

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

March 17, 2020



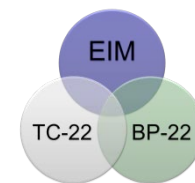
AGENDA REVIEW AND FEEDBACK FROM PRIOR WORKSHOP

Agenda

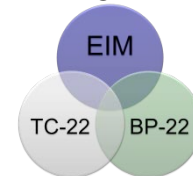
TIME *	TOPIC	Presenter
9:30 to 9:40 a.m.	Agenda Review & Safety	Rebecca Fredrickson Rachel Dibble
9:40 to 10:00 a.m.	Workplan and Proposal	Tina Ko
10:00 to 10:20 a.m.	Seller's Choice <ul style="list-style-type: none"> • Steps 1-2 	Suzanne Zoller, Tasha Bryan
10:20 to 10:40 a.m.	Transmission Losses <ul style="list-style-type: none"> • Step 4 	Mike Bausch, Andy Meyers, Katie Sheckells
10:40 to 11:00 a.m.	BREAK	
11:00 to 11:30 a.m.	Transmission Network Usage <ul style="list-style-type: none"> • Steps 3 - 4 	Tracey Salazar, Troy Simpson, Russ Mantifel
11:30 to Noon	Intertie Studies	Bob King, Abby Nulph
Noon to 1:00 pm	LUNCH	
1:00 to 2:30 p.m.	TC-20 Topics: <ul style="list-style-type: none"> • Hourly Firm (2.d) • <i>De minimis</i> <ul style="list-style-type: none"> ◦ Steps 1 through 4 • Short-term ATC Improvements (2.e) 	Kevin Johnson, Katie Sheckells Kevin Johnson, Margaret Olczak
2:30 to 4:30 p.m.	Power 2020 Resource Program Refresh	James Vanden Bos

* *Times are approximate.*

EIM Priority Issues

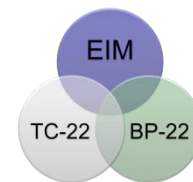


#	Issue	BP-22	TC-22	Future BP/TC
1	EIM Charge Code Allocation	X	?	X
2	EIM Losses	X	X	?
3	Resource Sufficiency	X	X	?
3a	- Balancing Area Obligations	X	X	?
3b	- LSE Performance & Obligations	X	X	?
3c	- Gen Input Impacts	X	X	?
4	Development of EIM Tariff Changes		X	?
5	Transmission Usage for Network	X	X	?
6	Non-federal Resource Participation	X	X	?
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	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	Generator Interconnection (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	Intertie Studies			?
35	De minimus (TC-20 Settlement)			?

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

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

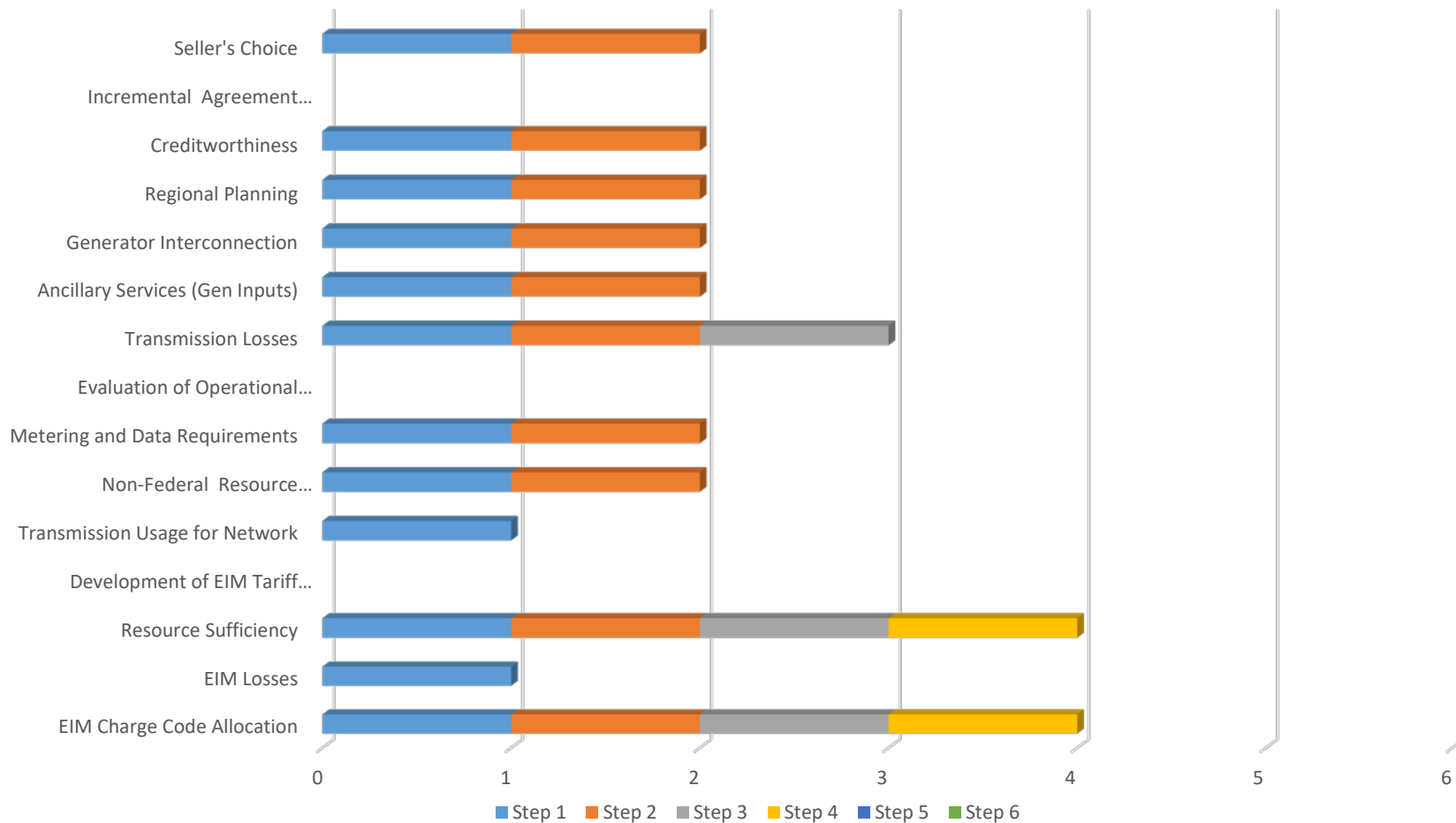
Step 4:
Discuss Alternatives

Phase Three: Proposal Development

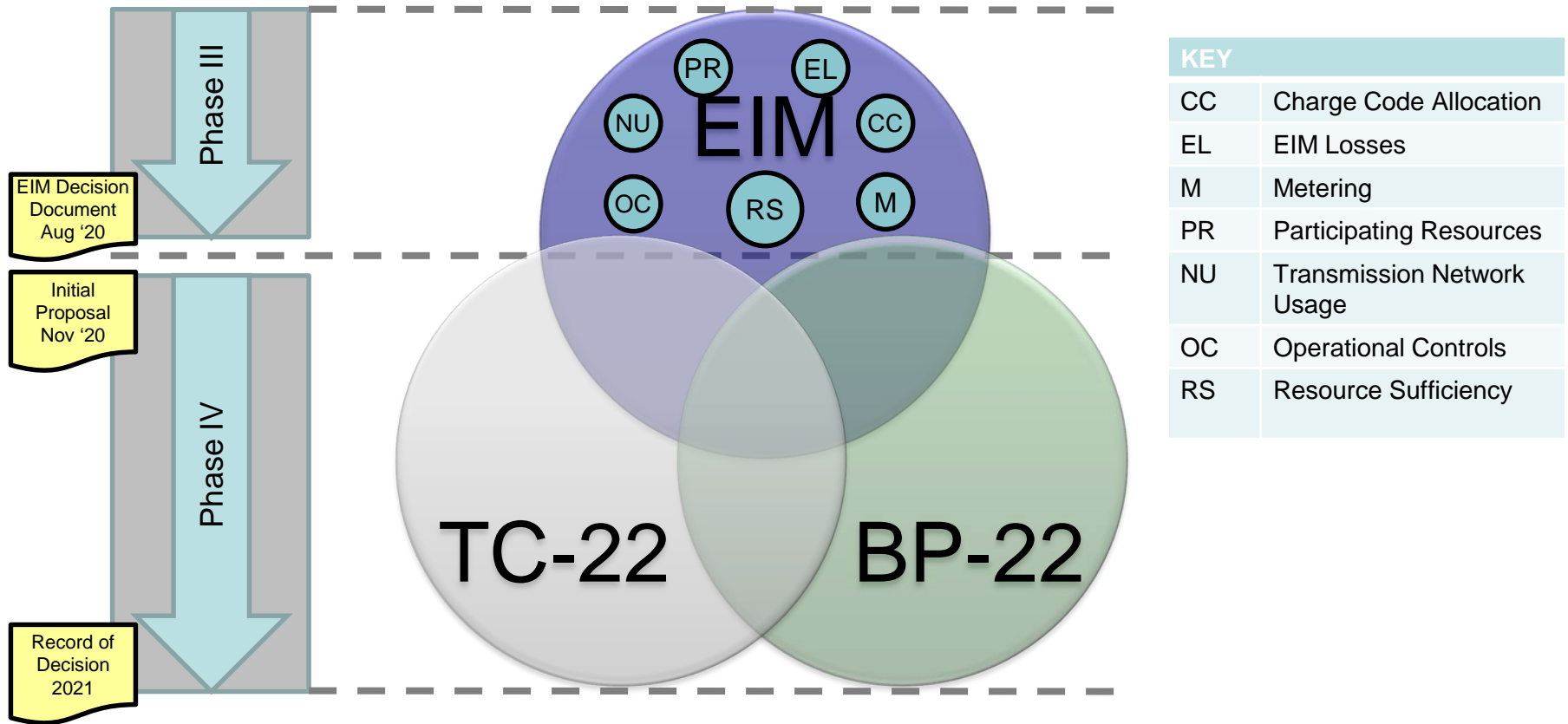
Step 5:
Discuss Customer
Feedback

Step 6:
Staff Proposal

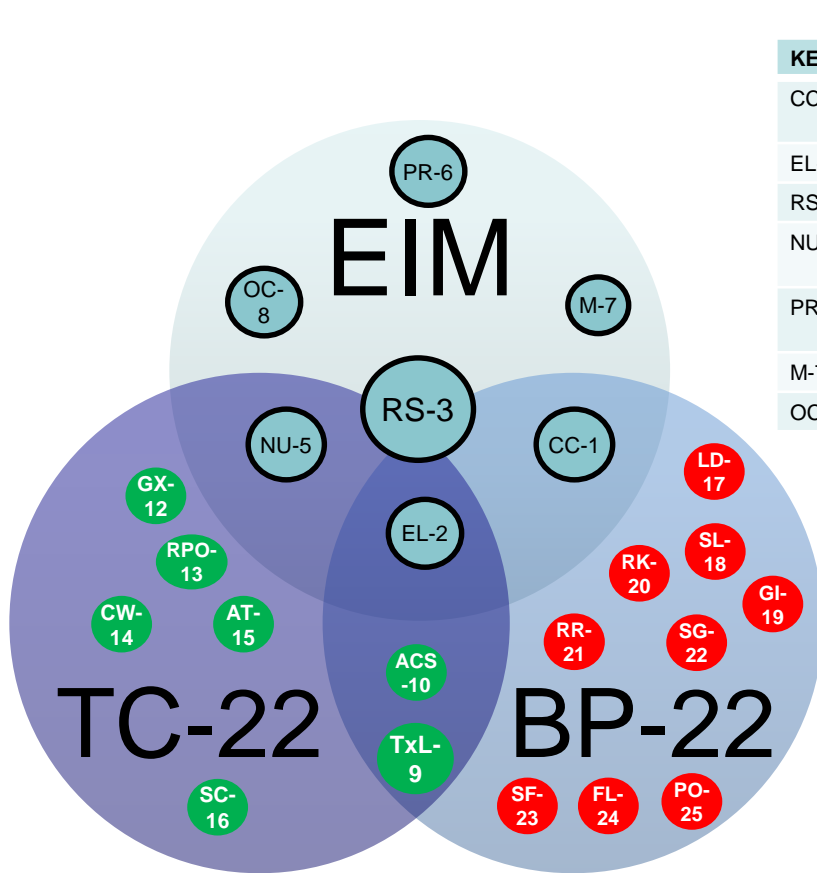
Status of Topics as of 3/17/2020



Coordination of EIM Issues for Phases III and IV



BP-22, TC-22 & EIM Integrated Scope

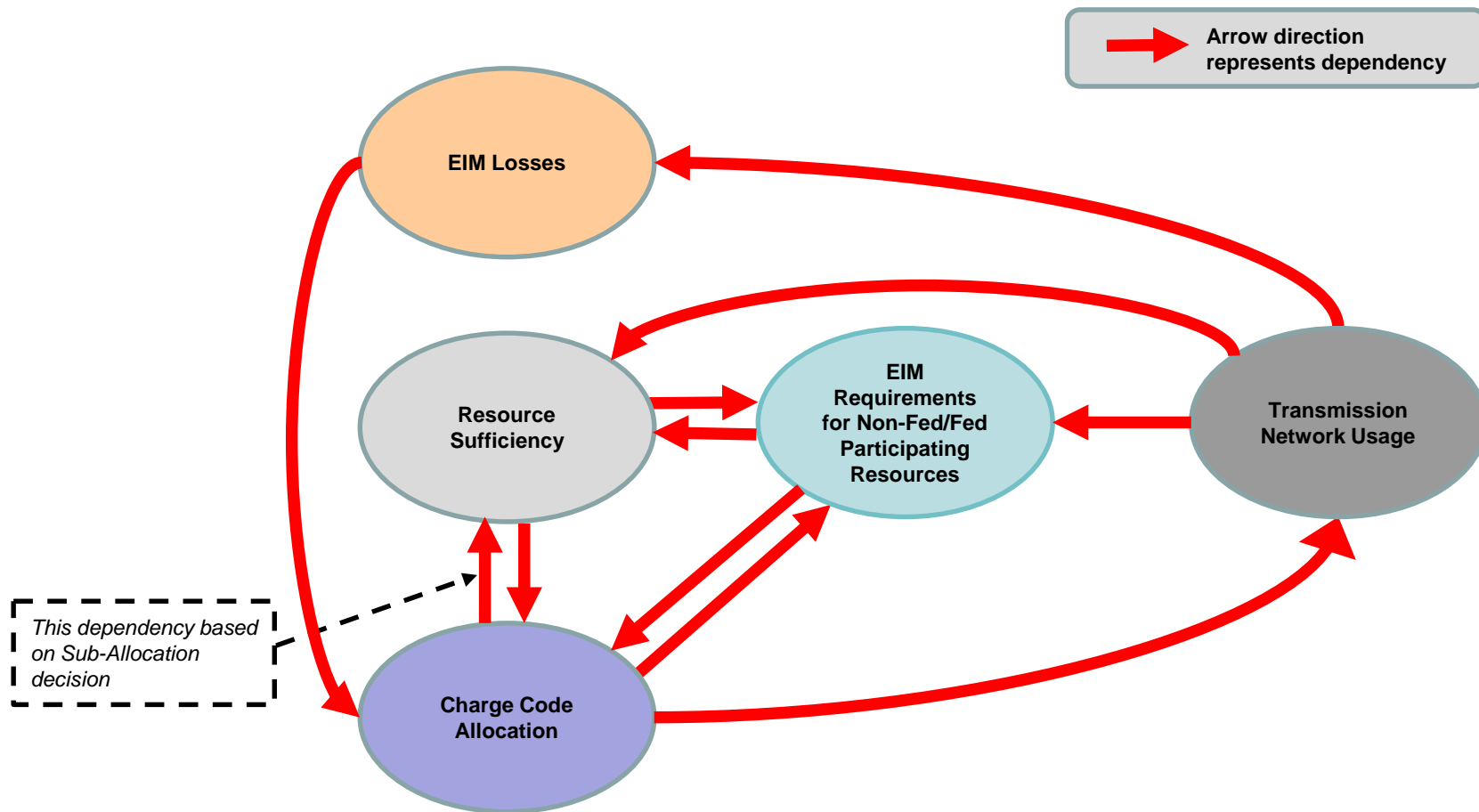


KEY	EIM
CC-1	Charge Code Allocation
EL-2	EIM Losses
RS-3	Resource Sufficiency
NU-5	Transmission Network Usage
PR-6	Participating Resources
M-7	Metering
OC-8	Operational Controls

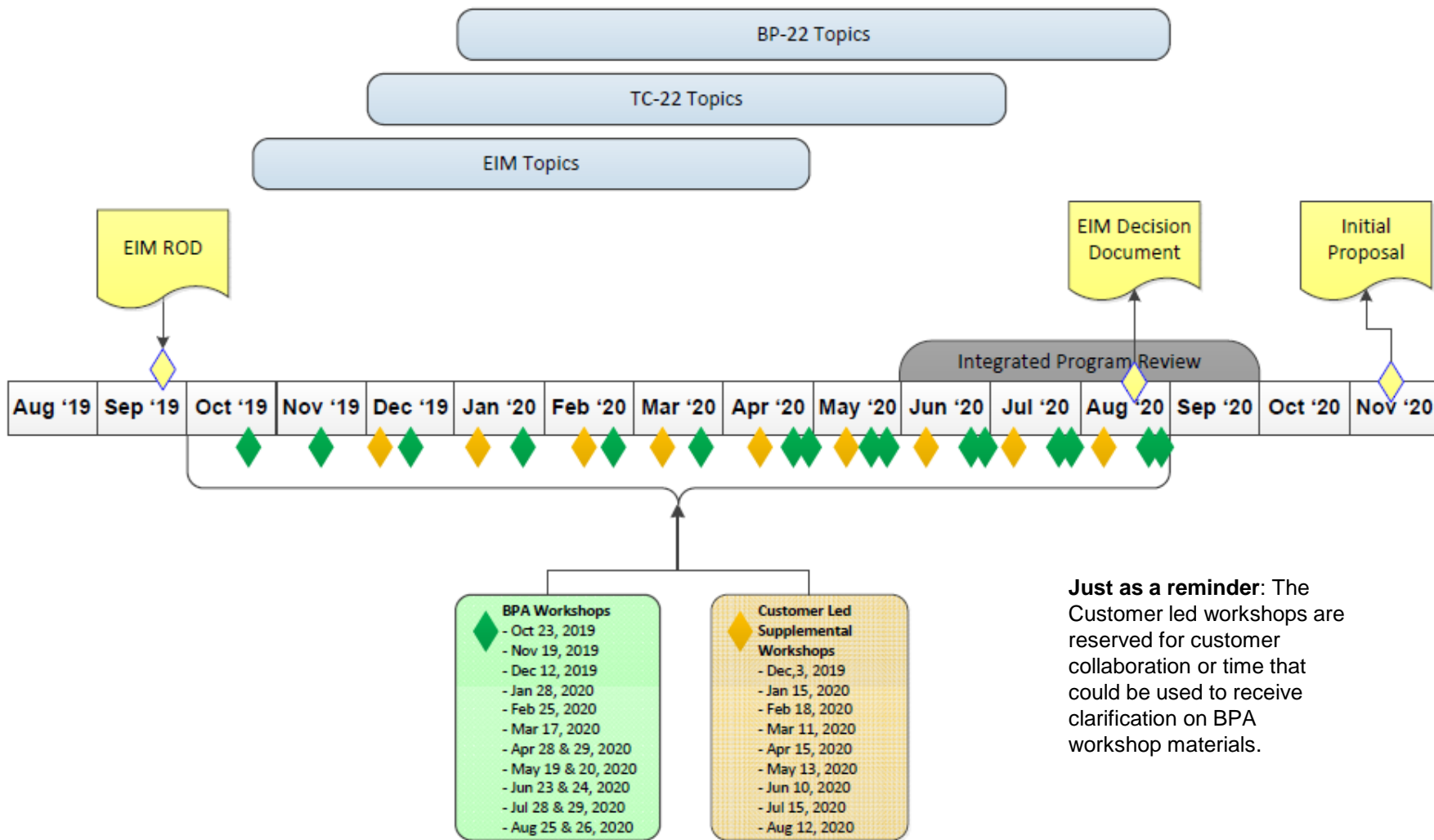
KEY	TC
TxL-9	Transmission Losses
ACS-10	Ancillary Services
GX-12	Generator Interconnection
RPO-13	Regional Planning
CW-14	Creditworthiness
AT-15	Agreement Templates
SC-16	Seller's Choice

KEY	BP
LD-17	Loads
SL-18	Sales
GI-19	Generator Interconnection
RK-20	Risk
RR-21	Revenue Requirements
SG-22	Segments
SF-23	Sale of Facilities
FL-24	Financial Leverage
PO-25	Power-only

EIM Issue Inter-Dependencies Identified



BP/TC-22 Proposed Workshop Timeline



Just as a reminder: The Customer led workshops are reserved for customer collaboration or time that could be used to receive clarification on BPA workshop materials.

