



Transmission Business Model and Pro Forma/Industry Standard Gap Analysis Customer Workshop

October 27, 2017

Customer Workshop Agenda

TIME	TOPIC	PRESENTERS
9:00 -10:30 AM	Transmission Business Model 3.0	Transmission Executive Team
10:30 -10:45 AM	Break	
10:45 -12:15 PM	PFGA Roadmap	PFGA Lead Managers
12:15 - 1:00 PM	Lunch	
1:00 - 3:00 PM	Tariff Engagement Design	Beth Loebach Rahul Kukreti



Transmission Business Model

Version 3.0 Update

WE ENERGIZE THE PACIFIC NORTHWEST

Transmission Value Proposition

Operating a High
Performing Grid

Enabling Economic
Growth in the Region

Providing Access to Federal
and Non-Federal Resources
And Markets

Through Excellence in Offering and Managing

Product Portfolio

Providing standardized options
Value-based price profiles
Drawing from integrated regional planning

Infrastructure

Advanced situational awareness
Right-sized investments in assets
Value and risk-based asset management

Long-Term Viability

Data-driven decision making
Integrated and efficient processes
Innovation and continuous improvement

A Dependable and Responsive Business Partner



Transmission Business Model 3.0

- What's New
- An Enhanced Customer Experience
- Required Changes
- Examples of Success

An Enhanced Customer Experience

- I **trust** and rely on BPA as a partner
- I **know** that BPA is attentive to my needs
- I **understand** what BPA needs from me
- BPA is accurate and timely
- BPA's products are clear in their design and visible in inventory

Product Portfolio

	Required Changes	Examples of Success
Providing standardized options	<ul style="list-style-type: none"> • Modernized operations • Clear value proposition for each product • Predictable and transparent change process 	<ul style="list-style-type: none"> • Stop selling unlimited Hourly Firm • Standardize NT Service • Standardize Conditional Firm product • Industry standard treatment of transmission losses
Value-based price profiles	<ul style="list-style-type: none"> • Define value and attributes of each product • Metrics for competitiveness and economic value 	<ul style="list-style-type: none"> • Price differentiation between long term and short term
Drawing from integrated regional planning	<ul style="list-style-type: none"> • Regional planning that incentivizes grid optimization • Innovative approaches within defined bands of reliability • Plans of service that embrace modern technology 	<ul style="list-style-type: none"> • Consistent, timely and repeatable queue management process • Replace ATC posting with more accurate system availability information

Infrastructure

	Required Changes	Examples of Success
Advanced situational awareness	<ul style="list-style-type: none"> • Risk thresholds and accuracy of identified system limitations • Better visibility of system conditions and limitations • Prevent and mitigate adverse system conditions 	<ul style="list-style-type: none"> • Automated study processes • Appropriate risk thresholds and operational practices • Improved generation and load forecasts
Right-sized investments in assets	<ul style="list-style-type: none"> • Engage customers to integrate new technology and economic development strategies • Repeatable, consistent study “follow through” process • Develop more tools than “build” 	<ul style="list-style-type: none"> • Identify available capacity and areas with lower interconnection costs/time • Implement re-bids on capacity • Eliminate the remainder policy
Value and risk-based asset management	<ul style="list-style-type: none"> • Define economic value • Improve and grow analytical skills • Define critical parts of the system • Establish organizational and program risk thresholds and tolerances 	<ul style="list-style-type: none"> • Deploy the Maintenance and Analysis Capabilities Improvement Team (MACIT) • Align planning and operational network models

Long-Term Viability

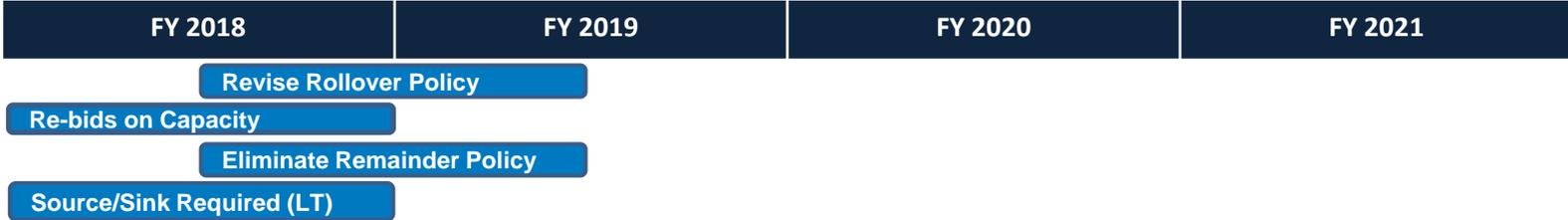
	Required Changes	Examples of Success
Integrated and efficient processes	<ul style="list-style-type: none"> Established accountabilities Business Process Management Council Evaluate customer relationship touch points 	<ul style="list-style-type: none"> Framework for process integration
Data-driven decision making	<ul style="list-style-type: none"> Matured business process management capabilities Own, quantify and manage customer and organizational benefits Establish data governance and stewardship 	<ul style="list-style-type: none"> Establish and operationalize a management framework for metrics, thresholds and results
Innovation and continuous improvement	<ul style="list-style-type: none"> Transmission grid continuous-improvement program Invest in safety and emergency preparedness Ongoing monitoring of changing industry and competitiveness factors 	<ul style="list-style-type: none"> Event-analysis, lessons learned, and corrective-action plans Revamp process for clearance and permitting for energized access Operational redundancy of proficiencies between control centers



