

TC-22, BP-22 and EIM Phase III Customer Workshop

July 28, 2020



AGENDA REVIEW AND FEEDBACK FROM PRIOR WORKSHOP

Agenda

Day 1 – July 28, 2020		
TIME*	TOPIC	Presenter
9:00 to 9:15 a.m.	Agenda Review & Safety	Rebecca Fredrickson Rachel Dibble
9:15 to 9:45 a.m.	Requirements for Participating Resources & Non-participating Resources: <ul style="list-style-type: none"> Steps 5-6 – Enabling Agreement Steps 5-6 – Transmission Reservations 	Eric King
9:45 to 10:30 a.m.	Participating Resources: Base Schedule Timeline <ul style="list-style-type: none"> Steps 5-6 	Eric King
10:30 to 11:30 a.m.	Generation Inputs: Energy Imbalance, Generation Imbalance, Persistent Deviation and Intentional Deviation <ul style="list-style-type: none"> Steps 1-4 	Miranda McGraw Frank Puyleart Libby Kirby Eric King
11:30 to 12:00 p.m.	Southern Intertie Studies <ul style="list-style-type: none"> Step 6 	Abbey Nulph
12:00 pm to 1:00 pm	LUNCH	
1:00 to 1:45 p.m.	Generator Interconnection <ul style="list-style-type: none"> Steps 5-6 200kW 	Tammie Vincent Ava Green Cherilyn Randall
1:45 to 2:45 p.m.	Seller's Choice <ul style="list-style-type: none"> Steps 5-6 	Suzanne Zoller
2:45 to 3:15 p.m.	EIM Tariff Language Update	Melanie Bersaas Rich Greene Sarah Kutil
3:15 to 4:30 p.m.	Revenue Requirement	Alex Lennox Michael Edwards Bill Hendricks

* *Times are approximate*

6/23 & 6/24 Workshop - Customer Comments

Topic	Comment Summary	BPA Response
<p>General Comments</p>	<ul style="list-style-type: none"> • Provide further examples of how EIM charges and rates will impact certain classes of customers. • Failure to appropriately sub-allocate charge codes could result in bad behaviors that may result in substantial costs and negative consequences • EIM can provide financial and renewable integration benefits but wary of contentious adoption and missing win-win opportunities. • Consider additional time to July agenda and wherever else necessary to ensure adequate time to discuss the issues • Clearly identify implementation issues not being addressed prior to rates/tariff cases 	<ul style="list-style-type: none"> • Thank you for your comments. Going forward we will start at 9 a.m. and will give enough time to address the issues • EIM Imbalance Scenarios will be discussed in this workshop • We are working to identify implementation issues as soon as possible
<p>Resource Sufficiency</p>	<ul style="list-style-type: none"> • Support for Status Quo for balancing BAA • Support for Status Quo for not setting Ramp Sufficiency pass target • How will gaps in balancing tests be covered? • Pursue further balance between cost to transmission customers and benefits to load customers. 	<ul style="list-style-type: none"> • Thank you for your comments
<p>Participating Resource Requirements</p>	<ul style="list-style-type: none"> • Confirm that requirements only apply to 3 MW or greater • Concerns with lack of requirements for PR to hold transmission rights • Evaluate impacts to EDAM • Encourage BPA to address demand response participation before BP-24 if possible • T-75 deadline not feasible for resources in non-EIM BAAs • Supports consistent policies and implementation across the EIM footprint 	<ul style="list-style-type: none"> • Thank you for your comments, these comments will be addressed in the later in the workshop

6/23 & 6/24 Workshop - Customer Comments (cont.)

Topic	Comment Summary	BPA Response
<p>Transmission Donation</p>	<ul style="list-style-type: none"> • General support for staff recommendation • Staff recommendation not consistent with BPA ROD or other EIM tariffs • Please provide further analysis supporting EIM limitations resulting from firm-only donations. • Aggregate all transmission donations on a single ETSR/Export tag • Provide examples of donations, including redirects of existing reservations • Further evaluate impact of return of losses on donated transmission • Concerned that current loss provisions may be a disincentive to donate transmission • Carefully evaluate rules and approaches for donations • Provide further details on BPA’s analysis and how it influenced the staff recommendation. • Unlimited non-firm should be further evaluated. • Provide clarification on how non-firm donations will not impact quality of how long-term rights are used. • Clarify how ETSRs might help reduce likelihood of curtailments 	<ul style="list-style-type: none"> • Thank you for your comments. These comments will be considered for the initial proposal
<p>Base Schedule Timeline</p>	<ul style="list-style-type: none"> • Support for both T-50 and T-57 <ul style="list-style-type: none"> • T-50 may minimize exposure to congestion costs • T-57 is consistent with other EIM entities • Not clear if additional seven minutes outweighs the potential complexity, costs and burdens • Clarify impacts and risks of changes up to T-20 	<ul style="list-style-type: none"> • Thank you for your comments. The risks and comments will be considered for the initial proposal

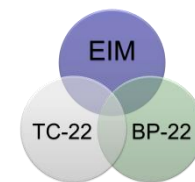
6/23 & 6/24 Workshop - Customer Comments (cont.)

Topic	Comment Summary	BPA Response
Gen Inputs	<ul style="list-style-type: none"> • Would proposed DERS reserves framework be adopted if BPA does not join EIM? • New method for pricing balancing reserves must show that it is revenue neutral compared to current methodology • Customers should have option to use their meteorological forecast • Show impact to BP-22 ancillary rates be if <u>committed scheduling</u> were retained. • Supports pricing different types of capacity with industry standards & market values • Further discuss impacts to OCBR & OMP if BPA joins EIM • Supports a timeline that allows wind resources adequate time to manage and schedule their resource portfolio • BPA super forecast struggles with handling outages, improvement is needed. 	<ul style="list-style-type: none"> • Thank you for your comments more discussion of the DERS and the Gen Inputs rates will be later this workshop and in August • OMP and OCBR will be discussed as part of the Business Practice Change Processes for the EIM (the Oversupply Management BP and the Balancing Reserves Capacity BPA for OCBR)
Transmission Losses	<ul style="list-style-type: none"> • General support for maintaining the status quo, both in-kind and financial • General support for monetizing the value of capacity used by Power Services but should reflect BPA’s capacity cost • General support for the FFI which should be established in tariff proceedings • Eliminating “In-kind” is non-negotiable and should not be part of TC-22 or TC-24 • Acknowledge that how losses are treated in an EIM may be different than network • Any financial settlement rate should be a transmission rate and should be based in embedded costs. • General support of returning losses sooner than 168 hours. • General support for updating transmission loss factor and updating on a regular basis and using seasonal values. • Is there a loss factor for Montana or Southern interties? • BPA should provide further information on administrative and implementation costs and challenges that support staff alternative. 	<ul style="list-style-type: none"> • Thank you for your comments. These will be considered as for the August workshop

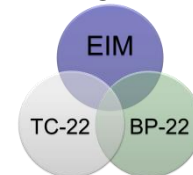
6/23 & 6/24 Workshop - Customer Comments (cont.)

Topic	Comment Summary	BPA Response
Generator Interconnection	<ul style="list-style-type: none"> Supportive of Alt 4 to update Attachment L with both Repower and Replacement provisions 	<ul style="list-style-type: none"> Thank you for your comments
Power Rates	<ul style="list-style-type: none"> Support further exploration of proposal on secondary revenues <ul style="list-style-type: none"> Meets customer needs Reduces agency reliance on secondary revenues Time is now There should be no immediate rate impact Secondary revenue construct should be further considered utilizing customer proposed principles 	<ul style="list-style-type: none"> Thank you for your comments
Hourly Firm & ST ATC	<ul style="list-style-type: none"> Supports retaining Hourly Firm in TC-22 Continue to improve ATC and other factors that could mitigate existing limitations to Hourly Firm Revisit allowing Hourly Firm reservations within the operating day 	<ul style="list-style-type: none"> Thank you for your comments BPA has not identified any of the conditions necessary to reconsider its current Hourly Firm service There is not sufficient data to warrant a reconsideration of the status quo The status quo recommendation allows staff more time to evaluate prior to TC-24, which is in alignment with the settlement agreement

EIM Priority Issues

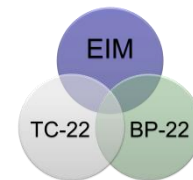


#	Issue	BP-22	TC-22	Future BP/TC
1	EIM Charge Code Allocation	X	?	X
2	EIM Losses	X	X	?
3	Resource Sufficiency	X	X	?
3a	- Balancing Area Obligations	X	X	?
3b	- LSE Performance & Obligations	X	X	?
3c	- Gen Input Impacts	X	X	?
4	Development of EIM Tariff Changes		X	?
5	Transmission Usage for Network	X	X	?
6	Requirements for Participating & Non-Participating Resources	X	X	?
6a	- Participating Resources: Base Scheduling Timeline			
7	Metering & Data Requirements		X	?
8	Evaluation of Operational Controls	X	X	?



Rates & Tariff Topics

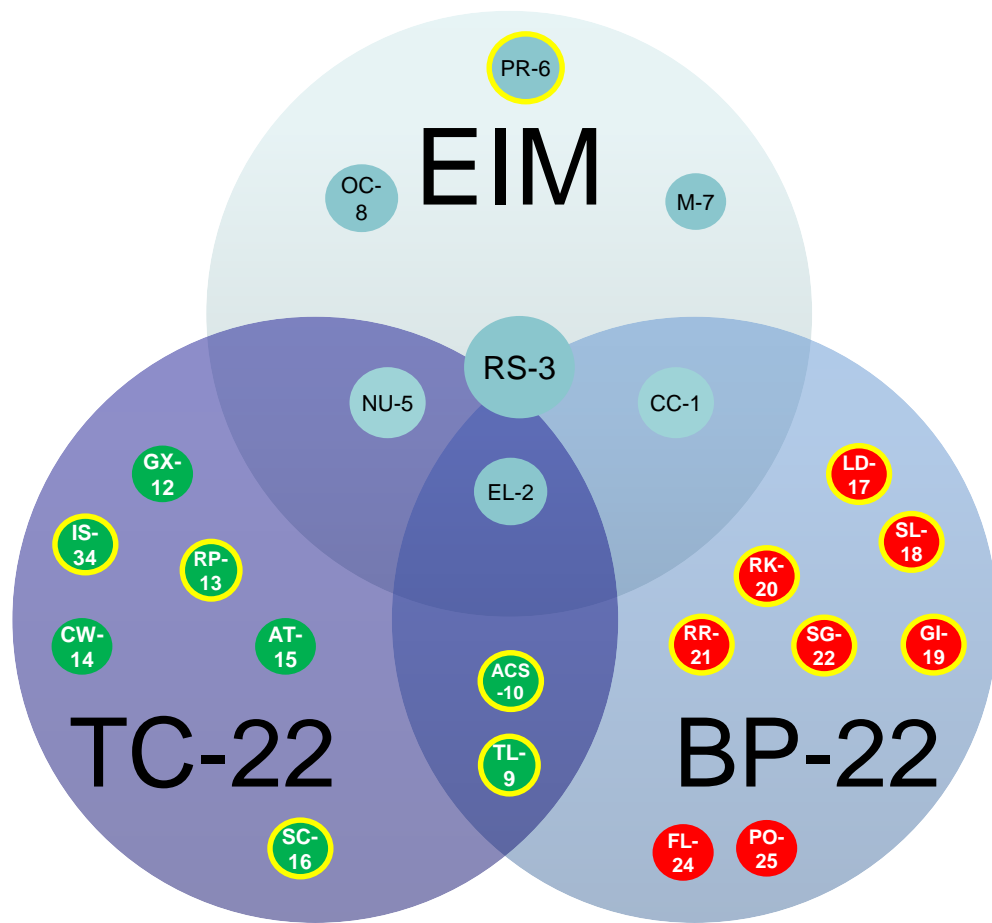
#	Topics	BP-22	TC-22	Future BP/TC
9	Transmission Losses	X	X	
10	Ancillary Services (Gen Inputs)		X	?
11	Debt Management (Revenue Financing)	X		
12	Generator Interconnection		X	
13	Regional Planning		X	
14	Creditworthiness		X	
15	Incremental/Minor Changes to Agreement Templates		X	
16	Seller's Choice		X	
17	Loads	X		
18	Sales	X		
19	Gen Inputs (assumed for BP-22)	X		
20	Risk	X		
21	Revenue Requirements	X		
22	Review of Segments	X		
23	Review of Sale of Facilities	X		
24	Financial Leverage Policy Implementation	X		
25	Power-Only issues	X		



Potential Future Rates & Tariff Issues

#	Issue	BP-22	TC-22	Future BP/TC
26	Simultaneous Submission Window			?
27	Study Process			?
28	Attachment C (Short-term & Long-term ATC)			?
29	Hourly Firm (TC-20 Settlement – Attachment 1: section 2.c.ii)			?
30	Required Undesignation			?
31	Reservation window for Hourly non-firm			?
32	Non-federal NT Redispatch			?
33	PTP/NT Agreement Templates			?
34	Southern Intertie Studies			?
35	De minimus (TC-20 Settlement)			?


BP-22, TC-22 & EIM Integrated Scope



TC	
TL-9	Transmission Losses
ACS-10	Ancillary Services
GX-12	Generator Interconnection
RP-13	Regional Planning
CW-14	Creditworthiness
AT-15	Agreement Templates
SC-16	Seller's Choice
IS-34	Intertie Studies

BP	
LD-17	Loads
SL-18	Sales
GI-19	Gen Inputs
RK-20	Risk
RR-21	Revenue Requirements
SG-22	Segmentation
FL-24	Financial Leverage
PO-25	Power-only

EIM	
CC-1	Charge Code Allocation
EL-2	EIM Losses
RS-3	Resource Sufficiency
NU-5	Network Usage
PR-6	Participating Resources
M-7	Metering
OC-8	Operational Controls

 XX-# Yellow Outline Denotes Current Workshop Topics

WORKPLAN AND PROPOSAL

Engaging the Region on Issues

- After every workshop, BPA will provide a two-week feedback period for customers.
 - Input can be submitted via email to techforum@bpa.gov. Please copy your Power or Transmission Account Executive on your email.
- Issues will be presented according to the following process at workshops (multiple steps might be addressed in a single workshop):

Phase One: Approach Development

Step 1:
Introduction & Education

Step 2:
Description of the Issue

Phase Two: Evaluation

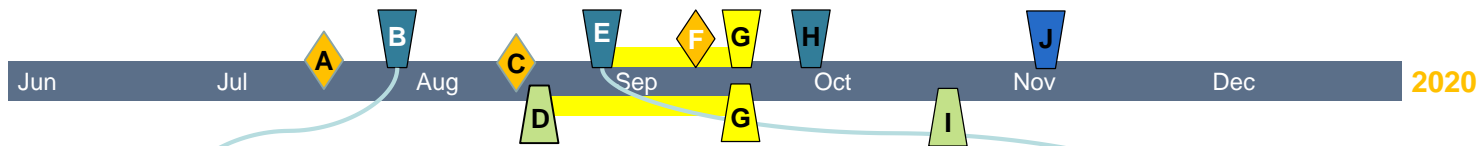
Step 3:
Analyze the Issue

Step 4:
Discuss Alternatives

Phase Three: Proposal Development

Step 5:
Discuss Customer
Feedback

Step 6:
Staff Proposal



July 28-30, 2020

- Seller's Choice
 - Steps 5-6 (SC-16)
- Generator Interconnection
 - Steps 5-6 (GX-12)
- Generation Inputs: Energy Imbalance, Generation Imbalance, Persistent Deviation and Intentional Deviation
 - Steps 1-4 (ACS-10)
- Requirements for Participating Resources & Non-participating Resources
 - Steps 5-6 – Enabling Agreement (PR-6)
 - Steps 5-6 – Transmission Reservations (PR-6)
- Participating Resources: Base Schedule Timeline
 - Steps 5-6 (PR-6)
- Review Tariff red line (GI-19)
- Revenue Requirement (SL-18)
- Transmission Rates
 - Sales (LD-17)
 - LGIA (RR-21)
 - EIM Charge Code Implementation (RR-21)
- Power Rates
 - Tier 2 Rates (RR-21)
 - EIM Benefits and Charges in Base Power Rates (RR-21)
- Southern Intertie Studies

Phase III EIM Draft Letter (8/14):

Decision Finalized in EIM Letter

- Sub Allocation of Resource Sufficiency
- Non Federal Resource Participation
- Metering
- EIM Losses