ISSUE #16: SELLER'S CHOICE

Step 1: Introduction and Education

Step 2: Description of the Issue

SELLER'S CHOICE EVALUATION APPROACH

Phase One: Approach Development

Step 1:
Introduction & Education

Step 2:
Description of the Issue

Today's
Workshop

Phase Two: Evaluation

Step 3:
Analyze the Issue

Step 4:
Discuss Alternatives

April 28
Workshop

Phase Three: Proposal Development

Step 5:
Discuss Customer
Feedback

Step 6:
Staff Proposal

June 23
Workshop

What is Seller's Choice (SC)?

- A type of Power Purchase Agreement (PPA) in which the seller agrees to deliver energy without identifying the resource at the time the agreement is made.
 - Seller can choose to source energy from a number of generators.
 - Seller does not generally indicate a specific generator until the Preschedule day.

- SC also refers to implementation of an exception to BPA's NT designation/scheduling requirements, as requested by BPA customers using SC contracts and agreed upon in TC-20.
 - Allows customer to designate a SC PPA as a network resource.
 - SC contract delivered at the Mid-C market (NWH or Mid-C BA participant).
 - Seller responsible for transmission to deliver generation to the Mid-C.

BPA's Commitment

- In accordance with the provisions of the TC-20 Settlement (2.g.iii);
 - Monitor and evaluate the implementation of Seller's Choice.
 - Share the results of its evaluation with customers at least once before July 2020.
 - Consider including Network Resource designation at Mid-Columbia Points of Receipt in TC-22.

Objective

To collaborate with customers on BPA's Seller's Choice implementation in order to determine how best to meet customers' and BPA's needs after October 1, 2021.

BPA's Seller's Choice Background

- Prior to the TC-20 Settlement, BPA required the NT customer to specify the Balancing Authority Area (BAA) when the customer requested to designate an off-system resource as a Network Resource, consistent with *pro forma* tariff requirements.
- NT customers requested an exception allowing designation of Seller's Choice purchases as Network Resources, to access lower cost generation.
 - Initial proposal included Northwest Market Hub (NWH) only.
 - Customer request for additional resource options to include Mid-C Remote, Chelan, Grant, and Douglas.

BPA's Seller's Choice Background

- BPA agreed to implement and evaluate the exception to the *pro forma* tariff requirement from October 1, 2019 through September 30, 2021, as part of the evaluation of hourly firm service.
- Version 9 of the NT Business Practice incorporated Seller's Choice on July 9, 2019 ahead of the October 1, 2019 implementation date.

What is “Sleeving?”

- Seller’s Choice purchases using “sleeving” agreements with third-party utilities:
 - Allows NT customer to attest to a single Mid-C BA.
 - Seller delivers generation hour-by-hour to the Mid-C.
 - Customers may incur an additional cost.
 - Impairs BPA’s visibility for planning.

Before TC-20

- NT customers required to submit an attestation that they owned or had purchased the output of a specific generator or BA when requesting firm transmission service.
- With a SC PPA, required resource information was generally not provided until Pre-schedule day (e.g., BAA for the resource, POR for the BPA transmission leg).
 - Customers requested hourly firm transmission and supplied attestation at this time.
 - Some customers reserved long-term transmission for SC PPAs using “sleeving” agreements with third-party utilities.

NT Customers' Perspectives

- Looking for a way to adapt to limited hourly firm environment.
- Want assurance to get market purchases to load, ability to reserve LTF.
- Prefer 7F to 6NN for transmission.
- Seller's Choice arrangement with BPA is more cost-effective than using "sleeving" agreements.
- Current implementation requires multiple legs of TSRs, incurring additional Transmission charges.

BPA's Perspectives

- Agency Strategic Goal 4: Meet transmission customer needs efficiently and responsively.
 - 4c: Meet current and future needs of Network Integration Transmission Service customers through clear business practices and streamlined processes.
- Seeking to balance customer flexibility to acquire low-cost resources with BPA's need to plan for load service.
- Seller's Choice implementation is challenging - currently requires up to five TSRs in order to enable maximum flexibility.
- Implications for **potential** future implementation of NT redispatch, in support of moving toward *pro forma*. BPA would need to know resources in advance to ensure required controls and communications are in place. BPA is not actively working on NT redispatch at this time.

Next Steps

Phase One: Approach Development

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

 Today's
Workshop

Phase Two: Evaluation

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

April 28
Workshop

Phase Three: Proposal Development

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

June 23
Workshop

March 31 – Feedback due on Seller’s Choice

Please submit to techforum@bpa.gov (with copy to your Account Executive)

ISSUE #9: TRANSMISSION LOSSES

Step 4: Discussion on possible alternatives to solve Issue

Agenda

- Discuss Alternatives (Step 4)

Objectives

- Settling of transmission wheeling losses
 - Ensure that BPA captures
 - Value of capacity
 - Value of energy
 - Minimize
 - Administrative costs of system administration, maintenance, and reconciliation of deviations
 - Load uncertainty

Customer Comment Themes

BPA Response

Customers suggested financial settlement of deviations of loss returns (*expected vs actual*)

Considered in alternatives 2 through 5

Customers requested to understand BPA's willingness to review and alter it's financial settlement

Considered in alternatives 3, 5 and 6

Customers requested the ability to elect physical or financial settlement of loss obligations

Considered in alternatives 1 through 5

Alternatives

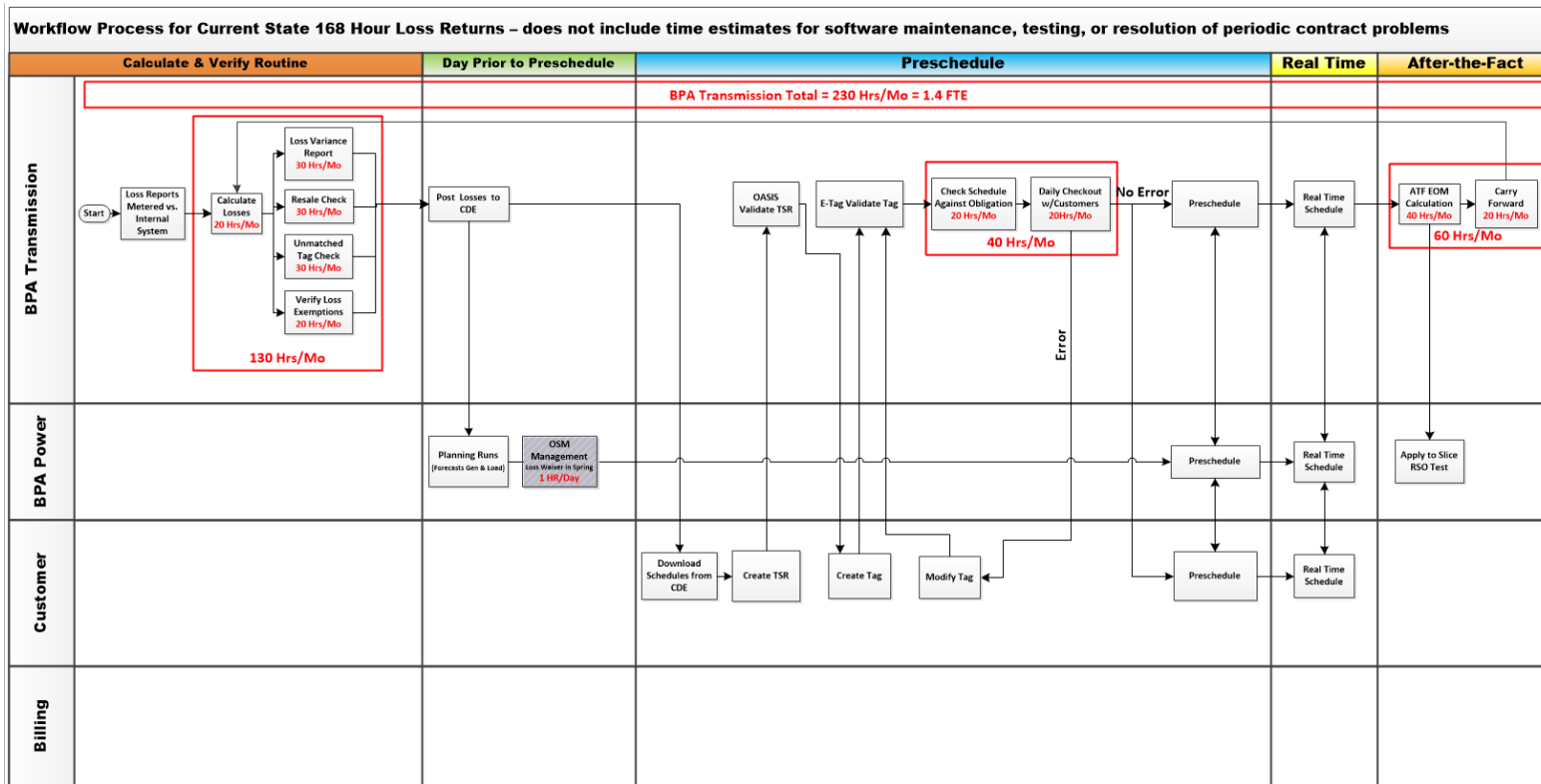
Alternative	Time to Return In-Kind	Settle Delivery Errors Financially?	Financial Rate Set by
1. Keep Status quo	168 hours	No	Trading Floor
2. Keep in-kind at 168 hours + implement financial settlement only for inaccurate return of energy (“Financial for inaccuracy - FFI”)	168 hours	Yes	Trading Floor
3. Keep in-kind at 168 hours + change financial rate to be set in rate case + implement FFI	168 hours	Yes	Rate Case
4. Change in-kind to concurrent only + implement FFI	Concurrent	Yes	Trading Floor
5. Change in-kind to concurrent only + change financial rate to be set in rate case + implement FFI	Concurrent	Yes	Rate Case
6. Change to financial settlement only	N/A	N/A – No delivery	Rate Case

Alternative 1 - Status Quo

- Financial Settlement
 - Price established by BPA Power Trading Floor
- In-Kind
 - Delivery is scheduled for 168 hours following the hour of incurring the line loss
 - Incorrect MWs are rolled forward to another hour/day
- Slice
 - Losses are deducted from Slice Right-To-Power 168 hours following the hour of incurring line loss

Note: Additional context available from 12/12/19 customer workshop:
<https://www.bpa.gov/Finance/RateCases/BP-22-Rate-Case/Documents/121219-Tx-Losses-Steps-1-3.pdf>

In-Kind Process – Current State



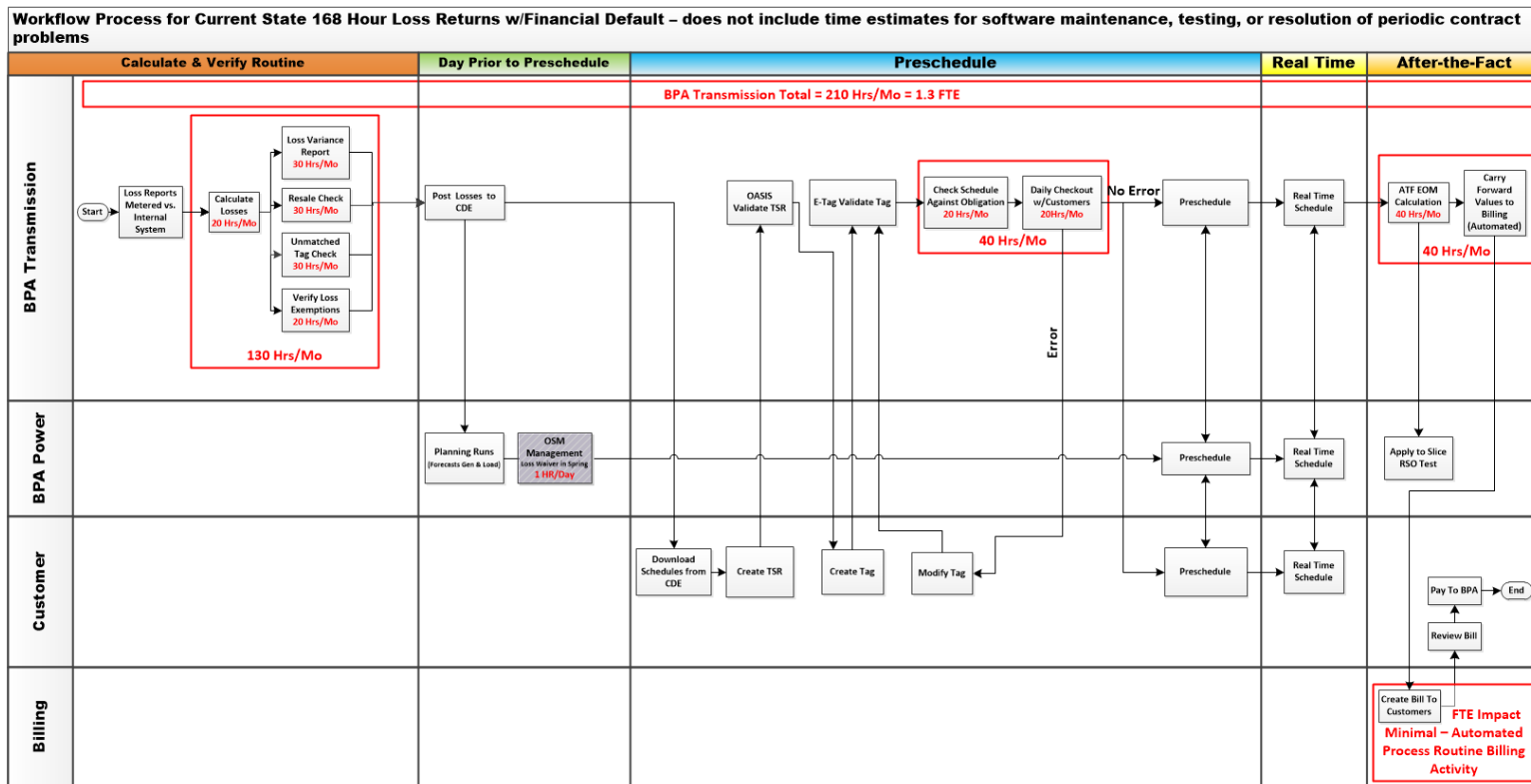
Alternative 2

- Financial Settlement
 - Price established by BPA Power Trading Floor
- In-Kind
 - Delivery is scheduled for 168 hours following the hour of incurring the line loss
 - *Incorrect MWs are settled financially*
- Slice
 - Losses are deducted from Slice Right-To-Power 168 hours following the hour of incurring line loss

Alternative 3

- Financial Settlement
 - *Price established through BP-22 rate proceedings*
- In-Kind
 - Delivery is scheduled for 168 hours following the hour of incurring the line loss
 - *Incorrect MWs are settled financially*
- Slice
 - Losses are deducted from Slice Right-To-Power 168 hours following the hour of incurring line loss

168 Hour Return + Default to Financial



Alternative 4

- Financial Settlement
 - Price established by BPA Power Trading Floor
- In-Kind
 - *Delivery is scheduled for concurrent time by the customer*
 - *Incorrect MWs are settled financially*
- Slice
 - Losses are deducted from Slice Right-To-Power concurrently

Note: Prior customer comments indicated concern regarding design, implementation, and workload for concurrent loss returns

Alternative 5

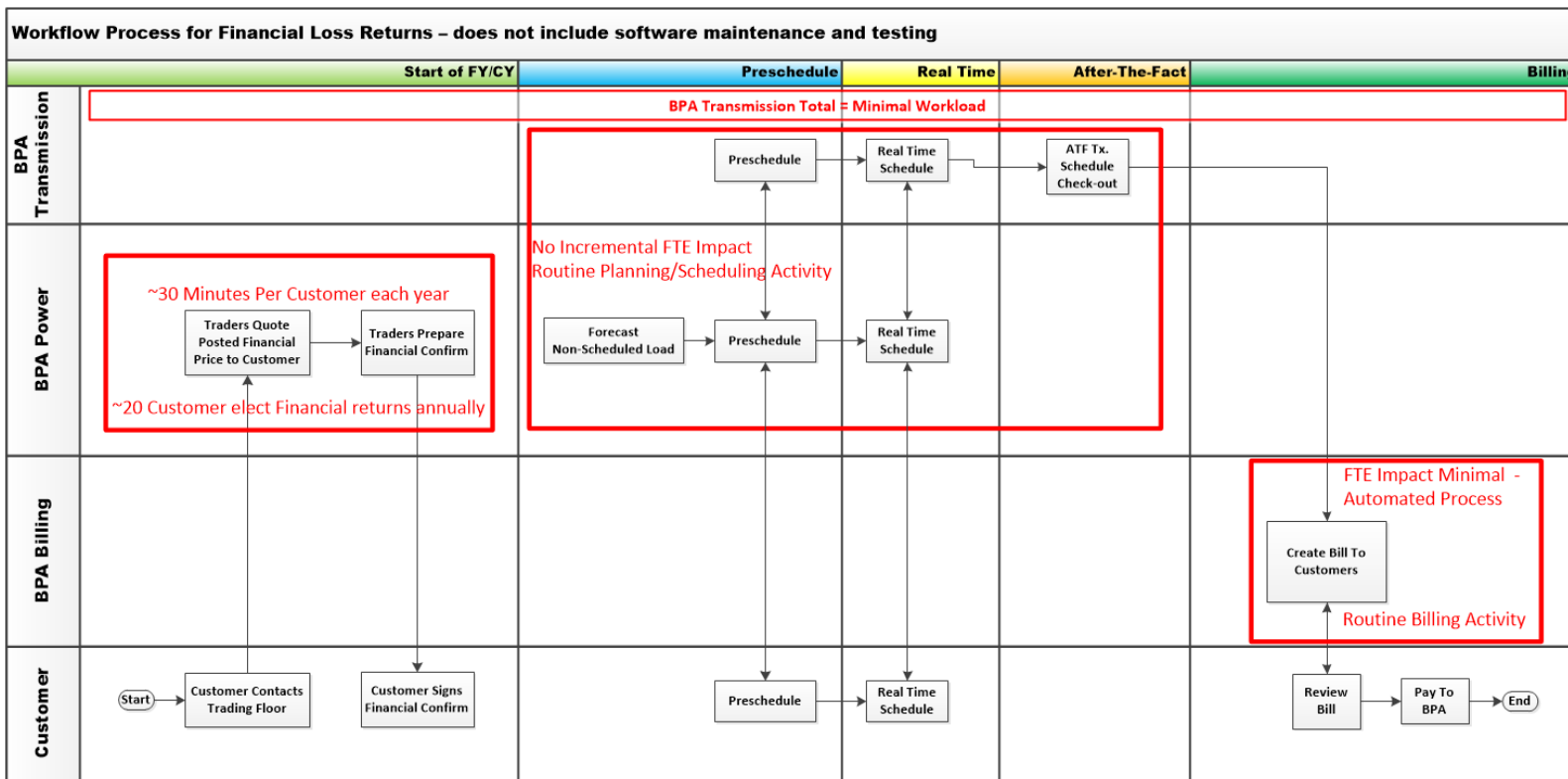
- Financial Settlement
 - *Price established through BP-22 rate proceedings*
- In-Kind
 - *Delivery is scheduled for concurrent time by the customer*
 - *Incorrect MWs are settled financially*
- Slice
 - Losses are deducted from Slice Right-To-Power concurrently

Note: Prior customer comments indicated concern regarding design, implementation, and workload for concurrent loss returns

Alternative 6

- All Customers are transitioned to financial settlement of losses
 - Financial Settlement
 - *Price established through BP-22 rate proceedings*

Financial Loss Returns Process



Criteria for Decision

- Aligned with the *pro forma* tariff and/or industry standards or best practices.
- Appropriate and fair compensation for FCRPS Capacity and Energy
- Efficiency of process and ease of administration, including managing deviations and imbalances
- Simplicity of policies to administer and enforce
- Cost of on-going IT system maintenance
- Align losses valuation with pricing and scheduling used when commercially purchasing energy
- Customer impact

Next Steps

- **Workshop on May 19, 2020**
 - Step 5 - Customer feedback on loss returns alternatives
 - Pricing methodology
 - Update on loss factor analysis

- **Workshop on June 23, 2020**
 - Step 6 - Staff proposal for loss returns alternatives
 - Discuss customer feedback
 - Pricing methodology and loss factor update

ISSUE #5: EIM TRANSMISSION USAGE ON THE NETWORK

Step 3: Data and/or Analysis that supports the Issue

Step 4: Discussion on possible alternative to solve Issue

Agenda

- Responses to customer comments
- Review of Step 2
 - Changes to Scope
 - Change in Objective
- Steps 3 and 4:
 - Analysis of Issue
 - Possible Alternatives
- Transmission Donation Process
- Next Steps

Customer Feedback Themes

- Customers submitted a number of questions related to the implementation of transmission donation. These questions were addressed at the February 18 customer-led workshop. Today's workshop will provide further information.
- Some commented that the objective statement phrase “while mitigating the commercial impacts on BPA’s transmission system and customers” appears to prioritize EIM transfers over bilateral trading. BPA has changed the objective in response to these comments.
- Comments on the evaluation of the pros and cons of alternatives, how they fair under the objective and their impacts on different customer groups were received. This evaluation will be done as part of Step 6 which will be presented in the May workshop.