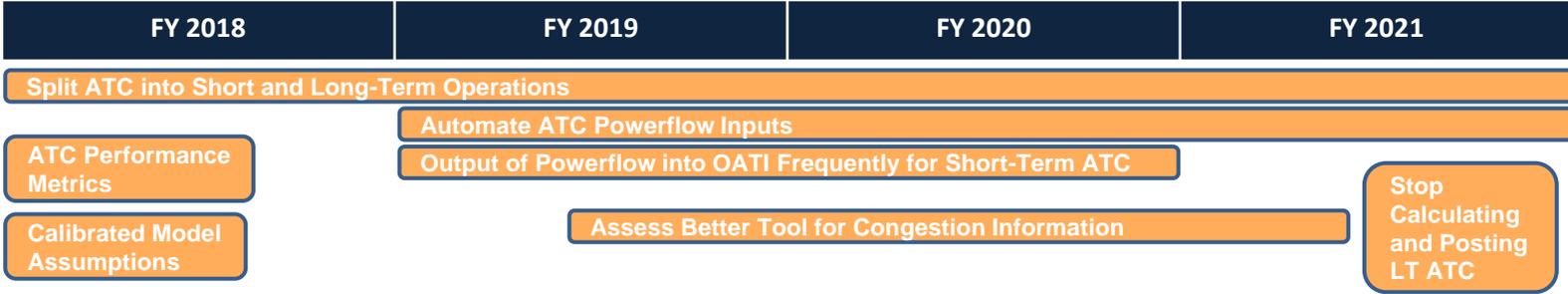
Pro Forma/Industry Standard Gap Analysis (PFGA) Roadmap