Other decisions that will be part of the Tariff or Rate Case

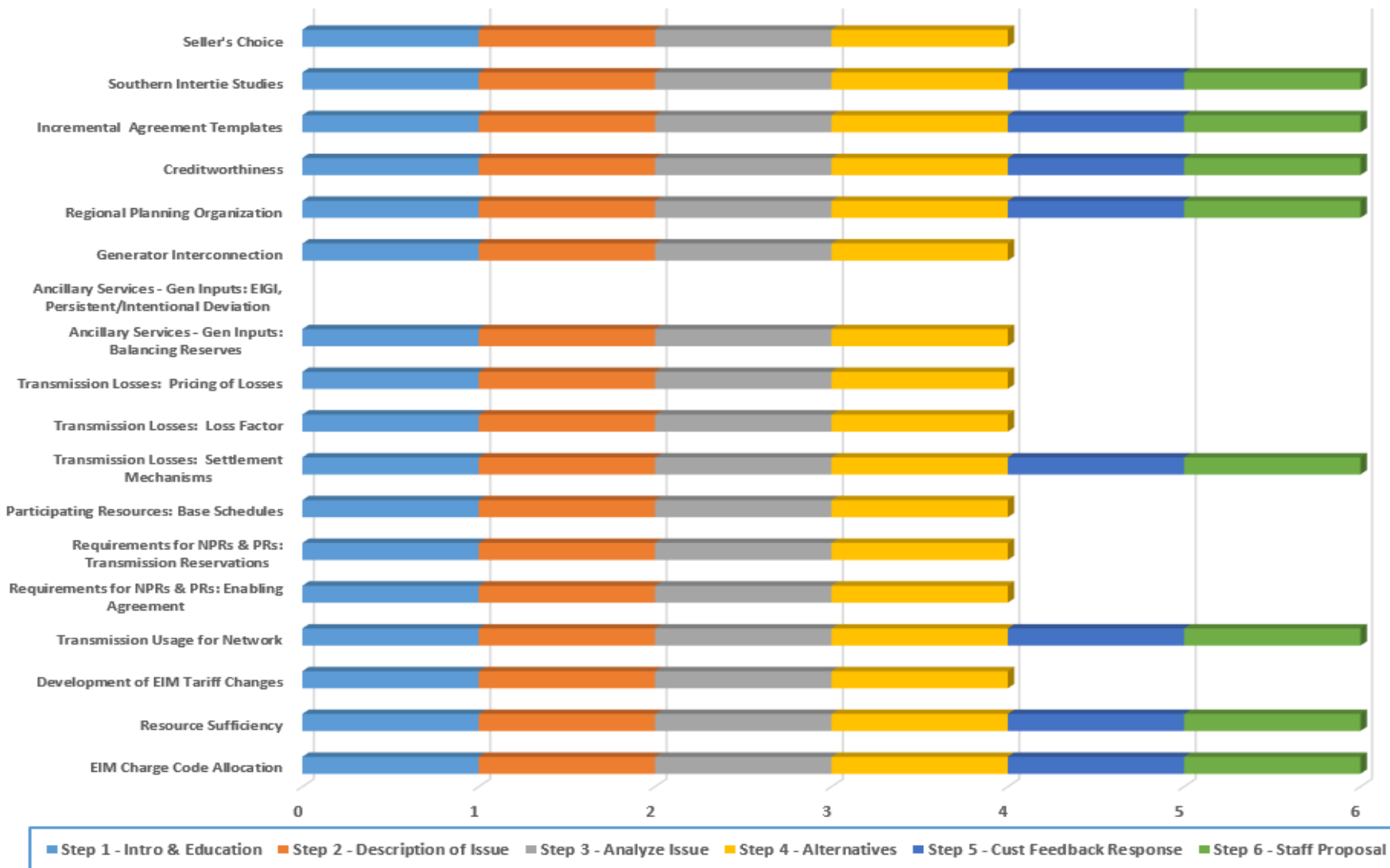
August 25-26, 2020

- Summary of Topics & Policy – Staff Leaning through the end of August
- Transmission Losses steps 5 & 6
 - Loss Factor (TL-9)
 - Pricing (RR-20)
- Draft Transmission Rates
 - Rate Schedules (RR-21)
 - Rates Modeling (RR-21)
 - EIM Charge Code Implementation (SG-22)
 - Cost Recovery of Losses (SG-22)
- Ancillary Services: Generation Inputs
 - Steps 5-6 (ACS-10)
- Power Rates
 - Loads & Resources
 - Gas and Market Price Forecasts
 - Secondary Revenue Forecast
 - Transfer Service
 - Follow-up: Treatment of EIM Charge Codes
 - Follow-up: Section 7(f) Power Rate Options
 - Net Secondary Revenue Proposal

Timeline Key

- A. 7/15: Customer Led Workshop
- B. 7/28-30: July Workshop
- C. 8/12: Customer Led Workshop
- D. 8/14: EIM Phase III Draft
- E. 8/25-26: August Workshop
- F. 9/9: Customer Led Workshop
- G. 9/18: Customer Comment Deadline
- H. 9/22: (September Workshop)
- I. 10/14: EIM Phase III Letter
- J. November: TC-22 & BP-22 Initial Proposal

Status of Topics as of 7/27/20



ISSUE #6: REQUIREMENT FOR PARTICIPATING & NON-PARTICIPATING RESOURCES:

Enabling Agreements

Step 5: Discuss Customer Feedback

Step 6: Staff Proposal

Transmission Reservations

Step 5: Discuss Customer Feedback

Step 6: Staff Proposal

TX AGREEMENT TX RESERVATION REQUIREMENT

Review of Issues

Review of Issues

Transmission Agreement

- **Issue:** What type of service agreement is needed to allow resources to become Participating Resources?
- **Objective:** Allow Non-federal resources to elect to be a Participating Resource in the EIM while ensuring they are subject to the terms of the BPA tariff.

Transmission Reservation

- **Issue:** Will Participating Resources be required to reserve transmission, and if so, how much and what type?
- **Objective:** Ensure BPA is compensated for use of its transmission that supports EIM dispatches.

Baseline: Terms of EIM Entity Tariff

Transmission Agreement

- Current EIM Entities have adopted tariff language that requires Participating Resources to have either a Network Integration Transmission Service (NT) agreement, a firm PTP enabling agreement or a non-firm enabling agreement with the Transmission Provider associated with the EIM Entity.
 - In practice, the other EIM Entities are using their non-firm enabling agreement for EIM Participating Resources not taking transmission service.

Transmission Reservation

- Current EIM Entities do not require Participating Resources to reserve transmission to participate in the EIM.

Areas and Risks to Be Analyzed

- Pro Forma Tariff and/or Industry Standards or Industry Best Practices.
- Participating Resources in the BPA BAA are subject to the terms of the BPA tariff.
- BPA is compensated for use of its transmission that supports EIM dispatches.
- Promote an efficient EIM market.
- Bonneville's participation is discretionary and Bonneville retains its ability to effectively exit the market in the event participation is no longer consistent with these principles.

Review of Step 4: Alternatives

Alternatives: Transmission Agreement

- Alternative #1: Status Quo – Rely on existing NT and Point-to-Point service agreements
 - BPA does not have separate enabling agreements for firm PTP and non-firm PTP.

- Alternative #2: Develop a simple EIMPR Agreement
 - BPA would draft a new EIMPR agreement for new EIMPRs that do not already have an enabling agreement binding them to the BPA Tariff.
 - This agreement would be for EIMPRs that are only going to be price takers in the market.
 - EIMPRs that are submitting schedules will have a standard enabling agreement.

Alternatives: Transmission Reservation

- Alternative #1: Do not require a transmission reservation or charge for use of transmission.

- Alternative #2: Require a transmission reservation of some sort without any additional charge for use of transmission:
 - A. Require a transmission reservation of some sort without any additional charge for use of transmission.
 - B. Require a transmission reservation of some sort and charge the corresponding PTP rate for use that exceeds the reserved amount.
 - C. Require a transmission reservation to cover all EIM dispatches and apply the UIC to any unreserved use (Either Firm or Non-Firm Point-to-point).

Step 5: Customer Feedback to Alternatives and BPA Responses

Customer Feedback on Alternatives

Topic	Comment Summary	BPA Response
EIMPR Transmission Reservation	<ul style="list-style-type: none"> • There was recognition that not requiring transmission reservations for a participating resource in BPA’s BAA likely introduces minimal risk in the BP-22 period. However, there are some concerns about BPA establishing this as a longer-term policy: <ul style="list-style-type: none"> • How will the agency determine whether a change may be needed in future rate periods. What are some of the metrics BPA will track after going live to help the agency make that decision? • How does ongoing discussions on transmission use in the potential extended day-ahead market interact with BPA staff’s proposal? 	<p>BPA will be looking at whether this continues to meet our principle of BPA being compensated for Transmission used by the EIM.</p> <p>This policy is for Participating Resources in the EIM. BPA will need to address transmission reservation requirements for Participating Resources in the extended day-ahead market separately.</p>

Step 6: Staff Proposal for Transmission Agreement

Evaluation of Alternatives: Transmission Agreement

Decision Criteria	Alternative 1: Status Quo, Existing Service Agreements	Alternative 2: New Enabling Agreement for EIMPRs
<p>BPA tariff language is aligned with the pro forma tariff and/or industry standard</p>	<ul style="list-style-type: none"> • Consistent with what other EIM entities are doing (BPA attachment A consistent with the non-firm template of others) <ul style="list-style-type: none"> • BPA’s attachment A/PTP is applicable to both firm and nonfirm • BPA is proposing a change to address the service commencement language in Attachment A 	<ul style="list-style-type: none"> • Not consistent with what other EIM entities are doing
<p>BPA is able to maintain reliable delivery of power and transmission to its customers</p>	<ul style="list-style-type: none"> • Would not impact the reliable delivery of power and transmission 	<ul style="list-style-type: none"> • Would not impact the reliable delivery of power and transmission
<p>BPA’s participation is discretionary and BPA retains its ability to effectively exit the market in the event participation is no longer consistent with these principles</p>	<ul style="list-style-type: none"> • BPA retains its ability to effectively exit the market - Little impact to EIMPRs 	<ul style="list-style-type: none"> • BPA retains its ability to effectively exit the market - Impact to EIMPRs that do not have an NT or PTP enabling agreement

Evaluation of Alternatives: Transmission Agreement

Decision Criteria	Alternative 1: Status Quo, Existing Service Agreements	Alternative 2: New Enabling Agreement for EIMPRs
<p>Participating Resources in the BPA BAA are subject to the terms of the BPA tariff</p>	<ul style="list-style-type: none"> Participating Resources in the BPA BAA would be subject to the terms of the BPA tariff 	<ul style="list-style-type: none"> Participating Resources in the BPA BAA would be subject to the terms of the BPA tariff
<p>The successful alternative should not unduly impinge on efficient market operation</p>	<ul style="list-style-type: none"> Consistent 	<ul style="list-style-type: none"> Consistent
<p>Minimize cost and implementation complexity</p>	<ul style="list-style-type: none"> Minimal Administrative burden for BPA and Customers 	<ul style="list-style-type: none"> Administration burden for BPA and Customers <ul style="list-style-type: none"> A new Enabling Agreement would have to be developed Need to include in EIM BP

Staff Recommendation

- Staff is recommending Alternative 1 – Status Quo; BPA will include language in its Tariff (attachment Q) that requires Participating Resources to have either a Network Integration Transmission Service (NT) agreement or a PTP enabling agreement with BPA.

Proposed Tariff Language

3.1 Internal Resources - Transmission Rights

Resources owned, ~~or~~ controlled, **or marketed** by Transmission Customers and located within the metered boundaries of BPA's BAA are eligible to become BPA EIM Participating Resources. The Transmission Customer that owns, ~~or~~ controls, **or markets** the resource must have associated transmission rights based on one of the following:

(1) The resource is a designated Network Resource of a Network Customer and the Network Customer elects to participate in the EIM through its Network Integration Transmission Service Agreement ; or

(2) The resource is associated with ~~either (i) a Service Agreement for Firm Point-to-Point Transmission Service., or (ii) a Service Agreement for Non-Firm Point-to-Point Transmission Service, and such Transmission Customer elects to participate in the EIM~~

STEP 6: STAFF PROPOSAL FOR TRANSMISSION RESERVATION

Evaluation of Alternatives: Transmission Reservation

Decision Criteria	Alternative 1: No Transmission Reservation	Alternative 2: Require Transmission Reservation to some extent
<p>BPA tariff language is aligned with the pro forma tariff and/or industry standard</p>	<ul style="list-style-type: none"> Aligns with industry best practices 	<ul style="list-style-type: none"> Does not align with industry best practices <ul style="list-style-type: none"> Potentially inconsistent with the Commission's ruling on the 2014 PAC proposal
<p>BPA is able to maintain reliable delivery of power and transmission to its customers</p>	<ul style="list-style-type: none"> Would not impact the reliable delivery of power and transmission 	<ul style="list-style-type: none"> Would not impact the reliable delivery of power and transmission <ul style="list-style-type: none"> Potential for increased donations of transmission to EIM if the EIMPR donates the extra transmission.
<p>BPA's participation is discretionary and BPA retains its ability to effectively exit the market in the event participation is no longer consistent with these principles</p>	<ul style="list-style-type: none"> BPA retains its ability to effectively exit the market - Impact to EIMPRs who have not acquired transmission reservations. <ul style="list-style-type: none"> If BPA exits the market, EIM PRs would need transmission reservations in order to schedule their generation 	<ul style="list-style-type: none"> BPA retains its ability to effectively exit the market – Little impact to EIMPRs <ul style="list-style-type: none"> EIM PRs would already have transmission reservations to some extent

Evaluation of Alternatives: Transmission Reservation

Decision Criteria	Alternative 1: No Transmission Reservation	Alternative 2: Require Transmission Reservation to some extent
Consistent with a sound business rationale	<ul style="list-style-type: none"> • May result in less Transmission revenue 	<ul style="list-style-type: none"> • Potential increase in Transmission revenue
BPA is compensated for use of its transmission that supports EIM dispatches	<ul style="list-style-type: none"> • BPA is compensated for Transmission used in EIM (EIM uses donated transmission and transmission already purchased to serve load in the BAA) <ul style="list-style-type: none"> • Transmission donated to the EIM is paid for by the Transmission customer 	<ul style="list-style-type: none"> • BPA is compensated for Transmission use in EIM <ul style="list-style-type: none"> • May be viewed as over collecting for Transmission
The successful alternative should not unduly impinge on efficient market operation	<ul style="list-style-type: none"> • Consistent 	<ul style="list-style-type: none"> • May limit participation by non-Federal resources if EIMPR is required to buy a significant amount of transmission capacity
Minimize cost and implementation complexity	<ul style="list-style-type: none"> • Minimal administrative burden for BPA and customers 	<ul style="list-style-type: none"> • Some administration burden for BPA and customers <ul style="list-style-type: none"> • Customers would need to acquire transmission reservation to some extent • BPA would need to check that the customer had transmission reservation

Staff Recommendation

- Staff is recommending Alternative 1 – Do not require a Participating Resource to have transmission reservations.

ISSUE #6A: PARTICIPATING RESOURCES: BASE SCHEDULE TIMELINES

Step 5: Discuss Customer Feedback

Step 6: Staff Proposal

Review of Issues

Review of Scheduling Timeline Issues

- The EIM base schedule timeline establishes the points in time that data is needed, and the point in time against which imbalance is measured (IIE and UIE)
- The EIM scheduling timeline requires financially binding base schedules be submitted significantly earlier than the WECC Scheduling Timelines that BPA follows today

Baseline: Terms of EIM Entity Tariff

The other EIM Entities' base schedule timeline requires:

4.2.4.5.1 Preliminary Submission of Transmission Customer Base Schedules by Transmission Customers with Resources Or Load in the PGE BAA.

- Transmission Customers with resources or load in the PGE BAA shall submit their initial Transmission Customer Base Schedules 7 days prior to each Operating Day (“T - 7 days”). Transmission Customers may modify the proposed Transmission Customer Base Schedule at any time but shall submit at least one update by 10 a.m. of the day before the Operating Day.

Baseline: Terms of EIM Entity Tariff

- The other EIM Entities in the Northwest have adopted base schedule timelines consistent with the EIM Scheduling Timelines.
 - Transmission Customers shall submit initial generation Forecast Data for each resource no later than 77 minutes prior to each Operating Hour (“T-77”). Transmission Customers may modify generation Forecast Data until 57 minutes prior to the Operating Hour (“T-57”). As of 55 minutes prior to each Operating Hour (“T-55”), the generation Forecast Data for the Operating Hour will be considered financially binding and Transmission Customers may submit no further changes.

