BP-24 Rate Case & TC-24 Tariff Proceeding Workshop

June 29, 2022

Bonneville
POWER ADMINISTRATION

Agenda

TIME*	TOPIC	Presenter
9:00 to 9:05 a.m.	Introduction, Meeting Protocols and Agenda	Rebecca Fredrickson Daniel Fisher
9:05 to 9:35 a.m.	Power Rates • Tier 2 Rates (steps 1-4)	Emily Traetow John Wellschlager
9:35 to 10:05 a.m.	Power Rates • Unauthorized Increase (UAI) Charge (steps 1-4)	Emily Traetow
10:05 to 10:25 a.m.	**BREAK**	
10:25 to 10:55 a.m.	Transmission Rates • Unauthorized Increase/Failure to Comply Charges (Inform)	Frank Puyleart Bill Hendricks
10:55 to 11:30 a.m.	Transmission Rates • Eastern Intertie Process Update (BP-22 Settlement Commitment)	Katie Sheckells Brian Altman
11:30 to 12:30 p.m.	**LUNCH**	
12:30 to 1:15 p.m.	Tariff • Generator Interconnection Process (steps 1-4)	Tammie Vincent Cherilyn Randall Christina Lee Ava Green
1:15 to 1:45 p.m.	Tariff • Attachment C: Long-Term ATC (step 5)	Abbey Nulph
1:45 to 2:30 p.m.	Tariff • Monthly Loss Factors on the Network Segment (all steps)	Colleen McDonnell Cherilyn Randall
2:30 to 2:45 p.m.	**BREAK**	
2:45 to 3:15 p.m.	Tariff • Utility and DSI Delivery Losses (all steps)	Toni Williams Jay Largo
3:15 to 3:25 p.m.	Wrap-up and Next Steps	Rebecca Fredrickson

** Times are approximate*

Approach to Customer Engagement

Most identified issues will be presented according to the following process at workshops (multiple steps might be addressed in a single workshop):

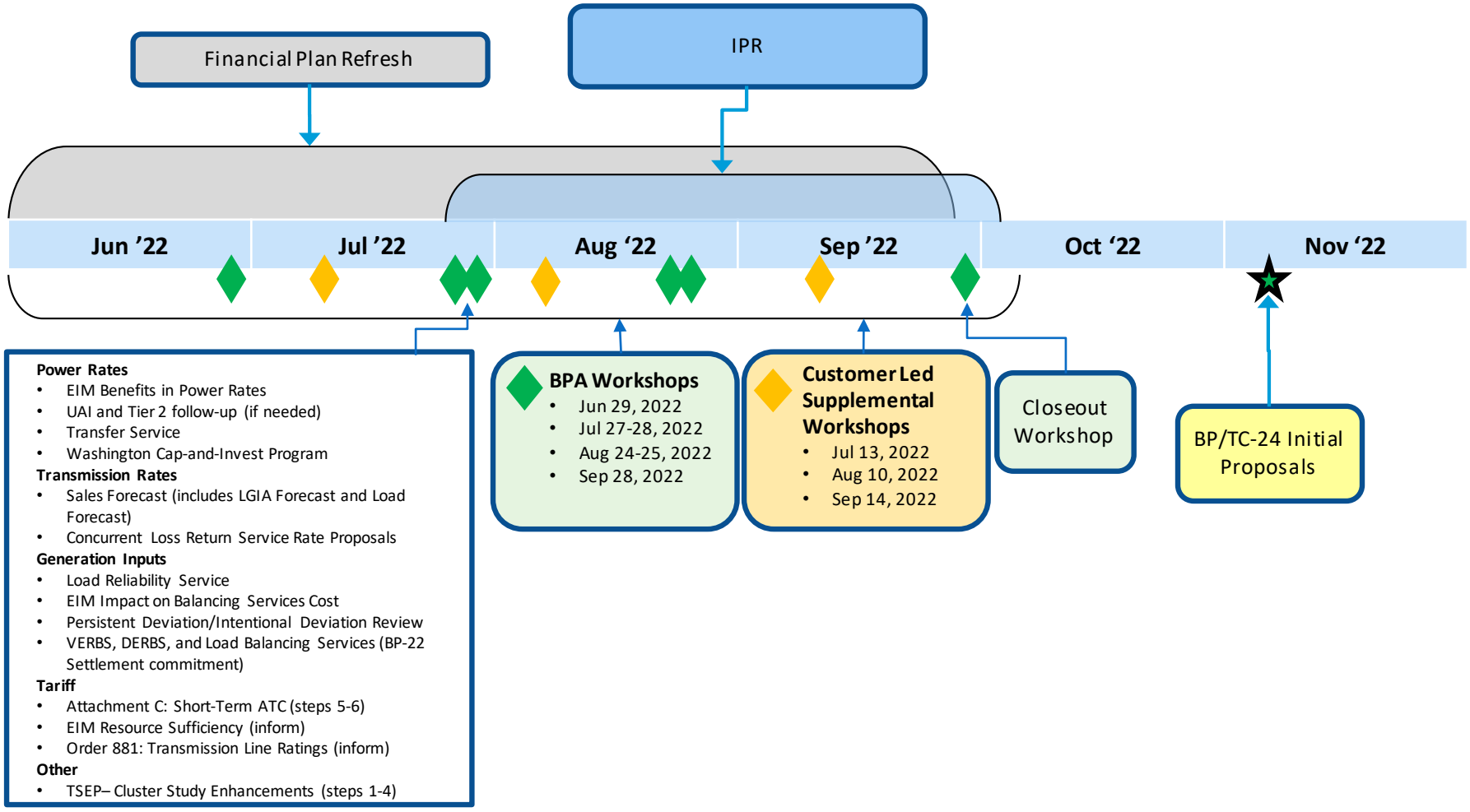
Phase One: Approach Development	Phase Two: Evaluation	Phase Three: Proposal Development
Step 1: Introduction & Education **Step 2: Description of the Issue**	**Step 3: Analyze the Issue** **Step 4: Discuss Alternatives**	**Step 5: Discuss Customer Feedback** **Step 6: Staff Proposal**

- Teams will follow the steps that may be covered in one workshop or more based on the complexity of the issue.

Customer Comment Process

- Thank you to everyone who submitted comments.
- In order to be as transparent and responsive as possible, BPA is developing a comment tracking and response process that includes the following:
  - All customer comments will be posted to the BP-24/TC-24 website.
  - BPA will be posting a consolidated customer response (CCR) document for each workshop that will be posted/updated at the same time as other workshop materials.
  - The CCR is organized to address comments listed by the workshop date where the comments were received.
  - The CCR will provide direct responses or identify other forums or future BP/TC-24 workshops where BPA expects to provide a response.
    - To the extent possible, BPA will endeavor to provide responses prior to the next workshop on the BP-24 website (updated CCR will be posted with workshop materials)
    - All comments will have a response

BP/TC-24 Pre-Proceeding Timeline



BP-24 Topics

Power Rates

- Tier 2 Rates
- Unauthorized Increase (UAI) Charge

Transmission Rates

- Unauthorized Increase/Failure to Comply Charges
- Eastern Intertie Process Update (BP-22 Settlement Commitment)

BP-24 Topic
Tier 2 Rates

- Step 1: Introduction & Education
- Step 2: Description of the Issue
- Step 3: Analyze the Issue
- Step 4: Discussions on possible alternatives to solve issue

Steps 1 & 2: Introduction, Education and Description of Issue

Previous and Current Tier 2 Rates

- BP-12 through BP-22 Tier 2 rates in $/MWh:

Fiscal Year	Rate Case	Short Term	Load Growth	VR1-2014	VR1-2016
2012	BP-12	$46.48	N/A	N/A	N/A
2013	BP-12	$48.69	$48.63	N/A	N/A
2014	BP-14	$35.58	$35.58	N/A	N/A
2015	BP-14	$39.65	$41.62	$41.56	N/A
2016	BP-16	$29.72	$45.18	$44.72	$40.60
2017	BP-16	$32.01	$49.60	$49.08	$43.18
2018	BP-18	$27.20	$47.68	$51.40	$46.50
2019	BP-18	$24.97	$45.42	$53.02	$48.02
2020	BP-20	$30.32	N/A	N/A	N/A
2021	BP-20	$33.00	N/A	N/A	N/A
2022	BP-22	$34.39	$34.39	N/A	N/A
2023	BP-22	$32.99	$32.99	N/A	N/A

BP-22 Tier 2 Rates

- BP-22 Short Term and Load Growth rate components:

Fiscal Year	Forecast Power Price	Risk Adder	Losses	TSS	Overhead Adder	Short Term and Load Growth Rate		Short Term amounts	Load Growth amounts
	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh		annual aMW	annual aMW
2022	$32.13	$0.00	$1.03	$0.11	$1.12	$34.39		142.767	13.823
2023	$30.73	$0.00	$0.99	$0.11	$1.16	$32.99		159.228	13.973

- In BP-22 BPA did not make any power purchases to support its sales at Tier 2 rates; obligations at Tier 2 rates were met with available Firm Surplus amounts (assuming critical water after meeting firm load obligations.)
  - Current Tier 2 aMW estimates for FY 2024 are similar to the Tier 2 amounts in BP-22; FY 2025 Tier 2 amounts are significantly higher (about twice the size.)
  - Tier 2 aMW amounts will be set November 1, 2022 for BP-24.

