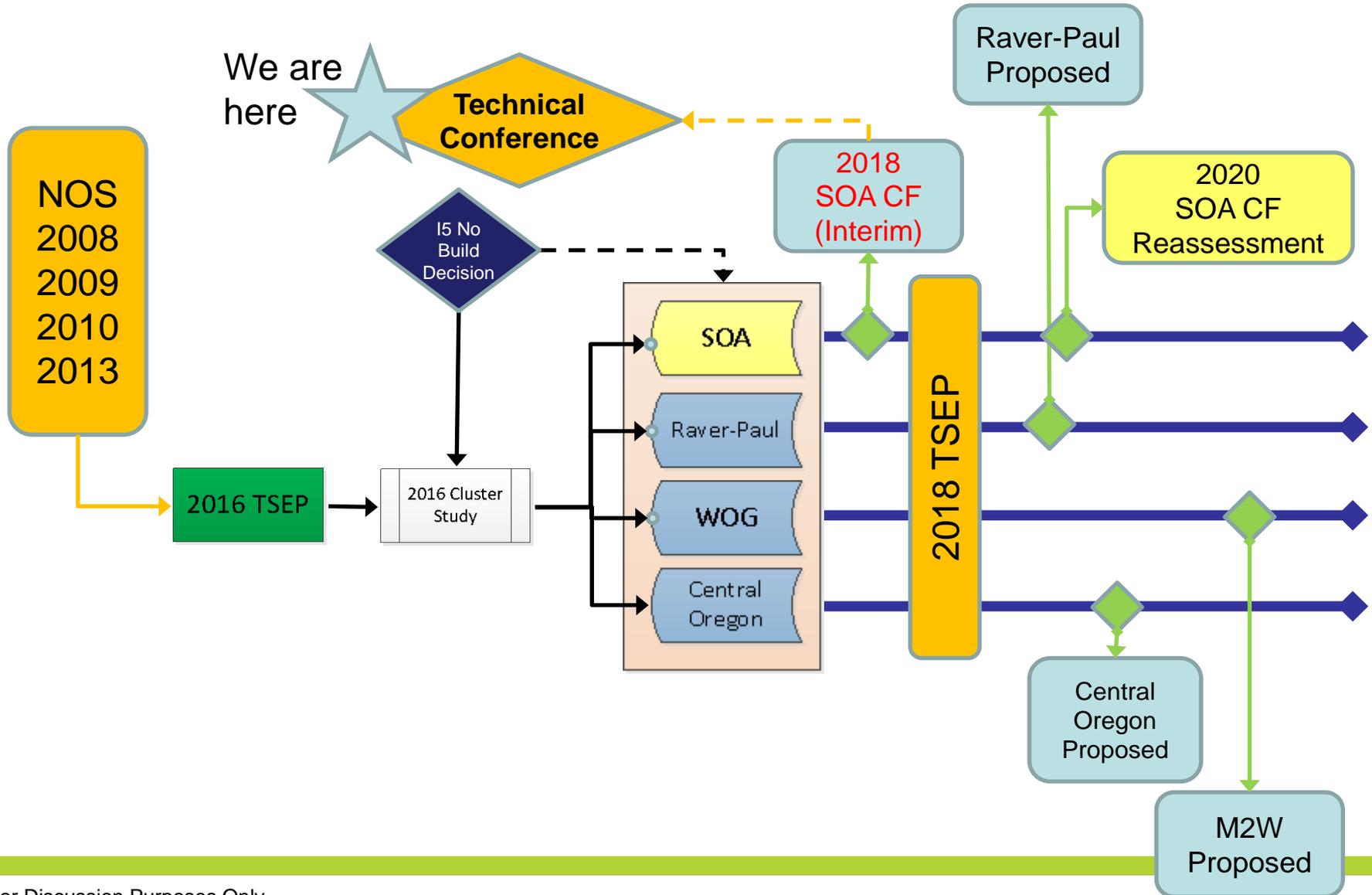
Phase 4: Environmental Review

- Required NEPA review of environmental impacts based on identified plan of service;
- Includes Record of Decision on preferred route, and whether to build the project;
- \$ - Customer's pro rata share of costs by MW

Phase 5: Project Construction

- Construction and Energization of identified transmission project;
- \$ - Customer secures its pro rata MW share of construction costs (letter of credit, etc.)