Review of Step 2

Phase III Transmission Policy Issues

- Transmission Agreements Required for Participating Resources
 - Issue 1: What type of contract should be required for Participating Resources to ensure they are subject to the terms of the tariff and BPs?
 - Issue 2: What type of transmission reservation, if any, should be required for Participating Resources?
- Policy Issues Related to Transmission Donation
 - Issue 1: Which transmission products should be eligible for Interchange Rights Holder donations of transmission for EIM transfers?
 - Issue 2: What should the transmission donation process be?

Change in Scope

- Transmission Agreements Required for Participating Resources has been moved from Issue #5, EIM Transmission Usage on the Network, to Issue #6, EIM Non-Federal Resource Participation
- Changes to Policy Issues Related to Transmission Donation
 - Issue 1: Which transmission products should be eligible for Interchange Rights Holder donations of transmission for EIM transfers will continue to be identified as a policy issue and will proceed through Step 6 of this workshop process.
 - Issue 2: What should the transmission donation process be is an implementation issue and will be scoped in workshops but ultimately reflected in a Business Practice.

Change in Objective

- The following objective was introduced in the January workshop:
 - Adopt transmission-related policies for EIM use of BPA's network that are non-discriminatory and do not negatively impact reliability and efficient EIM market while mitigating the commercial impacts on BPA's transmission system and customers.
- Updated objective:
 - Determine which Interchange Rights Holder transmission products are eligible for donation to the EIM. Bonneville will consider in this objective the operational and commercial impacts and the efficient function of the EIM.

Step 3: Analyze the Issue

Baseline: Terms of EIM Entity Tariff

- The CAISO tariff allows both the ATC transmission donation method and the Interchange Rights Holder donation method for EIM transfers. Both are available to EIM Entities.
- All EIM Entities that allow transmission donation by Interchange Rights Holders require donated transmission to be firm.
- EIM Entity tariffs define Interchange Rights Holder as follows:
 - A Transmission Customer who has informed the [NAME] EIM Entity that it is electing to make reserved firm transmission capacity available for EIM Transfers without compensation.
- In its EIM Business Practice Puget requires that transmission rights for EIM Transfers must be donated in full hour increments and must be on a confirmed firm transmission reservation (NERC priority 7).

Areas of Risk to be Analyzed

- Operations: Allowing donation of unlimited hourly non-firm on the network could be misaligned with actual system capabilities.
- Market Efficiency: Requiring firm transmission can restrict transmission donations thereby not allowing optimal market dispatch
- Transmission Revenue and Cost Shifts: Allowing donation of non-firm transmission for EIM may increase the risk that over time long-term firm PTP revenue will erode as customers opt to not roll over their agreements.

Areas of Risk to be Analyzed

- Customer Impacts:
 - The type of transmission on which ETSRs are scheduled should not negatively affect the quality of service to transmission customers.
 - The impact on the ability to reserve transmission and allow schedules may be different.
 - If transmission is donated or scheduled on firm then it would be encumbering transmission that might otherwise go unused and offered as non-firm by BPA.
- Cost and Implementation Complexity: Potential implementation costs and complexity may vary based on the transmission product donated.

Step 4: Alternatives

Alternatives

BPA is evaluating the following alternatives for transmission donations for EIM transfers by Interchange Rights Holders

- **Alternative #1, Status Quo:** Allow only firm transmission to be donated for EIM transfers
 - This alternative is interpreted to mean all firm PTP products including conditional firm PTP.
 - Given the nature of NT service for service to load, the transmission products allowed to be donated for EIM do not include NT products

- **Alternative #2:** Allow both firm and non-firm PTP of any term to be donated for EIM transfers.
 - May need to limit hourly non-firm

- **Suggestions for a third alternative within the Interchange Rights Holder donation method?**

TRANSMISSION DONATION PROCESS

BPA Setup for Customer Donation

- BPA will register a new system level Source/Sink (e.g. BPAT-EIM) to facilitate customer donation
- BPA will work with adjacent EIM Entities to establish transfer paths and procedures for customer donation
- Dynamic Transfer Capability (DTC)
 - Requesting DTC is not required on the network
 - DTC use on the Interties will be managed consistent with Dynamic Transfer Operating and Scheduling Requirements Business Practice

Reserving and Scheduling Customer Donation

- Participating resources are not required to donate transmission
- Interchange Rights Holders choosing to donate transmission must:
 - Reserve transmission service consistent with the pending donation policy
 - Submit e-Tags consistent with the pending scheduling policy

After the Fact Accounting

- Dynamic e-Tags will be updated by an EIM Entity with actual interchange within 60 minutes
- BPA is exploring whether donated transmission would incur a wheeling loss obligation
 - If BPA's transmission system is included in the EIM optimization, incremental losses would be accounted for in the EIM dispatches and associated EIM transfers
 - Incremental losses are accounted for in the marginal loss component of the LMP

Next Steps

BPA requests customer feedback on:

- Risks to be analyzed and alternatives under consideration
- Transmission donation process issues identified
- Please submit by March 31, 2020 to techforum@bpa.gov (with a copy to your account executive)

May customer workshop:

- Step 5: Discuss customer feedback
- Step 6: Discuss staff proposal
- Update on Transmission Donation Process

ISSUE #34: INTERTIE STUDIES

TC-20 Settlement Agreement: Southern Intertie Studies

Background:

- On November 12, 2019 and January 28, 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.):

- Intertie Studies are complicated and very costly to perform.
- BPA received feedback from customers which indicate a preference that the current treatment of southern intertie requests be memorialized in the tariff.
- Any tariff change options must meet the BPA 2018-2023 strategic plan and Transmission Business Model criteria.
- Following are the alternatives BPA has developed for consideration.

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

- Add language to the tariff to eliminate the need for the SIS/SFS process on the southern intertie and allow customers to remain in the queue and wait for capacity to become available on the existing system.
- Offers 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 would need to be developed to establish this process.

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

- Add language to the tariff to require customers to expressly request an SIS.
- If no SIS is requested, all TSRs remain in study state (consistent with current treatment).
- Offers would be made in queue order as capacity becomes available.
- May be the SIS requestor's responsibility to engage the other impacted parties.
- 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.

Alternative 3 – Adopt *Pro Forma* Process

- Adopt the *pro forma* study process for the southern intertie.
- Study process might look something like the TSEP process but would require much more SIS/SFS coordination with the impacted parties.
- May be the requestor's responsibility to engage the other impacted parties.
- The requestor would need to sign and fund a study agreement to maintain a TSR in the queue.
- A business practice may need to be developed to establish process and responsibilities.
- No change to existing tariff, but change process.

Other Options

- BPA remains open to consideration of other options.
- Ideas?

Next Steps

- Comment period
 - Customers should submit comments by March 31, 2020 to the techforum@bpa.gov
- BPA will collect feedback and share preliminary leaning and draft tariff language in May customer meeting.
- Goal is to have decision by July, which will be reflected in the initial proposal for TC-22.

ISSUE #29: HOURLY FIRM

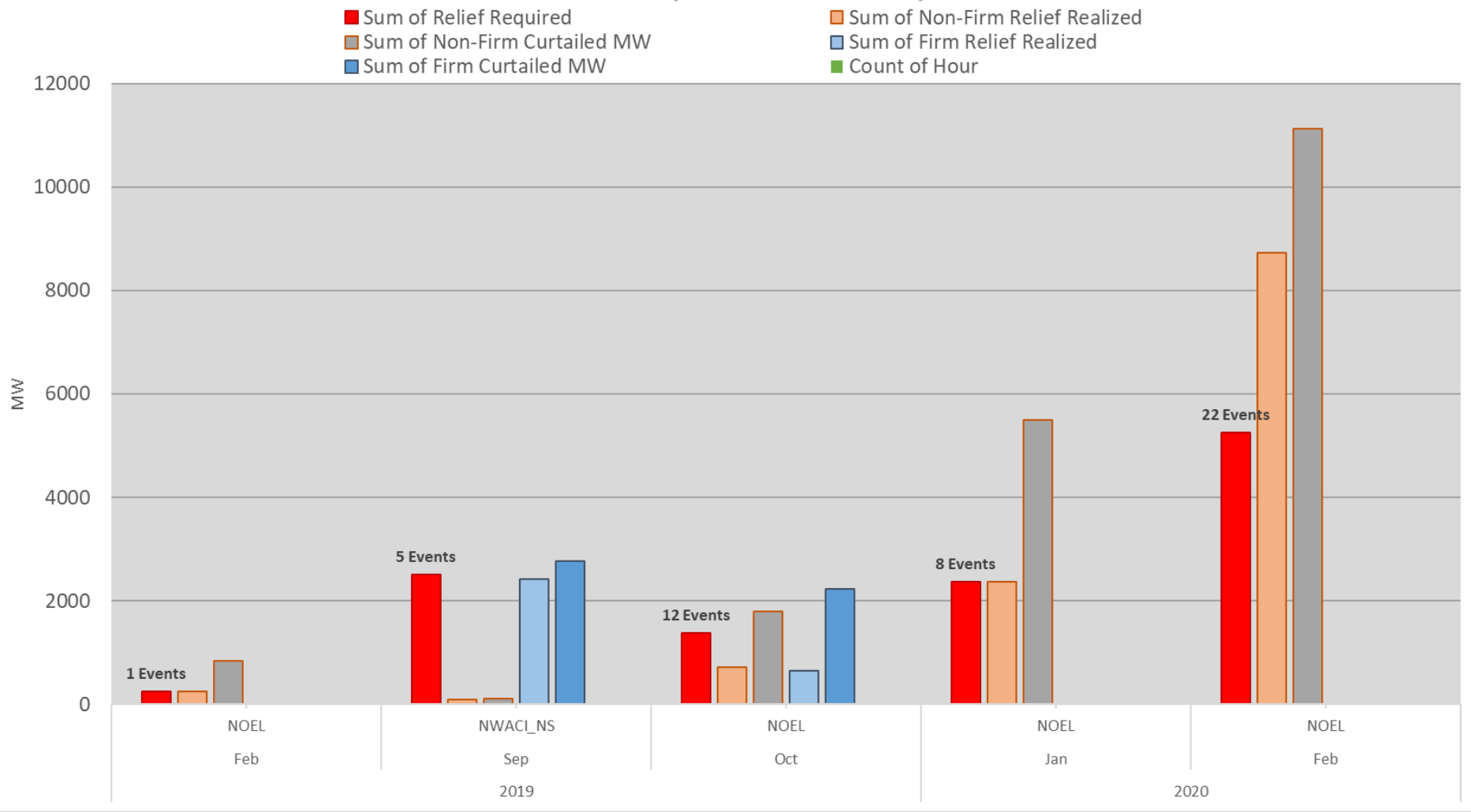
Today's Objective

As committed in the TC-20 settlement, BPA will provide an update and share results of the evaluation of Hourly Firm based on the Monitoring and Evaluation Plan.

Overall Events

- **Curtailments:**
 - 32 events over 8 individual days (12/1 – 2/29)
- **TLR Avoidance Events:**
 - 46 events over 42 individual days (12/1 – 2/29)
- **Refused TSRs due to TLR Avoidance:**
 - 635 (626 on NOEL) (12/1 – 2/29)
- **Percentage of hours where actual flows were within 20% of TTC:**
 - 2.68% - System-wide (31.09% - NOEL only)

Curtailment Impact Summary - 1 Year

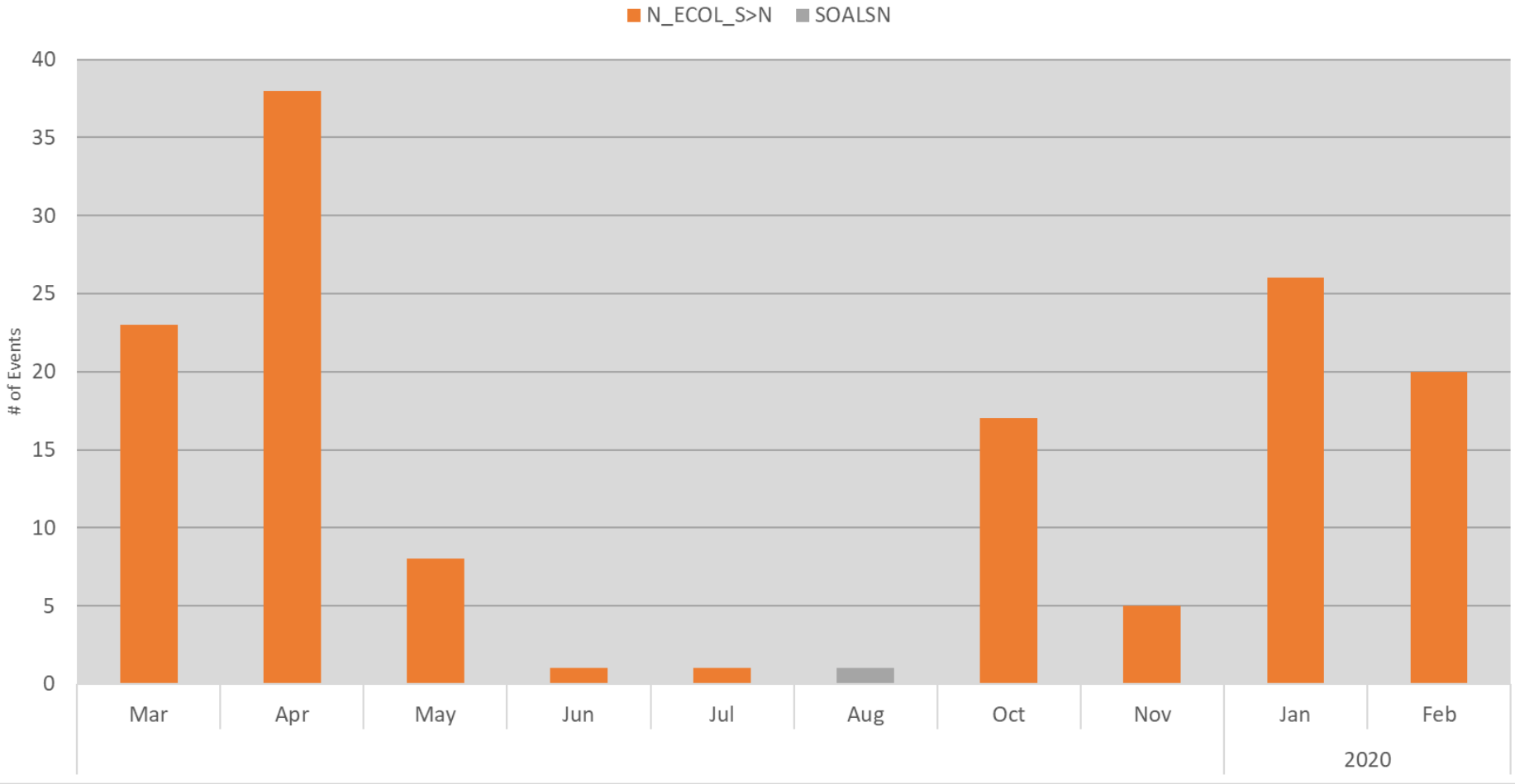


TLR Avoidance Events – March 2019-February 2020

Count of TLR Avoidance Events	Days/ Hours Impacted	Refused TSRs	Flowgate	Annotation	Initial Start	Final Instance
Total: 157	Total: 195/ 1798	Total: 139	-	-	2019-03-05 07:00:00 PS	2020-02-25 18:00:00 PS
134 Firm / 5 Non-Firm	177 / 1827	1222	N_ECOL_S>N	North of Echo Lake Mitigation	2019-03-05 07:00:00 PS	2020-02-25 18:00:00 PS
17 Firm	17/29	17	SOALSN	South of Allston Mitigation	2019-08-06 16:00:00 PD	2019-08-06 20:00:00 PD

*Days and Hours impacted count is not mutually exclusive.

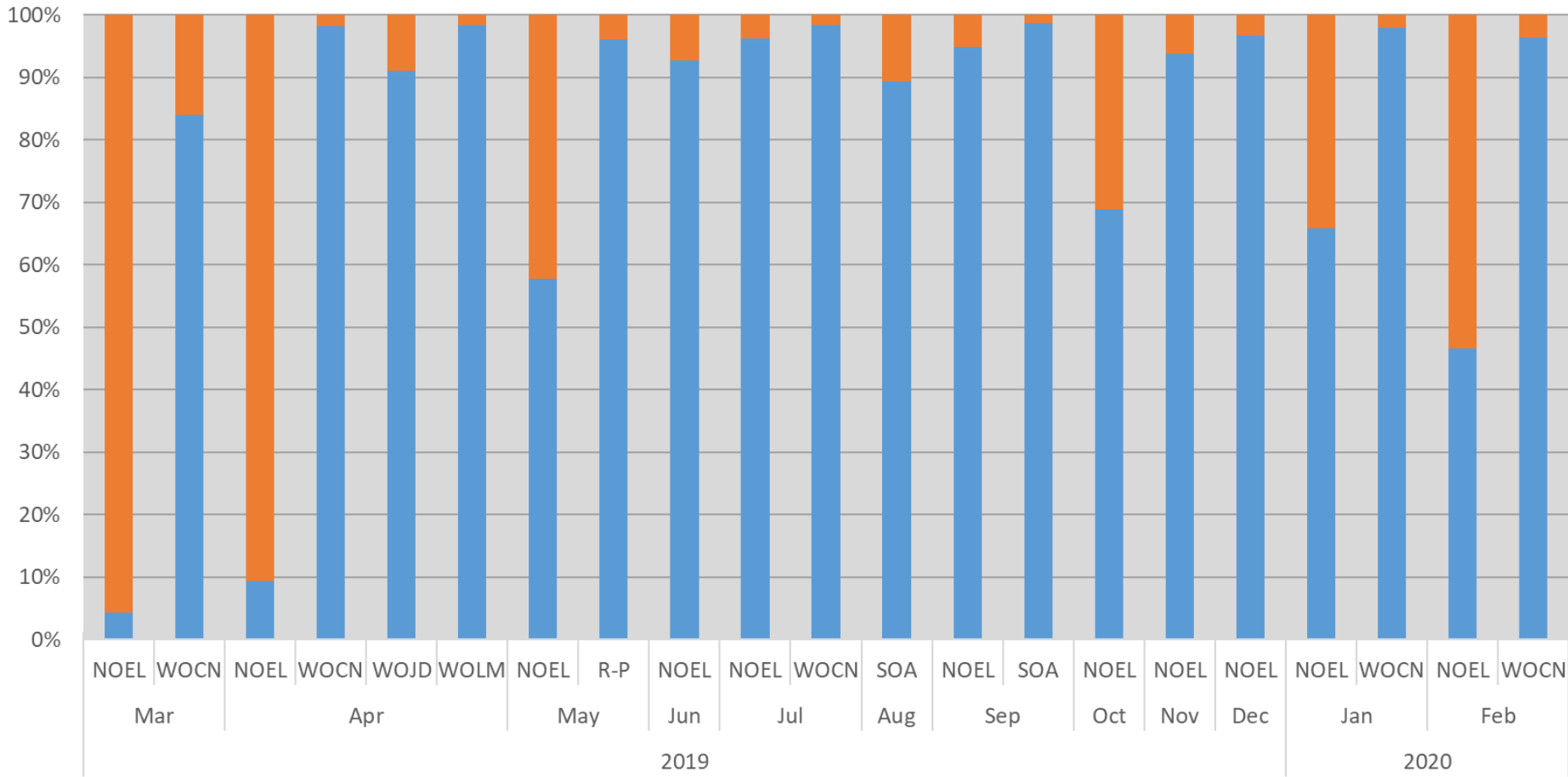
TLR Avoidance Events (03/01/2019 - 02/29/2020)



*Chart includes information for flowgates with greater one percent of hours where actual flows were within 20% of TTC.