BP-22 Forecast Power Prices

- In BP-22, the forecast power prices (aka Remarketing Value) used to set the Short Term and Load Growth rates were based on:
  - Average ICE MID-C settlement prices that were pulled during two separate five-consecutive-business-day periods (the last full week of September 2020 and last full week of March 2021) for a flat block of power in FY 2022 and FY 2023;
  - Plus $0.50/MWh.
- The 50 cent adder was used to convert settlement prices to physical prices. It was based on the difference between:
  - previously made Tier 2 power purchases;
  - and ICE settlement prices on the date the Tier 2 power purchases were made for the same years of the power purchases

Steps 3 & 4: Analyze and Discuss the Issue

BP-24 Tier 2 Rate Proposals

- Staff proposes to use the same methodologies used in BP- 22 to set BP-24 Tier 2 rates.
  - If BPA has Firm Surplus power to meet its entire Tier 2 obligation in a fiscal year, then that fiscal year's Tier 2 rate would be based on ICE settlement prices (pulled during the last full week of September 2022 and the last full week of March 2023) for a flat block of power in the same fiscal year, plus $0.50.
  - If BPA purchases an annual flat block of power to meet all or a portion of its Tier 2 obligation in a fiscal year, then that fiscal year's Tier 2 rate would be based on the purchase price for such power, even if some portion is supplied from the federal system.
- Staff proposes to use this methodology for Short Term and Load Growth rates. The Load Growth rate is proposed to be set equal to the Short Term rate.

Potential Adjustments to Tier 2 Rates?

- Carbon cost adder to account for the low carbon attributes associated with power sold at Tier 2 rates.
  - Firm Requirements Power sold at Tier 2 Short Term and Load Growth rates includes the attributes of BPA's system fuel mix regardless of whether the power is sourced from the FCRPS system or is purchased by BPA.
  - BPA could include a carbon cost adder in the Short Term and Load Growth rates to reflect the added-value of low carbon in BPA's system fuel mix as well as the slightly diminished market value of the Federal system due to the added carbon.
- Western Resource Adequacy Program (WRAP) credit if BPA makes a market purchase to meet its Tier 2 obligations that can be traced to a physical resource (and if BPA joins the binding phase of the WRAP.)

Carbon Cost Adjustment to Tier 2 Rates

- In BP-22 workshops BPA asked customers if we should include a carbon cost adder to account for the low carbon attributes associated with power sold at Tier 2 rates.
- Customers responded that the issue was not ripe for the BP-22 rate case. One customer group commented that the proposal is about 6-8 years too soon.
- BPA did not include a proposal for a Tier 2 carbon adder in its BP-22 Initial Proposal and the issue was not raised by any other parties during the rate case.
- Given the increased NW market value BPA is realizing from our low carbon power, BPA is interested in customer's thoughts on whether BPA should propose including a carbon cost adjustment in Tier 2 rates in the BP-24 rate case.
  - Such an adjustment could be based on the low carbon premium realized from actual forward sales.
  - Revenues from the adder would go to Tier 1 rates (composite cost pool, initial staff thinking).

WRAP Adjustment to Tier 2 Rates

- BPA should include an adjustment to Tier 2 rates associated with the Western Resource Adequacy Program (WRAP) if all of the following conditions are met:
  - BPA joins the binding phase of the WRAP;
  - BPA develops a credit for non-federal resources serving Above-RHWM Load that can be traced to a physical resource; and
  - BPA makes a purchase to support its Tier 2 obligations from a market purchase that can be traced to a physical resource or uses Firm Surplus to meet Tier 2 obligations.
- The credit should be equal to the WRAP credit that BPA develops (if any) for non-federal resources serving Above-RHWM Load.
- The cost of the credit would impact Tier 1 rates (non-slice customer cost pool, initial staff thinking).

Tier 2 Vintage Rates

- We have heard some interest in creating a Tier 2 Vintage rate for the remainder of Regional Dialogue.
- A Vintage rate can only be offered to customers that have elected the Tier 2 Short Term rate.
- If there is sufficient interest (at least 25 aMW per year for the pool of interested customers) BPA would issue a request for offers (RFO) that meets the following conditions:
  - Low carbon attributes
  - Backed by a physical resource (meets WRAP forward-showing requirements)
- Customers sign a binding Statement of Intent which obligates them to buy should BPA successfully procure power at or below an agreed upon price.
- The actual Vintage rate would be established in the BP-24 and BP-26 rate cases and would be based on the cost of the purchase made through the RFO plus any necessary adders (overhead costs, losses, Letter of Credit, etc.)

Vintage Rate Draft Timeline

- Possible timeline for establishing a Vintage rate in BP-24:
  - By July 13: Customers notify BPA (via Power Account Executives) of their interest in BPA's proposed Vintage rate
  - July 27/28 rates workshop: If sufficient interest and alignment to move forward, BPA goes over Vintage rate framework and timeline
  - Early August: Develop and sign confidentiality agreements with interested and eligible parties
  - Late August: Develop and offer the Statement of Intent (SOI)
  - Late September/early October: Deadline for customers to sign SOI
  - Late October: BPA issues RFO
  - November – Spring 2023: If BPA executes a purchase per the terms of the SOI, BPA notifies the parties and establishes a Vintage rate within the rate case, if no purchase is made the customers purchase power from BPA at the Tier 2 Short Term rate.

Vintage Rate Terms

- Information customers should share with AE:
  - aMW amounts by Fiscal Year that the customer would like to buy at a Vintage rate (power the customer has otherwise elected to purchase from BPA at the Tier 2 Short Term rate.)
  - Type of acquisition (that meets the low carbon, specified resource requirements)
- Confidentiality Agreement :
  - A confidentiality and non-disclosure agreement is required for all interested, eligible parties that would like to participate in SOI negotiations.
  - Example here: Confidentiality Agreement Example
- Statement of Intent (SOI):
  - Ideally the customers will have at least one month to sign the SOI. The SOI is a binding agreement that obligates the customer to purchase power at the Vintage rate if BPA makes a purchase in accordance with the terms of the SOI.
  - Example here: SOI Example

Next Steps

- Comments or questions? Email techforum@bpa.gov and copy your Account Executive

- Please provide comments by July 13th.

BP-24 Topic
Unauthorized Increase (UAI) Charge

- Step 1: Introduction & Education
- Step 2: Description of the Issue
- Step 3: Analyze the Issue
- Step 4: Discussions on possible alternatives to solve issue

Steps 1 & 2: Introduction, Education and Description of Issue

UAI in BP-22 Rate Case

- In the BP-22 rate case, we committed to having a workshop prior to the BP-24 rate case to discuss Unauthorized Increase Charges (UAI).

- This commitment was in response to a request from a customer during the rate case to review the application of UAIs, after the BP-22 rate case, and discuss whether customers would like to propose any changes to the penalty rates.

Why UAIs?

- The UAI Charge is a penalty charge intended to deter customers from taking more power from BPA than they are contractually entitled to take. BPA applies UAI charges when customers take more power than they have a contractual right to.

- BPA has a substantial economic and reliability interest in ensuring that customers are motivated at all times to ensure the availability and delivery of their non-BPA resource amounts.

- Customers can avoid UAI Charges by arranging for appropriate reserve and firming products or services. UAI Charges cannot be an economic alternative to not meeting contractual requirements because taking more power than contractually entitled jeopardizes the Federal Columbia River Power System (FCRPS) reliability.

UAI Demand and Energy Charges

- The demand UAI charge applies when:
  - the amount of measured demand during a HLH billing hour exceeds the amount of demand the purchaser is contractually entitled to take during that hour; and
  - is billed at 1.25 times the applicable monthly demand rate.