PFGA Roadmap - Overview

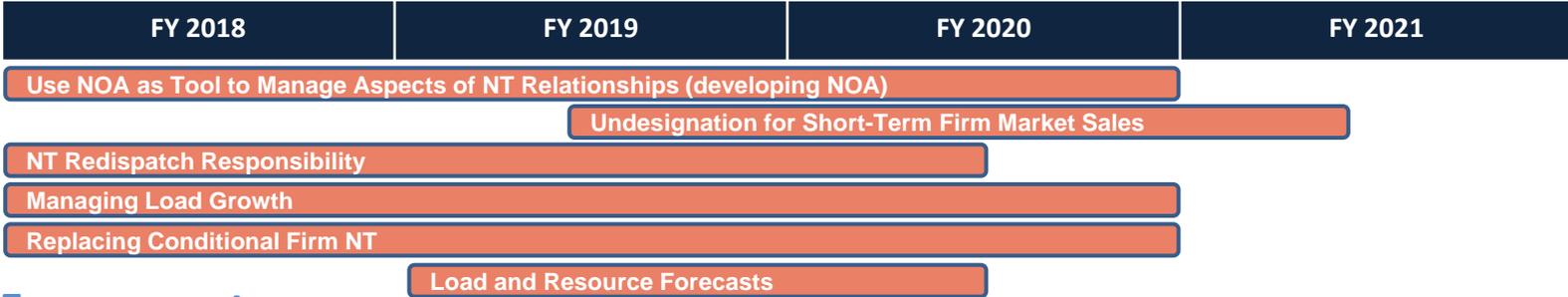
Queue Management



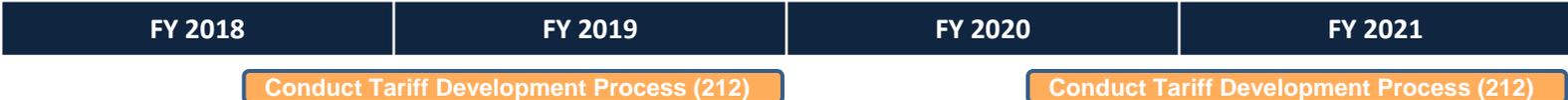
ATC



NT

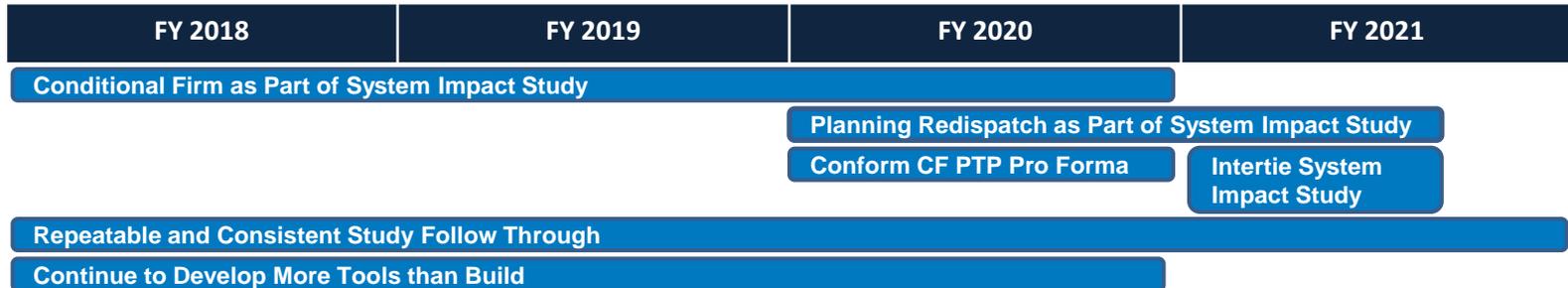


Tariff Engagement



PFGA Roadmap - Overview

Study



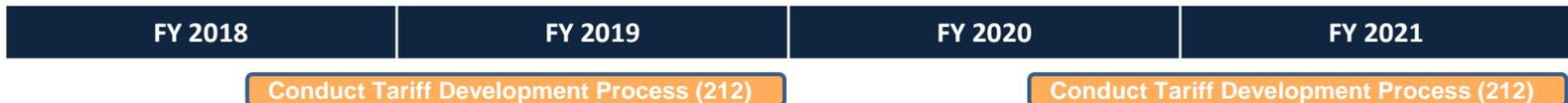
Hourly Firm



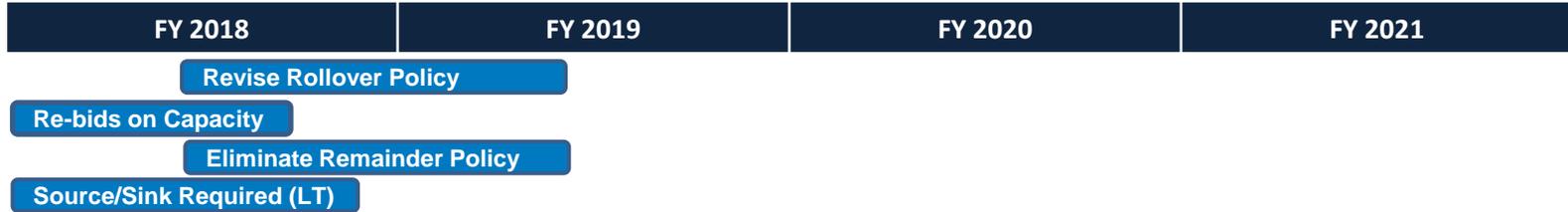
Ancillary Services and Losses



Tariff Engagement

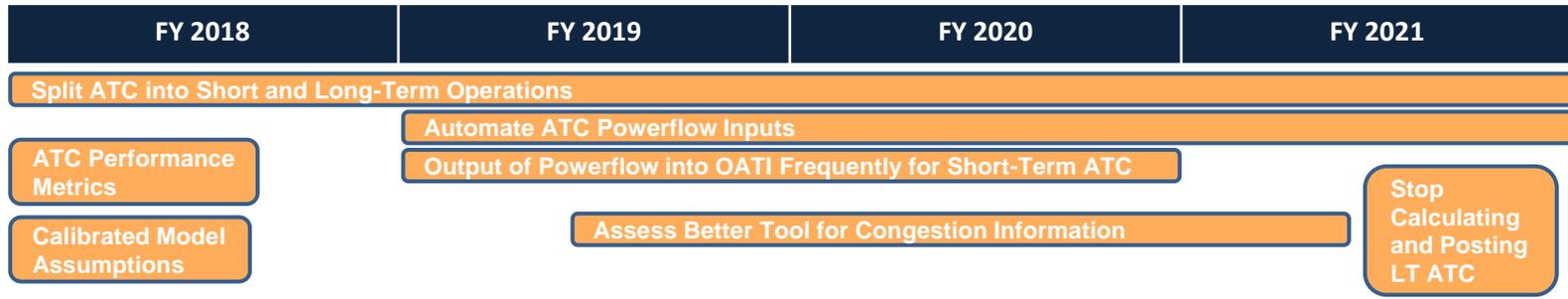


Queue Management - Detail



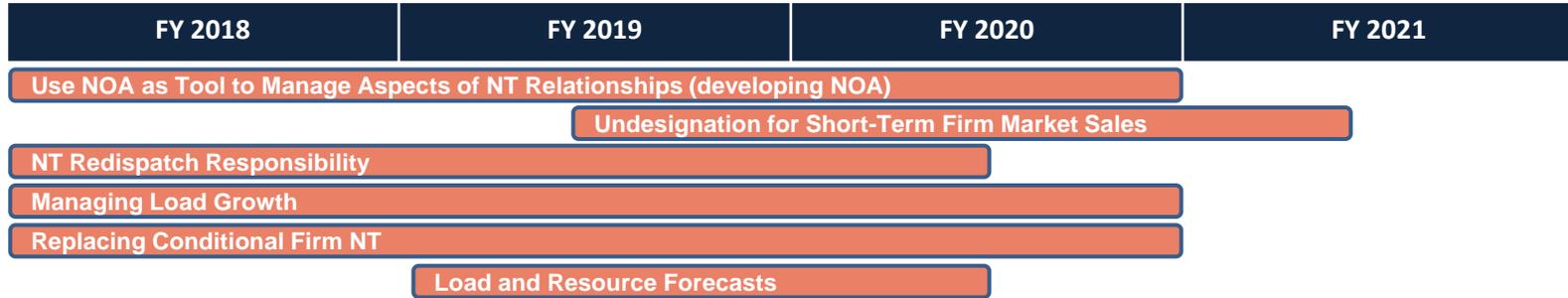
What We Heard	<ul style="list-style-type: none"> • Rebids on capacity has broad support as an additional service offered over OASIS (start & finish in 2018) • Eliminating remainders and limiting rollovers reduces current flexibilities for customers • Concern that requiring source/sink in short term TSRs would lead to major customer, system and process impacts
How that Changed our Planning	<ul style="list-style-type: none"> • No longer pursuing requiring source/sink for short term PTP TSRs. This may be revisited as we redesign our short term ATC. • BPA will continue to add more granular PORs and PODs as appropriate but this is out of scope for Queue Management • Considering allowing customers to conform existing TSRs less than 5 years with ROFR consideration
Why this Sequence?	<ul style="list-style-type: none"> • No Queue Management objectives depend on tariff change • Source/sink requirement for LT application in 2018 to align with next cluster study. Cluster study form would be moved up in application process.
Clarity on Decisions vs. Discussions	<ul style="list-style-type: none"> • All in scope except source/sink in the short term • ROFR eligibility is based on the contract term rather than original request • Policy application for remainders and rollovers will be developed
Benefits Customers Should Expect	<ul style="list-style-type: none"> • Consistency with industry standard supports more efficient queue management
CommOps Intersections	<ul style="list-style-type: none"> • Eliminate Remainder Policy – Initiative: Long-term Transmission Service • Source/Sink Required in Applications – Initiative: Reservation and Scheduling Practice Changes