Areas and Risks to Be Analyzed

- Pro Forma Tariff and/or Industry Standards or Industry Best Practices
 - Does not create seams between BPA and the other EIM Entities
 - Is conducive to EIM participation
- Facilitate Passing the Resource Sufficiency tests
- Consider impact to transmission customers
- Is consistent with BPA's EIM participation model:
 - Provide sufficient time in the EESC adjustment period for changes to be made to base schedules – time for the BPA BA to do its job
- Minimize cost and implementation complexity

Review of Step 4: Alternatives

Alternatives

- **Alternative #1: Status Quo – All financially binding at T-57**
 - Since BPA's current timeline is not compatible with the EIM base schedule timeline, for purposes of this decision, the status quo is based on the EIM base schedule timeline in the transmission tariffs of the existing EIM Entities

- **Alternative #2: T-50 – Allow change to Base Schedules up to T-50**
 - This would require the EESC to make base schedule changes on behalf of the customers after T-55
 - May require the BA to make offsetting adjustments to FCRPS base schedules in order to pass the RS and load over/under tests
 - Pushing the time for setting base points (no room for error); limited time to balance for BA need

Step 5: Customer Feedback to Alternatives and BPA Responses

Customer Feedback on Alternatives

Topic	Comment Summary	BPA Response
Advantages of T-50	<ul style="list-style-type: none"> • It was noted that T-50 would allow customers seven additional minutes to finish transactions, arrange for transmission, and make schedule changes before submitting a financially binding schedule, which would reduce some of the exposure to EIM imbalance and congestion costs. • However, concern was also expressed about the feasibility of using T-50. It is not clear that the benefits from the additional seven minutes would be outweighed by burdens, including additional market complexity for all market participants. 	<p>Thank you for your comments. BPA is evaluating whether there is a compelling reasons to do something different than the Status Quo (EIM timeline).</p> <p>BPA has addressed the pros and cons/risks of the alternatives as part of Step 6, Staff Proposal for Solution.</p>
Advantages of T-57	<ul style="list-style-type: none"> • Other customer noted that the T-57 standard has already impacted the bi-lateral trading window. Decisions to change after T-57 will be based more on significant changes in load or generation forecast vs EI/GI design. • Some neighboring EIM Entities expressed concern with the potential seams issues that the use of T-50 would create. They strongly encourage BPA to adopt the status quo T-57 deadline for base schedule submissions. 	<p>BPA is evaluating whether there is a compelling reasons to do something different than the Status Quo (EIM timeline).</p> <p>BPA has addressed the pros and cons/risks of the alternatives as part of Step 6, Staff Proposal for Solution.</p>

Customer Feedback on Alternatives

Topic	Comment Summary	BPA Response
Seams Issues	<p>There was disagreement regarding seams issues that may be created if T-50 is used.</p> <p>Some customers expressed the opinion that T-50 would not create dysfunction between markets and impede day-to-day operations.</p> <p>Some neighboring BAs commented that to adopt a base schedule submission deadline other than that of T-57, would create significant operational and settlements seams issues between BPA and adjacent EIM Entities. The base schedules between BPA and adjacent EIM Entities would not match, which would result in the adjacent EIM Entities becoming unbalanced and needing to take other actions to balance by T-40.</p>	<p>BPA tends to agree with the position expressed by neighboring BAs concerning seams impacts.</p> <p>BPA has addressed the pros and cons/risks of the alternatives as part of Step 6, Staff Proposal for Solution.</p>

Customer Feedback on Alternatives

Topic	Comment Summary	BPA Response
<p>Wheel-throughs</p>	<p>There was disagreement regarding impacts of wheel-throughs</p> <p>Some customers expressed the opinion that equal and offsetting changes for wheel-through transactions appear to have no negative consequences for the Balancing Area, so long as those changes are made prior to T-40. It is suggested that customers be allowed to submit changes to wheel-through schedules at least up until T-40.</p> <p>Some neighboring EIM Entities commented that since CAISO determines imbalances from the base schedules, wheeling customers would have different imbalance calculations across entities based on the timing of when the base schedules are submitted. It could result in one side of the wheel-through submitting the base schedule at T-57 versus the other side of the wheel-through submitting at T-50. The imbalance assessed to the e-Tag by CAISO would be different for the adjacent BA compared to BPA, thus customers’ statements from the various transmission providers could be very difficult to reconcile. In order for settlements to be applied consistently and accurately, base schedule submission timelines should align with all adjacent EIM Entities.</p>	<p>BPA tends to agree with the position expressed by neighboring BAs concerning wheel-through impacts.</p> <p>BPA has addressed the pros and cons/risks of the alternatives as part of Step 6, Staff Proposal for Solution.</p>

Step 6: Staff Proposal for EIM Base Schedule Timeline

Evaluation of Alternatives – Base Schedule

Decision Criteria	Alternative 1: Status Quo, Financially binding at T-57	Alternative 2: Financially binding at T-50
<p>BPA tariff language is aligned with the pro forma tariff and/or industry standard or Industry Best Practices</p> <ul style="list-style-type: none"> • Does not create seams issues between BPA and other EIM Entities • That is conducive to EIM participation 	<ul style="list-style-type: none"> • Consistent with what other EIM Entities require • No seams issue with other EIM Entities 	<ul style="list-style-type: none"> • Is not consistent with what other EIM Entities require • Creates operational and settlements seams issues with other EIM Entities that require T-57 <ul style="list-style-type: none"> • Can cause imbalance in adjacent EIM Entities which could lead to them needing to commit more capacity or fail the resource sufficiency test at T-40
<p>BPA’s participation is consistent with BPA’s EIM participation model:</p> <ul style="list-style-type: none"> • Provide sufficient time for EESC adjustment period for changes to base schedules – time for BA to do its job 	<ul style="list-style-type: none"> • Consistent with BPA’s EIM participation model: <ul style="list-style-type: none"> • Time for EESC to adjust base schedules • Utilicast advised BPA that given the amount of work that is needed between T-57 and T-40, BPA should not move to T-50 	<ul style="list-style-type: none"> • Risk with BPA’s EIM participation model: <ul style="list-style-type: none"> • Limited time for EESC to adjust base schedules

Evaluation of Alternatives – Base Schedule

Decision Criteria	Alternative 1: Status Quo, Financially binding at T-57	Alternative 2: Financially binding at T-50
<p>Consider impact to transmission customers</p>	<p>Impact to customers due to financial binding earlier than today (37 minutes)</p> <ul style="list-style-type: none"> • Experience larger imbalance • Potential congestion charges for Wheel-throughs 	<p>Impact to customers due to financial binding earlier than today (30 minutes)</p> <ul style="list-style-type: none"> • Provides a little more time for customers, however BPA is not sure that the reduction in exposure to EIM imbalance and congestion cost by moving to T-50 would be significant since it does not fully address the impacts and the customers are still exposed when compared to today. <ul style="list-style-type: none"> • Experience larger imbalance • Potential congestion charges for Wheel-throughs • It is not clear that the benefits from the additional seven minutes would be outweighed by burdens, including additional market complexity for all market participants.

Evaluation of Alternatives – Base Schedule

Decision Criteria	Alternative 1: Status Quo, Financially binding at T-57	Alternative 2: Financially binding at T-50
Facilitate Passing the Resource Sufficiency test, (balancing test)	<ul style="list-style-type: none"> Facilitates passing the RS test 	<ul style="list-style-type: none"> Adds risk to Passing the RS test Advise from Utilitcast: A T-57 customer base schedule deadline allows BPA to see how the final customer base schedules align with the final load forecast for the T-55 tests, providing a clearer target for adjustments prior to T-40. Moving the deadline to T-50 would complicate this assessment
Minimize cost and implementation complexity	<ul style="list-style-type: none"> Minimized cost and implementation complexity 	<ul style="list-style-type: none"> Additional administrative burden

BPA Staff Recommendation

- BPA staff recommends the Status Quo, T-57. There does not seem to be compelling reasons to do something different than the Status Quo (EIM timeline).
 - Moving the financially binding point to T-50 does not alleviate the impact to customers of having an EIM financially binding point earlier than T-20 (the extra 7 minutes does not buy the customer much).
 - BPA staff factored in Utilicast's recommendation that BPA not shorten the Base Schedule Submission deadline
 - Many parties that are trading in the market are already held to T-57 due to their EIM trading partners.
 - Seems impact on neighboring BAs if BPA were to use T-50.

Proposed Tariff Language

4.2.4.5.1 Preliminary Submission of Transmission Customer Base Schedules by Transmission Customers with Resources Or Load in the BPA BAA.

Transmission Customers with resources or load in the **BPA** BAA shall submit their initial Transmission Customer Base Schedules **to the BPA EIM Entity** 7 days prior to each Operating Day (“T - 7 days”). Transmission Customers may modify the proposed Transmission Customer Base Schedule at any time but shall submit at least one update **to the BPA EIM Entity** by 10 a.m. of the day before the Operating Day.

Proposed Tariff Language

4.2.4.5.2 Final Submissions of Transmission Customer Base Schedules

Transmission Customers shall submit proposed final Transmission Customer Base Schedules **to the BPA EIM Entity, ~~at any time but~~** no later than 77 minutes prior to each Operating Hour (“T-77”). Transmission Customers may modify Transmission Customer Base Schedules up to and until 57 minutes prior to the Operating Hour (“T-57”). As of 55 minutes prior to each Operating Hour (“T-55”), the Transmission Customer Base Schedule data for the Operating Hour **~~is will be considered~~** financially binding and Transmission Customers may not submit further changes **without incurring financial settlements**. If the Transmission Customer fails to enter a Forecast Data value, the default will be 0 MW for that Operating Hour.

Timing for Transmission Donations for ETSRs Revisit of Step 4:

Baseline: Tagging Transmission Donations for ETSRs

- BPA will follow the policy laid out in the implementation agreement to only allow Interchange Rights Holder Donation. BPA stated in the September 2019 ROD that BPA would not use the ATC donation method.

Objectives and Criteria of Evaluation

Transmission Donation for ETSRs

- Establish a donation timeline that:
 - Is Pro Forma Tariff and/or Industry Standards or Industry Best Practices
 - Does not create seams issues between BPA's Interchange Rights Holder donations and other EIM Entities transmission donations
 - Does not negatively impact Interchange Rights Holder use of transmission in other markets, and
 - Allows for the donated transmission to be included in the Resource Sufficiency test

Alternatives

- BPA is evaluating the following alternatives for Timing for Transmission Donations for ETSRs
 - Alternative #1: Require Interchange Rights Holders to tag their donations by T-75
 - This alternative is consistent with what other EIM Entities have adopted
 - Alternative #2: Require Interchange Rights Holders to tag their donations by T-75 and allow adjustments to tags until T-40
 - Other EIM entities require Interchange Rights Holders to tag their donations by T-75 and ATC (TSP) donations by T-40.
 - BPA will follow the policy laid out in the implementation agreement to only allow Interchange Rights Holder Donation.
 - (NEW) Alternative #3: Require Interchange Rights Holders to submit TSRs for their donations by T-77 and require BPA to create ETSR tag by T-75.

Why the New Alternative?

- **Neighboring BA Comments and impacts:**
 - E-Tags between BAs need to be approved by both BAs.
 - BPA has heard from some of the neighboring BAAs that they need us to work with them on how to address the transmission donations for ETSRs.
 - Some have stated that they do not want a bunch of dynamic tags from multiple customers between BPA and their BA on a single EIM path. They would prefer one dynamic tag authored by BPAT.

- **Timing for Resource Sufficiency Test:**
 - A donation right at T-75 may be too late to be included in the RS test
 - BPA needs the time to aggregate the donated transmission and submit a dynamic e-Tag to the neighboring BAs in order to have it included in the first Resource Sufficiency test.

High Level Process

- Interchange Rights Holders would submit Transmission Service Requests (TSRs) for EIM transfer paths (either original or redirect) by T-77
- By T-75 BPA would create or update a single e-Tag for each EIM transfer path by stacking all approved TSRs on that path

Possible Tariff Language for Alt 3

5.2 Provision of EIM Transfer Capacity by a BPA Interchange Rights Holder

The BPA EIM Entity shall facilitate the provision of transmission capacity for EIM Transfers offered by a BPA Interchange Rights Holder by providing the MO with information about the amounts made available by the BPA Interchange Rights Holder for EIM Transfers. The provision of EIM Transfer capacity shall be implemented through the BPA Interchange Rights Holder's submission of ~~an e-Tag~~ a **Transmission Service Request on an EIM transfer path** by 775 minutes prior to the Operating Hour ("T-775").

Possible Tariff Language for Alt 3 (continued)

By T-75 the BPA ~~Interchange Rights Holder~~ EIM Entity shall submit or update an e-Tag for each EIM transfer path for which a BPA Interchange Rights Holder has donated transmission. ~~include on~~ The e-Tag will include the OASIS identification reservation number(s) associated with the transmission rights made available for EIM Transfers and shall also include the Market Operator, all transmission providers, and path operators associated with the OASIS identification reservation number(s) identified on the e-Tag. The BPA Interchange Rights Holder's rights associated with the submitted e-Tag shall be available for the EIM, subject to approval of the e-Tag by all required e-Tag approval entities. The amount of transmission made available for EIM Transfers shall never exceed ~~the that which is donated by~~ BPA Interchange Rights Holders ~~transmission rights~~.

Next Steps

- BPA requests customer feedback on:
 - Transmission Donation Timing for ETSRs
 - Proposed process for Alternative #3
 - Please submit to techforum@bpa.gov Aug 12 (with a copy to your account executive)

ISSUE #10: ANCILLARY SERVICES: GENERATION INPUTS

EI/GI Service Rates

PD/ID Penalties

Step 1: Introduction & Education

Step 2: Description of the Issue

Step 3: Analyze the Issue

Step 4: Discuss Alternatives

Objective

- BPA currently uses the following mechanisms to incentivize proper scheduling behavior:
 - Energy Imbalance (EI) Bands,
 - Generation Imbalance (GI) Bands,
 - Intentional Deviation Penalty (ID), and
 - Persistent Deviation Penalty (PD)

- If BPA joins the EIM, BPA must decide whether to keep, remove, or modify these existing incentive mechanisms

Timeline

Phases One and Two: Approach and Evaluation

- Step 1: Introduction & Education
- Step 2: Description of the Issue
- Step 3: Analyze the Issue
- Step 4: Discuss Alternatives

Today's Workshop

Phase Three: Proposal Development

- Step 5: Customer Feedback
- Step 6: Staff Proposal

August 25-26
Workshop

Context: Charge Code Policy Direction

- BPA staff propose to begin the BP-22 Initial Proposal development pursuing a phased in charge code allocation approach for EIM charge codes.
- For BP-22, staff propose to begin with BPA-defined partial sub-allocation.
- Due to the proposed sub-allocation including base codes and over/under scheduling penalty codes, BPA is reviewing the interactions with existing rate mechanisms.

Issue: EI/GI SERVICE RATES AND PENALTIES

EI/GI Deviation Bands

- Designed to incentivize accurate scheduling
- Costs are added or payments reduced when scheduled energy deviates outside of pre-defined levels
- Accounting for hourly schedules is on an hourly basis
- Accounting for intra-hour schedules is on the customer's shortest scheduling period in the hour

PD Penalties

- PD applies to loads and DERs
- Minimize accumulation of imbalance energy in either a positive or negative direction
- Provide a mechanism for identifying and deterring schedule errors that are inconsistent with BPA's rate case assumptions regarding capability for accurate scheduling
 - Rate case assumes zero energy imbalance
- Provide an incentive to adopt best scheduling practices, and discourage use of balancing services as an alternative to corrective market actions

ID Penalties

- ID applies to VERs
- Maintain balancing reserve capacity availability and preserve system reliability
- Provide a mechanism for identifying and deterring schedule errors that are inconsistent with BPA's expectations regarding accurate scheduling
- Provide an incentive to adopt best scheduling practices, and discourage use of balancing services as an alternative to corrective market actions

EIM Over/Under Scheduling Penalty

- CAISO developed the Over/Under (O/U) Scheduling Penalty to discourage EIM entities from leaning on the market to serve load

- The O/U Scheduling Penalty is applied to the BAA when the following two conditions are not met:
 - The BAA scheduled within 1% of the CAISO's Area Load Forecast (ALF)
 - The BAA scheduled within 5% of its actual area load

Alternatives

EI/GI Alternatives

Given EIM Charge Code Policy Direction, ALL alternatives assume sub-allocation of the base codes for the EIM. Therefore, in alternatives where the EI/GI Deviation Bands are retained, bands would be in addition to the sub-allocated charges/credits.

- **Alternative 1: Retain Status Quo EI/GI Deviation Bands and Existing Pricing (Mid-C Index)**
- **Alternative 2: Retain EI/GI Deviation Bands and Adopt CAISO EIM Pricing (LAP and LMP)**
- **Alternative 3: Remove Existing EI/GI Deviation Bands**

Note: Under any alternative, the EI/GI Deviation Bands will be maintained as the contingency plan if BPA is outside the EIM market at any point.