- The energy UAI charge applies when:
  - the amount of measured energy or Residential Exchange Program contract load exceeds the amount of energy the customer is contractually entitled to take during a diurnal period; and
  - is billed at the greater of: (1) 150 mills/kWh; or (2) two times the highest hourly Powerdex Mid-C Index price for firm power for the month in which the unauthorized increase occurs.

UAI Demand Billing Determinants

- The amount of measured demand that exceeds the amount of demand a CHWM Contract customer is contractually entitled to take is further defined by purchase obligation types as follows:
  - The Load Following customer's demand UAI billing determinant is the shortfall of its dedicated resources delivered to load on the hour of its Customer System Peak (CSP)
  - A Block customer or the Block portion of a Slice/Block customer's demand UAI billing determinant is the single highest HLH demand in excess of the sum of its Tier 1 and Tier 2 HLH predetermined hourly schedule amounts
  - The Slice portion of a Slice/Block customer's demand UAI billing determinant is the hourly Slice power delivery amount greater than the Slice customer's hourly Right to Power (RTP) for that same hour during the hour of the customer's monthly peak HLH Slice RTP.

NR ESS, RSS/FORS, TCMS

- BPA offers support services to its customers to help cover potential non-federal resource shortfalls and avoid UAIs.
  - NR Energy Shaping Service (NR ESS) for Load Following customers using non-federal resources to serve an NLSL.
    - Customer requests and pays for capacity in advance of need.
    - Monthly energy differences are trued-up after-the-fact at NR rates (shortfalls) or ICE Mid-C day ahead prices (excess power provided by the non-federal resources.)
  - Resource Support Services (RSS) including Forced Outage Reserve Service (FORS).
    - Customer pays for capacity in advance of need through its RSS and FORS monthly capacity fees.
    - Except during a forced outage, energy differences are trued-up using forecast market prices (Load Shaping rates). During a forced outage event, energy is trued-up using Powerdex Mid-C hourly index prices for the first 24 hours and ICE Mid-C day ahead index prices are used after the first 24 hours.
  - Transmission Curtailment Management Service (TCMS) for Load Following customers treats eligible transmission curtailments on non-federal resource schedules like generation imbalance.
    - No capacity fee, capacity is covered by deployed balancing reserves.
    - Energy is trued-up using Powerdex index prices (subject to bands similar to BPAT generation imbalance charges prior to BPA joining the EIM.)

Steps 3 & 4: Analyze and Discuss the Issue

Actual UAI Charges

Demand and Energy UAIs - Billed revenue			
$	Slice/Block and Block	Load Following	IP and NR
2012	$351,377	$300	$0
2013	$382,980	$27,150	$0
2014	$208,746	$17,526	$0
2015	$144,060	$150	$12,538
2016	$118,475	$17,701	$91,622
2017	$154,022	$3,463	$21,819
2018	$142,609	$1,500	$8,781
2019	$117,616	$0	$23,903
2020	$69,422	$40,519	$3,552
2021	$223,908	$124,705	$132,013
2022	$20,020	$31,984	$303,246
Total	**$1,933,235**	**$264,998**	**$597,474**

Demand and Energy UAIs - Bill line item counts			
Count	Slice/Block and Block	Load Following	IP and NR
2012	62	1	0
2013	80	3	0
2014	76	2	0
2015	43	1	1
2016	47	1	3
2017	43	4	3
2018	35	1	1
2019	36	0	2
2020	19	22	1
2021	18	18	4
2022	10	4	4
Total	**469**	**57**	**19**

- Demand UAIs are not billed as frequently as Energy UAIs, but when they are billed the amount paid for Demand UAI has always been larger than Energy UAIs.
  - In total Demand UAIs make up 28% of billed revenue for UAIs ($793K/$2,795K) and 4% of the monthly bill line item counts (22/545)
  - On average a Demand UAI is $36K per bill line item and an Energy UAI is $4K per bill line item

UAI Demand Charges

- BPA staff think the current application of demand UAIs is appropriate and that it may not be wise to reduce BPA's capacity penalties at a time when capacity is becoming more scarce and an elevated strategic issue for many utilities.

- Capacity is expensive. The current rate is equivalent to 125% of one monthly debt payment a utility would pay to build new capacity. The financing assumed is also extraordinarily favorable – assumed to be financed over 30 years with BPA's credit rating at tax-exempt rates.

- Analogy: What would you charge someone that stayed in your house uninvited?
  - If the house was vacant at the time, maybe charging 125% of your monthly mortgage payment is too much.
  - If their unexpected arrival caused you to have to sleep outside in the rain, maybe 125% of your monthly mortgage payment isn't enough.

- Capacity penalties are tricky in that they are often too high until they aren't high enough.

Update UAI Energy Charge

- Revise UAI energy charge language in the General Rate Schedule Provisions (GRSPs) as follows:
  - Current language: Two times the highest hourly Powerdex Mid-C Index price for firm power for the month in which the unauthorized increase occurs.
  - Proposed language: Two times the highest hourly average Load Aggregation Point (LAP) price for BPA as determined by the Market Operation (MO) under Section 29.11(b)(3)(C) of the MO Tariff for the month in which the unauthorized increase occurs.
- Also replace Powerdex index prices used in FORS and TCMS. Proposed redline GRSP language will be shared during an upcoming workshop.

Next Steps

- Comments or questions? Email techforum@bpa.gov and copy your Account Executive

- Please provide comments by July 13th.

BP-24 Topic
Unauthorized Increase Charge (UIC) and Failure To Comply Penalty Charge

NIPPC Comment

BPA currently charges transmission customers who fail to comply with dispatch orders the higher of 500 mills/kwh or 150% of an hourly index price. BPA also charges customers who exceed their transmission capacity reservations an Unauthorized Increase Charge. NIPPC believes that BPA should review these charges with customers to determine whether they are higher than necessary to achieve their stated purpose. Part of this exercise should be to compare similar charges set forth in the tariffs of other transmission providers in the region as well as considering whether these charges remain appropriate now that BPA has joined the EIM.

Objectives

- Review the charges and how they work
- Discuss these types of charges within the industry
- Discuss their use while in the EIM

Unauthorized Increase Charge (UIC)

Criteria

- Transmission Customers taking PTP Transmission Service under the PTP, IS, and IM rate schedules shall be assessed the UIC when they exceed their capacity reservations at any Point of Receipt (POR) or Point of Delivery (POD). BPA will notify a Transmission Customer that is subject to a UIC once BPA has verified the UIC amount.

Rate

- The UIC rate shall be the lesser of
  1. 100 mills per kilowatt-hour plus the price cap established by FERC for spot market sales of energy in the WECC, or
  2. 1000 mills per kilowatt-hour.
- If FERC eliminates the price cap, the rate will be 500 mills per kilowatt-hour.

Failure To Comply Penalty Charge

Criteria

- If a party fails to comply with BPA's dispatch, curtailment, redispatch, or load shedding orders, the party will be assessed the Failure to Comply Penalty Charge. Parties that are unable to comply with a dispatch, curtailment, load shedding, or redispatch order due to a force majeure on their system will not be subject to the Failure to Comply Penalty Charge provided that they immediately notify BPA of the situation upon occurrence of the *force majeure*.

Rate

- The Failure to Comply Penalty Charge shall be the greater of
  1. 500 mills per kWh, or
  2. 150 percent of an hourly energy index in the Pacific Northwest.

Charges Within the Industry

- FERC Guidelines from Order 890-A
  - The Commission affirms the adoption of a rebuttable presumption that unreserved use penalties up to two times the transmission provider's applicable point-to-point service rate are just and reasonable.
  - It is therefore appropriate to apply the 200 percent penalty rate to all unreserved uses, whether inadvertent or intentional.
- Other entities don't sell transmission services to the large number of customers that BPA does

PacifiCorp Charge

Unauthorized Use of Transmission Service

Criteria

- In the event that a Transmission Customer has not secured Reserved Capacity or exceeds its firm or non-firm Reserved Capacity at any Point of Receipt or any Point of Delivery.

Rate

- The penalty charge for a Transmission Customer that engages in Unreserved Use is 200% of the applicable rate.

PacifiCorp Open Access Transmission Tariff – Schedule 11

These Charges in the EIM

Unauthorized Increase Charge

- The EIM isn't meant to solve the issues that this charge addresses.
- It is a market place the utilized donated transmission capacity.