ATC - Detail



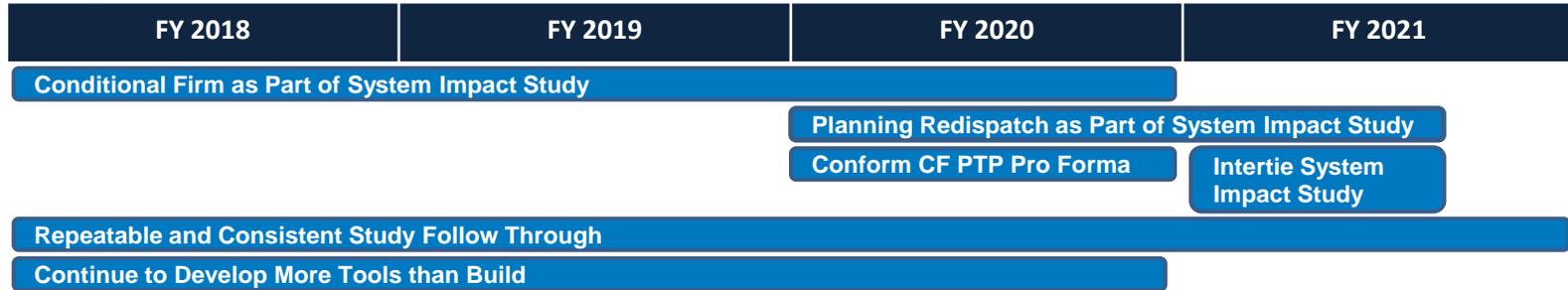
What We Heard	<ul style="list-style-type: none"> Faster studies and/or heat maps may not be adequate replacements for LT ATC postings Don't eliminate Hourly Firm product until development of an adequate replacement and/or exploration of improving calculation Support for more risk informed long term ATC calculations and caution on assuming "sweet spot" for risk is same for all customers/customer classes Support for automating short term and long term ATC calculations – consider wholesale upgrade, rather than phases, and provide same customer service we get today from Reservation desk (e.g., 'what if' scenarios)
How that Changed our Planning	<ul style="list-style-type: none"> Exploration into developing better tools for congestion information/assess customer needs and uses of information Make risk decision more transparent to customers via a collaborative process
Why this Sequence?	<ul style="list-style-type: none"> Dependency on commercial system change/resource availability Need metrics to assess risks, develop new tools and assess their value prior to eliminating long term ATC posting
Clarity on Decisions vs. Discussions	<ul style="list-style-type: none"> Improved Information on system availability, new mechanism to provide this information developed prior to eliminating long-term ATC calculation(s)
Benefits Customers Should Expect	<ul style="list-style-type: none"> Customer involvement in developing new risk tolerance factors Increased ATC access Better defined ATC values
CommOps Intersections	<ul style="list-style-type: none"> Split ATC into Short and Long Term Operations – Initiatives: Available Transfer Capability, Long-term Transmission Service Performance Metrics for ATC – Initiative: Available Transfer Capability Calibrated Model Assumptions – Initiatives: Price Forecasting and Zonal Inventory Management, Available Transfer Capability Stop Calculating and Posting Long-Term ATC – Initiative: Long-term Transmission Service