Flows within 20% of TTC

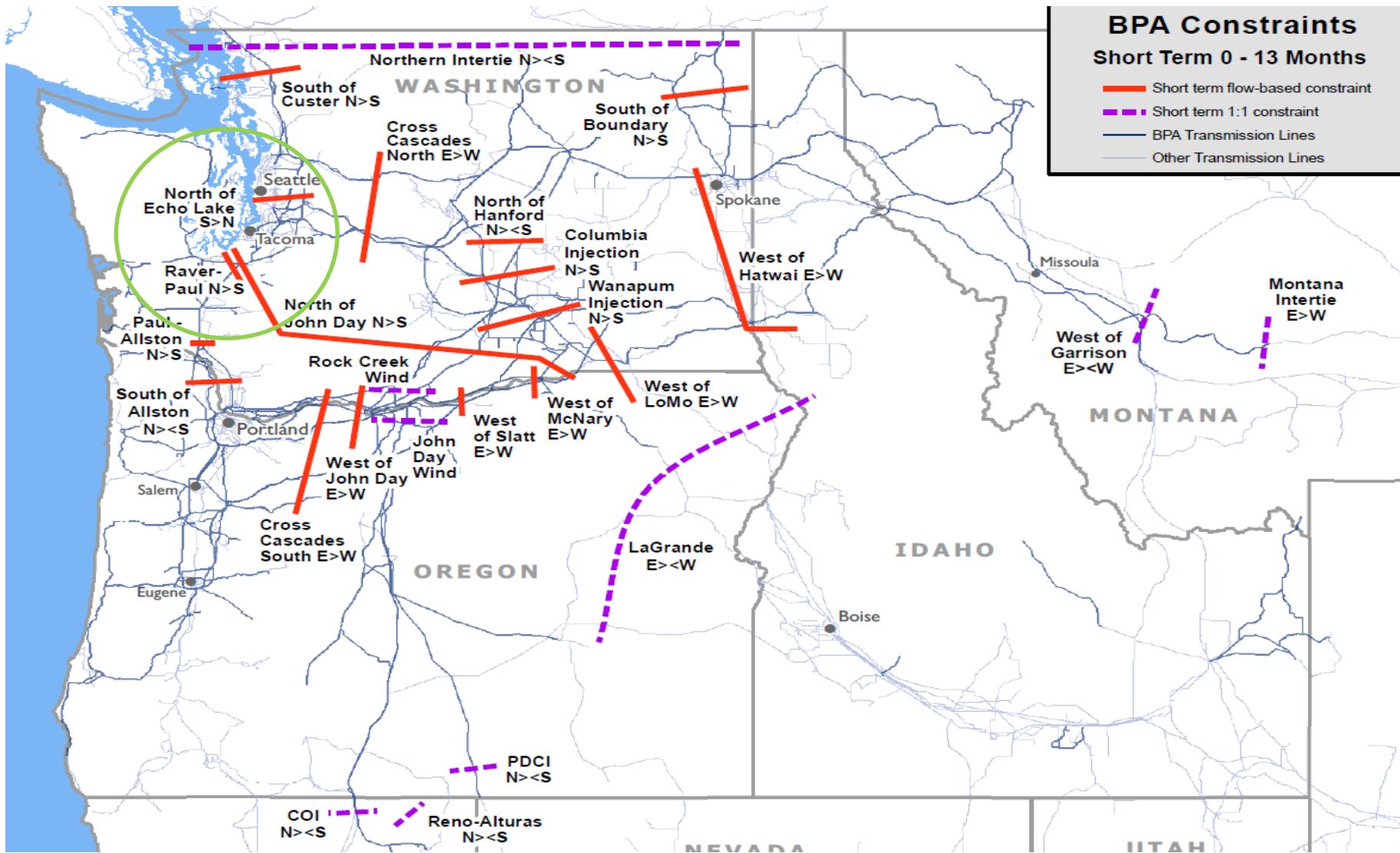
■ Percent Below 20% ■ Percent Within 20%



DEEP DIVE

FEBRUARY 2020
NORTH OF ECHO LAKE

ATC Short Term Constraints



Deep Dive Conditions

- Timeframes – Event 1: February 5-7, 2020
Event 2: February 16 – 18, 2020
Event 3: February 22 -24, 2020
- Curtailment Events – 11
- TLR Avoidance Events (February 2020) – 20 (20 individual days)
- Planned Outages – (detailed on following slide)
- February 5 , 2020 was 59° the warmest on record

Dispatcher Actions

Event 1: Bypassed series capacitors from 1200 to 1600 PST

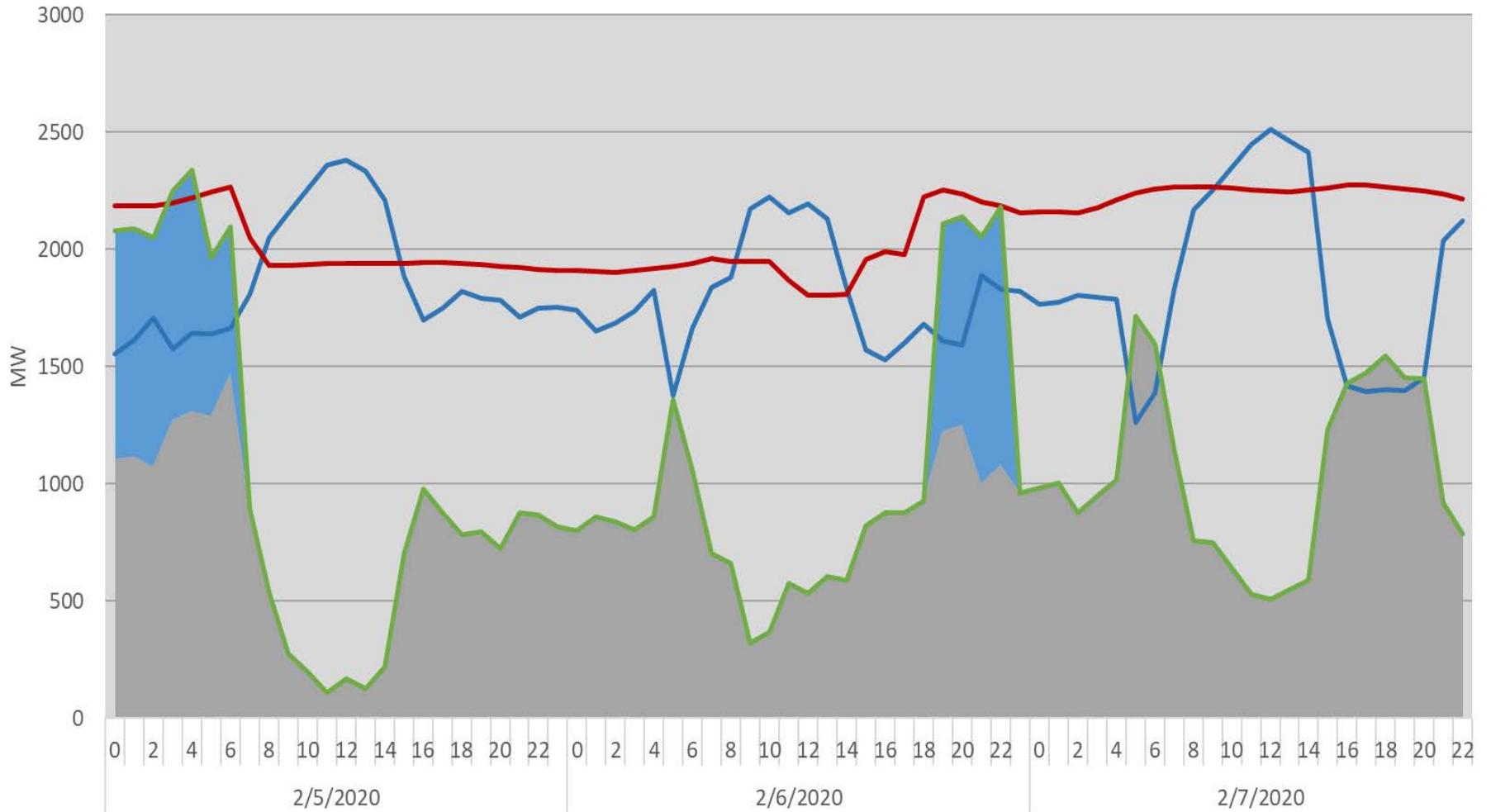
Key NOEL Outage Summary

N_ECOL_S>N

Event (from previous slide)	Annotation	Start (order by start)	Stop
1	SCL- EAST PINE-DENNY 115kV CABLE & EAST PINE BANK 95 (SLIM 636)	2020-02-05 08:00:00 PS	2020-02-06 20:00:00 PS
2	BPA - MONROE 500kV NORTH BUS INCLUDING CHIEF JO-MONROE 1 500kV LINE (STUDY 637 R2)	2020-02-17 07:00:00 PS	2020-02-22 17:00:00 PS
3	BPA-CHIEF JOSEPH-MONROE 1 500kV LINE (SLIM 641 R3)	2020-02-22 17:00:00 PS	2020-03-13 17:00:00 PD