Failure To Comply Penalty Charge

- The EIM does not issue any dispatch, curtailment, redispatch, or load shedding orders.
- The orders are necessary within BPA's BA in order to maintain its health.

QUESTIONS

BP-24 Topic
Eastern Intertie Process Update (BP-22 Settlement Commitment)

BP-22 Settlement Agreement for Public Process

- BPA will discuss and address rates and related issues regarding the Eastern Intertie in at least one pre-rate case workshop prior to the BP-24 proceeding, acknowledging the interests of the Montana Intertie parties and BPA transmission customers, and taking into account the projected long-term firm demand for the Eastern Intertie post 2025

Montana Transmission

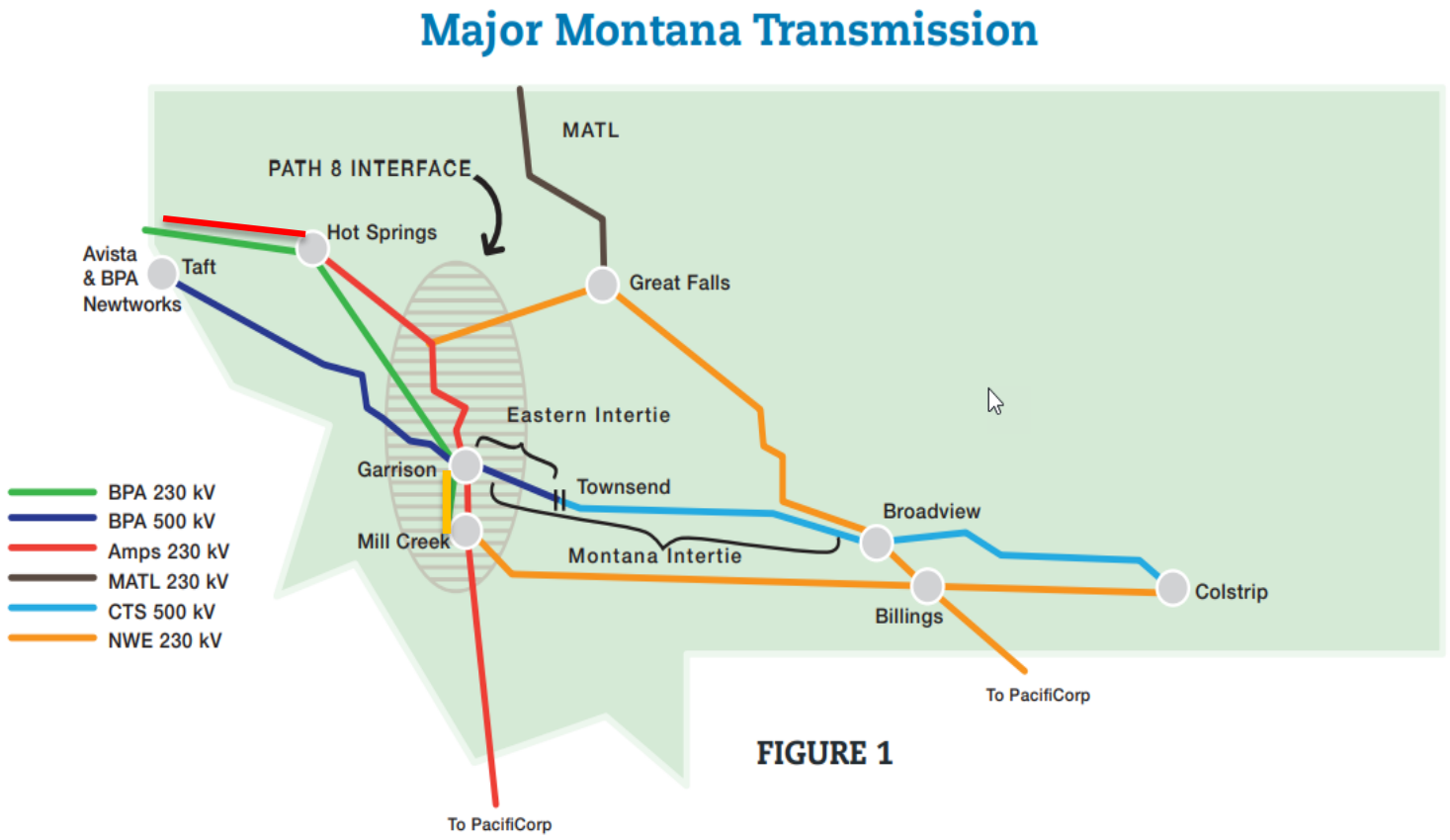
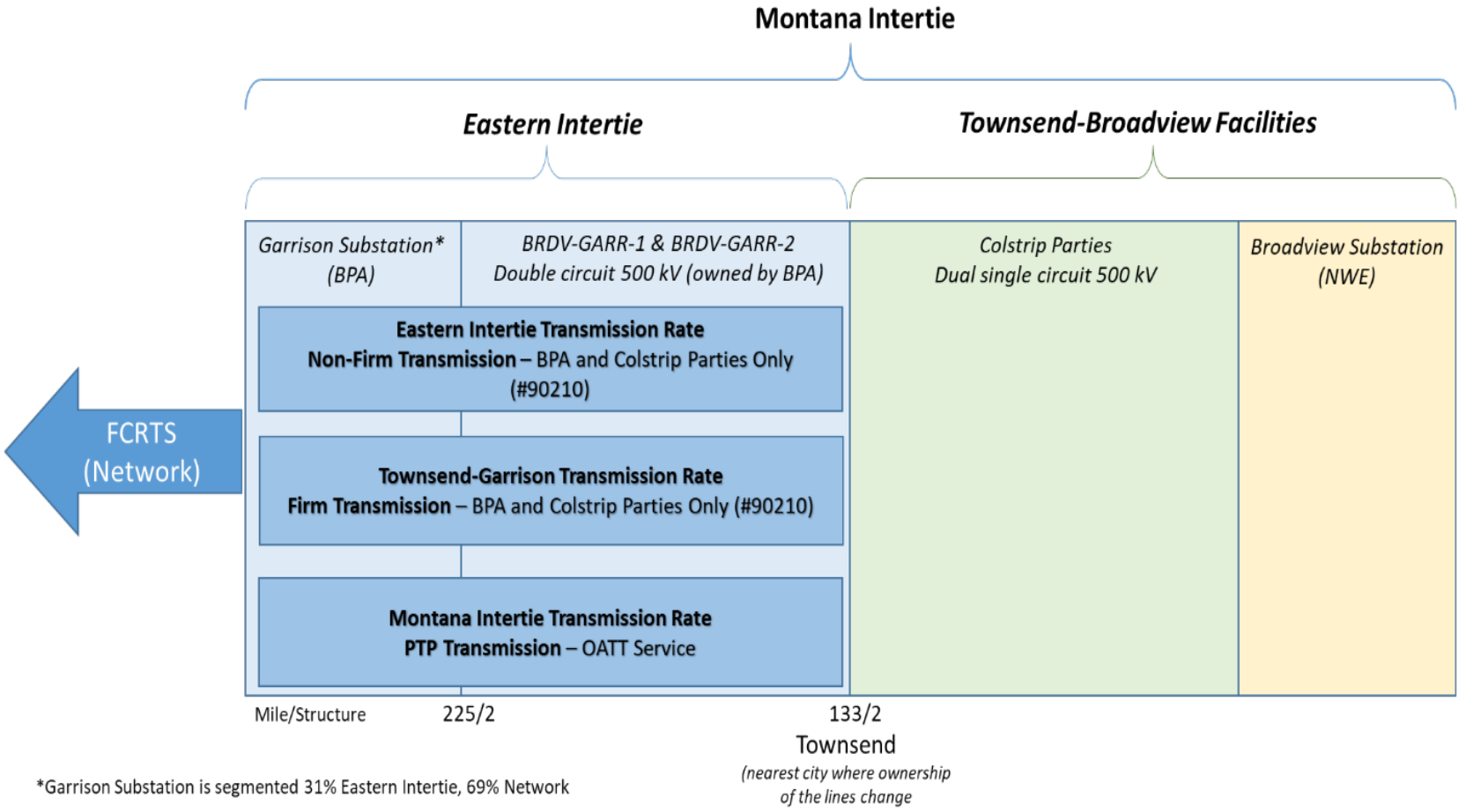


FIGURE 1

Montana Intertie Agreement



Background

- The Montana Intertie Agreement (MIA) provides the Colstrip Transmission System (CTS) parties a right to "rollover" service 2 years before the termination date (2027) to service *no less favorable* than what Bonneville is then offering to other customers
- The Colstrip Parties reached out to BPA in winter of 2021 and requested BPA to consider divestment of the Eastern Intertie to the Colstrip Parties as an alternative for the Eastern Intertie asset.
- The CTS owners and BPA discussed several options for the Eastern Intertie over several months and the benefits of the asset
- After careful consideration BPA believes the Eastern Intertie continues to provide benefits to the region.