NT - Detail



What We Heard	<ul style="list-style-type: none"> • Obligation to serve NT customer needs • Would like to see specific items customers suggested and more detail from BPA on NOA, undesignated (load growth and load and resource forecasts), replace conditional firm and redispatch • Many perspectives on conditional firm for NT & PTP • Many requests for more details on proposed actions • General consensus the list of initiatives is appropriate
How that Changed our Planning	<ul style="list-style-type: none"> • Did not take anything off the list • Develop specifics on all of above noted items • Describe interaction of interim and NT CF and relationship to PTP CF • Taking a deeper dive into undesignation – slice, timing and value to ATC • We will be working with a consultant to help us develop more detailed plans for all elements
Why this Sequence?	<ul style="list-style-type: none"> • Under review and adjustments expected to accommodate interim designs – NT CF removal will scheduled earlier • Tariff Engagement Design schedule and process will impact implementation schedule for CF, redispatch, NOA and undesignations
Clarity on Decisions vs. Discussions	<ul style="list-style-type: none"> • Load growth addressed through planning process and replacement of NT CF
Benefits Customers Should Expect	<ul style="list-style-type: none"> • More predictability on path to firm • Better understanding of interactions between NT and PTP • Better understanding of products/services
CommOps Intersections	<ul style="list-style-type: none"> • NT Redispatch – Initiative: Reservation and Scheduling Practice Changes • Managing Load Growth – Initiative: Long-Term Transmission Service • Replace Conditional Firm NT – Initiative: Reservation and Scheduling Practice Changes • Load and Resource Forecasts – Initiative: Reservation and Scheduling Practice Changes, Long-Term Transmission Service

Study - Detail



What We Heard	<ul style="list-style-type: none"> • Obligation to plan for and serve NT customer needs • Studies should look for both wire and non wire solutions • BPA in best position to procure planning redispatch Inc/Dec • Customers lack PFGA details to fully understand potential impacts (cost, responsibility, etc.) • Use 2013 NOS reform overhaul to help with PFGA study process • Make sure that selling of conditional firm does not impact existing firm customers • Would like a process map/diagram of existing TSR process
How that Changed our Planning	<ul style="list-style-type: none"> • Continue to evaluate and work with customers on who will have planning redispatch obligation for Inc/Dec • Provide more information to help customers understand PFGA inputs • Reviewed 2013 NOS reform recommendations • Transmission Planning rethinking current study process to be more agile and responsive
Why this Sequence?	<ul style="list-style-type: none"> • New study process is under development, more detail soon.
Clarity on Decisions vs. Discussions	<ul style="list-style-type: none"> • BPA will not assume hourly firm usage in doing long term studies.
Benefits Customers Should Expect	<ul style="list-style-type: none"> • Quicker response to TSRs • Better understanding of options available and costs associated with service requests • Better reflect meaningful distinctions between products
CommOps Intersections	<ul style="list-style-type: none"> • Planning Redispatch as part of System Impact Study – Initiative: Redispatch Improvement, AGC and Dispatch • Intertie System Impact Study – Initiative: Long-term Transmission Service • Repeatabile and Consistent Study Follow Through – Initiative: Long-term Transmission Service • Continue to Develop more Tools than Build – Initiative: Redispatch Improvement, Constraint Management Improvement, Long-term Transmission Service