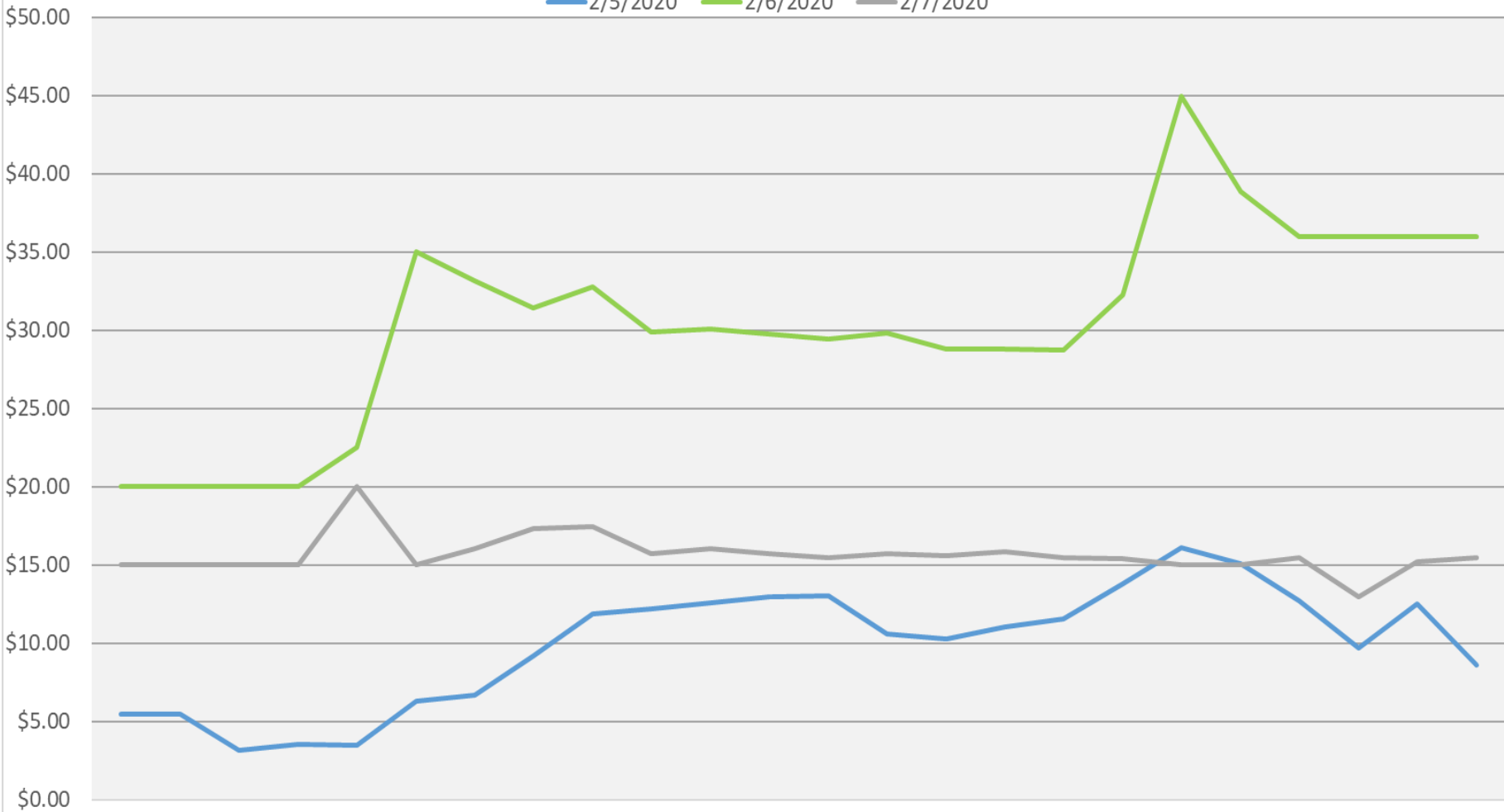
Short-Term ATC - 02/5/2020-02/7/2020

■ Non-Firm ATC ■ Firm ATC — Actual Flow — TTC — Total ATC

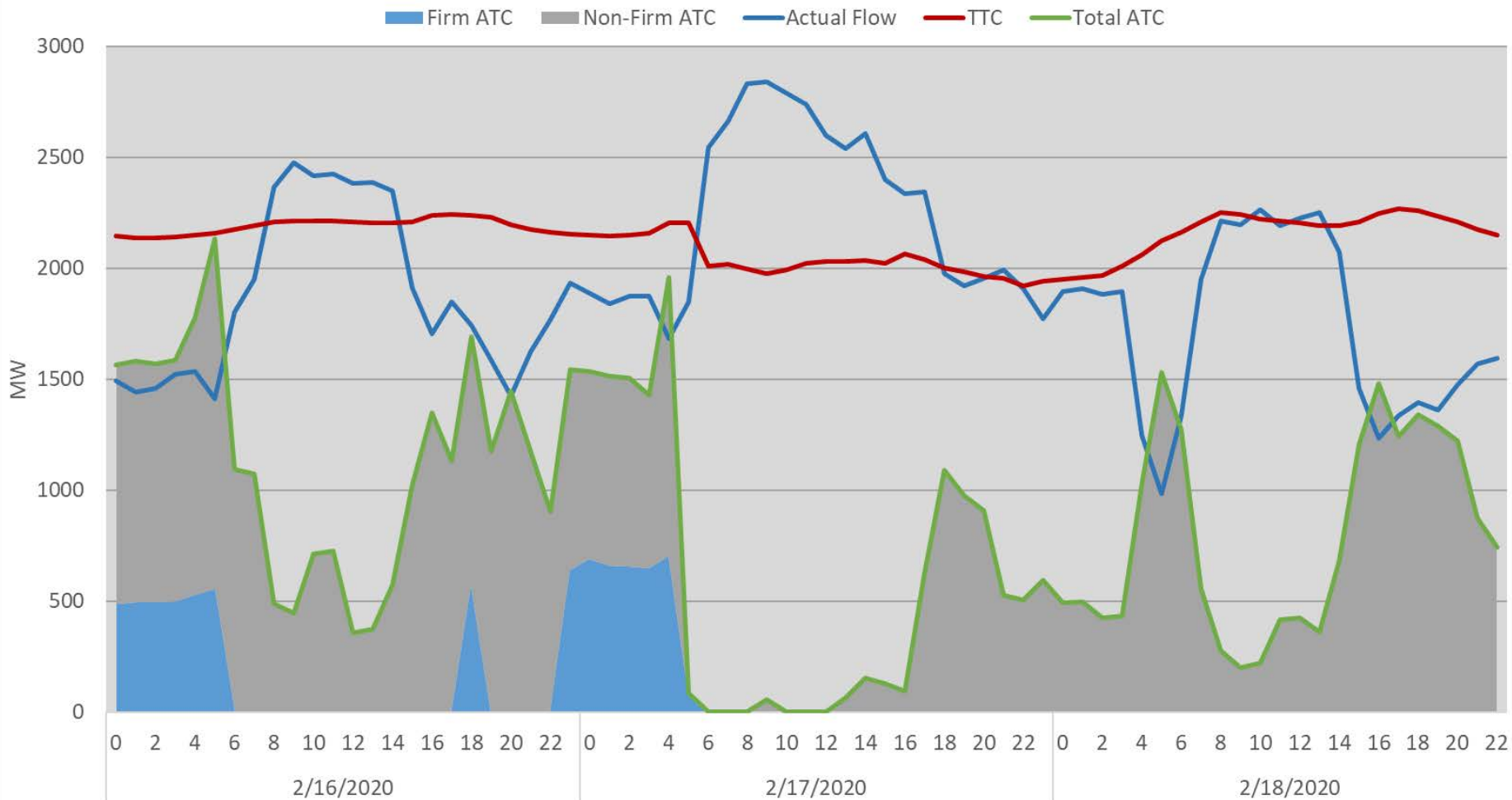


Mid-C Market Prices

— 2/5/2020 — 2/6/2020 — 2/7/2020

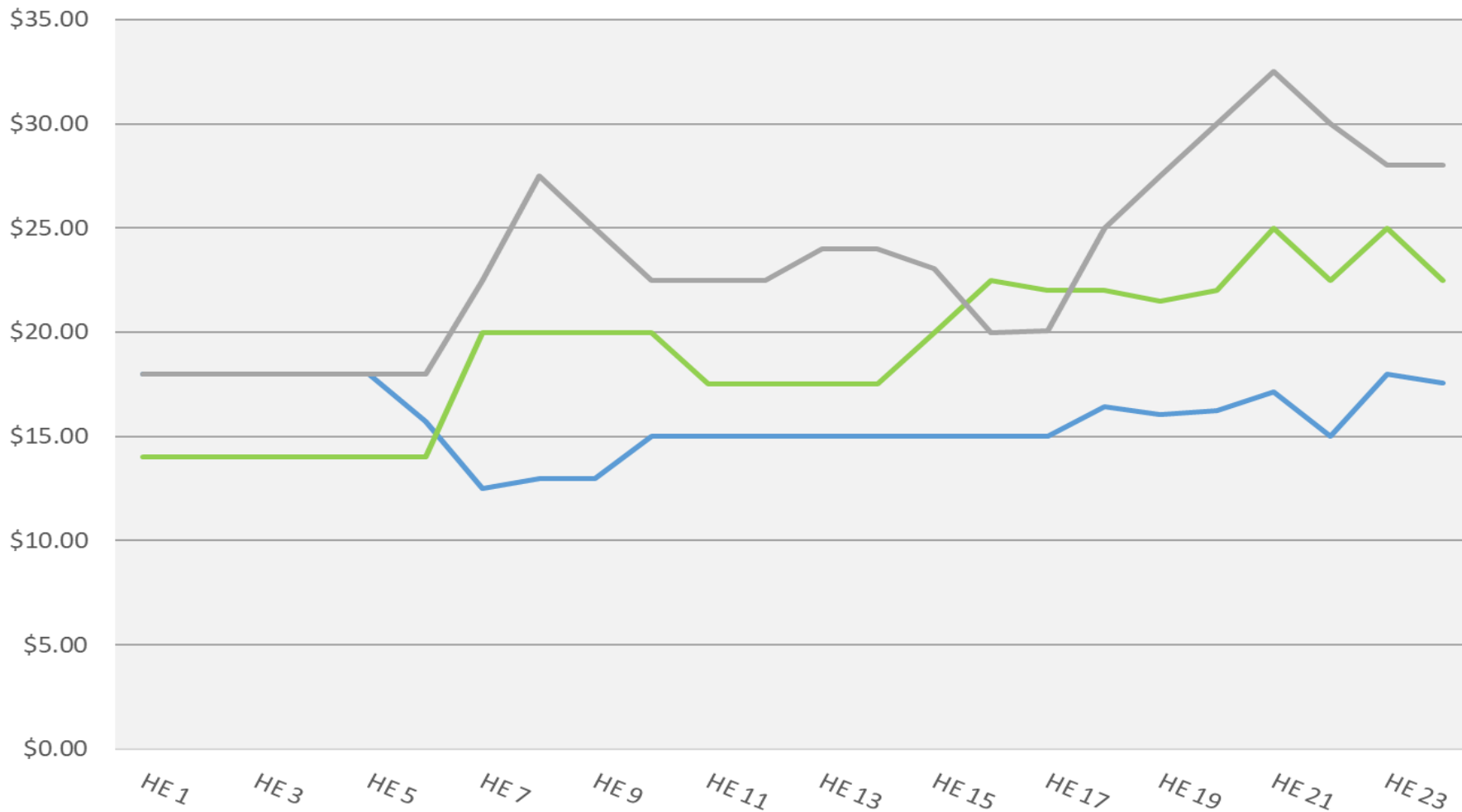


Short-Term ATC - 02/16/2020-02/18/2020

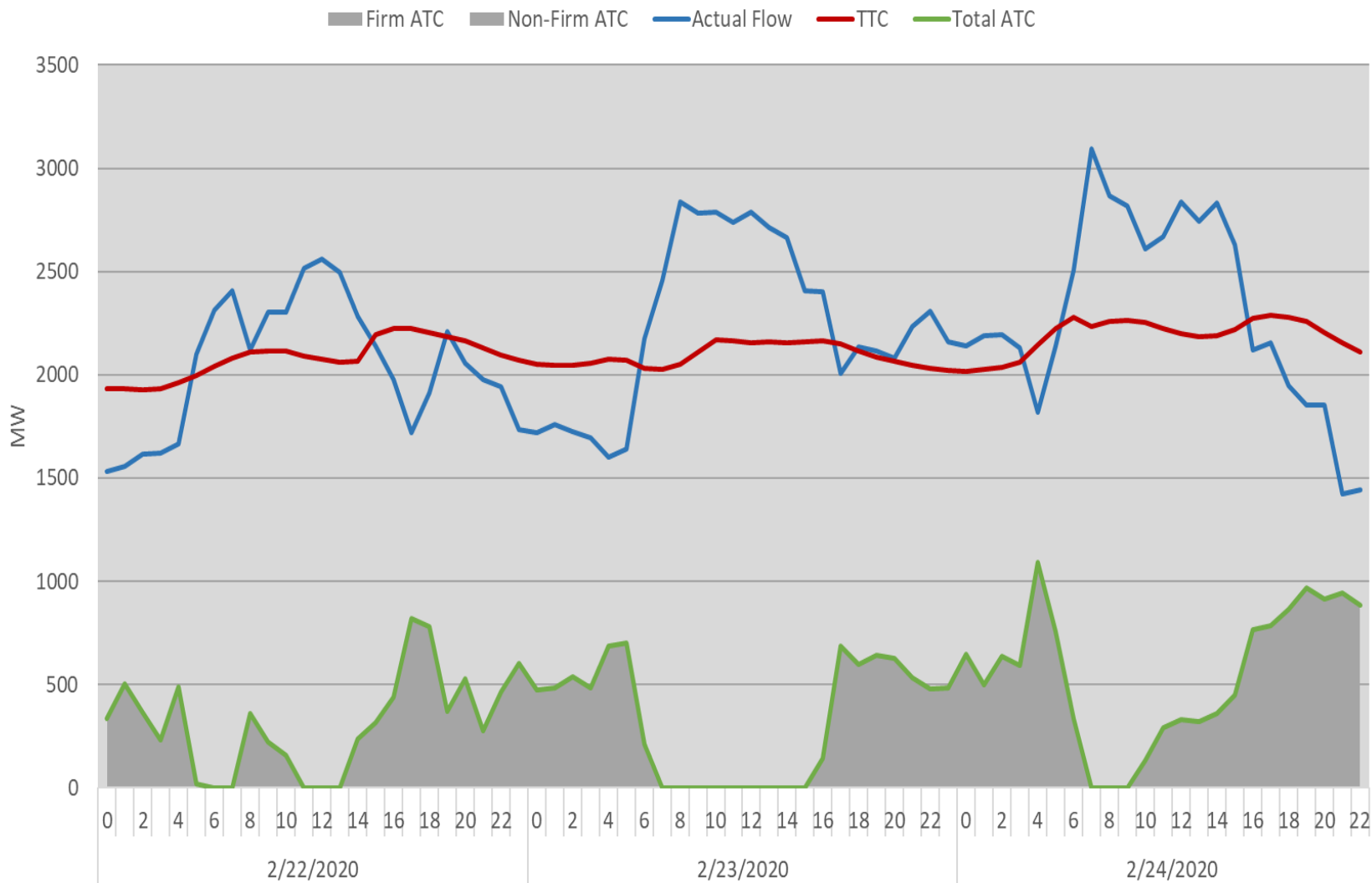


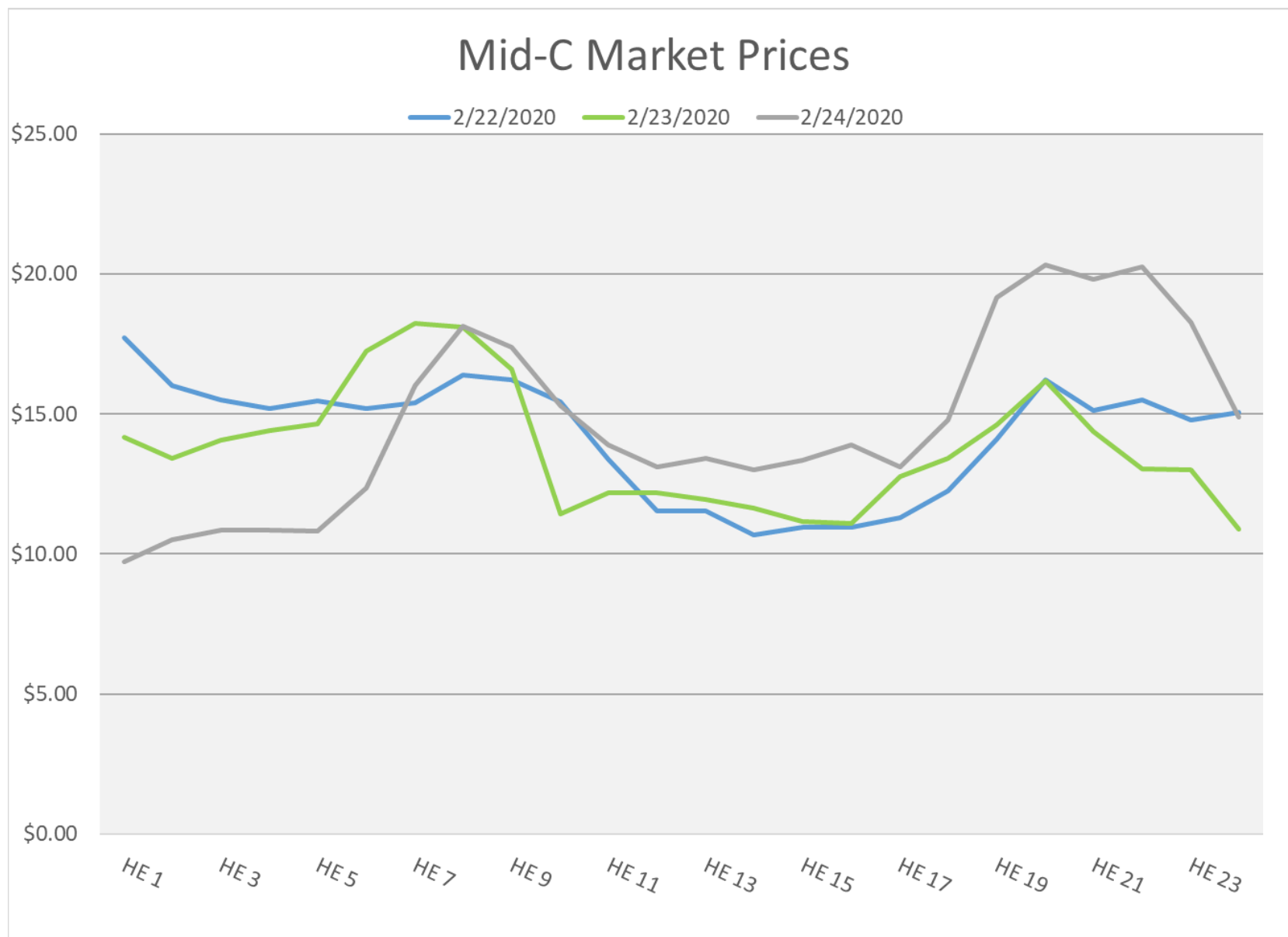
Mid -C Market Prices

2/16/2020 2/17/2020 2/18/2020



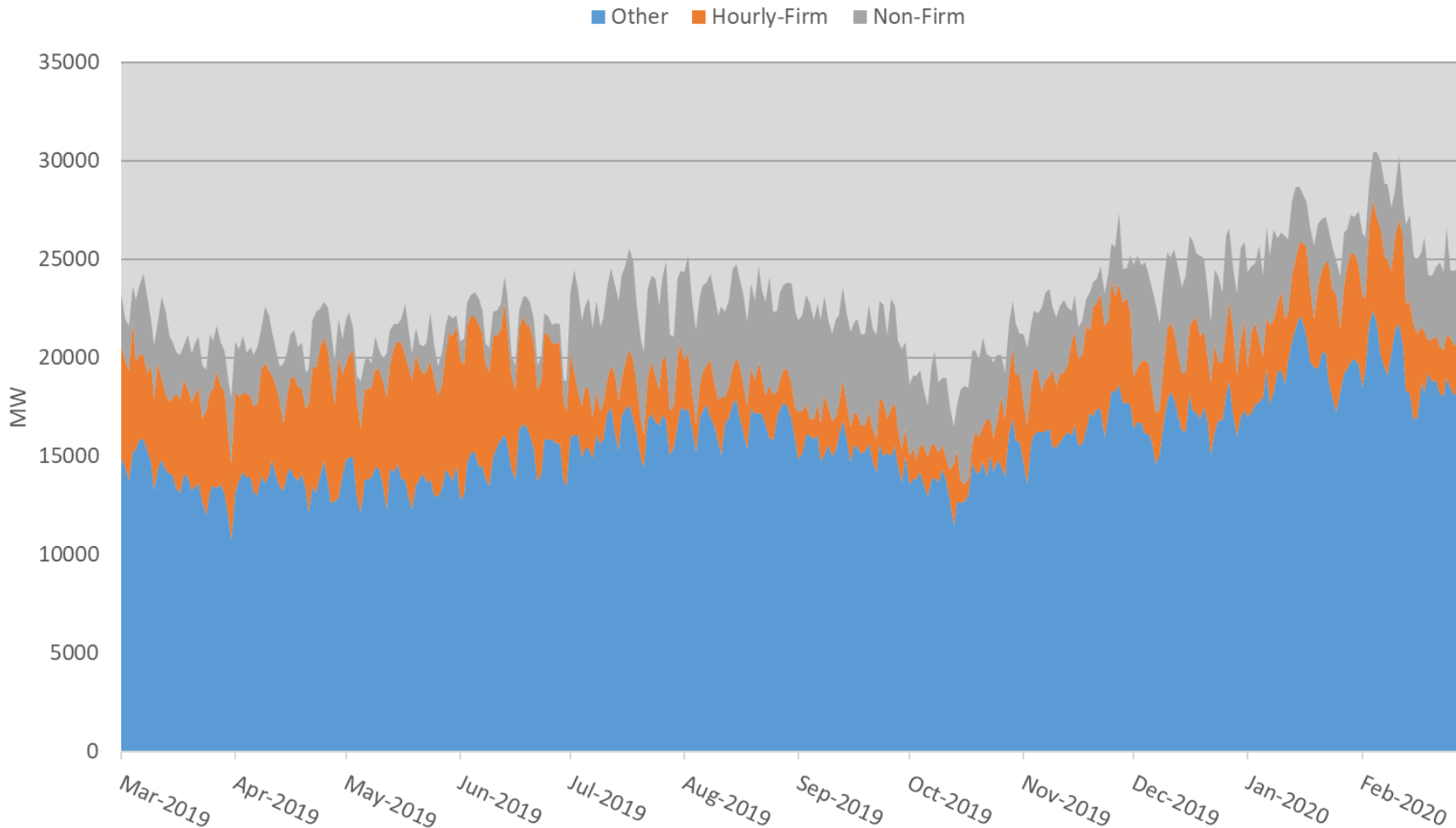
Short-Term ATC - 02/22/2020-02/24/2020





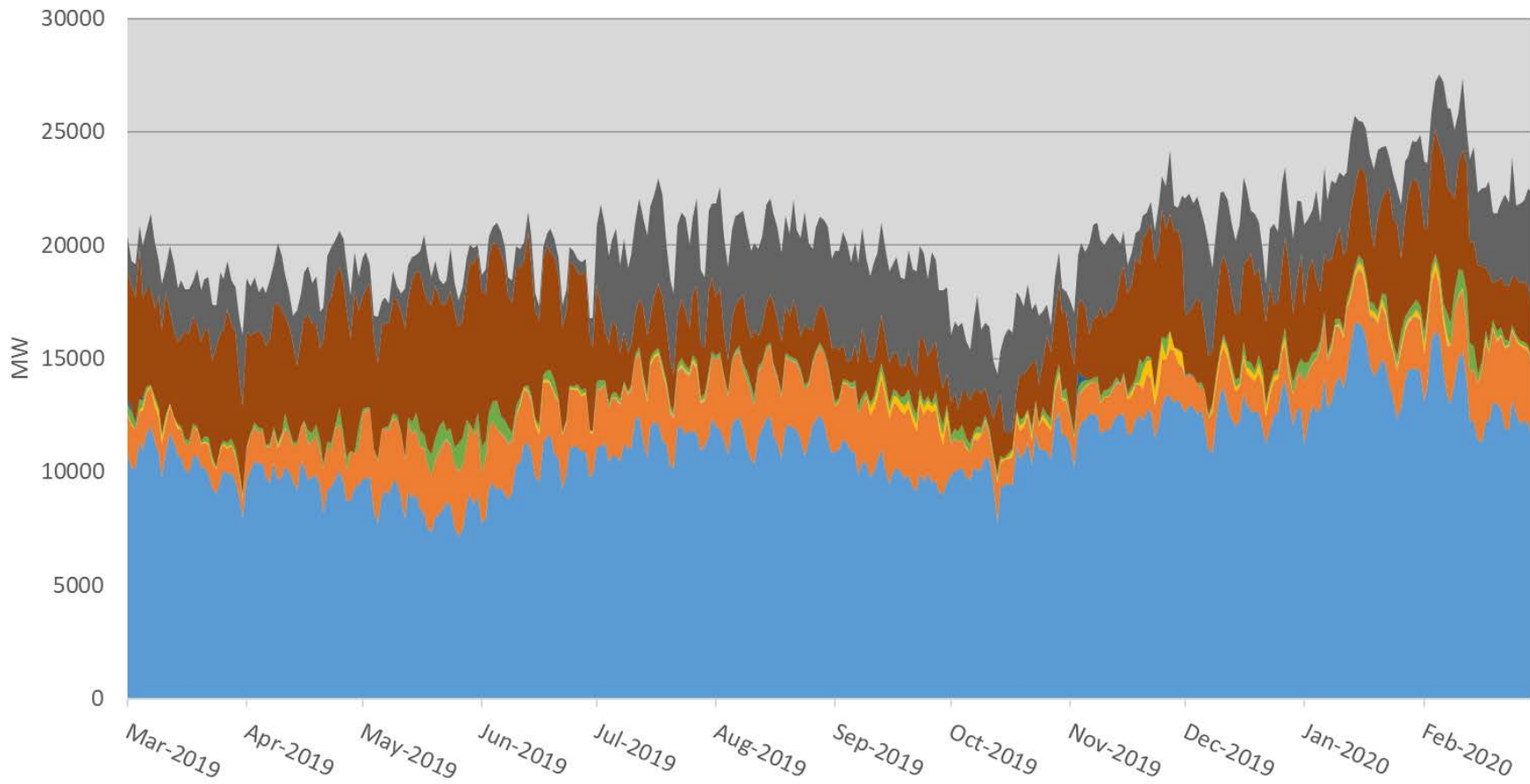
PRODUCT USAGE

Hourly Firm Limitation Impact - 1 Year



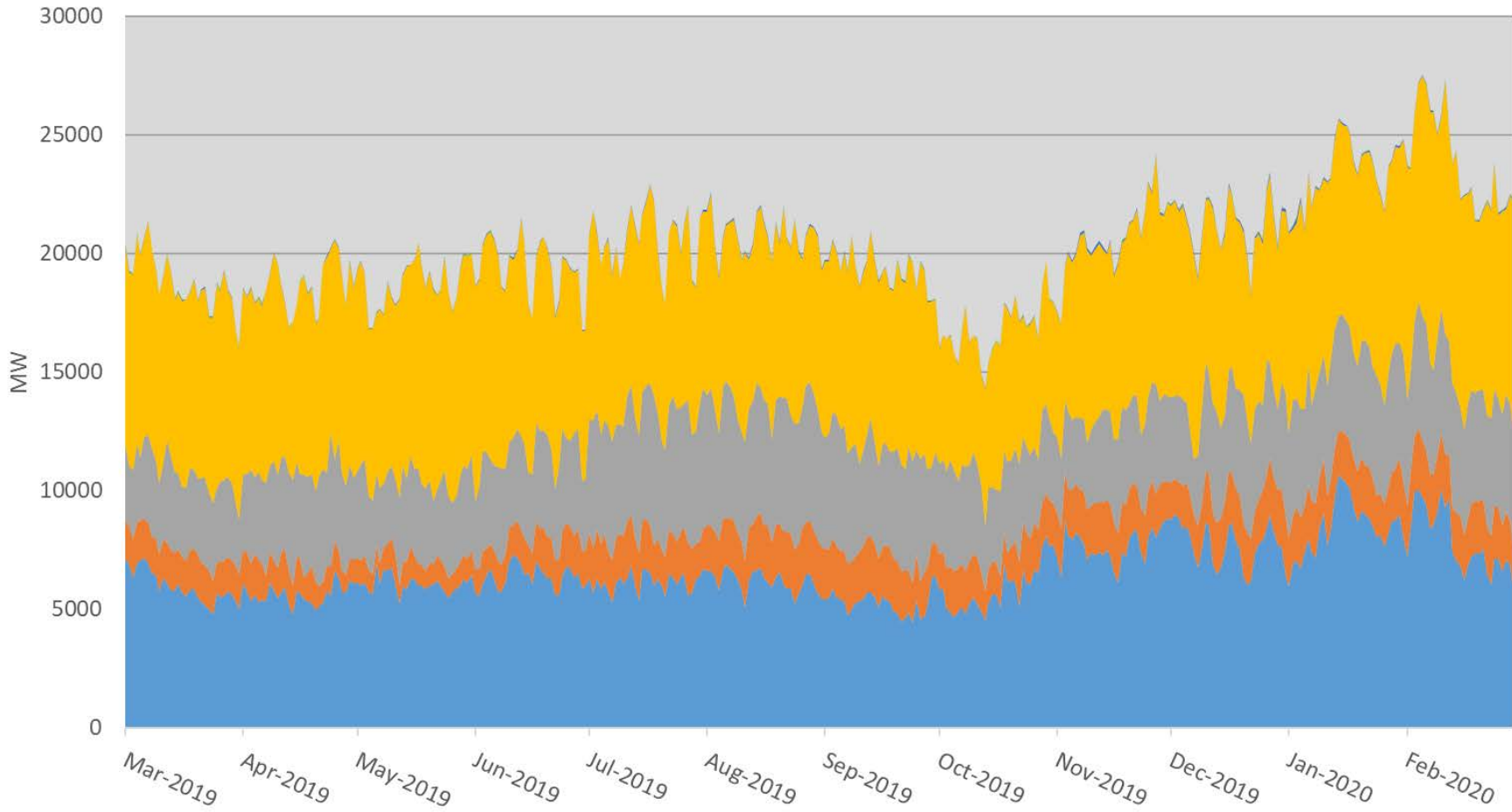
Product Mix - PTP - 1 year

- Yearly-Firm
- Monthly-Firm
- Monthly-Non-Firm
- Weekly-Firm
- Weekly-Non-Firm
- Daily-Firm
- Daily-Non-Firm
- Hourly-Firm
- Hourly-Non-Firm