Alternative 1: Retain Status Quo Deviation Bands and Existing Pricing (Mid-C)

- Pros
 - EI/GI deviation bands incentivize accurate scheduling
- Cons
 - As more entities join the EIM, there may be fewer bilateral transactions in real-time at the Mid-C trading hub and the current price index for EI/GI may not reflect the “true” value of energy
 - Risk of exposure to differences between prices at which EIM transactions are settled (LMP) and the price index EI/GI is settled (hourly bilateral index)
 - Customer option for physical returns after imbalance occurs creates a risk of difference in energy valuation
 - Poses seams risk, as other entities have not maintained deviation bands in addition to sub-allocating the EIM base codes
 - EIM requirements to submit schedules earlier than today exposes customers increases exposure to EI/GI
 - FERC ruling did not support retaining *pro forma* penalty tiers for EI/GI in combination with the EIM structure

Alternative 2: Retain Deviation Bands and Adopt CAISO EIM Pricing (LAP and LMP)

- Pros
 - EI/GI deviation bands incentivize accurate scheduling
 - Updates EI/GI pricing to align with the EIM market pricing
- Cons
 - See Status Quo Cons

Alternative 3: Remove Existing EI/GI Deviation Bands

■ Pros

- Alignment with other EIM Entities
- Removes price index risk, as bands are not based on Mid-C index
- Imbalance may increase due to updated EIM scheduling timelines, but removal of EI/GI deviation bands would reduce the impact of transitioning to the timeline
 - Customers will still have charges/credits associated with the EIM imbalance charge codes

■ Cons

- Loss of scheduling incentive may lead to reliance on the Persistent Deviation penalty

PD/ID Penalty Alternatives

- **Alternative 1: Status Quo: Keep the ID and PD penalties**
- **Alternative 2: Remove one or both of the ID and PD penalties**
- **Alternative 3: Modify the ID and PD penalties**
Modification Options Still Under Review

Context

- BPA sets Balancing Reserves Capacity based on expected variability of scheduling practices
- Poor scheduling by load and generators could make it more difficult for the BAA to pass the RS tests
- The O/U scheduling penalty doesn't apply if the BAA balances to the CAISO ALF
 - O/U scheduling penalty disincentivizes the BAA from leaning on the market to serve load, and the PD penalty disincentivizes individual customers from leaning on the BAA to serve load

Alternative 1: Keep the Penalties

Pros

- BPA sets Balancing Reserves Capacity based on expected variability of scheduling practices, and PD/ID penalties incentivize customers to schedule within that expected variability
- ID/PD penalties directly incentivize loads and generators to schedule accurately and not accumulate imbalance energy
 - The EIM's O/U scheduling penalty is at the BAA-level, and doesn't apply if the BAA balances to the CAISO's ALF

Alternative 1: Keep the Penalties

Cons

- If the BAA incurs an O/U scheduling penalty, a load customer could potentially incur both a portion of the O/U penalty plus a PD penalty
 - These penalties are addressing different issues, as described in the Context slide
- Other EIM entities do not have ID/PD penalties
 - However, these entities did not have ID/PD penalties prior to joining the EIM

Alternative 2: Remove the Penalties

Pros

- Other EIM entities have not used ID/PD penalties pre or post EIM
- Removing the PD/ID penalties would reduce the potential costs to customers caused by scheduling errors
- If the BAA incurs an O/U scheduling penalty, a load customer would not potentially incur both a portion of the O/U penalty plus a PD penalty

Alternative 2: Remove the Penalties

Cons

- Loads and generators may have less of an incentive to schedule accurately and avoid accumulating imbalance energy
 - Would increase the likelihood that the Balancing Reserves Capacity would be exhausted during normal system operations
 - Potential consequence of increased market settlement costs
- The O/U scheduling penalty does not necessarily address individual customer behavior

Potential Objectives for Penalty Modifications

- Continue to incentivize accurate scheduling by loads and generators
- Better align penalties with EIM requirements
 - Disincentivize scheduling practices that negatively impact RS requirements
- Opportunity to improve the existing penalty structures
- Continue to allow for 15-min tagging by generators
 - Generators would still have market price exposure for imbalance, but would prevent additional cost from these penalties

Alternative 3: Modify the Penalties

Modification Options Still Under Review

Pros

- Same pros as alternative 1
- Potential to better align penalties with EIM requirements
 - For example, the ID penalty could disincentivize eTag changes between T-57 and T-20
- Opportunity to improve the existing penalty structures
 - For example, BPA could reduce the number of thresholds in the PD penalty

Alternative 3: Modify the Penalties

Modification Options Still Under Review

Cons

- Same cons as Alternative 1
- Modifications would introduce additional changes that customers must manage during the transition to EIM
 - For example, the modified ID penalty could apply to all generator resources, not only VERs

Next Steps

- Feedback on alternatives for EI/GI and PD/ID
 - Please submit to techforum@bpa.gov (with copy to your account executive) by Tuesday, August 12

- August 25-26 Workshop:
 - Discuss Customer Feedback
 - Staff Proposal

ISSUE #34: SOUTHERN INTERTIE STUDIES

Step 6: Staff Proposal

Background:

- On 11/12/2019, 1/28/2020, 3/17/2020, and 5/19/2020 BPA's Transmission Integrated Planning staff engaged with customers on BPA's obligation to study southern intertie requests consistent with the TC-20 Settlement Agreement and BPA's tariff.
 - The TC-20 Settlement Agreement contained a commitment that “no later than January 1, 2020, Bonneville will begin a stakeholder process to review business practices related to studies of transmission service requests (“TSRs”), with the goal to examine and develop a consistent and repeatable approach to studying requests for long-term firm point-to-point transmission service on the southern intertie and network. Bonneville and Transmission Customers may identify the relevant business practices at the beginning of such process.”

Background (cont.):

- In May, BPA presented two alternatives to achieve alignment between BPA's tariff and processes on the Southern Intertie, and requested feedback from customers:
 1. Remove commercially-driven Southern Intertie expansion from the OATT; or
 2. TSR initiates study only upon Customer request.
- BPA received feedback indicating a preference for option 2 and a suggestion to consider merging options 1 and 2.
- Following are the:
 - Refined descriptions of the remaining alternatives;
 - Draft tariff language for the remaining alternatives; and
 - BPA staff leaning.

Alternative 1 – Remove Commercially-Driven Intertie Expansion from the OATT

- Modify the tariff to eliminate the requirement to conduct studies in response to Southern Intertie TSRs, so TSRs will remain in STUDY status if/until ATC is available, the TSR expires, or the customer does not execute a study agreement, offered at BPA's discretion if, for example, it identifies potential upgrades that would not necessarily be cost-prohibitive.
- Offers of capacity would be made in queue order as capacity becomes available.
- Commercial requests for service would not initiate studies for intertie expansion.
- Intertie expansion could still occur based on other drivers and BPA would still perform studies as needed based on system changes or developments on the intertie.
- A business practice may need to be developed to establish this process.

Alternative 2 – TSR Initiates Study Only Upon Request for a Study

- Modify the tariff to only conduct studies in response to Southern Intertie TSRs when a customer requests, otherwise the TSR will remain in STUDY status if/until ATC is available or the TSR expires.
- Offers of capacity would be made in queue order as capacity becomes available.
- May be the SIS requestor's responsibility to engage the other impacted parties (e.g., Californian Transmission Providers, etc.).
- A business practice would need to be developed to establish the process, responsibilities, and clarify how the SIS would affect all TSRs in the queue.
- To ensure queue order is honored, if a single customer requests a study, each higher-queued TSR would also be offered a study, at their expense.
 - This study may be either a cluster study or a series of individual studies.

Merge alternatives 1 & 2

- Modify the tariff to only conduct studies in response to Southern Intertie TSRs when a customer executes a study agreement offered by BPA either at the customer's request or BPA's discretion, otherwise the TSR will remain in STUDY status if/until ATC is available or the TSR expires.
- Offers of capacity would be made in queue order as capacity becomes available.
- May be the SIS requestor's responsibility to engage the other impacted parties (e.g., Californian Transmission Providers, etc.).
- A business practice would need to be developed to establish the process, responsibilities, and clarify how the SIS would affect all TSRs in the queue.
- To ensure queue order is honored, if a single customer requests a study, each higher-queued TSR would also be offered a study, at their expense.
 - This study may be either a cluster study or a series of individual studies.

Possible Tariff Language – §13.5 for all alternatives

Except with respect to the Northwest AC Intertie and Pacific DC Intertie, in cases where the Transmission Provider determines that the Transmission System is not capable of providing Firm Point-To-Point Transmission Service without (1) degrading or impairing the reliability of service to Native Load Customers, Network Customers and other Transmission Customers taking Firm Point-To-Point Transmission Service, or (2) interfering with the Transmission Provider's ability to meet prior firm contractual commitments to others, the Transmission Provider will be obligated to expand or upgrade its Transmission System pursuant to the terms of Section 15.4. [. . .]

Possible Tariff Language – §15.2

- Alternative 1:
[. . .] In the event sufficient transfer capability may not exist to accommodate a service request, the Transmission Provider will respond by performing a System Impact Study. Notwithstanding anything to the contrary, the Transmission Provider will perform a System Impact Study to accommodate service requests on the Northwest AC Intertie and the Pacific DC Intertie at its discretion.
- Alternative 2:
[. . .] In the event sufficient transfer capability may not exist to accommodate a service request, the Transmission Provider will respond by performing a System Impact Study. Notwithstanding anything to the contrary, the Transmission Provider will perform a System Impact Study to accommodate service requests on the Northwest AC Intertie and the Pacific DC Intertie upon request by the Transmission Customer.
- Merged alternative:
[. . .] In the event sufficient transfer capability may not exist to accommodate a service request, the Transmission Provider will respond by performing a System Impact Study. Notwithstanding anything to the contrary, the Transmission Provider will perform a System Impact Study to accommodate service requests on the Northwest AC Intertie and the Pacific DC Intertie either at its discretion or upon request by the Transmission Customer.

Possible Tariff Language – §15.4a for all alternatives

If the Transmission Provider determines that it cannot accommodate a Completed Application for Firm Point-To-Point Transmission Service because of insufficient capability on its Transmission System, the Transmission Provider will use due diligence to expand or modify its Transmission System to provide the requested Firm Transmission Service, consistent with its planning obligations in Attachment K, provided the Transmission Customer agrees to compensate the Transmission Provider for such costs pursuant to the terms of Section 27. The Transmission Provider will conform to Good Utility Practice and its planning obligations in Attachment K, in determining the need for new facilities and in the design and construction of such facilities. The obligation applies only to those facilities that the Transmission Provider has the right to expand or modify; it does not apply to requests for service on the Northwest AC Intertie or the Pacific DC Intertie except that the Transmission Provider will continue to perform its planning obligations under Attachment K.

Possible Tariff Language – §17.5 for Alt.1

Following receipt of a Completed Application for Firm Point-To-Point Transmission Service, the Transmission Provider shall make a determination of available transfer capability as required in Section 15.2. The Transmission Provider shall notify the Eligible Customer as soon as practicable, but not later than thirty (30) days after the date of receipt of a Completed Application that (i) it will be able to provide service without performing a System Impact Study, (ii) such a study is needed to evaluate the impact of the Application pursuant to Section 19.1, (iii) such a study is needed to evaluate the impact of the Application and that the Transmission Provider will perform a Cluster Study pursuant to Section 19.10 to evaluate such impact, or (iv) the request is for service on the Northwest AC Intertie or the Pacific DC Intertie and the Transmission Provider will perform System Impact and Cluster Studies at its discretion. [. . .]

Possible Tariff Language – §17.5 for Alt.2

Following receipt of a Completed Application for Firm Point-To-Point Transmission Service, the Transmission Provider shall make a determination of available transfer capability as required in Section 15.2. The Transmission Provider shall notify the Eligible Customer as soon as practicable, but not later than thirty (30) days after the date of receipt of a Completed Application that (i) it will be able to provide service without performing a System Impact Study, (ii) such a study is needed to evaluate the impact of the Application pursuant to Section 19.1, (iii) such a study is needed to evaluate the impact of the Application and that the Transmission Provider will perform a Cluster Study pursuant to Section 19.10 to evaluate such impact, or (iv) the request is for service on the Northwest AC Intertie or the Pacific DC Intertie and the Transmission Provider will perform System Impact and Cluster Studies at request of the Eligible Customer. [. . .]

Possible Tariff Language – §17.5 for merged alternative

Following receipt of a Completed Application for Firm Point-To-Point Transmission Service, the Transmission Provider shall make a determination of available transfer capability as required in Section 15.2. The Transmission Provider shall notify the Eligible Customer as soon as practicable, but not later than thirty (30) days after the date of receipt of a Completed Application that (i) it will be able to provide service without performing a System Impact Study, (ii) such a study is needed to evaluate the impact of the Application pursuant to Section 19.1, (iii) such a study is needed to evaluate the impact of the Application and that the Transmission Provider will perform a Cluster Study pursuant to Section 19.10 to evaluate such impact, or (iv) the request is for service on the Northwest AC Intertie or the Pacific DC Intertie and the Transmission Provider will perform System Impact and Cluster Studies at either its discretion or request of the Eligible Customer. [. . .]

Possible Tariff Language – §19.1 for Alt. 1 and/or 2

- Alternative 1:

After receiving a request for service, the Transmission Provider shall determine on a non-discriminatory basis whether a System Impact Study is needed. For requests on the Northwest AC Intertie or Pacific DC Intertie, the Transmission Provider performs System Impact and Cluster Studies at its discretion. A description of the Transmission Provider's methodology for completing a System Impact Study is provided in Attachment D. If the Transmission Provider determines that a System Impact Study is necessary to accommodate the requested service, it shall so inform the Eligible Customer, as soon as practicable. [. . .]

- Alternative 2:

After receiving a request for service, the Transmission Provider shall determine on a non-discriminatory basis whether a System Impact Study is needed. For requests on the Northwest AC Intertie or Pacific DC Intertie, the Transmission Provider performs System Impact and Cluster Studies at the request of the Transmission Customer. A description of the Transmission Provider's methodology for completing a System Impact Study is provided in Attachment D. If the Transmission Provider determines that a System Impact Study is necessary to accommodate the requested service, it shall so inform the Eligible Customer, as soon as practicable. [. . .]

Possible Tariff Language – §19.1 for merged alternative

- Merged alternative:

After receiving a request for service, the Transmission Provider shall determine on a non-discriminatory basis whether a System Impact Study is needed. For requests on the Northwest AC Intertie or Pacific DC Intertie, the Transmission Provider performs System Impact and Cluster Studies either at its discretion or the request of the Transmission Customer. A description of the Transmission Provider's methodology for completing a System Impact Study is provided in Attachment D. If the Transmission Provider determines that a System Impact Study is necessary to accommodate the requested service, it shall so inform the Eligible Customer, as soon as practicable. [. . .]

BPA Staff Leaning & Next Steps

- BPA staff prefer alternative 1 primarily due to the risk present in alternative 2 and the merged option, whereby one customer could trigger a study that would impact all other customers, however BPA is still working on finalizing our position and welcomes customer input.
- BPA staff are interested in hearing your feedback prior to the initial proposal.
 - Customers should submit comments by August 12, 2020 to the techforum@bpa.gov

ISSUE #12: GENERATOR INTERCONNECTION

Step 5: Discuss Customer Feedback

Step 6: Staff Proposal

Objectives

- Review the BPA leaning based on our analysis of the four proposed alternatives for new repower and replacement provisions in the LGIP.

Step 5: Customer Feedback

- BPA received one comment on the four alternatives
 - Transalta supports Alt #4 to update Att L with Repower and Replacement provisions

Step 6: Staff Proposal

- BPA conducted an analysis of four proposed alternatives for new repower and replacement provisions for the LGIP.
 - Alt #1: Status Quo;
 - Alt #2: Repower;
 - Alt #3: Replacement; and
 - Alt #4: Repower & Replacements (Alt #2 + Alt #3)

- Team Leaning: Alternative #4

Proposed Alternative #4 – Repower (Alt #2)

- Generating Facility Repower (replacement of the components of a Generating Facility Identified in an executed GIA).
 - NOTE: Streamlined Repower Process does not include general maintenance--e.g., replacement of in-kind components, or an increase in Name Plate and Interconnection Service, no new Point of Interconnection;
 - No need to submit an IR;
 - IC notifies Transmission Provider (TP) of the Repower;
 - Scoping meeting is held to discuss the Repower;
 - IC must demonstrate that repower will not degrade the Transmission System;
 - TP will determine whether the Repower is a potential Material Modification;
 - If the Repower is a potential Material Modification then an Interconnection Request is required.
 - Once the Interconnection Request is received the IC may bypass the Feasibility Study and Impact Study (if mutually agreed to by the IC and TP).
 - If not Material Modification TP will require the Repowered Generating Facility meet all of TP's current operational and technical standards;
 - IC will move to Facilities Studies (including any additional environmental studies as needed e.g., NEPA).
 - Existing GIA is amended to reflect the new Repowered Generating Facility;
 - NOTE: Some Repower requests are per se Material Modifications and would require a new Interconnection Request. This will be discussed in Business Practices---examples: Increasing both Name Plate and the Interconnection Service.

Proposed Alternative #4 – Replacement (Alt #3)

- Generating Facility Replacement (Any Replacement Generating Facility must connect to the Transmission System at the same electrical Point of Interconnection [i.e. same voltage level at the interconnecting substation] as the Existing Generating Facility). No increase in Name Plate and Interconnection Service, no new Point of Interconnection.
 - IC submits an IR consistent with the terms of the LGIP/SGIP and pays deposit and enters the Interconnection Queue;
 - The request for Generating Facility Replacement must be submitted to TP by IC for its Existing Generating Facility at least one (1) year prior to the date that the Existing Generating Facility will cease operation;
 - The IC shall request only ER Interconnection Service for the Replacement Generating Facility if the Existing Generating Facility has only ER Interconnection Service;
 - The Interconnection Customer may request either ER Interconnection Service or NR Interconnection Service for the Replacement Generating Facility if the Existing Generating Facility has NR Interconnection Service;
 - TP will conduct the following studies: Replacement Impact Study, may also conduct a Reliability Assessment Study, Interconnection Facilities Study, and additional environmental studies as needed (e.g., NEPA).
 - Existing GIA is amended to reflect the Generating Facility Replacement (See MISO Tariff Language as an example).