Hourly Firm - Detail

FY 2018	FY 2019	FY 2020	FY 2021
Address Unlimited Hourly Firm Product			

What We Heard	<ul style="list-style-type: none"> • Don't eliminate, manage it or look for different options • Unlimited is not workable • Hourly firm is important to current customer business models for meeting loads • Hourly firm is important to market participation
How that Changed our Planning	<ul style="list-style-type: none"> • Further analysis required on interaction with other products – NT and PTP; difficulties in developing hourly ATC; redirects from requested and studied paths; redirects and schedules from original reservations, etc. • Address how unlimited hourly firm impacts LT Planning - what is studied, and impacts of eliminating redirect flexibility
Why this Sequence?	<ul style="list-style-type: none"> • Need status quo analyzed first, curtailments, impacts on LTF PTP, 6NN, hourly ATC method attempts and impacts on planning
Clarity on Decisions vs. Discussions	<ul style="list-style-type: none"> • We will assess alternatives to unlimited hourly firm based on analysis results, consultant recommendations, industry standard assessment, and customers' business needs • We are analyzing impacts of unlimited hourly firm to help inform alternatives identification process • We will not provide unlimited hourly firm
Benefits Customers Should Expect	<ul style="list-style-type: none"> • Understanding impacts on customers to develop alternatives • Specifically address customer business impacts • Clarity on direction BPA will take and why
CommOps Intersections	<ul style="list-style-type: none"> • Eliminate Hourly Firm Product – Initiative: Reservation and Scheduling Practice Changes

Ancillary Services - Detail

FY 2018	FY 2019	FY 2020	FY 2021
Schedule 3 Language			
Schedule 9 Gen Imbalance			
Schedule 3A/10 – GI Capacity			

What We Heard	<ul style="list-style-type: none"> • Concerns on how changes work with rate case • Concerns about documentation in tariff or business practices
How that Changed our Planning	<ul style="list-style-type: none"> • Make connections between implement of rates and tariff terms and conditions
Why this Sequence?	<ul style="list-style-type: none"> • Coordinating tariff development and rate case timelines
Clarity on Decisions vs. Discussions	<ul style="list-style-type: none"> • Be clear on decision for language on real power losses • More discussion needed on generation imbalance language and relationship to pro forma
Benefits Customers Should Expect	<ul style="list-style-type: none"> • Clear understanding of service that will be priced in rates
CommOps Intersections	<ul style="list-style-type: none"> • Schedule 9 Generation Imbalance – Initiative: Reservation and Scheduling Practice Changes

Real Power Losses - Detail

FY 2018	FY 2019	FY 2020	FY 2021
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- Explore Calculating Losses Method
- Explore Concurrent Losses
- Explore Financial Only Settled Losses

What We Heard	<ul style="list-style-type: none"> Concurrent losses should be looked at but may not be helpful or hard to schedule/plan Financial rates are too high and how were they established? Customers would still like a choice of financial or in-kind payback of losses Would like cost analysis for financial returns
How that Changed our Planning	<ul style="list-style-type: none"> Industry practices are diverse - need to determine best practices for BPA and customers Willing to reassess concurrent pursuing concurrent repayment of losses - customers anticipate expense and complexity Financial: <ul style="list-style-type: none"> Pricing of loss payback is key component that must be evaluated internally and with customers Dependencies on tariff and rate changes
Why this Sequence?	<ul style="list-style-type: none"> Dependency on tariff/rate changes and industry best practice research Financial price research analysis likely will tie with methodology Dependency on commercial system change/resource availability Methodology study can overlap tariff work/changes – implementation may need to wait until tariff changes
Clarity on Decisions vs. Discussions	<ul style="list-style-type: none"> Incent financial – price comparable to in-kind Need to discuss keeping optionality – in-kind and financial for customer flexibility and needs Need to discuss concurrent vs. 168 hour and kwh tracking
Benefits Customers Should Expect	<ul style="list-style-type: none"> Financial – less labor intensive- frees up ATC for market purposes Granularity – better accuracy based on loading/system conditions Lower administrative cost due to better methodology, best practice, industry standard software and reduced FTE overhead
CommOps Intersections	<ul style="list-style-type: none"> Explore Calculating Losses Methodology – Initiative: Reservation and Scheduling Practice Changes Explore Concurrent Losses – Initiative: Reservation and Scheduling Practice Changes Explore Financial Only Settled Losses – Initiative: Energy Trading and Risk Management

Next Steps

- Comment period
 - Comments due to techforum@bpa.gov on December 8, 2017
 - List of questions and issues for comment provided
- Future PFGA Workshops will be scheduled to seek more specific customer input
 - Project planning and alternatives development
 - Development of tariff language