2016 TSEP Process



2016 TSEP Next Steps for each Plan of Service



Proposed Plans of Service (1 of 5)

- South of Custer (Northern Intertie Westside)
 - \$1.8 million (BPA portion)
 - Projected Energization*: Fall 2021
 - Upgrade BPA's Monroe-Novelty 230 kV line as well as third-party impacts.

- Raver-Paul Project
 - \$0.5 million
 - Projected Energization*: Fall 2021
 - Upgrade BPA's South Tacoma-St. Clair 230 kV line

*Projected energization dates based on construction feasibility, and do not account for BPA's NEPA obligations or Integrated Program Review/Capital Investment Review processes

Proposed Plans of Service (2 of 5)

- Harney Project
 - \$56 million (estimate does not include third party facilities)
 - Projected Energization*: Fall 2024
 - Add Harney SVC
 - Upgrade BPA's Redmond-Brasada 115 kV line
 - Add Brasada 115 kV shunt capacitor
 - Build Ponderosa-Brothers Tap 230 kV line (~46 miles) and substation
 - Third party impact to Idaho Power Company transmission

*Projected energization dates based on construction feasibility, and do not account for BPA's NEPA obligations or Integrated Program Review/Capital Investment Review processes

Proposed Plans of Service (3 of 5)

- La Pine Project
 - \$65 million
 - Projected Energization*: Fall 2022
 - Additional shunt capacitors
 - Upgrade BPA's La Pine 230/115 kV transformer
 - Build La Pine-Fort Rock 115 kV #2 line
- West of Garrison (WOG) Requirements
 - Cost to be developed during preliminary engineering
 - Projected Energization*: Will be determined during preliminary engineering

*Projected energization dates based on construction feasibility, and do not account for BPA's NEPA obligations or Integrated Program Review/Capital Investment Review processes

Proposed Plans of Service (4 of 5)

- Montana to Washington Project (M2W)
 - \$119 million
 - Projected Energization*: Fall 2023
 - Includes WOG requirements
 - The M2W project includes upgrading reactive compensation between Garrison, Hatwai and Bell substations
 - The M2W project refers to only upgrades on the BPA Network – facilities west of BPA’s Garrison Substation plus BPA’s share of harmonic filtering at the Colstrip Generating Station

*Projected energization dates based on construction feasibility, and do not account for BPA’s NEPA obligations or Integrated Program Review/Capital Investment Review processes

Proposed Plans of Service (5 of 5)

- Garrison to Ashe Project (GASH)
 - \$1,042 million
 - Projected Energization*: Fall 2029
 - Includes WOG requirements
 - New 500 kV single circuit AC transmission line between Garrison Substation and Ashe Substation, through Bell Substation (~430 Miles)
 - Addition of a new 500 kV substation between Taft and Hot Springs substation
 - Three 500 kV series capacitors
 - Facilities identified here exclude any additional facilities that may be required between Colstrip and Garrison substations, and any other reinforcements east of Garrison needed to deliver generation associated with the requests to BPA's Network

*Projected energization dates based on construction feasibility, and do not account for BPA's NEPA obligations or Integrated Program Review/Capital Investment Review processes

Alternative Response for South of Allston Only

- South of Allston (SOA) Only
 - PTP customers will be offered mandatory Reassessment System Conditions Conditional Firm.
 - Bridge CF will be converted to Reassessment CF
 - Customers that accept the Reassessment CF offer will retain their queue position and be offered the opportunity to participate in the next cluster study
 - Customers that do not accept the Reassessment CF offer will be removed from queue
 - If a TSR has been part of a previous cluster study, it is not expected to fund the next cluster study.
 - BPA will continue to honor the previous cluster study results.

2016 TSEP Phase III

Preliminary Engineering Agreements (PEA)

- All proposed plans of service resulting from a previous cluster study will be subject to Phase III requirements.
- For those TSRs needing a non-SOA plan of service, customers will be tendered a PEA that must be signed and funded within 30 days.
- If the customer does not sign and fund the PEA, the associated TSR(s) will be removed from the queue.
- If the customer meets all associated requirements, the TSR will retain its queue position.