Next Steps

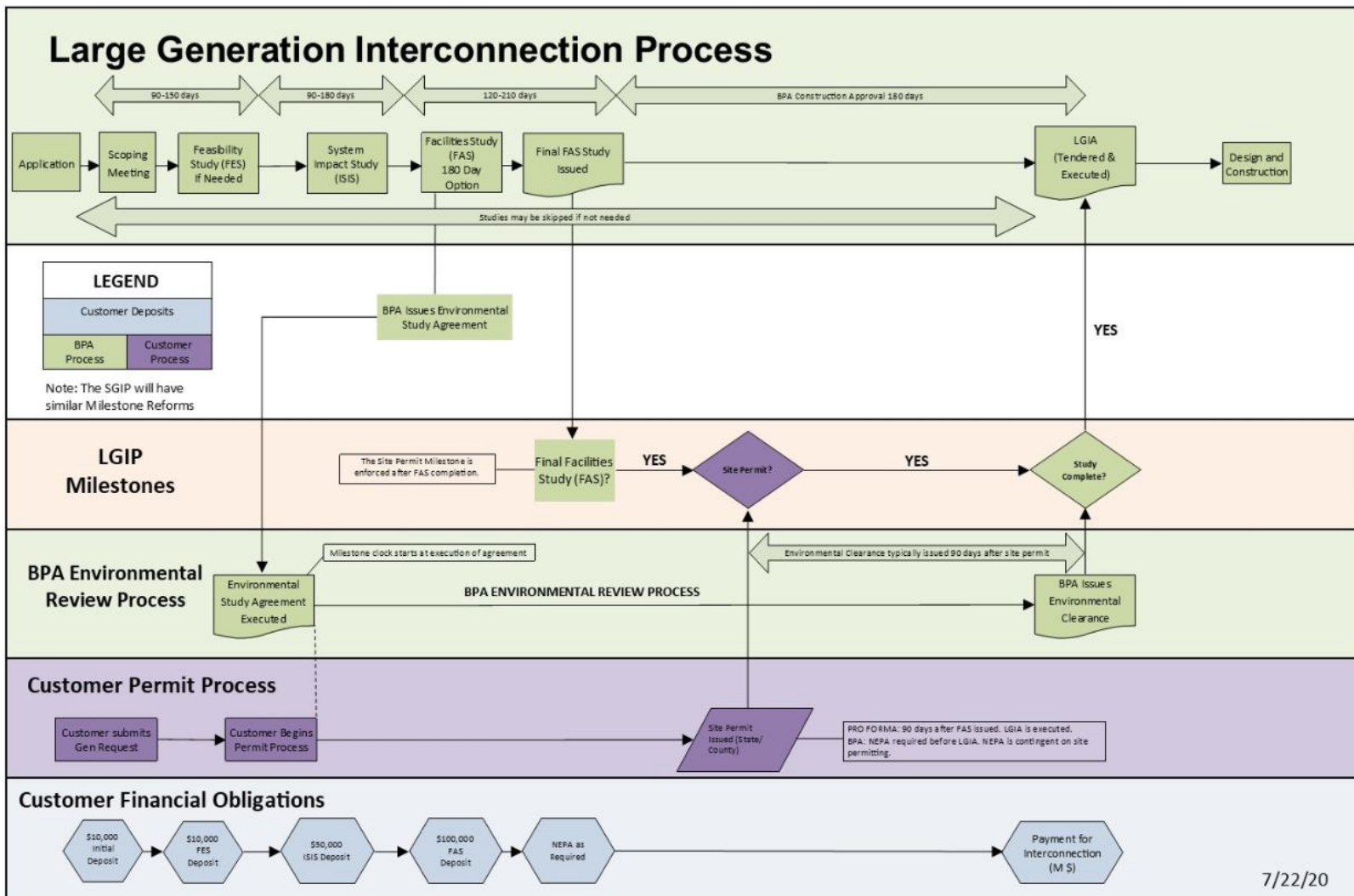
- August Customer Workshop
 - Final decision for Repower and Replacement Tariff Alternatives and redline Tariff language
 - BPA will share final draft of TC-22 Tariff language at this workshop.
- Provide feedback on all proposals by August 12, 2020 via techforum@bpa.gov (with a copy to your Transmission Account Executive).

GENERATOR INTERCONNECTION: 200 KW THRESHOLD

Background

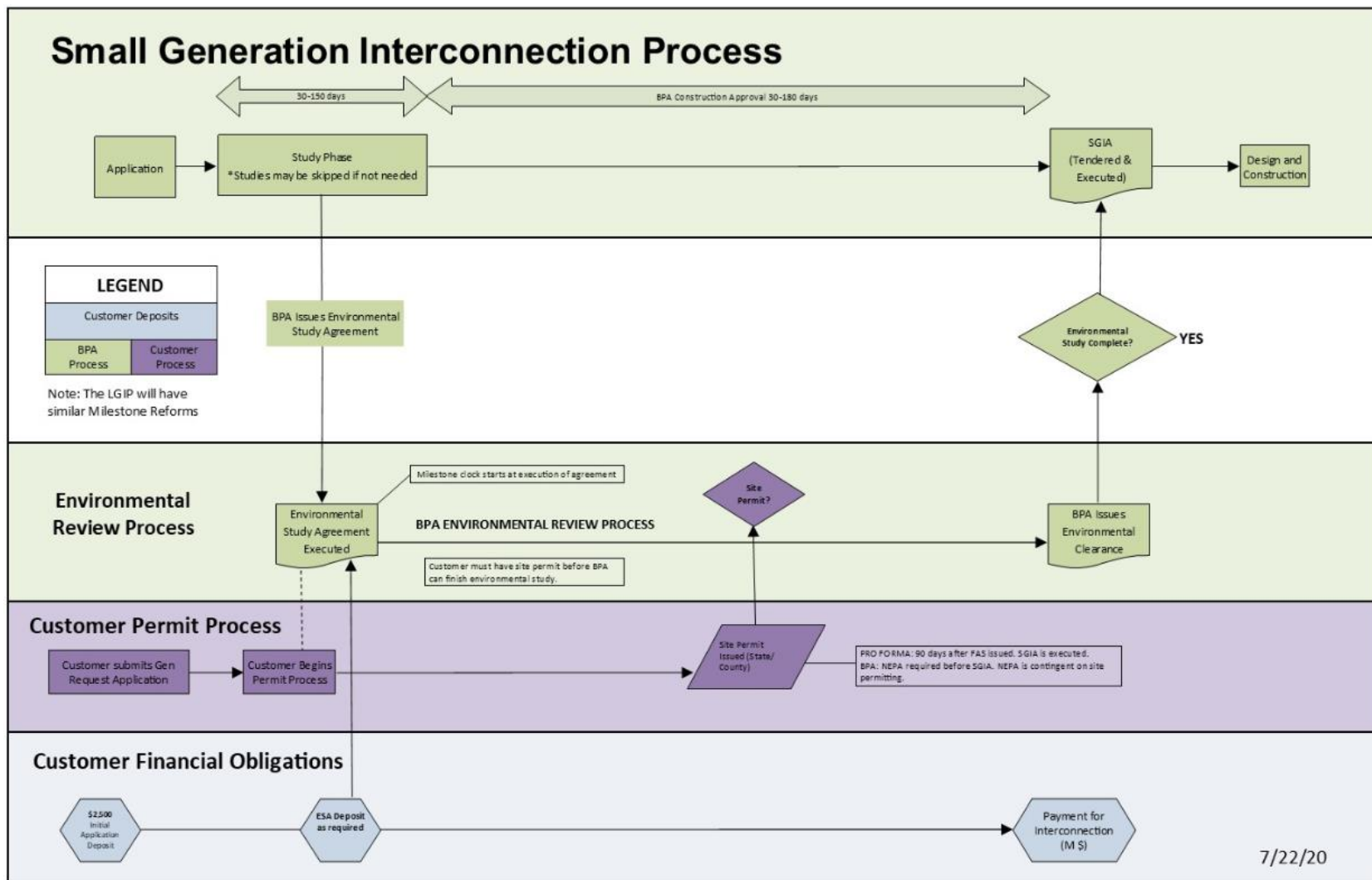
- BPA received a customer request to explain the 200 kw threshold: Why this specific threshold?
- > 200 kW threshold
 - Aligns with Power Services Regional Dialog contracts
 - Aligns with BPA Gen Inputs rate schedule
- What does this mean for the interconnection customer?
 - Any interconnection request greater than 200 kw must go through the SGIP or LGIP and give us MV90 access to their meter.
 - Requests between 1-3 MW with no system impact only need to schedule and give us MV90 access to their meter.
 - Integrations may go through the host utility queue if the utility has a posted public tariff and queue.
 - If customer is marketing the output rather than serving host utility load, it must go through BPA interconnection queue.
- BPA needs to understand where the project is connected for planning purposes and updating the right contracts, etc.

LGIP



7/22/20

SGIP



7/22/20

ISSUE #16: SELLER'S CHOICE

Step 5: Discuss Customer Feedback

Step 6: Staff Proposal

Seller's Choice Evaluation Approach

Phase One: Approach Development

- Step 1:**
Introduction & Education
- Step 2:**
Description of the Issue

March 17
Workshop

Phase Two: Evaluation

- Step 3:**
Analyze the Issue
- Step 4:**
Discuss Alternatives

May 19
Workshop

Phase Three: Proposal Development

- Step 5:**
Discuss Customer
Feedback
- Step 6:**
Staff Proposal

July 28
Workshop

Alternatives Review

- **Alternative #1:** Status Quo - Seller's Choice ends, returning to pre TC-20 status
- **Alternative #2:** Extend Seller's Choice as implemented through TC-22, re-evaluate for TC-24
- **Alternative #3:** Allow Seller's Choice for off-system purchases only at the Mid-Columbia area (excluding NWH) through TC-22, re-evaluate for TC-24

Step 5 – Discuss Customer Feedback

Customer Feedback Summary

- Clarify
 - Encumbering/unencumbering ATC for NT
 - FTSR impacts to ATC
 - Impacts of Seller's Choice on ATC
 - Reservation and Scheduling processes
 - Effect(s) of the NT MOA on ATC encumbrance
 - Update on preemption and competition
- All of the above topics were addressed in the July 15th customer led workshop. The materials are located [here](#).

Step 6 – Staff Recommendation

Key Steps

- The team analyzed the risks and considerations
- The team considered all customer feedback
- Analyzed available data

Key Risks and Considerations

- Alignment with *pro forma*
- Operations and Planning impacts
- Market access provided by 6-NN
- Standard product use and industry best practices
- Mid-C complexity, including uniqueness of NWH
- FERC perspective

Secondary Service and TCMS

- The delivery priority of Secondary NT service (6NN) is **higher than the delivery priority** for **all non-firm Point-to-Point** Transmission Service. This priority should help ensure delivery of non-designated resources to load, including Seller's Choice PPAs.
- In BP-18, with support of NT customers, Power Services expanded Transmission Curtailment Management Service (TCMS) at Mid-C to include non-firm service
 - Reduced penalties imposed on NT customers
 - Rate structure mirrors Transmission Services' current Energy Imbalance charge
- TCMS expansion to non-firm service significantly improves Load Following customers' ability to deliver "Seller's Choice" market purchases to load
- Provides better options for Load Following customers who are interested in serving Above High Water Mark Load from non-federal resources.

FERC Perspective

- **Order 890**: As the Commission concluded in Order No. 888-A, transmission **customers** ultimately must evaluate the **financial advantages and risks** and choose to use **either network integration or firm point-to-point transmission service** to serve load.
- **Order 888-A**: In choosing **between network and point-to-point transmission** services, the potential **customer must assess the degree of risk** that it is willing to accept associated with the availability of firm transmission capacity. Customers choosing point-to-point service, based solely on the amount of transmission capacity reserved (or contract demand), may face a relatively higher risk associated with the availability of firm transmission capacity.

Data Analysis

- Evaluation staff hours 3600+

- Limited ATC impact correlates with limited customer use
 - Three entities scheduling for nine NT customers
 - Fewer than 7% of NT customers

- Manual data extraction

Staff Recommendation

- The Seller's Choice evaluation team recommends Alternative #1, allowing BPA's Seller's Choice implementation to sunset on 9/30/2021
- This alternative supports the Agency Strategic goals of:
 - **4c:** Meet current and future needs of Network Integration Transmission Service customers through clear business practices and streamlined processes
 - **4d:** Offer more standardized products and services by better aligning BPA's Open Access Transmission Tariff with *pro forma* and industry best practices

Alternative #1 Benefits

- Enables Planning to meet its obligation to ensure designated network resources can serve network load
- Aligns most closely with *pro forma* tariff for NT service
- Maintains market access using 6NN for non-federal resources
- Resolves double loss issue
- Eliminates concern about potential future ATC impacts
- Opens critical staff bandwidth (especially with the upcoming EIM work)
- Implementation
 - Lowest risk implementation option
 - No transmission commercial system application development needed
 - Removes a one-off from the system, making the system more stable

Next Steps

Please provide comments by August 12, 2020 to techforum@bpa.gov and cc your AE

ISSUE: EIM TARIFF LANGUAGE UPDATE

BPA approach to EIM tariff language

- No *pro forma* language baseline for entities joining EIM, but FERC has approved EIM-related language in other EIM Entities' tariffs
- Starting with TC-20 tariff language for sections that are contained in TC-20 tariff
 - Shared redline with current tariff for these sections
- BPA is starting with PGE's tariff language for EIM-specific language
- Sections with outstanding policy decisions or no tariff proposal marked "under review"
- Language shared today is still in draft form – as updates are made to language, it will be shared in subsequent workshops
- Will share complete tariff at August workshop (including Attachment Q)

Tariff sections added to EIM tariff language in July

Tariff Section
Definition – Transmission Customer Base Schedule
12.5 – EIM Disputes
28.7 – Participation in the EIM
Att Q, 3.1 – Internal Resources - Transmission Rights
Att Q, 3.3.1 – Application
Att Q, 4.1.2.2 – Registration
Att Q, 4.1.6 – Dispute Resolution with the MO
Att Q, 4.2.4.5.1 – Submission of Txm Customer Base Schedules
Att Q, 4.2.4.5.2 – Final Submission of Txm Customer Base Schedules
Att Q, 6.1 – Compliance with Reliability Standards

Tariff Language Related to Transmission Customer Base Schedules

- Definition of Transmission Customer Base Schedule added
- Att Q, Section 4.2.4.5.1 – Preliminary Submission of Transmission Customer Base Schedules by Transmission Customers with Resources Or Load in the BPA BAA added
 - Refer to Participating Resources: Base Schedule Timeline presentation for more details
- Att Q, Section 4.2.4.5.2 – Final Submissions of Transmission Customer Base Schedules
 - Refer to Participating Resources: Base Schedule Timeline presentation for more details

Tariff Language Related to EIM Disputes

- 12.4 – EIM Disputes added
 - BPA using section 12.4 instead of 12.4A in PGE's tariff
- Att Q, Section 4.1.6 – Dispute Resolution with the MO

Tariff Language Related to Participating Resource Applications

- Att Q, Section 3.3.1 – Application added
- BPA will outline more detailed Participating Resource application process in EIM BP
- Current thinking on application process:
 - BPA doesn't anticipate accepting Participating Resource applications until 6 months after EIM go-live date in BPA BAA
 - BPA will charge a non-refundable application fee
 - If the resource is approved, an additional reimbursable agreement will be set up for actual implementation costs.

Other Tariff Sections Added

- Section 28.7 – Participation in the EIM
- Att Q, Section 3.1 – Internal Resources - Transmission Rights added
 - Updated to reflect BPA uses the same PTP service agreement for both firm and non-firm service and to allow for participation of resources marketed by Transmission Customers
- Att Q, Section 4.1.2.2 – Registration added
- Att Q, Section 6.1 – Compliance with Reliability Standards added

Tariff Language Still Under Review

- Att Q, Section 4.1.1.3(3) – Determination of EIM Implementation Decisions for BPA’s BAA
 - BPA’s use of BAA load forecasts for setting base schedules will be discussed next month during Resource Sufficiency topic
- Att Q, Section 4.2.4.2 – Transmission Customers with Non-Participating Resources that are Variable Energy Resources
 - Forecast Data for Variable Energy Resource will be discussed next month during the Generation Inputs topic
- Att Q, Section 5.2 – Provision of EIM Transfer Capacity by a BPA Interchange Rights Holder
 - Possible Tariff language for Alt #3 shared today during Requirements for Participating & Non-Participating Resource Participation topic

Tariff Language Still Under Review cont.

- Att Q, Section 7 & Section 4.2.3 – Outages
 - BPA still reviewing how these sections align with BPA's outage policies and RC outage requirements
- Att Q, Section 8 – EIM Settlements and Billing & Att Q, Section 4.1.5 – Settlement of MO Charges and Payments
 - Most of these sections will likely be reflected in the rate schedules
- Att Q, Section 10 – Market Contingencies
 - Details use of temporary schedules, most of this section will likely be reflected in the rate schedules
- Schedule 1A – EIM Administrative Service
 - BPA still looking into if this schedule will be required

Next Steps

- Please submit any questions or comments to techforum@bpa.gov (with copy to your account executive) by August 12, 2020

ISSUE: REVENUE REQUIREMENTS

Overview

- Revenue Requirements
- Leverage
- Regulatory Assets
- Repayment
- Non-Federal Debt Accounting
- CGS Decommissioning Trust

Revenue Requirement Assumptions

- All data is of IPR vintage and should be considered preliminary. Data will be refreshed for the Initial Proposal.
- Program spending & capital spending
 - Assumes proposed IPR data
 - Will be updated with final IPR data
- Depreciation
 - Preliminary forecasts
 - Continuing to refine calculations
- Repayment
 - Based on proposed IPR capital spending
 - Will be updated for initial proposal
- Modeled costs
 - Costs modeled in the rate case, such as power purchases, gen inputs, generation integration, and transmission acquisition, have not been fully modeled in this dataset.
 - These costs are calculated in the rate development process.