Tariff Engagement Design Process and Timeline

Tariff Engagement: Customer Comments

Tariff Engagement Design (TED) last December

- BPA announced decision to use public process to change tariff and to no longer seek reciprocity status for the tariff
- Customers submitted comments
 - General concern with using an informal public process, such as the process used for business practices
 - General support for using formal 7i-like process, but some concern with:
 - the difficulty of building regional consensus when ex parte is in place; and
 - BPA and customer resources required for the 7i-like process
 - Some customers supported a scalable approach so that non-controversial tariff changes could be adopted with an informal public process

July 26 PFGA workshop

- BPA shared the staff leaning to use Federal Power Act section 212 procedural requirements to develop a new tariff
- Customers submitted comments
 - Many customers submitted comments with general support for the section 212 procedures to establish a new tariff
 - Some customer confusion about the impact on the current tariff

Tariff Engagement

BPA proposes to follow the procedural requirements of Federal Power Act section 212(i)(2)(A)(ii) to develop a new tariff

What we will share with you today:

- Our proposal to develop a new tariff and the impact on the current tariff
- Development of a new tariff proposal and potential differences with the current tariff
- Requirements of Federal Power Act section 212(i)(2)(A)(ii) and available remedies under a new tariff
- Respond to customer feedback on the section 9 proposal for the new tariff
- Customer comment period and next steps

What could change

BPA is not proposing to modify the current tariff

- Section 9 of the current tariff requires FERC approval for all modifications
- BPA will not submit FERC filings to modify the current tariff
- Existing contracts under current tariff will be grandfathered

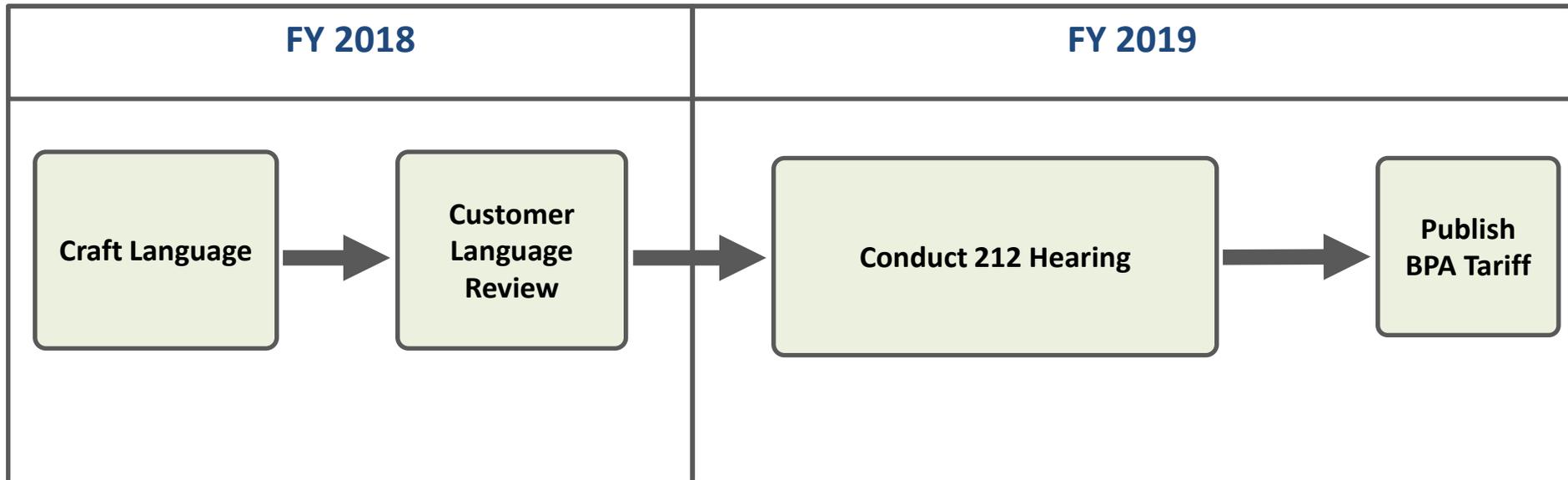
BPA proposes to establish a new tariff based on the procedural requirements of Federal Power Act Section 212(i)(2)(A)(ii)

- Anticipate that new tariff would be more closely aligned to FERC's *pro forma* tariff
- Section 9 in new tariff would not require FERC approval for modifications to the terms and conditions
- Existing contracts will be provided an opportunity to voluntarily opt in to the new tariff

BPA proposes to conduct the Section 212 hearing parallel with the BP-20 rate case

- Benefits of conducting the hearing concurrently with the rate case in terms of resources
- BPA may propose conducting a hearing with the subsequent rate case as needed, after consulting with customers

Development of the new tariff



Use Federal Power Act Section 212 to establish a new Tariff

Pursuant to section 212(i)(2)(A)(ii), Administrator may establish terms and conditions of general applicability for transmission service on the FCRTS after the following requirements are met:

1. Provide an opportunity for a hearing;
2. Publish notice in the Federal Register, including the reasons why the specific terms and conditions for transmission services are being proposed;
3. During the hearing, adhere to the procedural requirements of paragraphs (1) through (3) of section 7(i) of the Northwest Power Act (*the requirements for setting rates*);
4. The Hearing Officer issues a Recommended Decision on all material issues of fact, law, or policy; and
5. Administrator issues a Record of Decision, explaining the reasons for reaching any findings and conclusions which may differ from those of the Hearing Officer.