Next Steps

- BPA will be offering OATT service to the CTS parties 10/1/25, effective 10/1/27.
- BPA will address rate treatment in BP-26.
- Continue to coordinate with CTS parties as adjacent transmission owners.

TC-24 Topics

Tariff

- Generator Interconnection Process
- Attachment C: Long-Term ATC
- Monthly Loss Factors on the Network Segment (all steps)
- Utility and DSI Delivery Losses (all steps)

TC-24 Topic
Generator Interconnection Process – LGIP Appendix 1 Modifications

- Step 1: Introduction & Education
- Step 2: Description of the Issue
- Step 3: Analyze the Issue
- Step 4: Discussions on possible alternatives to solve issue

Steps 1 and 2: Introduction, education, description of the issue

- BPA Transmission is receiving an increasing amount of Large Generator Interconnection requests that include battery technology associated with solar and wind generator projects.
- The Large Generator Interconnection Process (LGIP) does not take into account the fundamentals of battery technology.
- Adding language to instruct customers how to submit requests that includes battery technology is critical for Transmission to be able to understand and study these requests.

Steps 1 and 2: cont.

- Order 845 made it easier for new technology, particularly batteries, to interconnect to our system.
- Order 845, however, did not address the information technical data/information requirements that are necessary in the application process to efficiently & effectively process and study the new technology requests.

Step 3: Data and/or analysis that supports the issue

- BPA Transmission has begun to receive Large Generator Interconnection requests that include battery technology associated with solar and wind generator projects that do not have the necessary information to effectively proceed with the request and study process
- We anticipate that these types of requests will continue to increase.

Step 4: Discussions on possible alternative to solve issue

- LGIP Appendix 1 modifications
  - Additional request types:
    - Material Modification analysis
    - Repower of an existing Large Generating Facility
    - Surplus Interconnection Request
    - Replacement Interconnection Request

LGIP Appendix 1 modifications, cont.

- Changes, cont:
  - Name of the Large Generating Facility
  - Resource Interconnection Service (NRIS) Request
    - Additional information for eligible Network customer
  - Additional information for Repower and Replacement Interconnection requests
  - Additional location and technical information for Large Surplus Generating Facilities

Next Steps at July Workshop

- Step 5: Discussion of customer feedback to alternatives and BPA's response
- Step 6: Staff final proposal for solution

Next Steps

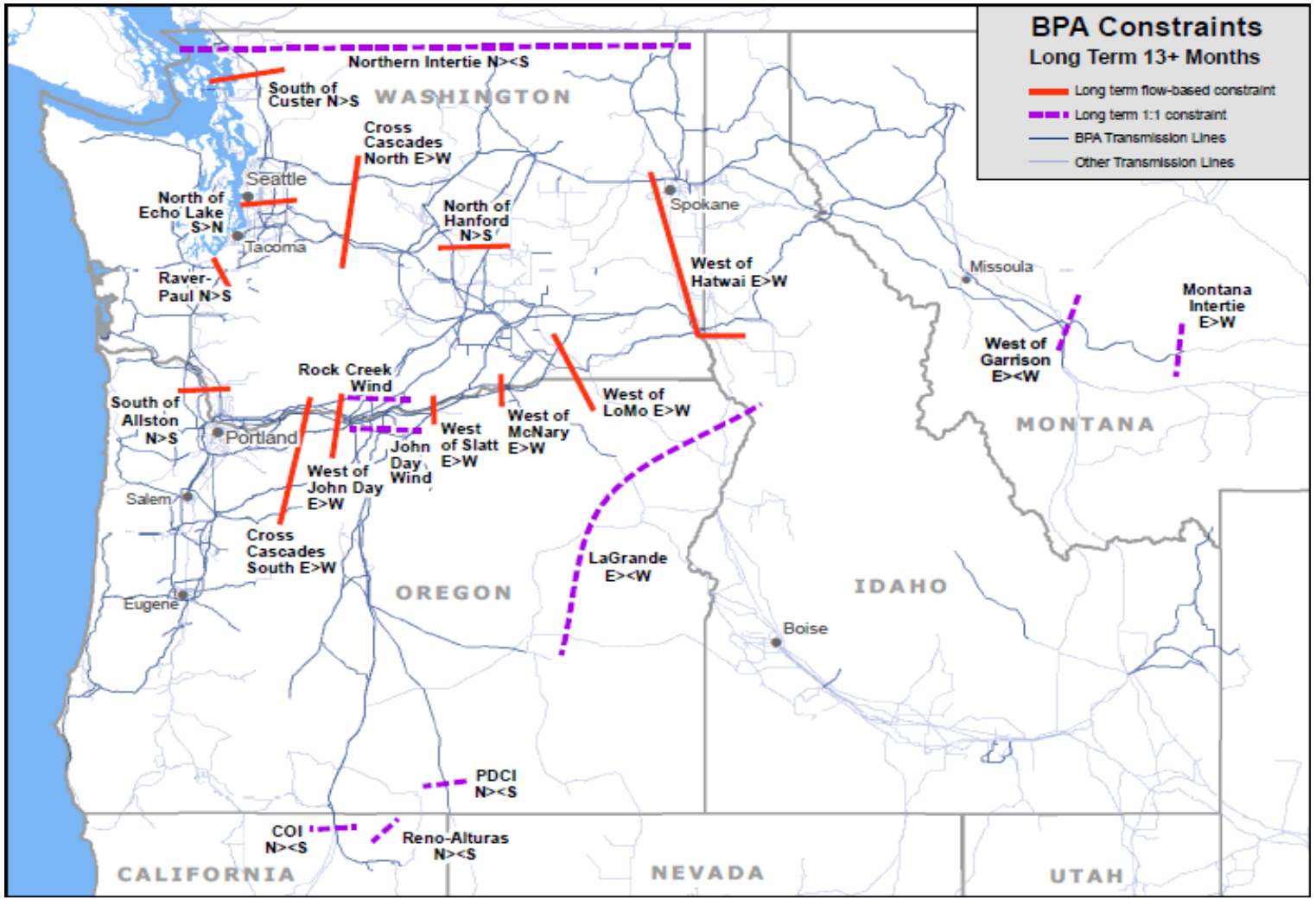
- Comments or questions? Email techforum@bpa.gov and copy your Account Executive

- Please provide comments by July 13th.

TC-24 Topic
Attachment C: Long-Term ATC

- Step 5: Customer Feedback and BPA Response

Map of BPA's Long-Term Constraints



Also available at: https://www.bpa.gov/-/media/Aep/transmission/atc-methodology/atc-long-term-constraints.pdf

Feedback from Last Workshop

- During the April 27, 2022 workshop, BPA staff opened a comment period and asked:
  - Would you prefer quarterly or bi-monthly commercial powerflow studies to determine whether new LT TSRs and/or NT forecasts (FTSRs) can be granted service? If neither, what frequency would be preferable?
  - Would the input (tables of generation and import/export levels) and output (report of study findings) data proposed provide sufficient transparency to the commercial powerflow studies? If not, what other information would you find useful?
  - Is the CTIM tool providing value to you? Do you have any feedback on your experience(s) with this tool or suggestions for improvement?
- One comment was received, indicating a preference for bi-monthly studies and provision of a study report.