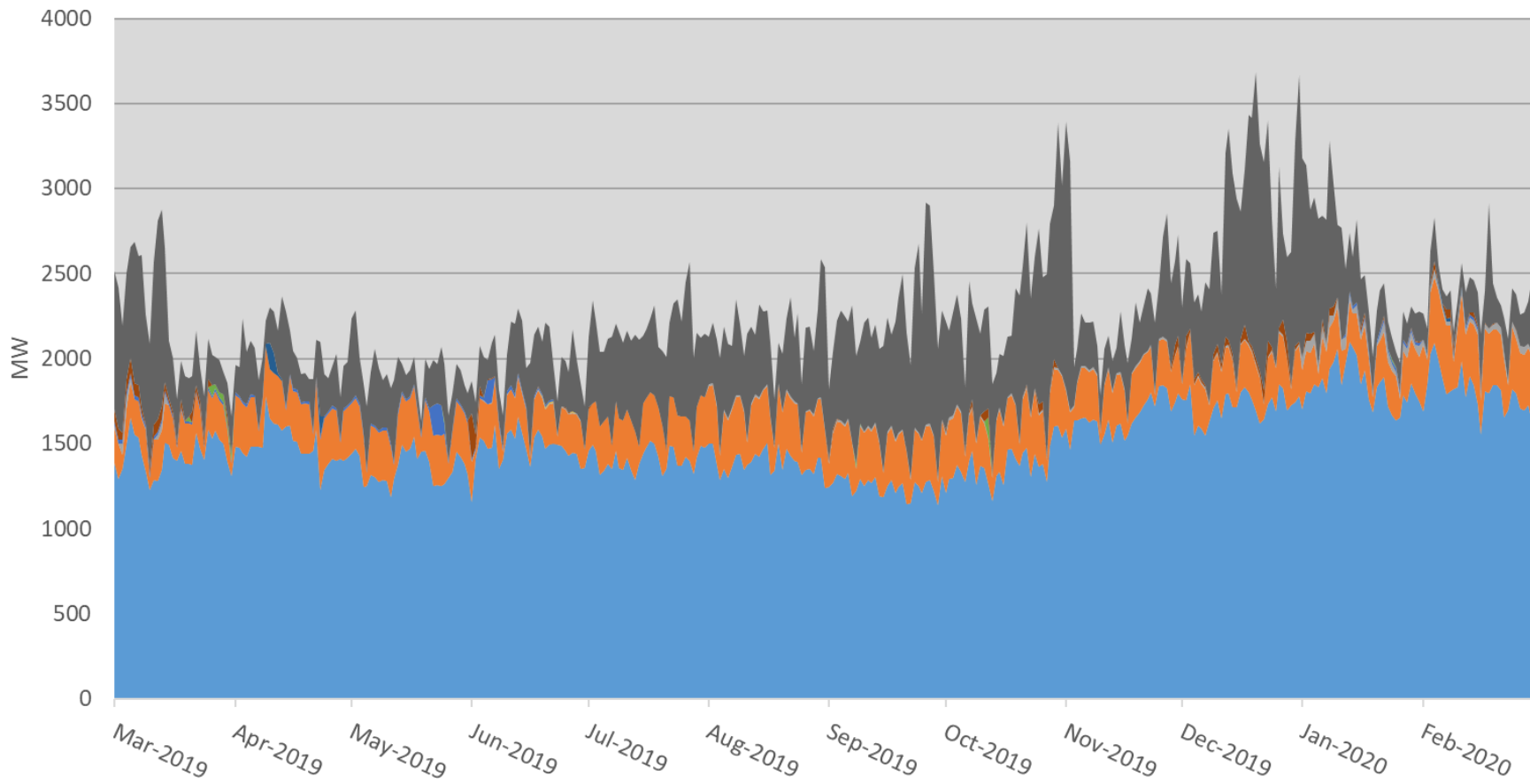
Product Usage - PTP - 1 Year

ORIGINAL RENEWAL RESALE TO SELF REDIRECT RESALE FROM MARKET DEFERRAL

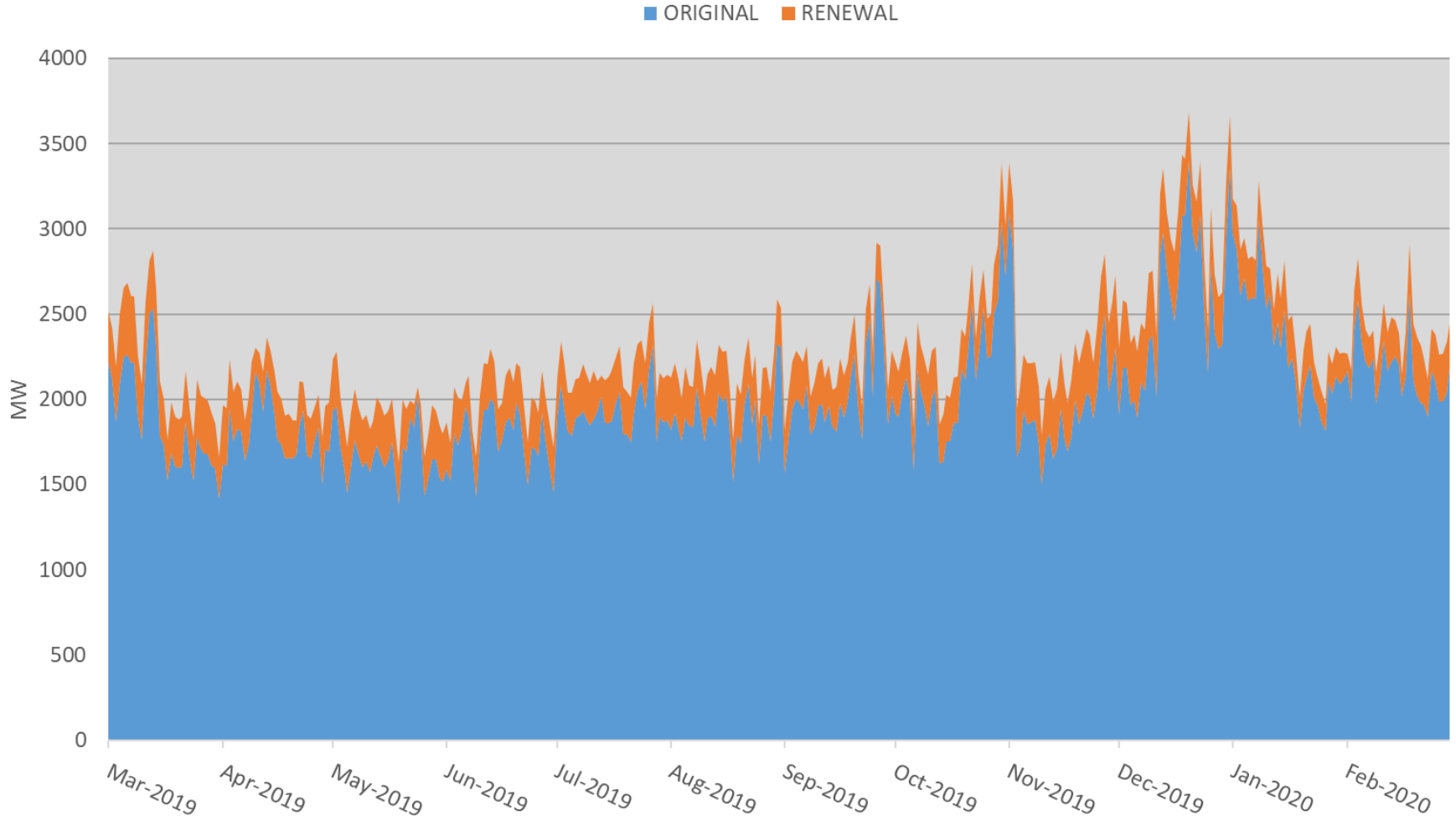


Product Mix - NT - 1 year

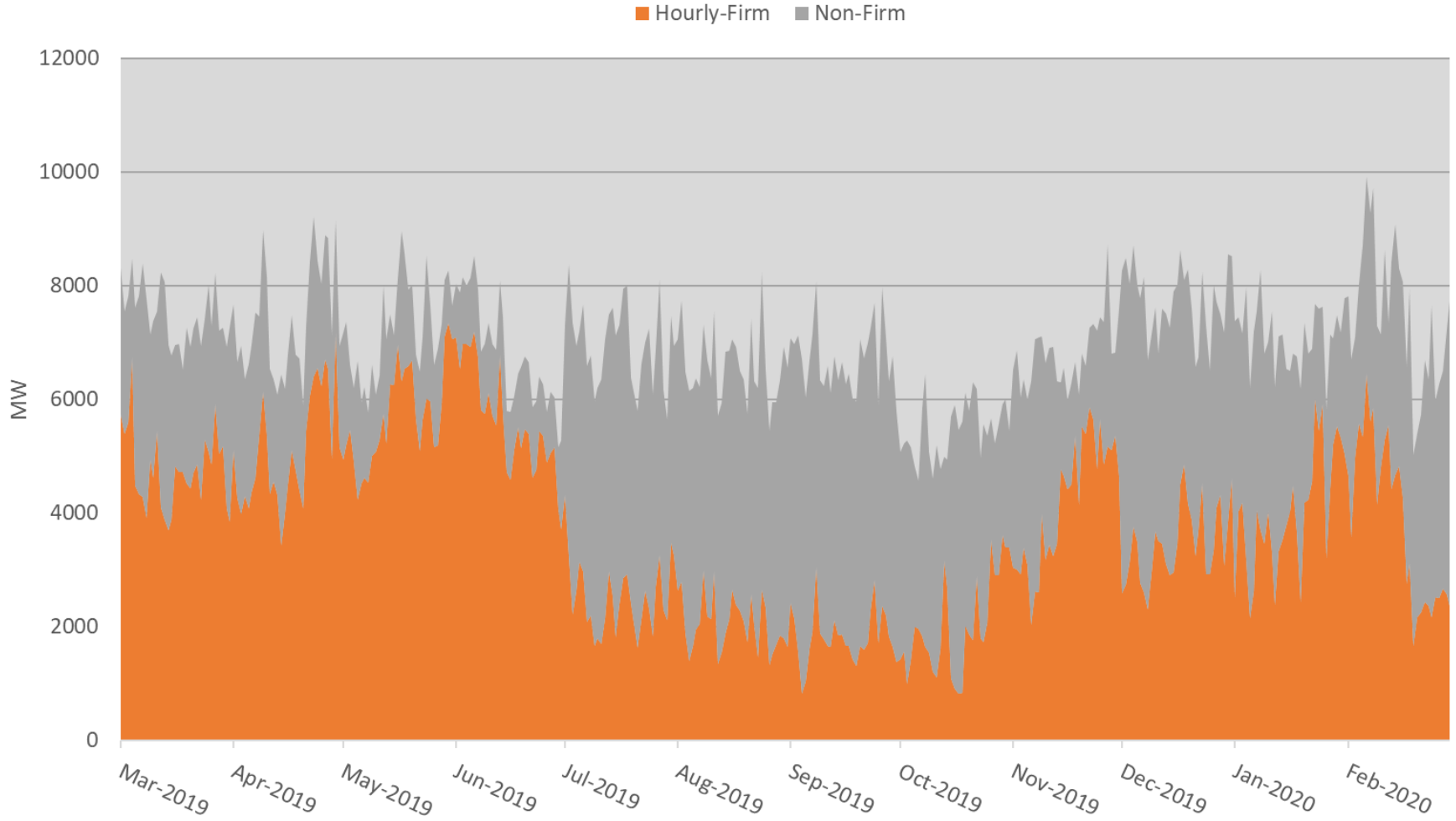
- Yearly-Firm
- Monthly-Firm
- Monthly-Non-Firm
- Weekly-Firm
- Weekly-Non-Firm
- Daily-Firm
- Daily-Non-Firm
- Hourly-Firm
- Hourly-Non-Firm