Power Comparison to BP-20

			BP20 FP Average	BP22 IPR Average
1	OPERATING EXPENSES			
2	POWER SYSTEM GENERATION RESOURCES			
3		OPERATING GENERATION RESOURCES	709,119	710,003
4		OPERATING GENERATION SETTLEMENT PAYMENTS	22,997	27,625
5		NON-OPERATING GENERATION	1,581	2,358
6		CONTRACTED POWER PURCHASES	3,100	3,100
7		AUGMENTATION POWER PURCHASES	-	0
8		EXCHANGES & SETTLEMENTS	249,757	249,757
9		RENEWABLE GENERATION	35,696	31,943
10		GENERATION CONSERVATION	121,587	121,267
11	POWER NON-GENERATION OPERATIONS		83,869	80,785
12	PS TRANSMISSION ACQUISITION AND ANCILLARY SERVICES		219,476	209,023
13	F&W/USF&W/PLANNING COUNCIL		292,141	290,023
14	GENERAL AND ADMINISTRATIVE/SHARED SERVICES		77,955	86,505
15	OTHER INCOME, EXPENSES AND ADJUSTMENTS		(10,000)	0
16	DEPRECIATION		140,009	142,526
17	AMORTIZATION		381,845	310,341
18	ACCRETION		in Amortization	37,558
19	TOTAL OPERATING EXPENSES		2,329,131	2,302,812
20				
21	OTHER EXPENSE AND (INCOME)			
22	INTEREST			
23		APPROPRIATED FUNDS	45,297	45,835
24		CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)
25		BONDS ISSUED TO U.S. TREASURY	65,037	55,495
26		BOND PREMIUMS/DISCOUNTS	12	274
27		NON-FEDERAL INTEREST	207,804	177,622
28	ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION		(16,199)	(21,865)
29	INTEREST CREDIT ON CASH RESERVES		(5,856)	(4,807)
30	INTEREST INCOME ON DECOMMISSIONING TRUST		(8,965)	(9,574)
31	OTHER EXPENSE AND (INCOME) (GAINS/LOSSES)		(5,136)	(5,485)
32	TOTAL OTHER EXPENSE AND (INCOME)		236,056	191,557
33				
34	TOTAL EXPENSES		2,565,187	2,494,370
35				
36	MINIMUM REQUIRED NET REVENUE 1/		58,235	135,106
37	TOTAL REVENUE REQUIREMENT		2,623,422	2,629,476

Transmission Comparison to BP-20

		BP20 FP Average	BP22 IPR Average
1	OPERATING EXPENSES		
2	TRANSMISSION OPERATIONS	166,172	170,687
3	TRANSMISSION ENGINEERING	46,805	56,832
4	TRANSMISSION MAINTENANCE INCLUDING ENVIRONMENT	173,179	178,710
5	TRANSMISSION ACQ & ANCILLARY SERVICES	130,290	122,581
6	BPA INTERNAL SUPPORT	93,206	103,404
7	OTHER INCOME, EXPENSES & ADJUSTMENTS	(55,413)	-
8	DEPRECIATION & AMORTIZATION	338,837	353,476
9	TOTAL OPERATING EXPENSES	893,075	985,690
10			
11			
12	INTEREST EXPENSE		
13	INTEREST EXPENSE		
14	FEDERAL APPROPRIATIONS	6	-
15	CAPITALIZATION ADJUSTMENT	(18,968)	(18,968)
16	ON LONG-TERM DEBT	118,759	129,345
17	AMORTIZATION OF CAPITALIZED BOND PREMIUMS	559	559
18	DEBT SERVICE REASSIGNMENT INTEREST	4,411	2,444
19	NON-FEDERAL INTEREST (INCL CUSTOMER FUNDED)	76,535	69,701
20	PREMIUMS/DISCOUNTS	8,271	-
21	AFUDC	(14,423)	(15,653)
22	INTEREST INCOME	(3,752)	(2,793)
23	NET INTEREST EXPENSE	171,397	164,634
24			
25	TOTAL EXPENSES	1,064,472	1,150,324
26			
27	TOTAL MINIMUM REQUIRED NET REVENUE 1/	26,442	-
28			
29	TOTAL REVENUE REQUIREMENT	1,090,914	1,150,324

Repayment

- Repayment model methodology is consistent with past practice.
- Capital financing: currently assumes financing 100% with Treasury bonds. If BPA enters into other financing arrangements (e.g. lease financing), the data set will be updated.
- Debt placement: all bonds in the rate period are assumed to be issued in the fourth quarter of each fiscal year.
- Regional Cooperation Debt (RCD): all RCD2 transactions are forecast and embedded in repayment results.
- Deferred borrowing: as in past rate cases, deferred borrowing is held constant until the last month of the rate period when it is converted to debt. This is done for the repayment demonstrations to FERC.
- Interest rates: uses FY20 forecast.
- Repayment results will be updated for the Initial and Final proposals using the most up-to-date data available and assumptions.

Issues

Leverage

- The Leverage Policy includes a high level description of the calculation:
(Federal debt + Nonfederal debt) / (Net Utility Plant + Nonfederal generation)
- The variances are driven by our interpretation of how assets and debt are categorized, defined and/or calculated.
- A simplified forecast approach compared to actuals is a significant source of variance.
- Bottom Line Up Front: BPA intends to clarify its interpretation of assets and debt to better align forecast elements in the leverage ratio to actuals. The impact:
 - Transmission: Additional payments due to the Leverage Policy **are unlikely** to trigger for BP22 to meet the near term goal of holding leverage flat.
 - Power: No significant change.

Sources of Variance: Deferred Borrowing

- BPA uses cash on hand to finance capital spending and then borrows to replenish cash as needed. BPA defers borrowing until it is needed.
- BPA expects to borrow for every dollar of its investment but times the borrowing based on liquidity needs.
- Every dollar of borrowing that is delayed creates downward pressure on the leverage ratio. Every dollar of deferred borrowing converted to debt creates upward pressure.
- The leverage forecast assumes a constant amount of deferred borrowing. The actual balance can change significantly from year to year, based on liquidity needs.
- Changes in the deferred borrowing balance can cause notable swings in the ratio results. In FY19, the forecast over estimated debt because deferred borrowing actually increased.
 - Transmission deferred borrowing increased by \$151 million reducing its leverage ratio by ~2%.
 - Power deferred borrowing grew by \$95 million reducing its leverage ratio by ~1%.

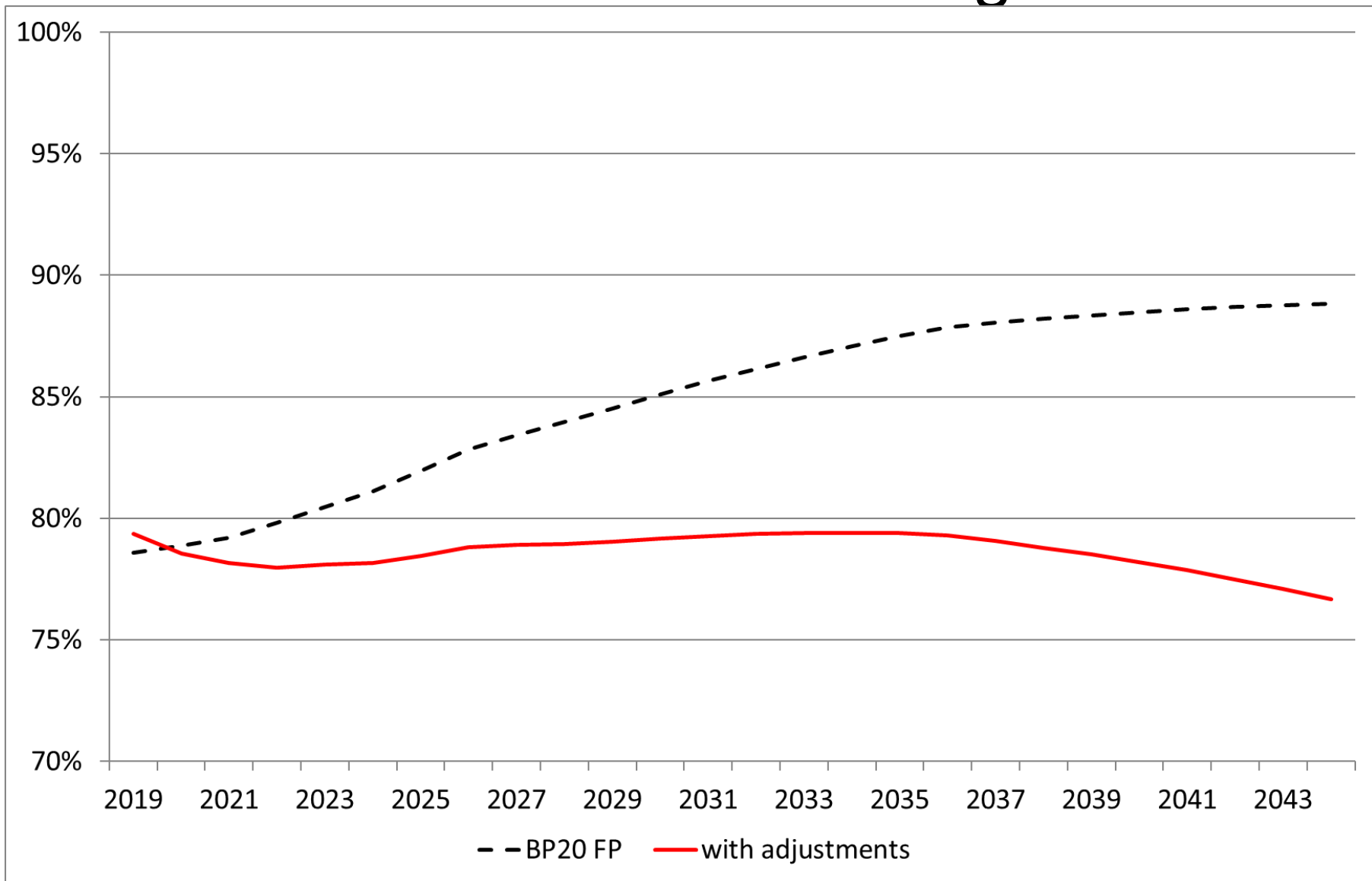
Sources of Variance: Net Utility Plant

- The leverage forecast includes simplifying assumptions about net utility plant.
 - Gross plant increases by the amount of capital investment identified in the revenue requirement, which is limited to BPA-financed capital.
 - Accumulated depreciation grows by the annual depreciation expense.
- Actuals are more complex
 - Gross plant grows by all new assets regardless of the funding source. This includes Projects Funded in Advance (PFIA). It is also reduced by retirements.
 - Accumulated depreciation grows by annual expense net of a range of adjustments (e.g. retirements, cost of removal, net salvage value).
- The result: Leverage forecast tends to undervalue the asset side of the equation.
 - In FY19, Transmission had \$77 million of PFIA investment not captured in the forecast, which reduced the ratio.
 - In FY19, Transmission retired \$84 million of plant and had \$134 million of total adjustments to accumulated depreciation. The net, \$50 million, reduced the ratio.
 - In FY19, Power retired about \$15 million of plant and had about \$15.3 million of adjustments to accumulated depreciation. The net had virtually no impact on the ratio.

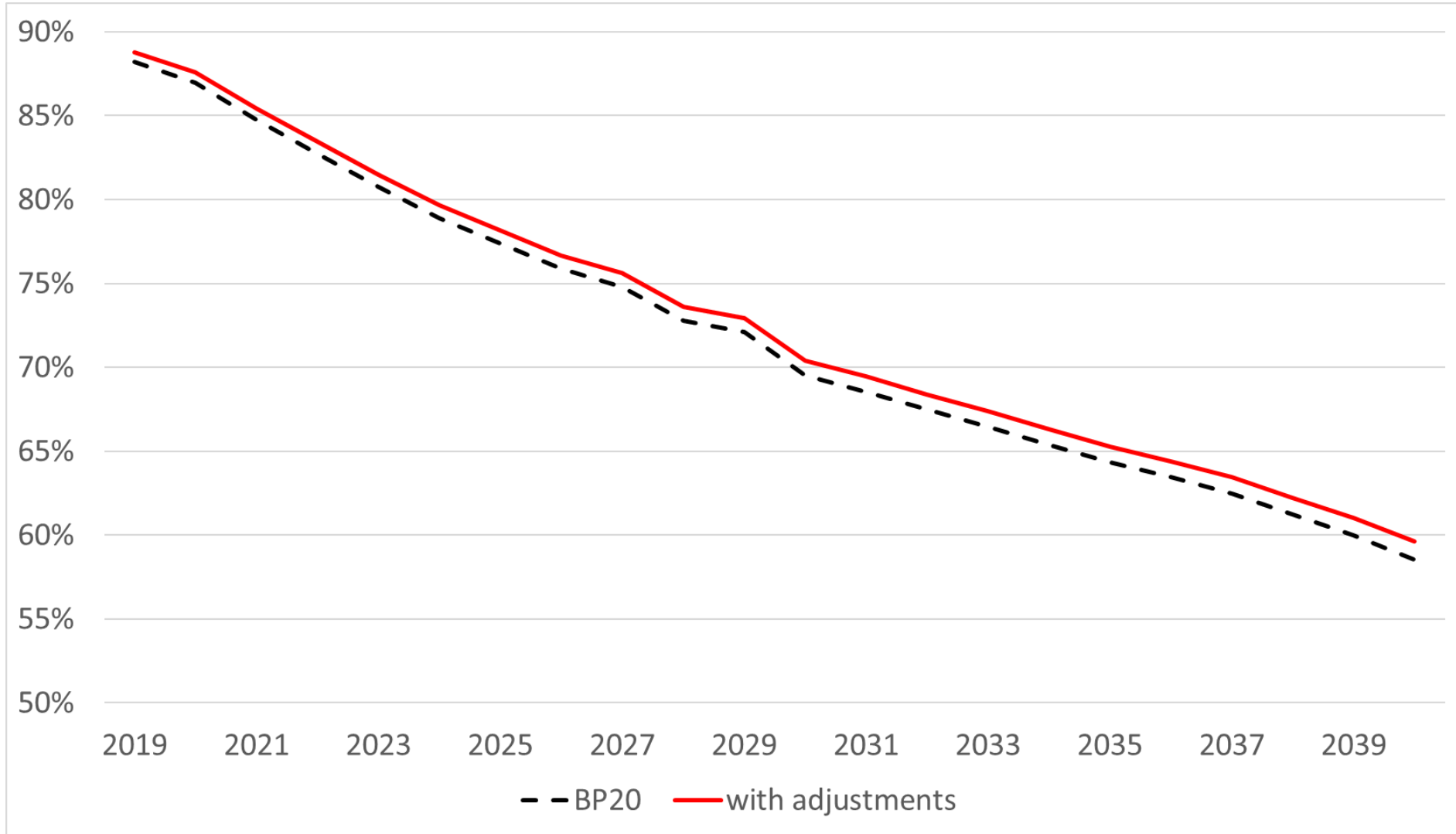
Addressing the Variances

- BPA proposes to clarify its interpretation of some components of the leverage calculation described in the Leverage Policy.
 - Include deferred borrowing as Federal debt in actuals.
 - Include non-BPA financed capital investments as forecast plant in the calculation of net utility plant in the forecast.
 - Include an estimate of retirements and adjustments to depreciation in the calculation of net utility plant in the forecast.
 - Current thinking = use a 3 year rolling average of actuals.
- Impact for BP-22:
 - Transmission: Highly unlikely that Transmission will see revenue financing to meet the near term target of holding the leverage ratio flat.
 - Power: Leverage continues on steady decline.
 - Ultimately, the actual impact will not be known until the Final Proposal.

Transmission Leverage



Power Leverage



Regulatory Assets

- Columbia River Fish Mitigation (CRFM) program
 - Considering shortening the repayment period from 75 years to 50 years.
 - This would align the repayment period and the amortization period.
 - Any change would only affect future amortization. No restatement of the past.
 - Amortization expense would go up (approximately \$7 million/year) but would be offset by a matching reduction in MRNR.

- Covid-19 spending
 - The pandemic may result in higher expenses for BPA.
 - Regulatory asset treatment is not being considered at this time. However, this is a situation that is being closely monitored.

Non-Federal Debt Accounting

- Both revenue requirements incorporate revised non-Federal debt accounting described in BP-20.
- The treatment of premium and discount bonds has also changed. Note that we generally do not use discount bonds.
- Before accounting change:
 - Premiums were netted against outstanding debt. As a result, the debt balance declined over time, e.g. replace a \$100 bond with a \$90 bond
 - The premium is effectively embedded in interest expense through a somewhat higher interest rate.
- New accounting:
 - Premiums will not be netted against outstanding debt.
 - Premiums will be amortized over time and netted against interest expense.
- This creates a non-cash reduction to interest expense that will be captured on the statement of cash flows.

Non-Federal Debt Accounting cont.

- Non-Federal bond transactions include a small cost to conduct the bond transaction called the cost of issuance. The treatment of this cost is also changing.
- Before accounting change:
 - Cost of issuance was embedded in the outstanding debt.
- New accounting:
 - Cost of issuance will be removed from the outstanding debt on the balance sheet.
 - It will be amortized over time and included in interest expense as a non-cash expense that will be captured on the statement of cash flows.
- What does all of this mean?
 - This only affects actual transactions.
 - The revenue requirements and Power cost table will need new line items.
 - They should not affect total cost. Premiums would more than offset the cost of issuance. Both would be offset by changes to minimum required net revenues (MRNR).
 - These changes have not been incorporated yet in the revenue requirements.