Updated BPA Proposal

BPA will continue to:

- *Proposal for TC-24* – Need to describe the following in BPA's Tariff Attachment C, as well as performance of:
  - Calculating and posting ATC values for all constraints in the 0-13 month time horizon
  - Calculating and posting ATC values for all 1:1 constraints in the +13 month time horizon
- Use of LT ATC values to assess whether the Transmission System can accommodate impact(s) of new LT (F)TSRs impacting 1:1 constraints
- Perform TSEP Cluster Studies in response to requests that cannot be granted on the existing system
- Post the long-term pending queue, with PTDF-based impacts for all long-term (F)TSRs in queue order
- Conduct Deferral and Renewal competitions
- Identify partial offers for LT (F)TSRs

Updated BPA Proposal

BPA will stop:

- Calculating and posting ATC values for the flow-based constraints in the +13 month time horizon
- The annual LT ATC Base Case update
- Use of LT ATC values to assess whether the Transmission System can accommodate impact(s) of new LT (F)TSRs impacting flow-based constraints
- Provision of "What If" analyses

* *These will require Business practice modifications using the Business Practice Process*

Updated BPA Proposal

BPA will begin to:

- *Proposal for TC-24* – Describe in BPA's Tariff Attachment C and perform bi-monthly commercial powerflow studies to assess whether to accept new LT (F)TSRs impacting flow-based constraints, similar to the Needs Assessment which is now performed as part of the TSEP Cluster Study
- *Business practice modifications using the Business Practice Process:*
  - Provide and update the CTIM informed by the commercial powerflow studies, rather than the Needs Assessment, to allow interested parties to approximate impacts of a potential LT (F)TSR on the flow-based constraints
  - Collect Data Exhibits (location of resource and load information) at the time of (F)TSR submission, rather than just prior to the TSEP Cluster Study
  - Provide a study report following each commercial powerflow study to share details of the study outcomes
    - Report will detail which scenarios were evaluated and for which LT (F)TSRs BPA was able to offer Transmission Service without upgrades
    - Example provided in April workshop

Status Quo vs. BPA Proposal

	Status Quo	BPA Proposal
Calculate and post ST ATC values for all constraints	Yes	Yes
Calculate and post LT ATC values for all 1:1 constraints	Yes	Yes
Perform TSEP	Yes	Yes
Post the long-term pending queue, with PTDF-based impacts for all long-term (F)TSRs in queue order	Yes	Yes
Conduct Deferral and Renewal competitions	Yes	Yes
Identify partial capacity and/or term offers for long-term (F)TSRs	Yes	Yes
Update Attachment C of the BPA tariff	Yes	Yes
Calculate LT ATC values for the flow-based constraints	Yes	**NO**
Perform the LT ATC Base Case update	Yes	**NO**
Use of LT ATC values to assess whether the Transmission System can accommodate impact(s) of new LT (F)TSRs	Yes	Yes & **NO**[1]
Provide "What If" analyses	Yes	**NO**
Provide and update the CTIM, informed by the commercial powerflow studies	Yes	Yes[2]
Collect Data Exhibits at the time of (F)TSR submission	No	**Yes**[3]
Performance of bi-monthly commercial powerflow studies to process LT (F)TSRs	**NO**	Yes
Provide a study report following each new commercial powerflow study	**NO**	Yes

[1] LT ATC will be used to process (F)TSRs impacting 1:1 constraints & LT ATC will cease to be used to process (F)TSRs impacting flow-based constraints
[2] The CTIM is currently informed by the Needs Assessment
[3] Data Exhibits are currently required prior to the Needs Assessment/TSEP

Further Refinement of Proposal

New info since the April workshop:

- BPA plans to continue to post the Long-Term Pending Queue to its external website
- BPA plans to continue to facilitate Deferral and Renewal competitions, though this will require updates to BPA's processes
- BPA plans to continue to identify partial offers if full service can't be awarded, decreasing the term and/or demand, as possible and necessary
- BPA plans to collect Data Exhibits at the time of (F)TSR submission, to facilitate performance of the commercial powerflow studies
- Tariff Attachment C language
  - What follows is BPA's proposed draft language for its +13 month processes, which is a complete replacement of the current language…

DRAFT Tariff Attachment C (1 of 3)

Documents referenced within this attachment are available on the Transmission Provider's OASIS and/or the publically available website at www.bpa.gov. Transmission Provider defines TTC, ETC, and TRM in accordance with the NERC Glossary of Terms.

Scheduling, Operating, and Planning Time Horizon (0-13 months) ATC:

[Placeholder for language to be shared in July workshop]

Long-Term Planning Time Horizon (beyond 13 months) ATC:

For the long-term planning horizon (beyond 13 months to 10 years), Transmission Provider has 1:1 ATC Paths and flow-based paths, which are identified in the Map of Long-Term BPA Constraints, or its successor, provided on Transmission Provider's external website.

1. For 1:1 ATC Paths , Transmission Provider uses the following mathematical algorithm to calculate firm ATC for the long-term planning horizon (beyond 13 months and extending out to 10 years):

   ATC = TTC – ETC – TRM

   Where:

   ATC is the firm Available Transfer Capability for the ATC Path during that period.

   TTC is the Total Transfer Capability of the ATC Path during that period.

   ETC is the sum of existing firm commitments for the ATC Path during that period.

   TRM is the Transmission Reliability Margin for the ATC Path during that period.

DRAFT Tariff Attachment C (2 of 3)

To calculate TTC, Transmission Provider performs reliability studies to satisfy NERC standard TPL-001-4, or its successor, and to identify a range of System Operating Limits for each ATC Path. TTC values for the long-term planning horizon are determined consistent with the System Operating Limits.

To calculate ETC for the 1:1 ATC Paths, Transmission Provider assumes 1 MW of reserved firm transmission services equals 1 MW of ETC across that path. Transmission Provider calculates ETC as follows:

ETC = NITS + GF + PTP + ROR

Where:

NITS is the firm capacity reserved for Network Integration Transmission Service serving Network Load, to include losses, and Network Load growth, not otherwise included in Transmission Reliability Margin or Capacity Benefit Margin.

GF is the firm capacity set aside for grandfathered Transmission Service and contracts for energy and/or Transmission Service executed prior to the Commission's issuance of Order No. 888.

PTP is the firm capacity reserved for confirmed firm Point-to-Point Transmission Service.

ROR is the firm capacity reserved for roll-over rights for contracts granting Transmission Customers the right of first refusal to take or continue to take transmission service when the Transmission Customer's transmission service contract expires or is eligible for renewal.

DRAFT Tariff Attachment C (3 of 3)

The ETC calculation and the TRM calculation methodology for the paths where Transmission Provider has implemented TRM are found in [insert new name for LT ATC Methodology document here].

2. For the flow-based paths, Transmission Provider does not calculate ATC for the long-term planning horizon (beyond 13 months and extending out to 10 years). Commercial powerflow studies are performed to evaluate whether transmission service requests and/or Network Load and resource forecasts impacting flow-based constraints during this time period can be granted or require additional study to identify transmission system upgrades necessary to reliably offer transmission service.

Feedback Requested

- Do you support BPA's proposal to stop calculating and posting LT ATC values for the flow-based constraints?
- Do you have any suggested edits to the proposed Tariff Attachment C language?
- If BPA stops calculating and posting LT ATC values for the flow-based constraints, do you support use of bi-monthly commercial powerflow studies to assess whether to accept new LT (F)TSRs?
- If BPA begins to use bi-monthly commercial powerflow studies to process LT (F)TSRs:
  - Do you support BPA requiring Data Exhibits at the time of (F)TSR submission?
  - Do you believe the example study report (shared at the April TC-24 pre-proceeding workshop) will contain sufficient information to provide transparency?
- If BPA continues to make the CTIM available, can you describe your business impacts if BPA no longer provides "What If" analyses?

- **Please submit responses** to the above questions or any aspect of this presentation by **Wednesday, July 13** to techforum@bpa.gov, with a cc to your Transmission Account Executive, and "LARP" as the subject.

TC-24 Topic
Monthly Loss Factors on the Network Segment

- All Steps

Regulatory

- Sections 15.7 and 28.5 of BPA's Tariff requires point-to-point (PTP) and network integration transmission service (NT) customers to replace the real power losses associated with transmission service as calculated by BPA.
  - BPA calculates the real power losses a customer owes using the loss factors specified in Schedule 11 of its Tariff.
- Schedule 11 of BPA's Tariff includes loss factors for Network, Southern Intertie and UD and DSI segments.

Background

- In TC-22, staff proposed to update the network loss factor from an annual average to monthly averages.
- Parties generally agreed with staff's proposal to update the network loss factor, but disagreed on the granularity proposed.
- Alternate proposal from a party: two-season loss factors
- The TC-22 Final ROD adopted the two-season loss factors and directed staff to propose monthly loss factors in TC-24.

Staff Proposal

- In TC-24, BPA staff plans to propose monthly average network loss factors, as directed by the Administrator in the TC-22 Final ROD.
- Staff calculated the monthly loss factors using the same methodology used in the TC-22 Tariff Proceeding with refreshed data inputs.
  - Updated power flow inputs using 2024 base cases
  - Total Transmission System Load (TTSL) data from 2019-2021
- Staff is not proposing to change the loss factor for use of the Southern Intertie Segment.