Major components of Section 212 Process

Rules of Procedure

- The hearing would follow the 7i procedural requirements, including BPA's Rules of Procedure, 18 CFR 1010

Notice published in the Federal Register

- Notice must include the reasons why the specific terms and conditions for transmission services are being proposed
- In Rate Case, BPA Staff make an Initial Proposal, with supporting studies and testimony BPA may do something similar for the 212 proceeding

Hearing: Follows the same Northwest Power Act 7i processes used for rate cases

- **Procedural Schedule** adopted by Hearing Officer
- **Discovery:** Clarification, Data Requests, and Responses to Data Requests
- **Testimony and Exhibits:** Expert witnesses, Clarity of Evidence, Cross-Examination, and Rebuttal

Major components of Section 212 Process

Written Record

- Opportunity to submit evidence developed in the hearing into the record
- Opportunity to submit briefs raise legal, factual, and policy issues to be resolved by the Hearing Officer and Administrator. Issues not raised in briefs are waived.

Hearing Officer's Recommended Decision

- Must address all material issues of fact, law, or discretion presented on the record

Administrator's Record of Decision (ROD) adopting the Tariff terms and conditions

- The ROD must explain reasons for reaching any findings and conclusions which may differ from those of the hearing officer
- The terms and conditions will not be filed with FERC

Comparison of major components of rate case and 212 hearing

Rate Case: Typically 9 month process	212 Hearing: Probably 9 month process
<p>Notice published in Federal Register</p> <ul style="list-style-type: none"> BPA’s Initial Proposal with proposed rate schedules, supporting studies and documentation, and testimony 	<p>Notice published in Federal Register</p> <ul style="list-style-type: none"> BPA’s proposed Tariff terms and conditions, with reasons why the specific terms and conditions are being proposed
<p>Hearing:</p> <ul style="list-style-type: none"> Discovery Testimony and exhibits Cross examination 	<p>Hearing:</p> <ul style="list-style-type: none"> Discovery Testimony and exhibits Cross examination
<p>Written Record</p> <ul style="list-style-type: none"> Evidence submitted into the record Initial briefs filed 	<p>Written Record</p> <ul style="list-style-type: none"> Evidence submitted into the Record Initial briefs filed.
<p>***</p>	<p>Hearing Officer’s Recommended Decision</p>
<p>Oral Argument before the Administrator</p>	<p>Oral Argument before the Administrator</p>
<p>Administrator issues Draft Record of Decision</p>	<p>Administrator issues Draft Record of Decision</p>
<p>Briefs on Exception filed</p>	<p>Briefs on Exception filed</p>
<p>Administrator issues Final Record of Decision</p>	<p>Administrator issues Final Record of Decision</p>
<p>Rates filed with FERC for approval</p>	<p>***</p>

Available Remedies

Remedy	Current Tariff	New Tariff
Apply to FERC under Federal Power Act section 210, 211, and 211A	✓	✓
File breach of contract claim with Court of Federal Claims	✓	✓
Appeal to Ninth Circuit	✓	✓

Development of the Section 9 Proposal

Customer feedback on section 9 BPA proposed during the July 26 workshop

- BPA proposed section 9 language which required a public process for tariff changes
- Customers generally not supportive of the proposal. Changing tariff terms and conditions impacts your business and an informal public process would not provide adequate procedural protections
- Customers generally want section 9 to include procedural protections, such as requiring the Administrator to follow the requirements of Federal Power Act section 212 to make changes to the terms and conditions
- Some customers want section 9 to include a substantive standard for tariff changes
- Avista, Puget, and PGE proposed a section 9 for consideration

During a section 212 hearing, BPA would propose a section 9 for the new Tariff

- The section 9 would not apply to service under the current Tariff
- BPA is not proposing to file section 9 or other changes with FERC
- Section 9 language would be developed during pre-212 hearing workshops, with the goal of building consensus for the section 9 proposal for the 212 hearing

Next Steps

- Comment period
 - Comments due to techforum@bpa.gov on December 8, 2017
 - List of questions and issues for comment provided
 - BPA will share its decision on whether to use the 212 Process to establish a new tariff by January 2018
- Future PFGA and 212 Hearing Workshops will be scheduled to seek more specific customer input
 - Project planning and alternatives development
 - Development of tariff language
 - 212 Hearing timelines, rules of procedure and Section 9 language