CGS Decommissioning Trust Fund

- The accounting for the decommissioning trust fund changed and was incorporated in the BP-20 Final Proposal. It is counted as part of the CGS asset on the balance sheet.
- Impacts to the BP-22 Revenue Requirement:
 - Cash contributions to the trust fund now appear on the statement of cash flows rather than being embedded in CGS O&M. Averaged \$4.5 million/yr in current data set.
 - Accretion, recognizing the growth in value of the trust, is included as a non-cash expense. Averaged \$37.6 million/yr in current data set.
 - Interest earned on the trust fund is included as a non-cash component of interest expense. Averaged \$9.6 million/yr in current data set.
 - Gains/losses on the trust fund are included as a non-cash component of interest expense. Averaged \$5.5 million/yr in current data set.
 - All last three produce a net increase in expense of about \$22.5 million/yr in the IPR revenue requirement.
 - As non-cash elements, they are included in the calculation of MRNR, reducing it by a matching amount.
- End result = no net impact to the Power revenue requirement.

Appendix

Power Income Statement

		A	B
		2022	2023
1	OPERATING EXPENSES		
2	POWER SYSTEM GENERATION RESOURCES		
3	OPERATING GENERATION RESOURCES	682,222	737,783
4	OPERATING GENERATION SETTLEMENT PAYMENTS	27,749	27,500
5	NON-OPERATING GENERATION	2,341	2,375
6	CONTRACTED POWER PURCHASES	3,100	3,100
7	AUGMENTATION POWER PURCHASES	0	0
8	EXCHANGES & SETTLEMENTS	249,767	249,747
9	RENEWABLE GENERATION	34,418	29,467
10	GENERATION CONSERVATION	121,267	121,267
11	POWER NON-GENERATION OPERATIONS	79,510	82,059
12	PS TRANSMISSION ACQUISITION AND ANCILLARY SERVICES	211,443	206,604
13	F&W/USF&W/PLANNING COUNCIL	290,053	289,993
14	GENERAL AND ADMINISTRATIVE/SHARED SERVICES	85,864	87,145
15	OTHER INCOME, EXPENSES AND ADJUSTMENTS	0	0
16	DEPRECIATION	140,927	144,125
17	AMORTIZATION	312,520	308,161
18	ACCRETION	36,754	38,363
19	TOTAL OPERATING EXPENSES	2,277,936	2,327,688
20			
21	OTHER EXPENSE AND (INCOME)		
22	INTEREST		
23	APPROPRIATED FUNDS	45,424	46,245
24	CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)
25	BONDS ISSUED TO U.S. TREASURY	58,328	52,662
26	BOND PREMIUMS/DISCOUNTS	506	41
27	NON-FEDERAL INTEREST	175,443	179,800
28	ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	(21,326)	(22,404)
29	INTEREST CREDIT ON CASH RESERVES	(4,614)	(5,001)
30	INTEREST INCOME ON DECOMMISSIONING TRUST	(9,416)	(9,731)
31	OTHER EXPENSE AND (INCOME) (GAINS/LOSSES)	(5,395)	(5,575)
32	TOTAL OTHER EXPENSE AND (INCOME)	193,014	190,101
33			
34	TOTAL EXPENSES	2,470,950	2,517,790
35			
36	MINIMUM REQUIRED NET REVENUE 1/	113,480	156,733
37			
38	TOTAL REVENUE REQUIREMENT	2,584,429	2,674,523

Power Statement of Cash Flows

		A	B
		2022	2023
1	CASH FROM OPERATING ACTIVITIES		
2	MINIMUM REQUIRED NET REVENUE 1/	113,480	156,733
3	NON-CASH ITEMS:		
4	NON-FEDERAL INTEREST	7,854	6,799
5	DEPRECIATION AND AMORTIZATION	453,448	452,286
6	ACCRETION	36,754	38,363
7	NON-CASH EXPENSES (INTEREST INCOME & GAINS/LOSSES)	(14,811)	(15,306)
8	CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)
9	NON-CASH REVENUES	(30,600)	(30,600)
10	CASH CONTRIBUTION TO DECOMMISSIONING TRUST	(4,472)	(4,651)
11	CASH FREE UP	<u>16,510</u>	<u>16,865</u>
12	CASH PROVIDED BY OPERATING ACTIVITIES	532,225	574,551
13			
14	CASH FROM INVESTMENT ACTIVITIES		
15	INVESTMENT IN:		
16	UTILITY PLANT (INCLUDING AFUDC)	(306,289)	(313,631)
17	FISH & WILDLIFE	(43,000)	(43,000)
18	CASH USED FOR INVESTMENT ACTIVITIES	(349,289)	(356,631)
19			
20	CASH FROM BORROWING AND APPROPRIATIONS:		
21	INCREASE IN BONDS ISSUED TO U.S. TREASURY	333,269	350,608
22	REPAYMENT OF BONDS ISSUED TO U.S. TREASURY	(493,000)	(517,000)
23	INCREASE IN FEDERAL CONSTRUCTION APPROPRIATIONS	16,020	6,022
24	REPAYMENT OF FEDERAL CONSTRUCTION APPROPRIATIONS	0	0
25	REPAYMENT OF NON-FEDERAL OBLIGATIONS	(23,165)	(44,811)
26	CUSTOMER PROCEEDS	0	0
27	PAYMENT OF IRRIGATION ASSISTANCE	<u>(16,060)</u>	<u>(12,740)</u>
28	CASH PROVIDED BY BORROWING AND APPROPRIATIONS	(182,936)	(217,921)
29			
30	ANNUAL INCREASE (DECREASE) IN CASH	0	0
31			
32	PLANNED NET REVENUE FOR RISK	0	0
33			

Transmission Income Statement

		2022	2023
1	OPERATING EXPENSES		
2	TRANSMISSION OPERATIONS	169,239	172,135
3	TRANSMISSION ENGINEERING	56,570	57,094
4	TRANSMISSION MAINTENANCE INCLUDING ENVIRONMEN	177,560	179,860
5	TRANSMISSION ACQ & ANCILLARY SERVICES	122,578	122,584
6	BPA INTERNAL SUPPORT	102,667	104,141
7	OTHER INCOME, EXPENSES & ADJUSTMENTS	-	-
8	DEPRECIATION & AMORTIZATION	351,035	355,917
9	TOTAL OPERATING EXPENSES	979,648	991,732
10			
11			
12	INTEREST EXPENSE		
13	INTEREST EXPENSE		
14	FEDERAL APPROPRIATIONS	-	-
15	CAPITALIZATION ADJUSTMENT	(18,968)	(18,968)
16	ON LONG-TERM DEBT	121,946	136,744
17	AMORTIZATION OF CAPITALIZED BOND PREMIUMS	559	559
18	DEBT SERVICE REASSIGNMENT INTEREST	2,960	1,927
19	NON-FEDERAL INTEREST (INCL CUSTOMER FUNDED)	70,748	68,655
20	PREMIUMS/DISCOUNTS	-	-
21	AFUDC	(14,937)	(16,369)
22	INTEREST INCOME	(2,666)	(2,920)
23	NET INTEREST EXPENSE	159,641	169,628
24			
25	TOTAL EXPENSES	1,139,289	1,161,360
26			
27	TOTAL MINIMUM REQUIRED NET REVENUE 1/	-	-
28			
29	TOTAL REVENUE REQUIREMENT	1,139,289	1,161,360

Transmission Statement of Cash Flows

		2022	2023
1	<u>CASH FROM CURRENT OPERATIONS:</u>		
2	TOTAL MINIMUM REQUIRED NET REVENUE	-	-
3	CASH FLOW BEFORE REVENUE FINANCING	-	-
4	REVENUE FINANCING	-	-
5	RESERVE FINANCING	-	-
6	EXPENSES NOT REQUIRING CASH:		
7	DEPRECIATION & AMORTIZATION	351,035	355,917
8	CUSTOMER FUNDED PROJECTS NET INTEREST	2,340	1,863
9	AMORTIZATION OF CAPITALIZED BOND PREMIUMS	559	559
10	CAPITALIZATION ADJUSTMENT	(18,968)	(18,968)
11	NON-CASH REVENUES		
12	CUSTOMER FUNDED	(16,478)	(17,317)
13	AC INTERTIE CO/FIBER	(3,482)	(3,482)
14	CASH PROVIDED BY CURRENT OPERATIONS	315,005	318,571
15			
16	<u>CASH USED FOR CAPITAL INVESTMENTS:</u>		
17	INVESTMENT IN:		
18	UTILITY PLANT	(526,591)	(560,003)
19	CASH USED FOR CAPITAL INVESTMENTS	(526,591)	(560,003)
20			
21	<u>CASH FROM TREASURY BORROWING AND APPROPRIATIONS:</u>		
22	INCREASE IN LONG-TERM DEBT	526,591	560,003
23	DEBT SERVICE REASSIGNMENT PRINCIPAL	(21,596)	(22,678)
24	REPAYMENT OF CAPITAL LEASES	(73,474)	(72,647)
25	REPAYMENT OF LONG-TERM DEBT	(219,935)	(223,246)
26	REPAYMENT OF CAPITAL APPROPRIATIONS	-	-
27	CASH FROM TREASURY BORROWING AND APPROP.	211,586	241,432
28			
29	ANNUAL INCREASE (DECREASE) IN CASH	-	-
30	PLANNED NET REVENUES FOR RISK	-	-
31	TOTAL ANNUAL INCREASE (DECREASE) IN CASH	-	-

Summary of Customer Feedback

APPENDIX

5/19 Workshop - Customer Comments

Topic	Comment Summary	BPA Response
Workshop Schedule	<ul style="list-style-type: none"> • Ensure sufficient time to engage customers in iterative process on important issues and if more time is necessary consider additional workshops. • Continue to notify customers of any procedural, topical or timeline changes in advance. • Ensure schedules are aligned on all documentation. 	<ul style="list-style-type: none"> • Thank you for the comments we have added time and dates to give customers time to provide comments in the work plan proceeding these slides
Seller's Choice	<ul style="list-style-type: none"> • Clarify process for encumbering/unencumbering ATC for NT service, particularly for Seller's Choice. <ul style="list-style-type: none"> • Clarify Reservation and Scheduling process for Seller's Choice • Clarify how an FTSR goes through the ATC process • Provide further examples of how impacts/effects of Seller's Choice are calculated. <ul style="list-style-type: none"> • This analysis is important for any decision to extend. • Provide examples/analysis of how Seller's Choice impacts Hourly Firm ATC • Evaluate impacts of the NT MOA on ATC and propose to include in TC-22 proceedings. • Additional analysis is important to determining whether to support or oppose • Seller's Choice is a vital market alternative for NT customers for Mid-C market purchases <ul style="list-style-type: none"> • Hourly Firm no longer reliable • Seller's Choice mitigates impacts resulting from limited Hourly Firm and absence of Preemption & Competition 	<ul style="list-style-type: none"> • Thank you for your comments the team is reviewing the comments are planning to have a customer meeting on July 15 to respond to customer comments during the customer led workshop.

5/19 Workshop - Customer Comments (cont.)

Topic	Comment Summary	BPA Response
RPO	<ul style="list-style-type: none"> Support Attachment K referencing NorthernGrid planning process to be most efficient and avoid discrepancies 	<ul style="list-style-type: none"> Thank you for your comments
Intertie Studies	<ul style="list-style-type: none"> Both alternatives appear viable Consider modification of Alt 1 to include option for customer to request a study Some concerns with level of “BPA discretion in Alt 1 	<ul style="list-style-type: none"> Thank you for your comments. The team will consider your comments for alternative #1
Tariff Language	<ul style="list-style-type: none"> Supports a separate service agreement for participation in EIM Supports minor amendments to Attachment A for e-signature and such 	<ul style="list-style-type: none"> Thank you for your comments, they have been forwarded to the SMEs for consideration.
BP-22 Rates	<ul style="list-style-type: none"> If possible, provide materials for Revenue Requirements and Risk as soon as possible to allow for internal vetting prior to workshops Concerns with degradation of FBS, need to work with region to develop ways to improve value of FBS DERBS service should be re-evaluated during BP-22 Functionalization and assignment of GridMod and EIM costs should be addressed in BP-22 Consider customer input on principles and requirements for a 7(f) rate discussion 200 kW threshold for SGIP should be addressed in BP-22 	<ul style="list-style-type: none"> Thank you for your comments. The comments and suggestions are being considered and we will share with you at our next meeting when these topics are scheduled to be discussed.

5/19 Workshop - Customer Comments (cont.)

Topic	Comment Summary	BPA Response
General Comments	<ul style="list-style-type: none"> • Provide an update on Preemption and Competition with regards to BPA’s plan to comply with Order 676-I and associated NAESB standards. • BPA must pursue policies that are fair and equitable to both NT and PTP customers. 	<ul style="list-style-type: none"> • Thank you for your comments. We have an update at the customer let workshop on July 15
	<ul style="list-style-type: none"> • Undesignation of NT Resources should be included in TC-22 	<ul style="list-style-type: none"> • The undesignation of is currently prioritized to be discussed in TC-24
	<ul style="list-style-type: none"> • No policy decisions on charge code allocation should be made until there is more data to support allocation and price signals. 	<ul style="list-style-type: none"> • Thank you for your comments on the charge code cost allocation. The team will consider this and the Powerex presentation in its evaluation.
	<ul style="list-style-type: none"> • Provide requirements for small, non-participating resources if BPA joins the EIM 	<ul style="list-style-type: none"> • Thank you for your comments on the requirements for the small and non participating resources. The requirements are included in today’s presentation.

4/28 Workshop - Customer Comments

Customer	Comment Summary	BPA Response
Charge Code Allocation	<ul style="list-style-type: none"> • Existing transmission usage should be preserved to the extent possible to minimize unintended consequences of existing use of the FCRTS and BPA’s transmission business model • Per BPA’s own criteria, to the extent possible, maintain alignment with FERC-approved allocation methods, particularly to avoid seams issues • Allocation of charges/credits should be consistent with cost causation to avoid uneconomic price signals and increased costs and included in evaluation criteria • Clarify how charges attributable to load following customers will be allocated and accounted for. • Concerned with unintended shift of costs to transmission customers and with revenues only benefiting BPA Power • Revenues should be allocated to transmission customers to offset costs with any surplus to Power • Request further clarification on certain charge codes that are excluded from initial sub-allocation (bid cost recovery, flexible ramp, grid management, enforcement protocol, administrative) • Operational experience will mitigate inappropriate allocation of charges/credits. Until such experience is attained, consider no sub-allocation. • If proceeding with sub-allocation, develop a framework to guide charge/credit allocation. • If proceeding with sub-allocation, all charge codes should be well understood 	<ul style="list-style-type: none"> • Thank you for your comments. BPA will continue to evaluate the impacts and consider the concerns expressed as we approach the implementation phase.

4/28 Workshop - Customer Comments (Cont.)

Customer	Comment Summary	BPA Response
<p>Proposed Workplan</p>	<ul style="list-style-type: none"> • Provide clarification on status of 7(f) options and grandfathered Green Exception • Undesignation of DNR should be addressed in TC-22 	<ul style="list-style-type: none"> • See BP-22 Rate Case Kickoff presentation. • BPA does not calculate its ST ATC frequently enough for ST undesignations to be reflected in ST ATC. • The systems are not in place at this time to recognize ST undesignations of NT resources and release the corresponding ST ATC to the market. • The full implementation of NITS on OASIS will include this functionality. However, the recent FERC Order 676-I makes extensive changes to the NITS on OASIS module that OATI needs to build over the next several months. • BPA still offers unlimited non-firm transmission, which mitigates the impact of not releasing ST ATC to the non-firm market after ST undesignation of a network resource.

4/28 Workshop - Customer Comments (Cont.)