Summary of TC-24 Loss Factor Study: Methodology

- Step 1: Power flow analysis using 2024 WECC seasonal base cases to determine the amount of real power losses by season.
- Step 2: Create seasonal curves (winter, spring, summer).
- Step 3: Perform statistical analysis by month.
  - Average the seasonal curves to create a single curve for the BPA system.
  - The single curve was used to calculate monthly loss factors by dividing the monthly average real power losses by the monthly average TTSL.

Summary of TC-24 Loss Factor Study: Results

Month	Average Hour (MW)	Loss Factor (%)
January =	23488	2.16%
February =	23516	2.16%
March =	21081	2.04%
April =	18829	1.93%
May =	19951	1.98%
June =	21569	2.07%
July =	22408	2.11%
August =	22021	2.09%
September =	19431	1.96%
October =	18385	1.90%
November =	21342	2.05%
December =	23510	2.16%

Summary of TC-24 Loss Factor Study: Data Details and Comparisons

- Two-season loss factor for comparison:
  - The current two-season loss factors calculated in TC-22 are 2.31% (summer) and 1.95% (non-summer).
  - The two-season loss factors calculated using data from the TC-24 Loss Factor Study are 2.09% (summer) and 2.04% (non-summer).

- Load and generation patterns are changing:
  - Large loads are appearing along the Columba River between McNary and The Dalles while the western load centers are flat.
  - Seeing some flattening of the losses.

Excerpt of Proposed Changes to Schedule 11

SCHEDULE 11

Real Power Loss Calculation

The applicable Real Power Loss factors are as follows:

a) for use of the Network Segment, the Loss Factors will be set on a ~~Summer (June through August) and Non-Summer (September through May) seasonal~~monthly basis as noted in the table below;

NETWORK LOSS FACTORS	
Period	Loss Factors (%)
January 1, 12:00am PPT to February 1, 12:00am PPT	2.16~~1.95~~ percent of kWh delivered
February 1, 12:00am PPT to March 1, 12:00am PPT	2.16~~1.95~~ percent of kWh delivered
March 1, 12:00am PPT to April 1, 12:00am PPT	2.04~~1.95~~ percent of kWh delivered
April 1, 12:00am PPT to May 1, 12:00am PPT	1.93~~1.95~~ percent of kWh delivered
May 1, 12:00am PPT to June 1, 12:00am PPT	1.98~~1.95~~ percent of kWh delivered
June 1, 12:00am PPT to July 1, 12:00am PPT	2.07~~2.34~~ percent of kWh delivered
July 1, 12:00am PPT to August 1, 12:00am PPT	2.11~~2.34~~ percent of kWh delivered
August 1, 12:00am PPT to September 1, 12:00am PPT	2.09~~2.34~~ percent of kWh delivered
September 1, 12:00am PPT to October 1, 12:00am PPT	1.96~~1.95~~ percent of kWh delivered
October 1, 12:00am PPT to November 1, 12:00am PPT	1.90~~1.95~~ percent of kWh delivered
November 1, 12:00am PPT to December 1, 12:00am PPT	2.05~~1.95~~ percent of kWh delivered
December 1, 12:00am PPT to January 1, 12:00am PPT	2.16~~1.95~~ percent of kWh delivered

More Info and Next Steps

- The TC-24 Loss Factor Study Summary data (.xlsx) is posted with the meeting material on the BP-24 Rate Case webpage.
- We encourage customers to submit feedback on staff's proposal.
- Complete redline of proposed Schedule 11 changes will be shared at the August workshops.

TC-24 Topic
Utility Delivery (UD) and Direct Service Industry (DSI) Loss Factor

- All Steps

Background

- Sections 15.7 and 28.5 of BPA's Tariff requires point-to-point (PTP) and network integration transmission service (NT) customers to replace the real power losses associated with transmission service as calculated by BPA.
  - BPA calculates the real power losses a customer owes using the loss factors specified in Schedule 11 of its Tariff.
- Schedule 11 of BPA's Tariff includes loss factors for Network, Southern Intertie and UD and DSI segments.
- Prior to TC-22 BPA had not proposed modifications to it's losses calculations.
  - BPA did not consider the UD and DSI segments in the TC-22 proceedings.

UD and DSI Segments

- UD segments consist of low voltage equipment associated with supplying power directly to utility distribution systems.
  - Includes transmission facilities used to serve a small subset of BPA customers.
- DSI segment consists of equipment that is used to step down voltages to industrial voltage.
- A limited number of customers fall under the UD or DSI category.
- The number of customers and facilities has decreased over time.

UD Loss Factor

- UD loss factor is 0.6% in Schedule 11 of BPA's Tariff.
  - UD loss factor is not used in any BPA systems to calculate the return of losses.
  - Amount of losses that would occur would be very small due to the limited number of customers and facilities associated with the UD segment.
- BPA conducted study for TC-22 which evaluated its Network loss factor.
  - The bulk of losses that would occur for UD customers are the losses across BPA's network.
  - These losses have historically been captured in the Network loss factor.

DSI Loss Factor

- DSI loss factor is not represented by a number in Schedule 11 of BPA's Tariff.
  - Schedule 11 refers to DSI loss factor as "specified in the Service Agreement" for DSI customers.
- The bulk of losses that would occur for DSI customers are the losses across BPA's network.
- These losses have historically been captured in the Network loss factor.

UD and DSI Loss Factor

- Where the Point of Delivery and Point of Meter locations and voltage are the same, there is no loss equation used in metering.
- Overall system losses are accounted for at the meter location by use of the Network loss factor which all customers are subject to.

Options

Options for UD and DSI Schedule 11 language in BPA's Tariff.

- **Option 1** – Remove UD and DSI loss factor language from Schedule 11 in BPA's Tariff.
- **Option 2** – Retain current UD and DSI loss factor language in schedule 11 of BPA's Tariff.

Staff Recommendation

- **Option 1** – Remove UD and DSI loss factor language from Schedule 11 in BPA's Tariff.
  - UD and DSI segments utilize the Network loss factor
  - Removes unnecessary and possibly confusing language from BPA's Tariff.
    - This is in alignment with BPA's current efforts since TC-20 to clean up it's Tariff.

Current Tariff Language

SCHEDULE 11

Real Power Loss Calculation

The applicable Real Power Loss factors are as follows:

a) for use of the Network Segment, the Loss Factors will be set on a Summer (June through August) and Non-Summer (September through May) seasonal basis as noted in the table below;

b) for use of the Utility Delivery Segment – 0.6 percent of kWh delivered;

for use of the DSI Delivery Segment as specified in the Service Agreement; and

c) for use of the Southern Intertie Segment – 3.0 percent of kWh delivered.

Redline Tariff Language

SCHEDULE 11

Real Power Loss Calculation

The applicable Real Power Loss factors are as follows:

a) for use of the Network Segment, the Loss Factors will be set on a ~~Summer (June through August) and Non-Summer (September through May) seasonal~~monthly basis as noted in the table below;

~~b) for use of the Utility Delivery Segment—0.6 percent of kWh delivered;~~

~~for use of the DSI Delivery Segment as specified in the Service Agreement;~~ and

~~c)~~b) for use of the Southern Intertie Segment – 3.0 percent of kWh delivered.