Product Usage - NT - 1 Year

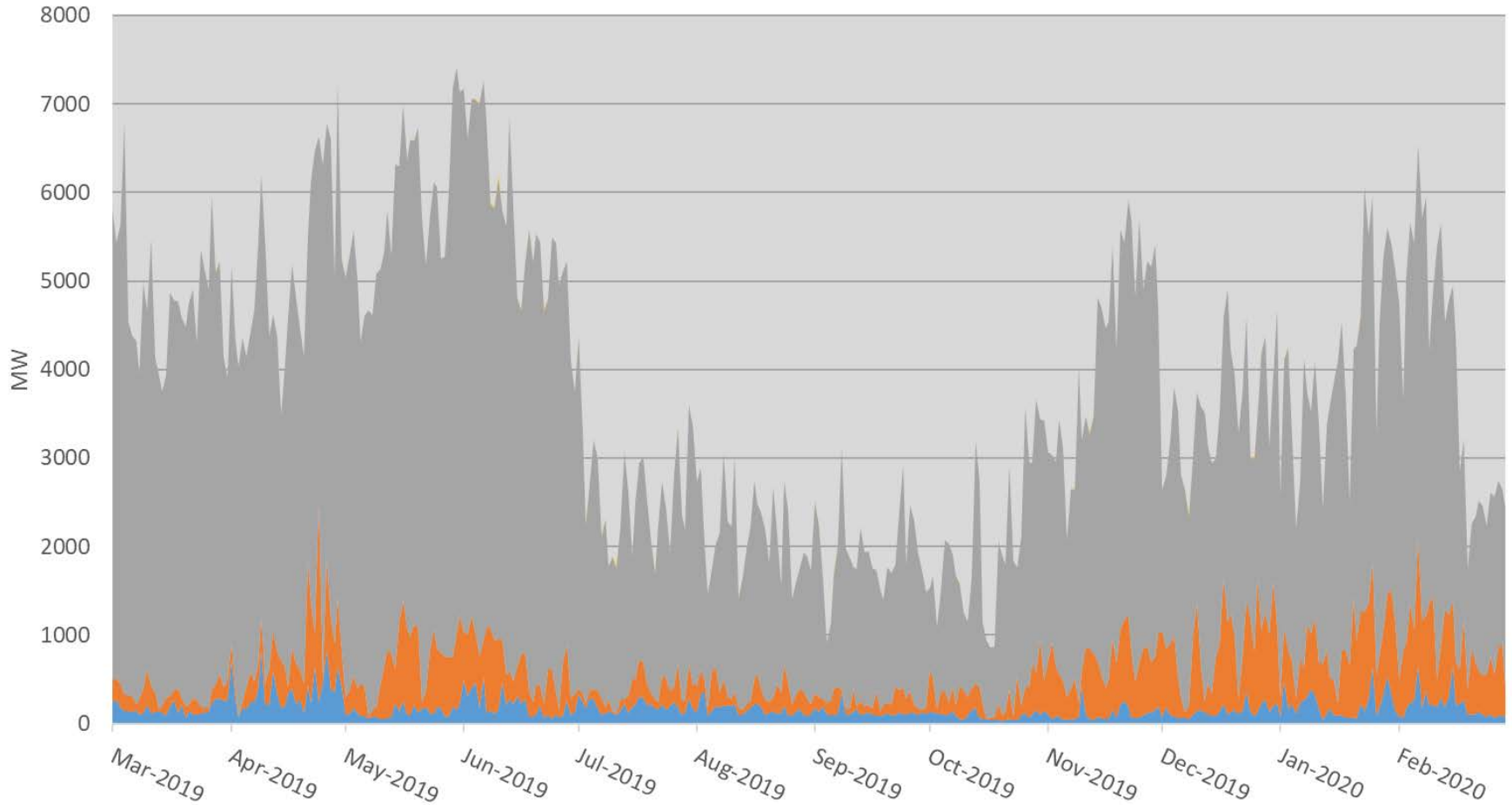


Hourly Firm/ Non-Firm Review - 1 Year



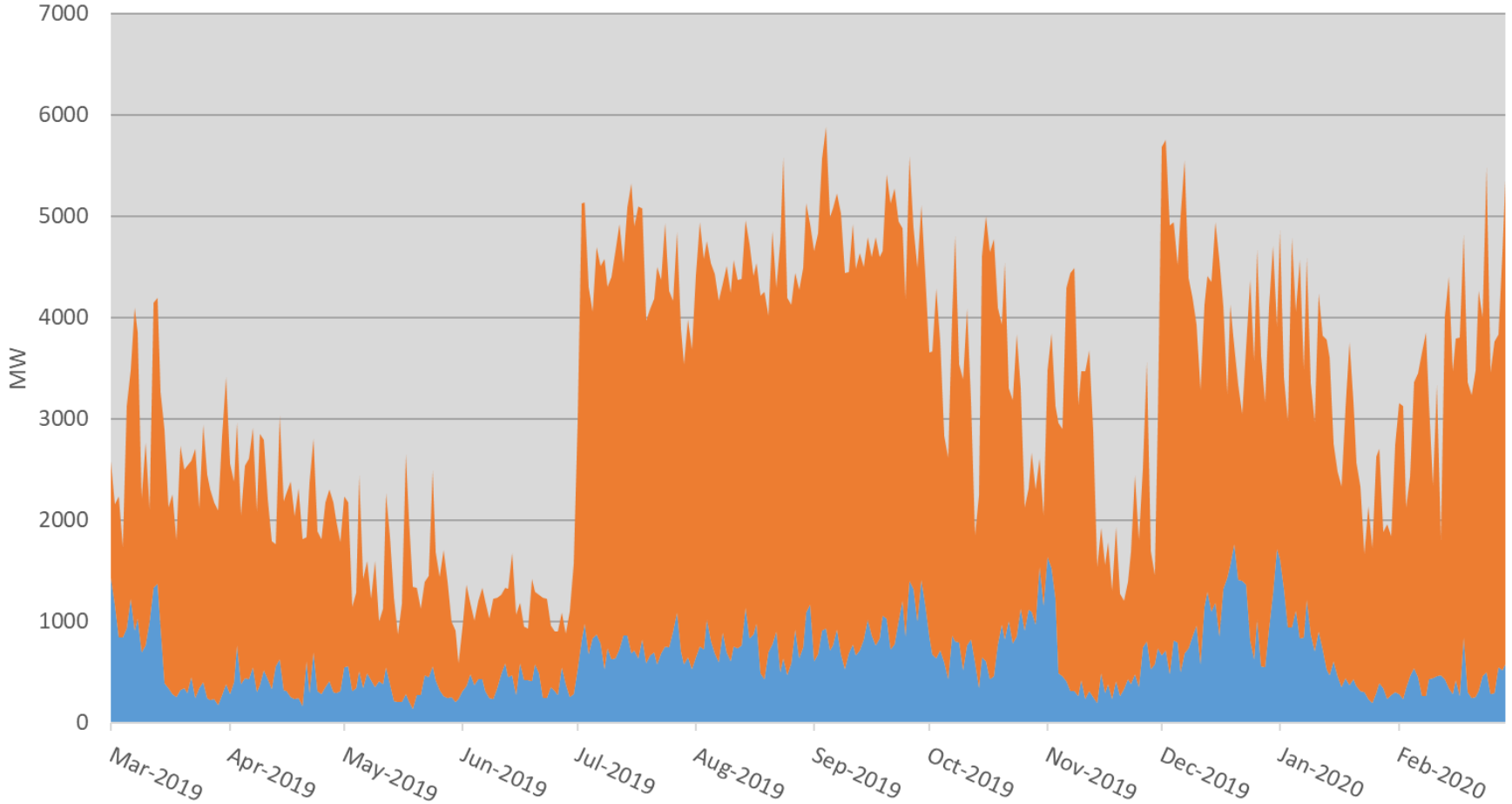
Hourly Firm Usage - 1 Year

■ ORIGINAL ■ RESALE TO SELF ■ REDIRECT ■ RESALE FROM MARKET



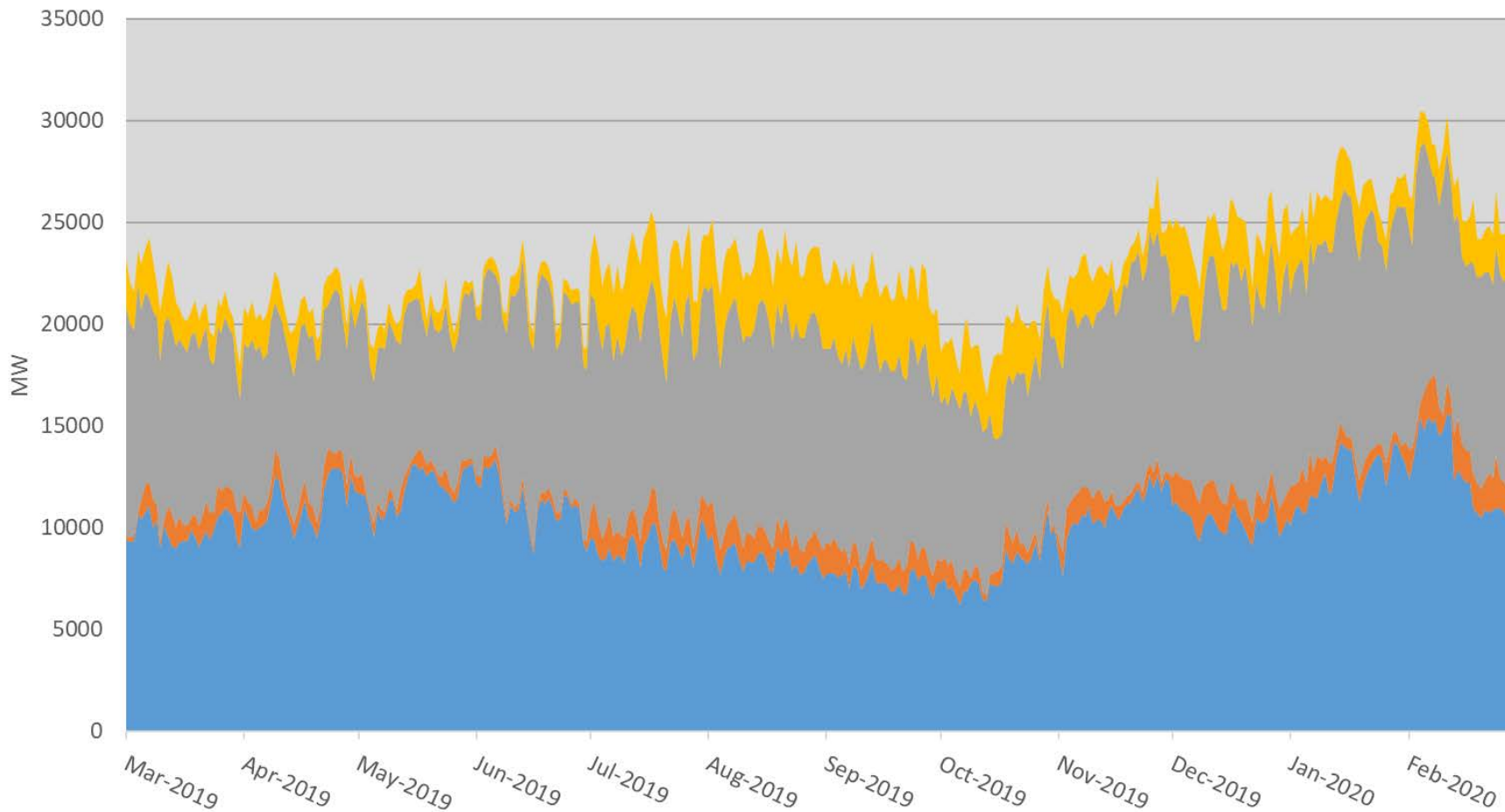
Non-Firm Usage - 1 Year

ORIGINAL REDIRECT



Source Analysis - 1 Year

■ FCRPS-Firm ■ FCRPS-Non-Firm ■ NonFCRPS-Firm ■ NonFCRPS-Non-Firm



Information Availability

- Reports and raw data will be generated per the Hourly Firm Monitoring and Evaluation Plan
- Post the updated and generated reports on a quarterly basis on BPA's external website
- Estimated availability - June 23, 2020:
<https://www.bpa.gov/transmission/Reports/Pages/Data-Monitoring-and-Repository.aspx>

Proposed Timeline & Next Steps

1. Quarterly Monitoring and Evaluation Plan Updates:
– June 24, 2020
2. Comments on the Hourly Firm information discussed today are due March 31, 2020

ISSUE #35: *DE MINIMIS*

De Minimis Customer Update

- Per customer request, BPA drafted some examples of the possible alternatives for short-term *de minimis* redirects.
- We will begin our discussion with the *de minimis* policy objective and decision criteria that will later be used to evaluate against the alternatives.
- For reference, BPA discussed the *de minimis* policy alternatives with customers at the January 28 customer workshop and again at the Webinar held Feb 6, 2020.
- BPA has posted responses to customer concerns around documentation and implementation of the *de minimis* policy.
- None of this material is meant to represent a predetermination of the merits of any particular alternative.

De Minimis Objective

The objective is to ensure the *de minimis* policy aligns with our tariff, business practices, and internal processes and systems for both the short-term and long-term markets. This will allow us to meet transmission customer needs more efficiently and responsively.

Agency Strategy

BPA's 2018–2023
STRATEGIC GOALS
DELIVERING ON OUR PUBLIC RESPONSIBILITIES THROUGH A COMMERCIALY SUCCESSFUL BUSINESS

- #1 STRENGTHEN FINANCIAL HEALTH**
 Improve cost-management discipline, build financial resiliency and maintain strong credit ratings.
- #2 MODERNIZE ASSETS & SYSTEM OPERATIONS**
 Administer an industry-leading asset management program; modernize federal power and transmission system operations to leverage market and technology developments.
- #3 PROVIDE COMPETITIVE POWER PRODUCTS & SERVICES**
 Increase revenues; align the region around a durable and financially sustainable fish and wildlife plan; align energy efficiency investments with long-term needs; achieve a modernized Columbia River Treaty.
- #4 MEET TRANSMISSION CUSTOMER NEEDS EFFICIENTLY & RESPONSIVELY**
 Make more flexible, scalable, economical and operationally efficient transmission investments; support efficient regional resource development; streamline processes; standardize products and services.

Transmission Business Model

WE ENERGIZE THE PACIFIC NORTHWEST

Transmission Value Proposition

- Operating a High Performing Grid
- Enabling Economic Growth in the Region
- Providing Access to Federal and Non-Federal Resources And Markets

Through Excellence

- Product Portfolio** Providing standardized options
Value-based price profiles
Drawing from integrated regional planning
- Infrastructure** Advanced situational awareness
Right-sized investments in assets
Value and risk-based asset management
- Long-Term Viability** Integrated and efficient processes
Data-driven decision making
Innovation and continuous improvement

A Dependable and Responsive Business Partner

De Minimis Action Plan

- To achieve our objective of ensuring the *de minimis* policy aligns with our tariff, business practices, and internal processes and systems for both the short-term and long-term markets, respectively.



- 1) Continue down the path of engaging customers at workshops to explore *de minimis* policy alternatives for ST market.
- 2) Simultaneously, continue internally working on a full-scale clean-up effort to meet our end-goal objective. This includes beginning a work stream to assess *de minimis* policy for LT market.
- 3) Bonneville will continue its current implementation of the De Minimis Policy as an interim step during the customer engagement process.
- 4) Bring it all together!

De Minimis Decision Criteria

The decision criteria will be used later to evaluate against each of the *de minimis* alternatives to inform decision-making.

1. Impact on customer access to firm ST service (better, worse, same).
2. Impact on reliability (better, worse, same).
3. Consistent with BPA's statutory, regulatory, and contractual obligations.
4. Alignment with *pro forma* tariff to the extent practical.
5. Cost of implementation and maintenance.

Summary of *De Minimis* Current Implementation

Request Type	Test	Criteria	ST	LT
Original and Redirect	Test 1	Flowgate MW Impact \leq 10MW AND $(POR_{PTDF} - POD_{PTDF}) \leq 10\%$	Yes	Yes
Redirect Only	Test 2	Redirect MW Impact – Parent MW Impact \leq 10MW AND $(Parent_{PUF} \div Redirect_{PUF}) \geq 80\%$	No	Yes

- PUF (Path Utilization Factor) = Request POR_{PTDF} – Request POD_{PTDF}
- Test 1 is applied equally to Original and Redirect requests in both the short-term and long-term, respectively.

LT and ST Redirect Requests

- Risk associated with *de minimis* is correlated to volume
- BPA wanted to share with customers how the volume of redirect requests differs from the long-term to the short-term markets, respectively.
- Time Period Covered
 - February 2019 through February 2020
 - Long-Term Redirect Requests – 260
 - Short-Term Redirect Requests – 364,535
 - These are all redirect requests for both time horizons
 - No filters applied to the data
 - Includes invalid, withdrawn and annulled requests

Summary of *De Minimis* Alternatives for ST

Alternative	De Minimis Test 2
Alt. 1 Current Implementation	No. Do NOT apply test two to short-term redirects.
Alt. 2 Align ST with LT policy	Yes. Apply long-term test two to short-term redirects. Long-term test two is the ratio between the parent PTDF and the redirect PTDF. The threshold is >80%
Alt. 3 Same as Alt 2, but establish a different threshold for ST redirects	Yes. Establish a new threshold to apply test two to short-term redirects. For example, apply 90% instead of 80% threshold to short-term redirects.
Alt. 4 Establish new test two for ST redirects based on net PTDF difference	Yes, but different from current long-term test two for redirects. For example, compare net PTDF difference (redirect PTDF – parent PTDF) against a newly established percentage threshold (e.g., 5%).
Alt. 5 Another way to manage the amount of TSRs granted as de minimis impact	Yes. This is complementary to all alternatives except status quo. For example, we would grant TSRs up to a ceiling amount, without reducing ATC, until the cumulative amount of impact of de minimis TSRs adds up to some accommodation threshold (e.g., 50 MW).

Alternative 1

Test 1

- Current Implementation
- No redirect Test 2

A: $MW\ Impact \leq 10MW$
 AND
 B: $(POR_{PTDF} - POD_{PTDF}) \leq 10\%_{PUF}$

Example using 10MW TSR

Request Type	New Request			Parent			Net Impact (Redirect MW - Parent MW)	Test 1		Result	Comment
	POR/POD	PUF	MW	POR/POD	PUF	MW		Criteria A (<= 10MW)	Criteria B (<= 10%)		
Original	BC.US.Border to BigEddy	0.2395	2.395	NA	NA	NA	NA	Pass 2.395 < 10MW	Fail .2395 > 10%	Fail	Not considered de minimis as it fails criteria B of Test 1.

Summary: An original or redirect request must pass both criteria A and B to be considered de minimis under Test 1.

Examples using 100MW TSRs

Request Type	New Request			Parent			Net Impact (Redirect MW - Parent MW)	Test 1		Result	Comment
	POR/POD	PUF	MW	POR/POD	PUF	MW		Criteria A (<= 10MW)	Criteria B (<= 10%)		
Original	BPAPower to Franklin	0.0714	7.14	NA	NA	NA	NA	Pass 7.14 <= 10MW	Pass .0714 <= 10%	Pass	Original is de minimis, so it is accepted.
Redirect	BPAPower to Franklin	0.0714	7.14	BC.US.Border to JohnDay	0.2276	22.76	-15.62MW	Pass 7.14 <= 10MW	Pass .0714 <= 10%	Pass	The redirect is also accepted under the very same de minimis rules as the original.

Summary: The de minimis rules are applied equally to original and redirect requests. Both requests are considered de minimis under Test 1.

Alternative 1 continued

Examples using 100MW TSRs

Request Type	New Request			Parent			Net Impact (Redirect MW - Parent MW)	Test 1		Result	Comment
	POR/POD	PUF	MW	POR/POD	PUF	MW		Criteria A (<= 10MW)	Criteria B (<= 10%)		
Original	BC.US.Border to JohnDay	0.2276	22.76	NA	NA	NA	NA	Fail 22.76 > 10MW	Fail .2276 > 10%	Fail	Original is not de minimis, so rejected.
Redirect	BC.US.Border to JohnDay	0.2276	22.76	BC.US.Border to BigEddy	0.2395	23.95	-1.19MW	Fail 22.76 > 10MW	Fail .2276 > 10%	Pass	Redirect is also not de minimis per Test 1, but it is accepted because the redirect needs less capacity than the parent already holds (ie, Net Impact is negative).

Summary: Both requests fail de minimis Test 1. Where original requests fail, redirects can leverage parent capacity in some cases to get requests granted. Here, the parent rights fully cover the redirect capacity needs.

Request Type	New Request			Parent			Net Impact (Redirect MW - Parent MW)	Test 1		Result	Comment
	POR/POD	PUF	MW	POR/POD	PUF	MW		Criteria A (<= 10MW)	Criteria B (<= 10%)		
Original	BC.US.Border to BigEddy	0.2395	23.95	NA	NA	NA	NA	Fail 23.95 > 10MW	Fail .2395 > 10%	Fail	Original is not de minimis, so rejected.
Redirect	BC.US.Border to BigEddy	0.2395	23.95	BC.US.Border to JohnDay	0.2276	22.76	1.19MW	Fail 23.95 > 10MW	Fail .2395 > 10%	Fail	Redirect is not de minimis per Test 1 and needs more capacity than the parent holds (ie, Net Impact is positive). There is no de minimis Test 2 applied to the Net Impact.

Summary: Here, the parent rights do not fully cover the redirect capacity needs. The redirect needs ATC. If ATC is unavailable, a short-term redirect would fail. A long-term redirect would pass under Test 2.

Alternative 2

- Adopt the same criteria as Test 2 as in the LT

A: Redirect MW Impact – Parent MW Impact \leq 10MW

AND

B: $(\text{Parent}_{\text{PUF}} \div \text{Redirect}_{\text{PUF}}) \geq 80\%_{\text{PUF}}$

- Adopt the same 80% threshold as in the LT
- One goal in this alternative is consistency between ST and LT

Examples using 100MW TSRs

Redirect4		Parent		Criteria A	Criteria B (Threshold 80%)	Result
MW	PUF	MW	PUF			
20	0.20	15	0.15	20 – 15 = 5MW (does meet \leq 10MW)	0.15 \div 0.20 = 0.75 (does not meet \geq 80%)	Fail
61	0.61	52	0.52	61 – 52 = 9MW (does meet \leq 10MW)	0.52 \div 0.61 = 0.85 (does meet \geq 80%)	Pass

Alternative 3

- Criteria is the same as Alt 2 but with different threshold

A: Redirect MW Impact – Parent MW Impact \leq 10MW

AND

B: $(\text{Parent}_{\text{PUF}} \div \text{Redirect}_{\text{PUF}}) \geq \text{Threshold}_{\text{PUF}}$

- Threshold may differ between ST and LT (not necessarily 80% ST)
- No specific ST threshold has been considered at this time

Examples using 100MW TSRs with thresholds of 75% and 85% for illustration.

Redirect4		Parent		Criteria A	Criteria B (Threshold 85%)	Result
MW	PUF	MW	PUF			
20	0.20	15	0.15	20 – 15 = 5MW (does meet \leq 10MW)	0.15 \div 0.20 = 0.75 (does not meet \geq 85%)	Fail

Redirect4		Parent		Criteria A	Criteria B (Threshold 75%)	Result
MW	PUF	MW	PUF			
44	0.44	34	0.34	44 – 34 = 10MW (does meet \leq 10MW)	0.34 \div 0.44 = 0.77 (does meet \geq 75%)	Pass

Alternative 4

- Uses a different criteria B than Alternatives 2 and 3

A: Redirect MW Impact – Parent MW Impact \leq 10MW

AND

B: (Redirect_{PUF} – Parent_{PUF}) \leq **Threshold_{PUF}**

- Uses a delta of PUF impacts between parent and Redirect, rather than a ratio.
- A specific threshold has not been considered.

Examples using 100MW TSRs with differential threshold of 5% for illustration.

Redirect4		Parent		Criteria A	Criteria B (Threshold 5%)	Result
MW	PUF	MW	PUF			
20	0.20	15	0.15	20 – 15 = 5MW (does meet \leq 10MW)	0.20 - 0.15 = 0.05 (does meet \leq 5%)	Pass
61	0.61	52	0.52	61 – 52 = 9MW (does meet \leq 10MW)	0.61 - 0.52 = 0.09 (does not meet \leq 5%)	Fail

Alternatives 2 and 3 Ratio Test

- The Test 2 *de minimis* criteria is an allowance for how much the impact of a Redirect request can exceed existing parent rights on a constrained flowgate and still have service granted on that flowgate.
- Alternatives 2 and 3 use a ratio of parent to redirect impacts to determine this allowance.
- This approach provides a bigger allowance the larger the existing parent rights are.

Examples using 100MW TSRs with a Test 2 ratio of 80% from Alternative 2.

Examples	1	2	3	4
Parent _{PUF}	.16	.24	.32	.40
Redirect _{PUF}	.20	.30	.40	.50
Ratio (Parent _{PUF} ÷ Redirect _{PUF})	.16 ÷ .20 = 80%	.24 ÷ .30 = 80%	.32 ÷ .40 = 80%	.40 ÷ .50 = 80%
<i>De minimis Impact</i> (Allowance) (Redirect _{PUF} - Parent _{PUF})*Demand	(.20 - .16)*100 = 4MW	(.30 - .24)*100 = 6MW	(.40 - .32)*100 = 8MW	(.50 - .40)*100 = 10MW

- All of the examples have the same Test 2 ratio of 80%. But the parent with 40MW impact is allowed a redirect of 50MW (a 10MW *de minimis* allowance) compared to a parent of 16MW that only has a 4MW allowance (to support a 20MW Redirect).

Compare Alternatives 2,3 and 4

- Whereas the ratio test for Alternatives 2 and 3 provide a *de minimis* allowance that will vary depending on the existing parent rights, Alternative 4 provides a *de minimis* allowance that is fixed. It is the same allowance regardless of the rights held by the parent TSR.

Examples using 100MW TSRs with a ratio of 80% compared to a delta threshold of 5%.