2016 TSEP Phase III

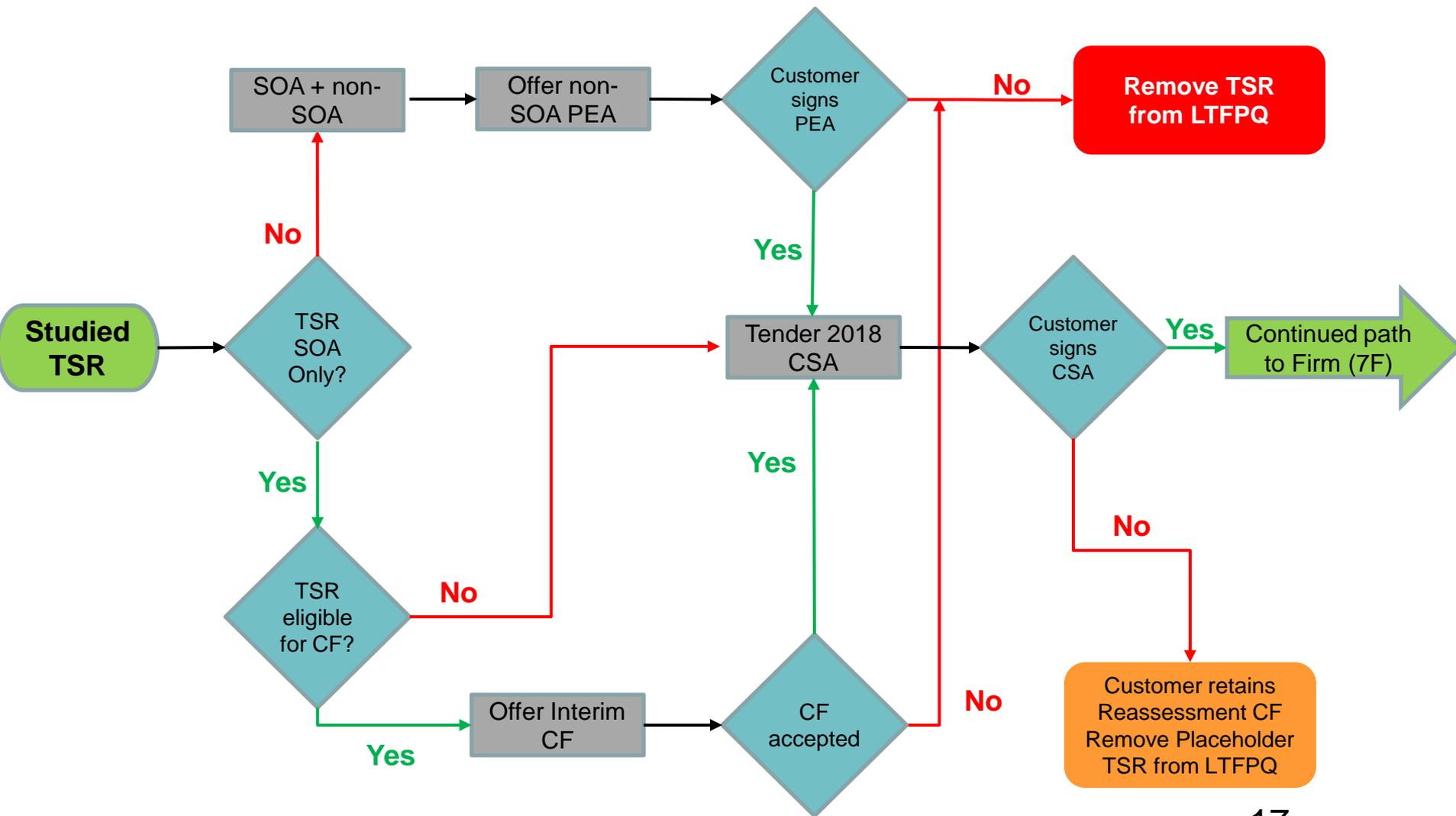
Third-Party Impacts

- For those TSRs where third-party impacts were identified, customers will be subject to the requirements outlined in the TSEP business practice.
- If the customer does not continue to meet the third-party requirements under the TSEP BP, the associated TSR(s) will be removed from the queue.
- If the customer meets all associated requirements then the TSR will retain its queue position.

SOA Plus a Build

- For TSRs that need an identified plan of service in addition to SOA capacity.
 - Customer must maintain the TSR's identified contractual and/or financial requirements to maintain its path to firm.
 - A revised plan of service for SOA is expected from the next cluster study.
 - Customer must meet the contractual and financial requirements for that additional plan of service.
 - If a customer does not meet all contractual and financial requirements, the TSR will be removed from the long-term firm transmission queue.
 - The TSR can request to be studied for Reassessment CF service.

Process Flow for Studied TSRs



Next Steps

- Send out cluster study closeout letters
- Tender Mandatory CF offers
- Tender Preliminary Engineering Agreements (PEA)
- Send Third-Party Notices