Proposed Tariff Language

SCHEDULE 11

Real Power Loss Calculation

The applicable Real Power Loss factors are as follows:

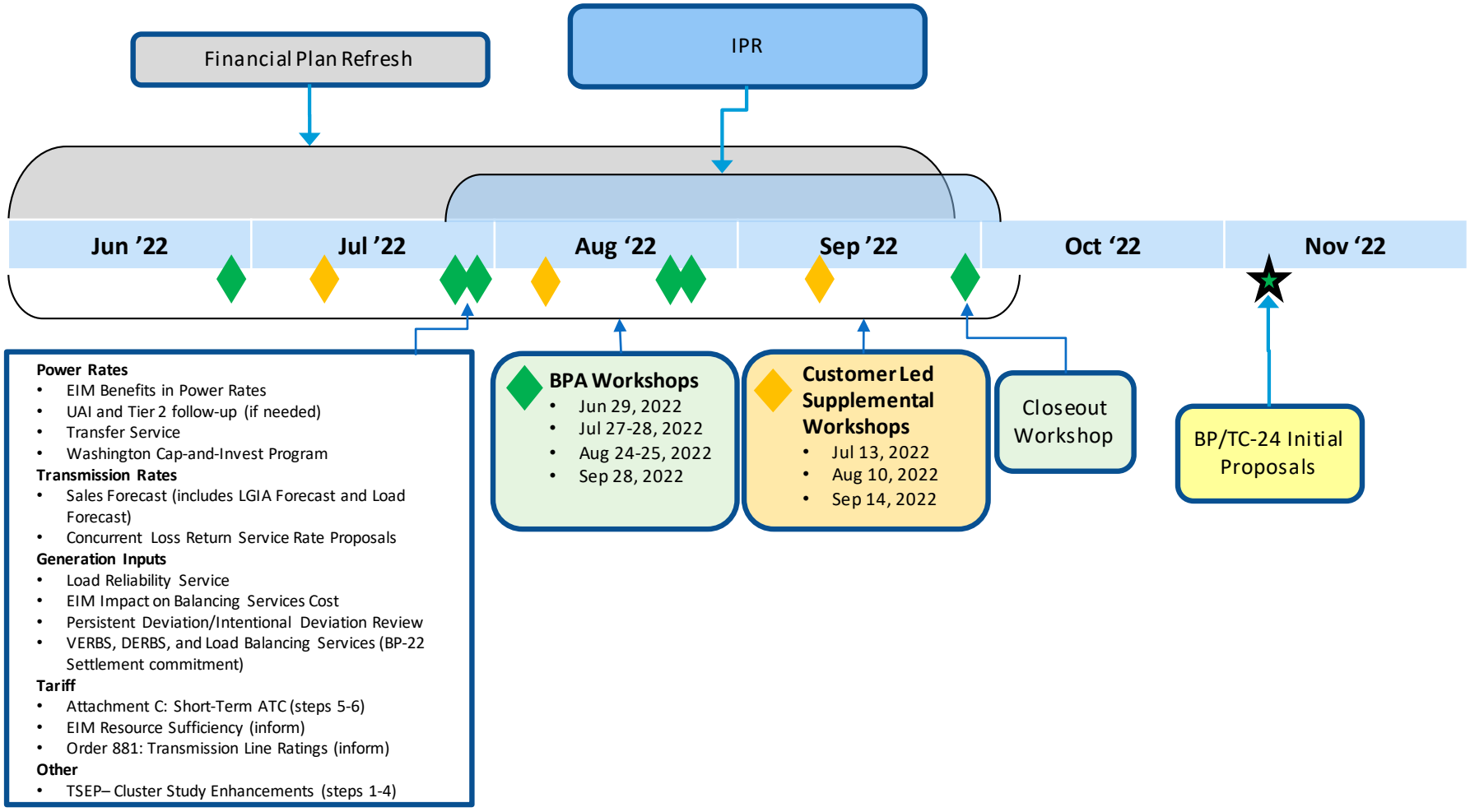
a) for use of the Network Segment, the Loss Factors will be set on a monthly basis as noted in the table below; and

b) for use of the Southern Intertie Segment – 3.0 percent of kWh delivered.

Next Steps

- BPA would like to hear from customers on the proposal.
- Please send comments by July 13th to techforum@bpa.gov and be sure to copy your transmission Account Executive.

BP/TC-24 Pre-Proceeding Timeline



Next Steps: BP/TC-24

- **Wednesday, July 6**
  - Deadline for requests for July 13 customer-led workshop, including specific topics and amount of time.
- **Wednesday, July 13**
  - Deadline for feedback and comments on June 29-30 materials. Please submit feedback and comments to techforum@bpa.gov, with a cc to your Power and/or Transmission Account Executive.
- **July 27 & 28**
  - Next BP/TC-24 workshops

Appendix

Customer Led Workshops

- Within one week after every workshop, customers can request a Customer Led workshop that would focus on topics presented in the previous workshop.
- Customers should provide the topic and estimated time needed for discussion with BPA SMEs.
- BPA will not create new content – this is an opportunity to ask further questions on materials previously presented.
- Opportunities for customers to present on topics of interest, where BPA will be in listening mode.

BP-24 & TC-24 Workshops: Proposed Dates for Rate and Tariff Topics

Date	Rate/Tariff Topics
April 27 (Wed)	**Generation Inputs** • Operating Reserves with Western Power Pool (WPP) **Tariff** • Attachment C: Long-Term ATC (steps 1-5) • Conditional Reservation Deadline for Daily Firm PTP (all steps)
May 25 (Wed)	**Power Rates/Generation Inputs** • EIM Benefits in Power Rates • EIM Impact on Balancing Services Cost • Customer concerns regarding EIM and Generation Inputs **Transmission Rates** • EIM Charge Code Allocation • Segmentation Study **Tariff** • Attachment C: Short-Term ATC (steps 1-4)
June 7 (Tues)	• *RHWM Process Workshop*
Jun 14-16	• *IPR (pre-rate case process)*

BP-24 & TC-24 Workshops: Proposed Dates for Rate and Tariff Topics (cont.)

Date	Rate/Tariff Topics
Jun 29 (Wed)	**Power Rates** • Tier 2 Rates • Unauthorized Increase (UAI) Charge **Transmission Rates** • Eastern Intertie Process Update (BP-22 Settlement Commitment) • Unauthorized Increase/Failure to Comply Charges (Inform) **Tariff** • Generator Interconnection Process (steps 1-4) • Attachment C: Long-Term ATC (step 5) • Generator Interconnection Process (steps 1-4) • Utility and DSI Delivery Losses (all steps) • Monthly Loss Factors on the Network Segment (all steps)

Agenda changes to note:
- EIM Benefits in Power Rates and EIM Impact on Balancing Services Costs topics moved to July
- Topics no longer needed and removed from agenda: Gen Inputs discussion on Losses (Power's capacity cost and recovery of losses)

BP-24 & TC-24 Workshops: Proposed Dates for Rate and Tariff Topics (cont.)

Date	Rate/Tariff Topics
Jul 27-28 (Wed-Thu)	**Power Rates** • EIM Benefits in Power Rates • UAI and Tier 2 follow-up (if needed) • Transfer Service • Washington Cap-and-Invest Program **Transmission Rates** • Sales Forecast (includes LGIA Forecast and Load Forecast) • Concurrent Loss Return Service Rate Proposals **Generation Inputs** • Load Reliability Service • EIM Impact on Balancing Services Cost • Persistent Deviation/ Intentional Deviation Review • VERBS, DERBS, and Load Balancing Services (BP-22 Settlement commitment) **Tariff** • Attachment C: Short-Term ATC (steps 5-6) • EIM Resource Sufficiency (inform) • Order 881: Transmission Line Ratings (inform) **Other Topics** • TSEP – Cluster Study Enhancements (steps 1-4)

Agenda changes to note:

- Revenue Requirements and Risk topics moved to August workshop.
- Added Concurrent Loss Return Service Rate Proposals topic.

BP-24 & TC-24 Workshops: Proposed Dates for Rate and Tariff Topics (cont.)

Date	Rate/Tariff Topics
Aug 24-25 (Wed-Thu)	**Agency (P&T)** • Revenue Requirements • Risk **Power Rates** • Loads & Resources • Gas & Market Price Forecast • Secondary Revenue Forecast **Transmission Rates** • EIM Charge Code Allocation **Generation Inputs** • Load Reliability Service **Tariff** • Attachment C: Long-Term ATC (steps 5-6) • Generator Interconnection Process (steps 5-6) • Proposed Draft Tariff (redline), including miscellaneous clean-up
Sept 28 (Wed)	Workshop Close-out and Summary of Staff Leanings

Meeting topics and workshop dates are subject to change. Please check the BPA Event Calendar for the most up-to-date information.

Proposed Procedural Schedules

	BP-24	TC-24
Federal Register Published (estimated)	Nov 10	Nov 10
Pre-Hearing Conference/BPA Direct Case	Nov 17	Nov 17
Clarification of BPA's Direct Case	Dec 7-8	Dec 6
Parties File Direct Cases	Jan 24	Jan 20
Litigants File Rebuttal	Mar 7	Mar 1
Cross Examination	Apr 6-7	Mar 23-24
Initial Briefs	Apr 25	April 13
Hearing Officer's Recommendation	n/a	May 23
Draft ROD	Jun 13	Jun 23
Briefs on Exceptions	Jun 27	Jul 7
Final ROD	Jul 26	Jul 26

Preliminary proposal subject to change.