Customer	Comment Summary	BPA Response
Solar Study (BP-20 Settlement)	<ul style="list-style-type: none"> • Don't support decision to delay development of a shaped quantity of reserves • Study should be expanded to include wind resources • BPA should be prepared to revisit should circumstances change 	<ul style="list-style-type: none"> • Thank you for your comment. Should circumstances change significantly, BPA is prepared to revisit.
Creditworthiness	<ul style="list-style-type: none"> • Support alignment with structure of pro forma approach 	<ul style="list-style-type: none"> • Thank you
Agreement Templates	<ul style="list-style-type: none"> • Proposed clarifying language regarding service commencement 	<ul style="list-style-type: none"> • Thank you. We will review consider it our next workshop in June
Tariff Language Review	<ul style="list-style-type: none"> • Inter-related issues should be presented together to ensure complete picture of tariff edits is understood 	<ul style="list-style-type: none"> • BPA will share tariff language with customers as it's available. At the final workshop a complete draft tariff will be shared with customers with an opportunity to provide feedback before that language goes into the Initial Proposal.
General Comments	<ul style="list-style-type: none"> • EIM must support the Northwest's current shift to low carbon resources and not result in negative financial impact to VERS • Requests a workshop to educate CAISO on tools that BPA and renewables have used to reduce integration costs 	<ul style="list-style-type: none"> • Thank you
Timeline for Base Schedules	<ul style="list-style-type: none"> • T-57 scheduling deadline may increase VERBS exposure to balancing reserves • Supports exploration of possibly reducing balancing reserve requirements • Entities may be forced to make decisions to use transmission to support within hour scheduling versus EIM participation. 	<ul style="list-style-type: none"> • This will be considered in the June presentation

3/17 Workshop - Customer Comments

Customer	Comment Summary	BPA Response
Work Plan & Workshops	<ul style="list-style-type: none"> • More information and clarity needed on EIM Phase III Decision Document • Clarify where all policy issues will be documented • Identify topics that could be delayed or simplified to allow focus on priority issues • Support additional workshops • Continue to use the VENN diagram to highlight topics 	<ul style="list-style-type: none"> • BPA has included a detail policy questions and proposal on where those decisions will be made in the presentation
Seller's Choice	<ul style="list-style-type: none"> • Support access to non-federal resources at Mid-C • Clarify whether there is an impact to ATC due to NT encumbrance. • Be careful with any policies that deviate from the OATT. • Provide additional analysis of reservations/schedules/flow impacts at Mid-C. 	<ul style="list-style-type: none"> • These concerns will be considered and addressed in May, when Seller's choice will be discussed
Transmission Losses	<ul style="list-style-type: none"> • General support for Alternative 3 and 5, maintain both options with financial rate developed in rate case. • This issue should be able to be resolved quickly • Support financial for inaccuracy charge • Additional details needed on financial pricing including impacts by customer type • Additional details needed on customer impacts/benefits • Administrative costs may be worthwhile/appropriate • Consider additional decision criteria (per submissions) 	<ul style="list-style-type: none"> • Thank you for your feedback. These comments will be considered and addressed in the May workshop
EIM Transmission Usage	<ul style="list-style-type: none"> • Support for modifications to scope and objective • Support non-firm donations • Concerns with donation deadlines misaligned with market intervals • Evaluate impacts to dynamic transfers as compared to ETSRs. • Cost recovery mechanisms must be in place to follow cost-causation principles 	<ul style="list-style-type: none"> • Thank you for your feedback, your concerns will be considered and addressed in the June workshop
Intertie Studies	<ul style="list-style-type: none"> • Support updating the tariff • Maximize flexibility and minimize financial exposure • Work with customers, regional stakeholders and partners on expansion needs 	<ul style="list-style-type: none"> • Thank you for your comments. BPA staff will consider these comments as we address the tariff discussion for the Intertie studies at the May workshop.

2/25 Workshop - Customer Comments

Customer	Comment Summary	BPA Response
Charge Code Allocation	<ul style="list-style-type: none"> • Comments received reflected support for both a phased in sub-allocation approach as well as a “direct-assigned” approach that would utilize CAISO charge codes. <ul style="list-style-type: none"> • Develop more examples of how different customer types would be treated under the different alternatives. • Provide additional estimates on the administrative costs. • Provide a cost-benefit analysis for each alternative that weighs benefits against administrative costs. • If no sub or sub-allocation: <ul style="list-style-type: none"> • Balance cost-causation with simplicity • Imbalance service should be developed as a separate rate • Will better ensure existing transmission rights are respected • Focus on Base Codes and Scheduling Entity Codes • If direct assigned (FERC-approved allocation method): <ul style="list-style-type: none"> • Maintain incentives for customers to schedule accurately within the BAA • Consistency across EIM footprint • Maintains consistency with FERC, one of BPA’s tariff principles • Insulation of costs will create risk of hiding EIM market signals • A phased in approach could be applied • Concerned that development of rate mechanisms will not capture granularity • Experiences with EIM suggest more administrative burden up front but ease of that burden moving forward. • Administrative burden to insulate customers is not a justifiable argument and eventually will be same level as other EIM entities • Customers need transparency for market signals and disputes • Ensures better adaptability and response to future changes from CAISO instead of every two years. 	<ul style="list-style-type: none"> • Direct assignment, sub allocation will be discussed in the alternatives in Steps 5 and 6 on April 28.

2/25 Workshop - Customer Comments (Cont.)

Customer	Comment Summary	BPA Response
Resource Sufficiency	<ul style="list-style-type: none"> • Don't establish a target • Develop financial mitigation for the t-20 to t-55 window • Develop a matrix of 4 alternatives for better comparative capability 	<ul style="list-style-type: none"> • The target and the alternatives will be discussed in steps 5 and 6 in the April 28 workshop.
Gen Inputs	<ul style="list-style-type: none"> • Develop principles for Gen Inputs • EIM benefits should be part of Gen Input rate design • Maintain close association with Charge Code discussion • Schedules 9 and 10 might benefit from transitioning to EIM methodology • Need a more robust conversation about ID, PD, EI, and GI rates relative to the charge code sub-allocation alternatives • Eliminating the 30/60 and 30/15 committed scheduling elections options will increase the capacity that BPA must set aside for reserves and increase the rates that ancillary services customers will have to pay 	<ul style="list-style-type: none"> • The team will consider the customer request and respond at the April workshop • The alternatives will be considered in the development of steps 3 and 4 in the April workshop.
Creditworthiness	<ul style="list-style-type: none"> • Attachment to the OATT 	<ul style="list-style-type: none"> • Attachment to the OATT will be considered the review of the alternatives in steps 3 to 4 in the April workshop
Section 7(f) Power Rates	<ul style="list-style-type: none"> • Customers have requested we explore contractual solutions such as the grandfathered Green Exception.” 	<ul style="list-style-type: none"> • The team will address this in our next workshop on service under 7(f).
Regional Planning	<ul style="list-style-type: none"> • Revise Attachment K to ensure future changes must go through tariff process 	<ul style="list-style-type: none"> • We will consider this alternative in steps 3 and 4 which will be reviewed in the May workshop
Generator Interconnection	<ul style="list-style-type: none"> • Support for implementation of Order 845 • Need more information regarding “streamlining” proposal to ensure no queue discrimination 	<ul style="list-style-type: none"> • Thank you

1/28 Workshop - Customer Comments

Customer	Comment Summary	BPA Response
Objective Statement	<ul style="list-style-type: none"> Clarify that BPA will not negatively impact existing rights or existing uses in favor of EIM Costs associated with EIM should be allocated to those benefiting Alternatives should consider the sub-elements of the objective statement. 	<ul style="list-style-type: none"> These suggestive changes to the objective statement will be considered
Network Usage	<ul style="list-style-type: none"> Concerns that EIM will reduce capacity used to support bilateral transactions Encourage BPA to pursue solutions that would allow use of ATC Methodology. Admittedly may be most appropriate in EDAM BPA needs to ensure rights and expectations of existing customers under the tariff and in some cases may need to eliminate adverse commercial impacts. EIM reciprocity transmission framework is an essential principle. Align with requirements utilized by other EIM entities 	<ul style="list-style-type: none"> The concerns and considerations will be evaluated in steps 3 and 4. Some of these concerns were addressed in the other forums and we will address these concerns in our evaluation.
Deviation Policies	<ul style="list-style-type: none"> Evaluate persistent deviation and intentional deviation penalties with respect to EIM dispatch How does EIM dispatch impact Intentional Deviation policies? 	<ul style="list-style-type: none"> The penalties are discussed in the presentation 2/25 and will be evaluated in steps 3 and 4
Ancillary Services	<ul style="list-style-type: none"> NIPPC posed several questions addressing concerns around how BPA will address ancillary services in EIM. Penalties/Negative Prices: Review ACS rate schedules for appropriate modifications 	<ul style="list-style-type: none"> The ancillary services questions as it relates to rates are discussed in the Gen Inputs of the 2/25 workshop and will continue the discussion in future rate case workshops

1/28 Workshop - Customer Comments (Cont.)

Customer	Comment Summary	BPA Response
Participating & Non-participating Resources	<ul style="list-style-type: none"> • Non-participating Resources: Concerned with requirements for co-gen resources • Participating Resources: BPA should present preliminary evaluation along with pros and cons on what types of transmission products for EIM transfers. • External-BA Resources: will BPA allow dynamic schedules? • Participating Resources: NIPPC poses several questions regarding type of transmission donations and the donation process. <ul style="list-style-type: none"> ○ Survey and share findings of how existing EIM participant approaches to these questions. ○ How will BPA manage exposure to EIM prices? 	<ul style="list-style-type: none"> • The concerns and the evaluation will be discussed during the steps 3 and 4
Un-designation of DNR	<ul style="list-style-type: none"> • Un-designation of DNR <ul style="list-style-type: none"> ○ Require the Un-designation of DNRs being used to make Firm network sales ○ Address this issue in TC-22 including review of the NT MOA 	<ul style="list-style-type: none"> • The NT team is reviewing these comments and will have a response at the next TC-20 settlement workshop.
Solar Study (BP-20)	<ul style="list-style-type: none"> • Solar Study (BP-20): Material value to exploring shaped reserve option. • Gen Inputs: limited input to reach conclusions 	<ul style="list-style-type: none"> • The concerns and considerations will be evaluated in steps 3 and 4

1/28 Workshop - Customer Comments (Cont.)

Customer	Comment Summary	BPA Response
7f Rate Design	<ul style="list-style-type: none"> • Clarify the timing, availability and market risk as a discretionary Tier 1 obligation <ul style="list-style-type: none"> ○ Also include terms & conditions, methodology for new rate and customer obligations ○ New firm surplus rate could be explored with similar clarification per above • Support continued exploration as long as available to all preference customers among other considerations. • Any new proposal for serving load following customers should be win-win for all preference customers and not create any new material risks or cost shifts • There is potential merit deserving further exploration based on initial customer benefits and BPA revenues 	<ul style="list-style-type: none"> • The 7f rates team are reviewing these comments and will consider them as part of their evaluation and alternatives in upcoming rates workshop
Financial Planning	<ul style="list-style-type: none"> • Concerned of disproportionate burden on transmission • use of MRNR per previous filings and testimony <ul style="list-style-type: none"> ○ Accounting policies should be considered outside of a rate case ○ Amortize short-lived regulatory assets for greatest ratepayer benefits ○ More strategic approach at regulatory accounting and MRNR • include long-term cost and rate forecasting. Customers will want greater visibility 	<ul style="list-style-type: none"> • These concerns and comments were forwarded to the financial planning process
General Comments	<ul style="list-style-type: none"> • BPA should demonstrate how it will track how the new processes will affect other topics. • EIM charges: incremental transmission charges would be problematic and upset the reciprocity transmission framework <ul style="list-style-type: none"> ○ FERC expressly disapproved of PAC’s proposal of an incremental transmission rate for EIM • VERBS: 30/15 option will most likely be eliminated. What other changes might be needed? • In general, avoid seams issues • Encourage BPA to work with stakeholders across EIM footprint 	<ul style="list-style-type: none"> • These comments will be considered by the affected teams moving forward

12/12/19 Feedback Summary

Themes	BPA's Response
Transmission Losses concerns on pricing and capacity adder	The review of the pricing and the value for transmission losses will be discussed in the rate case
Customers would like to have a better understanding of the objective and reason for change for Transmission Losses.	Losses will return in the -March workshop to address this request.
Customers would like to have choices for settling transmission losses (i.e. physical vs financial). For example one choice could be to consider an option of returns in like kind with a penalty for customers who fail to return the loss obligation	Losses will return in the March workshop to begin sharing options.
Transmission loss factor should be established in Tariff proceedings	The Tariff does contain the annual average system loss factor for the network and intertie. We do not intend to suggest removing it from the Tariff.
Transmission losses should be included in the Transmission rates and rates schedule and should be equitably allocated	Bonneville intends to have any rate discussions during the upcoming rate case proceedings. Any discussion regarding the location (i.e. Power or Transmission Rates Schedules) will be discussed during the rate proceeding. Options of transmission losses pricing will be discussed in the rate case in steps 4 and 5.
The EIM losses are important and BPA is in the the best position to determine the appropriate transmission loss percentage for OATT service	In the workshops, steps 4 and 5 will discuss the option for the EIM Losses
Provide more information on the value lost to BPA from a customer's failure to deliver In Kind	This will be addressed in steps 4 and 5.
Costs are inevitable so develop cost/benefit analysis (administrative burden) for financial returns (similar to what was developed for In Kind). In other words, realize that certain administrative costs may be worthwhile due to the market value they deliver – such costs should be appropriately allocated.	This will be addressed in steps 4 and 5
Be clearer of the strategic interplay between EIM Losses and Transmission Losses both in implementation and long-term	We will continue to look for opportunities to share interplay between EIM losses and Transmission losses if applicable. At this point, we do not see any interplay between EIM Losses and Transmission Losses.
Maintain separation between EIM Losses and Transmission Losses	We agree there is a separation of EIM Losses and Transmission Losses

12/12/19 Feedback Summary (cont.)

Themes	BPA's Response
Customer proposed changes to EIM Charge Code principles	The team will consider the proposed principles and will give feedback to customers at the February workshop
Include a glossary of EIM charge codes and a crosswalk to current BPA rates where applicable	We will continue discussing the EIM charge codes and cross walk to current BPA rates where applicable in the February workshop materials
EIM charge code cost allocation should include wheel through , preference customers and interchange and non-participating resources. How are customers outside the BA considered?	Analysis and alternatives will be discussed in steps 4 and 5.
EIM charge code cost allocation should be initially based on cost causation and should be phased in with a partial insulation	Cost allocation is an important issue and the feedback on a phased in and partial insulation will be considered in the alternatives development
As the EIM charge code cost allocation (and other EIM policy issues) is discussed, one consideration is to ensuring customers existing OATT rights are fully respected and that customers maintain the ability to use their rights without facing new costs.	In the evaluation phase, there will be consideration of OATT rights and how to recover new costs . In the steps 5 and 6 the consideration of OATT rights will be evaluated
More clearly tie Ancillary Services to EIM Charge Codes	In the rates discussion, there will be an in-depth discussion of tying the Ancillary Services to EIM Charge Codes where it is applicable.

12/15/19 Feedback Summary

Themes	BPA's Response: Updated 1/28
Provide a detailed summary timeline with topics for each workshop	We will keep an agile schedule and adjust as we hear feedback from customers.
Customers concurred with BPA's proposal for engagement for certain topics	No change
Customers want early discussions on the following topics: <ul style="list-style-type: none"> • Transmission Usage • Creditworthiness • EIM Metering and Data Requirements • EIM Non Federal Resources 	Based on customer feedback, we have started discussion on the identified topics from customers in Jan. and Feb. This is reflected in the schedule on the Meetings and Workshops page
Provide customers information on where/if there will be changes for Rate Case topics	We recognize rates have dependencies on EIM policy topic decisions and we will stay coordinated with the topics. We also recognize their dependencies on charge code, gen inputs and Priority Firm Load. We have discussions on rate case issue in the Jan workshop and will continue those discussions through the summer.
Provide an explanation of why the proposed future tariff topics are not part of TC-22	The future deferred tariff topics are due to possible changes in industry standards and developing markets. As we discussed in the Oct. 23 workshop, we are focusing on EIM for this proceeding.
Identify early in steps 1 & 2 where there are dependencies for other topics	We will identify the steps and to the extent we know the dependencies, will include them.
Provide a crosswalk of the Tariff issues from TC-20 to TC-22	Please see appendix at workshop in Nov. 19.

12/15/19 Feedback Summary (cont.)

Themes	BPA's Response: Updated 1/28
EDAM impact on rates and tariff	EDAM policy is out of scope in the rates and tariff. Customers have the ability to participate directly in the CAISO's EDAM policy initiative process. Bonneville's evaluation of whether and how to join EDAM is anticipated to be another decision process – much like EIM – including the development of principles for our evaluation. We also anticipate that process would then be followed by rates and tariff cases.
Green House accounting	Green house gas accounting is out of scope in the rates and tariff process. The policy was discussed in the following workshop: https://www.bpa.gov/Projects/Initiatives/EIM/Doc/20190312-March-13-2019-EIM-Stakeholder-Mtg.pdf
EIM governance	EIM governance is out of scope in the rates and tariff process. Customers have the ability to participate in CAISO's governance review process.
Leverage customer led workshops to share experiences and challenges	We worked with other participants to get a better understanding of their experiences and challenges. We also agree the monthly customer led workshops are an excellent forum to share experiences and challenges with other customers. Our first requested customer led workshop was 1/15.
Carry larger ancillary services reserves	This will be addressed in the Gen Inputs discussion.
More discussion is needed on steps 1 & 2 for resource sufficiency. Customers provided several questions to gain a better understanding.	We will look at the schedule and update it to address these questions.

12/15/19 Feedback Summary (cont.)

Themes	BPA's Response: Updated 1/28
Develop a roadmap of how future deferred tariff topics are addressed.	The future deferred tariff topics are due to possible changes in industry standards and developing markets. We don't have roadmaps at this time. We would look to develop roadmaps after the conclusion of TC-22 if warranted.
Regional Planning Organization may have a couple of options	This will be addressed in steps 3-6 of the RPO discussion. An RPO update will be discussed at the 2/25 workshop and step 3 will be addressed in the 4/28 workshop.
Oversupply discussion and if it is needed in EIM	As noted in the EIM discussions at https://www.bpa.gov/Projects/Initiatives/EIM/Doc/20190312-March-13-2019-EIM-Stakeholder-Mtg.pdf BPA believes OMP is compatible with EIM. As we gain experience with EIM operations, we will continue to evaluate implementation and consider any potential changes in future tariff cases.

EIM Issue Inter-Dependencies Identified