Redirect		Parent		Net MW (Redirect - Parent)	Alternative 2		Alternative 4	
MW	PUF	MW	PUF		Criteria B (Ratio 80%)	Result	Criteria B (Delta 5%)	Result
20	0.20	15	0.15	20 - 15 = 5MW	0.15 ÷ 0.20 = 0.75 (does not meet ≥ 80%)	Fail	0.20 - 0.15 = 0.05 (does meet ≤ 5%)	Pass
61	0.61	52	0.52	61 - 52 = 9MW	0.52 ÷ 0.61 = 0.85 (does meet ≥ 80%)	Pass	0.61 - 0.52 = 0.09 (does not meet ≤ 5%)	Fail

- Note that the ratio test for Alternatives 2 and 3 results in the granting of a Redirect that exceeds the parent by 9MW (row 1), while at the same time refusing another Redirect that exceeds the parent by only 5MW (row 2).
- Alternative 4 results in the opposite results. Both are allowed a fixed 5% *de minimis* impact allowance (ie, 5MW). Row 1 meets this criteria, but row 2 does not.

Alternative 5

- Alternatives 2, 3, and 4 provide a criteria by which a given Redirect request may be granted, permitting a *de minimis* impact on a constrained flowgate. However, there is no limit placed on the number of such *de minimis* allowances granted under these alternatives. Over time, the accumulation of individual *de minimis* impacts may result in a significant impact.
- Alternative 5 may address this situation by setting an upper limit on the cumulative *de minimis* impacts. It is not a standalone alternative, but one that may be used in conjunction with Alternatives 2, 3, or 4.

Example using Alternative 2 with 100MW Redirects and a 35MW *de minimis* limit for a given flowgate.

Redirect PUF	Parent PUF	Test 2 Ratio	De minimis Impact	Cumulative DM Impact	Result
.43	.35	0.81	8MW	8MW	Pass
.61	.52	0.85	9MW	17MW	Pass
.32	.27	0.84	5MW	22MW	Pass
.60	.50	0.83	10MW	32MW	Pass
.16	.20	.80	4MW	36MW	Fail

The 5th TSR is refused once the 35MW limit is reached, even though this Redirect does pass the *de minimis* criteria by itself.

It would work like this:

1. Select Alternative 2, 3, or 4 for Test 2.
2. Set an MW *de minimis* limit for each network flowgate.
3. Evaluate Original and Redirects according to *de minimis* policy. If Test 1 or Test 2 passes, determine the *de minimis* impact of that TSR.
4. Accumulate these *de minimis* impacts.
5. Stop accepting new *de minimis* impacts once the limit is reached for a given flowgate.

Next Steps

- BPA will notify customers via tech forum of the next customer workshop when *de minimis* will be discussed.
- Contact your AE directly with questions or send an email via techforum@bpa.gov (with copy to your AE).

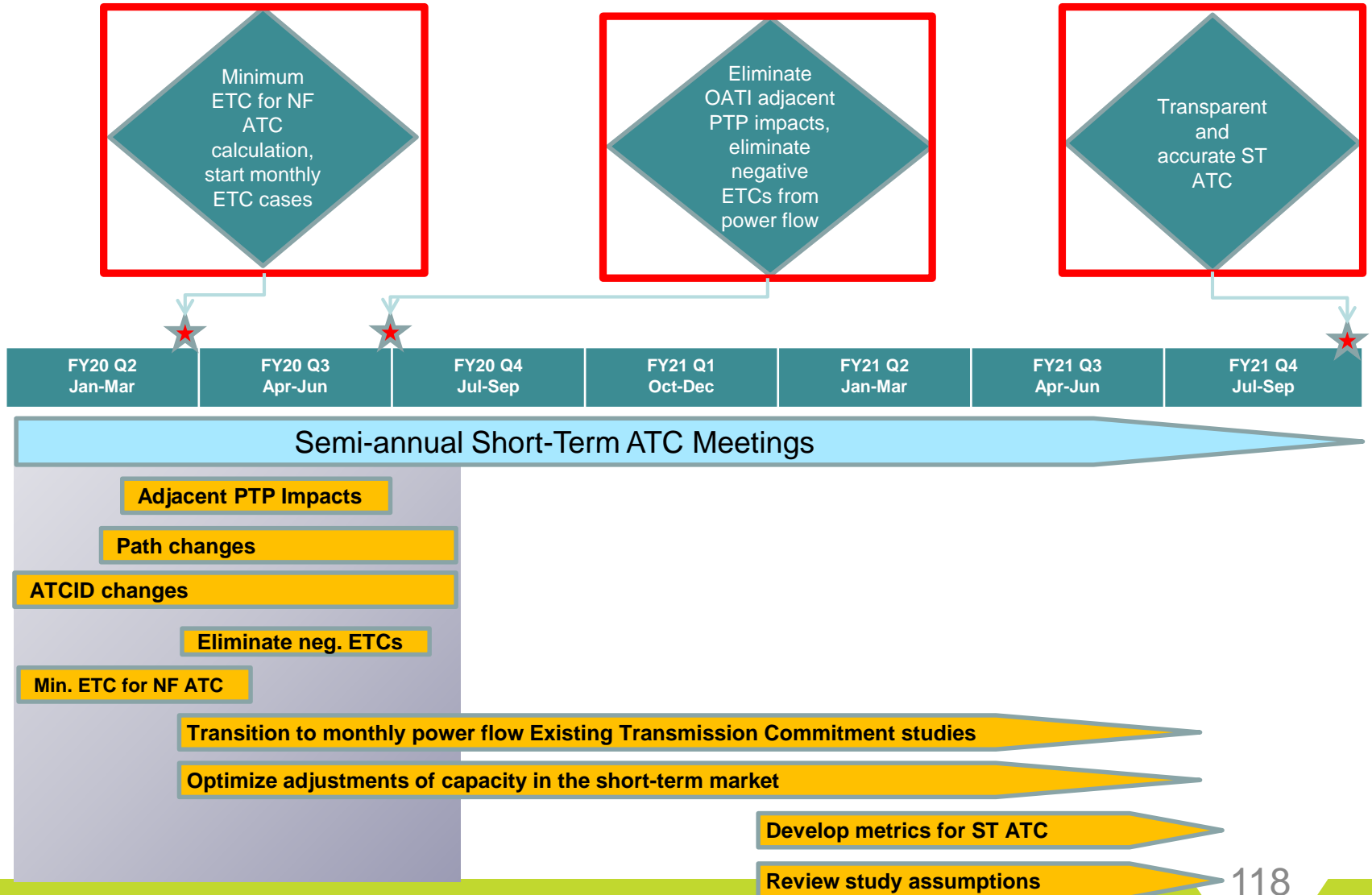
ISSUE #28: SHORT-TERM ATC IMPROVEMENTS (2.E)

- **Short-Term Available Transfer Capability (ST ATC) Project Update**

Agenda

1. ST ATC Project Timeline
2. ATC Calculation
3. Inflight ST ATC Improvements
4. ATC Implementation Document (ATCID) Update
5. Proposed ST ATC Improvements
6. Wrap up

Short-Term ATC Project Timeline



ATC Formulas for the NERC Time Horizon

The firm ATC formula is:

$$\mathbf{ATC_F = TTC - ETC_F - CBM - TRM + Postbacks_F + Counterflows_F}$$

The non-firm ATC formula is:

$$\mathbf{ATC_{NF} = TTC - ETC_F - ETC_{NF} - CBM_S - TRM_U + Postbacks_{NF} + Counterflows_{NF}}$$

Where:

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

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

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

CBM is the Capacity Benefit Margin for the ATC Path during that period.

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

TRM_U is the Transmission Reliability Margin that has not been released for sale as non-firm capacity

Postbacks are changes to firm Available Transfer Capability due to a change in the use of Transmission Service for that period, as defined in Business Practices.

Counterflows are adjustments to firm Available Transfer Capability as determined by the Transmission Service Provider and specified in their ATCID.

F subscript refers to Firm; **NF subscript** refers to Non-Firm; **S subscript** refers to Scheduled

Inflight ST ATC Improvements

1. BPA has two in-flight ST ATC improvements, which were originally presented at BPA's January 30, 2020 webinar on ST ATC
 - a. Transition to monthly Existing Transmission Commitment (ETC) power flow studies
 - b. Use of the minimum ETC from the power flow base cases to calculate non-firm ATC across flow-based paths for 0 to 13 month NERC horizon
2. BPA will be implementing these improvements on March 24, 2020

Inflight ST ATC Improvement #1

Description: Transition to monthly ETC power flow studies

1. BPA will transition to monthly ETC studies Spring 2020
 - a. Current ETC power flow studies are seasonal, with three studies performed per year (Spring, Summer and Winter)
 - b. The seasonal ETC values are used to establish the base ETC values used in the ST ATC calculation for all 12 months of the year
2. Benefits of monthly ETC power flow studies
 - a. Monthly studies will enable BPA to use monthly load and generation forecasts for our Balancing Authority, as opposed to seasonal peak forecasts
 - b. Monthly studies will enable BPA to update system topology and generation energizations in a more timely manner

Inflight ST ATC Improvement #1 (cont.)

3. Schedule for transition to monthly ETC studies:
 - a. WECC Spring 2020 case will be used for April and May ETC studies
 - i. These studies will be reflected in the April and May ATC values posted in OASIS on March 24, 2020
 - b. WECC Summer 2020 case will be used for June, July, August, September and October ETC studies
 - i. These studies will be reflected in the June, July, August, September and October ATC values posted in OASIS in late May 2020
 - c. WECC Winter 2021 case will be used for November, December, January, February and March ETC studies
 - i. These studies will be reflected in the November, December, January, February and March ATC values posted in OASIS in late October 2020

Inflight ST ATC Improvement #2

Description: Use minimum ETC from the power flow base cases to calculate non-firm ATC across flow-based paths for 0 to 13 month NERC horizon

1. ETC is the sum of existing commitments across each path
2. Currently, BPA uses the maximum ETC result from the power flow base cases to calculate firm and non-firm ATC for the NERC horizon
3. BPA releases the difference between the maximum and minimum ETC results from the power flow to non-firm ATC in the 0 to 4 month time frame
 - a. This is described as a commercial uncertainty margin in BPA's ATCID
 - b. This process results in BPA using the minimum ETC for its non-firm ATC for the 0 to 4 month horizon

Inflight ST ATC Improvement #2 (cont.)

4. Current Process

	0 to 4 months	4 to 13 months
Firm ATC	Maximum ETC	Maximum ETC
Non-Firm ATC *	Minimum ETC	Maximum ETC

5. Proposed Process – change is highlighted in Yellow

	0 to 4 months	4 to 13 months
Firm ATC	Maximum ETC	Maximum ETC
Non-firm ATC *	Minimum ETC	Minimum ETC

* For non-firm ATC, minimum ETC will be used in the Beyond Real-Time Horizon to 13 months. In the Real-Time Horizon that begins at 22:00 the day prior to the delivery day, BPA sums firm schedules, non-firm schedules and unscheduled non-firm reservations to calculate non-firm ETC.

Inflight ST ATC Improvement #2 (cont.)

6. Staff analyzed this process and concluded that BPA can use the minimum ETC in its non-firm ATC calculation for the entire 0 to 13 month NERC horizon, without impacting reliability
7. Customer Impacts
 - a. Upon this change, customers will see that non-firm ATC will be greater than before in the 4 to 13 month timeframe
 - b. Customers will no longer see a release of additional non-firm ATC around the four month time frame, as the additional capacity will already have been made available

ATCID Update

1. An updated ATCID capturing ST ATC Improvements #1 and #2 will be posted prior to March 24, 2020
 - a. The update will cover BPA's transition to monthly ETC cases and the use of the minimum Existing Transmission Commitment value to calculate non-firm ATC for 0-13 month time frame
2. Details of changes will be available in the Version History of the ATCID

Proposed ST ATC Improvements

1. BPA would like to discuss the following proposed future changes on ST ATC
 - a. Using zero as base ETC when power flow studies result in negative base ETCs (indicating that power is expected to flow counter to the constraint)
 - b. Elimination of the impacts of adjacent Transmission Service Provider (TSP) impacts calculated by OATI from BPA's ETC calculation
 - c. Potential pilot program to manage hourly non-firm ATC across BPA's flow-based paths when congestion is anticipated

Proposed ST ATC Improvement #1

Description: If power flow studies result in negative base ETCs (indicating that power is expected to flow counter to the constraint), treat the base ETC as zero

1. BPA presented this proposed improvement at the January 30th, 2020 webinar
2. Customers have submitted comments regarding this proposal
 - a. The comments have been posted at:
<https://www.bpa.gov/transmission/CustomerInvolvement/TC20Implementation/Documents/02.14.20-Comments-and-Questions-regarding-Short-Term-ATC-PGE-PSE-SCL-SNPD.pdf>
3. Customers requested that BPA delay the implementation of this change and clarify the impacts of the change to ETC, ATC and the counterflow calculation
 - a. BPA is including this information on the following slides and is delaying the implementation to allow for more discussion and understanding of the proposal

Proposed ST ATC Improvement #1 (cont.)

4. BPA has instances where power flow studies have resulted in negative base ETC values across BPA's flow-based paths
5. Negative base ETC values indicate that, if all commitments modeled in the base case are scheduled, BPA will see negative flows on that path
 - a. Negative ETC values result from counterflows within the power flow study, as these studies inherently include counterflows
 - b. Using a negative base ETC value in the ATC calculation results in ATC values that are higher than the TTC of a path
 - c. Since not all commitments in the ETC base case will be scheduled, counterflows may not materialize as assumed by the power flow and should not be used to create excess capacity
 - d. This change is consistent with the long-term ETC process

Proposed ST ATC Improvement #1 (cont.)

6. At the last upload of base ETC data in late October 2019, BPA had negative maximum ETC values for the following paths/seasons:

PATH	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
SOUTH OF ALLSTON S>N (TTC = 1320 MW)	-509	-509	-509	-509	-509	-509	-509	-509	-509	-509	-509	-509
NORTH OF HANFORD N>S (TTC = 5100 MW)	-589	-589	1060	2708	2708	2708	2747	2747	1913	1079	-589	-589
SOUTH OF CUSTER N>S (TTC = 1357 MW - 1478 MW)	-1931	-1931	-582	768	768	768	609	609	-26	-661	-1931	-1931

7. The above ETCs resulted in the following ATC values:

PATH	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
SOUTH OF ALLSTON S>N (TTC = 1320 MW)	1664	1063	1073	1072	1072	1155	1129	1153	1170	1238	1152	1269
NORTH OF HANFORD N>S (TTC = 5100 MW)	5516	5497	3670	2006	1997	2111	2088	2092	2926	3830	5495	5567
SOUTH OF CUSTER N>S (TTC = 1357 MW - 1478 MW)	3253	3253	1886	552	551	703	863	864	1498	2136	3285	3285

- a. The ATC values highlighted in orange are higher than the TTCs of these paths

Proposed ST ATC Improvement #1 (cont.)

8. If zeros had been used as the base ETC in late October 2019, BPA would have used the following base ETC values in its system update:

PATH	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
SOUTH OF ALLSTON S>N (TTC = 1320 MW)	0	0	0	0	0	0	0	0	0	0	0	0
NORTH OF HANFORD N>S (TTC = 5100 MW)	0	0	1354	2708	2708	2708	2747	2747	2060	1374	0	0
SOUTH OF CUSTER N>S (TTC = 1357 MW - 1478 MW)	0	0	384	768	768	768	609	609	457	305	0	0

9. The above ETCs would have resulted in the following ATC values:

PATH	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
SOUTH OF ALLSTON S>N (TTC = 1320 MW)	1155	554	564	563	563	646	620	644	661	729	643	760
NORTH OF HANFORD N>S (TTC = 5100 MW)	4927	4908	3376	2006	1997	2111	2088	2092	2779	3536	4906	4978
SOUTH OF CUSTER N>S (TTC = 1357 MW - 1478 MW)	1322	1322	920	552	551	703	863	864	1015	1171	1354	1354

- a. Note that none of the ATC values would have been higher than the TTC of these paths

Proposed ST ATC Improvement #1 (cont.)

10. BPA is not proposing any other changes to the counterflow methodology
 - a. BPA's Firm ETC = base ETC from power flow + interim ETC from PTDFs
 - b. The negative ETC in the proposed change is the base ETC from the power flow
 - i. BPA will use a zero for base ETC from the power flow, rather than a negative value
 - ii. In these instances, BPA's Firm ETC = 0 + interim ETC from PTDFs
 - c. The counterflow in the equation above is captured in the non-firm equation as we switch to using schedules rather than reservations in the real-time horizon
 - i. There will be no changes to this process
11. BPA has postponed this change from March 2020 to May 2020 to allow additional time for customers to understand the impacts of this change
 - a. Change will be implemented as the June through October ETC numbers are released in late May 2020

Proposed ST ATC Improvement #2

Description: Eliminate the impacts of adjacent Transmission Service Provider (TSP) impacts calculated by OATI from BPA's ETC calculation

1. When BPA implemented NERC MOD-030 to calculate ATC for its flow-based paths, BPA implemented functionality in OATI to calculate the impacts of adjacent TSPs in BPA's ETC calculation
 - a. MOD-030 specifically requires TSPs to include adjacent TSP impacts in their ETC calculations
 - b. MOD-029, which BPA presently uses for all its paths, does not have this requirement

Proposed ST ATC Improvement #2 (cont.)

2. BPA reviewed this functionality, and plans for it to be retired
3. BPA accounts for adjacent TSP impacts in several ways:
 - a. BPA uses the load forecasts of adjacent TSPs in the WECC seasonal cases when doing the power flow studies that establish BPA's base ETC values
 - b. BPA uses the generation assumptions of adjacent TSPs in the WECC seasonal cases as well, unless the generators are in BPA's Balancing Authority or directly interconnected to BPA (then the firm rights of the generators are modeled)
 - c. BPA allocates TTC for shared paths among owners and only uses BPA's share of the TTC to calculate BPA's ATC
4. BPA believes that the additional OATI functionality results in double counting of adjacent TSP impacts

Proposed ST ATC Improvement #2 (cont.)

5. Customers could see additional capacity on the flow-based paths when this functionality is turned off
6. Removing adjacent TSP impacts streamlines the calculation, making ST ATC calculations more transparent
7. BPA would like to implement this change with its system update at the end of May 2020

Proposed ST ATC Improvement #3

Description: BPA is looking at ways to better manage hourly non-firm ATC across BPA's flow-based paths when congestion is anticipated

1. BPA typically sells unlimited hourly non-firm ATC across these paths
2. BPA uses curtailments to bring flows on a path within reliability limits if congestion is occurring
3. Additionally, BPA may implement non-firm TLR Avoidance across a specific path to manage congestion
 - a. TLR Avoidance reduces ATC to zero across the specific path

Proposed ST ATC Improvement #3 (cont.)

4. BPA is considering a pilot program to limit hourly non-firm sales to the posted hourly non-firm ATC in OASIS (like the AFC Validation in place for hourly Firm)
 - a. The validation would be used as an alternative to TLR Avoidance when BPA anticipates congestion
 - b. The validation would impact all flow-based paths (unlike TLR Avoidance), as the current software does not support limiting validation to specific paths

Proposed ST ATC Improvement #3 (cont.)

5. Visual of the proposed change:

Path	Hourly NF AFC, Normal State	Hourly NF AFC, TLR Avoidance	Hourly NF AFC, Pilot Program
North of Echo Lake	Unlimited	0	100
West of Slatt	Unlimited	Unlimited	0
Cross Cascades North	Unlimited	Unlimited	100
North of John Day	Unlimited	Unlimited	100

- a. Hourly NF AFC, Normal State: BPA sells unlimited hourly non-firm AFC in the normal state
- b. Hourly NF AFC, TLR Avoidance: If TLR Avoidance is needed, BPA reduces the firm/non-firm AFC across a specific path to zero; hourly non-firm AFC across all other paths remains unlimited
- c. Hourly NF AFC Pilot Program: Under this pilot, BPA would not trigger TLR Avoidance, but would instead turn on hourly non-firm AFC Validation **for all paths** to limit new hourly non-firm requests to the calculated/posted hourly non-firm AFC. If the calculated/posted hourly non-firm AFC was zero across a path, BPA would deny requests needing additional hourly non-firm AFC across that path.

6. BPA would like feedback on whether customers are interested in having BPA explore this type of pilot program

Wrap up

1. BPA will continue to work on the proposed ST ATC changes and will let customers know when additional details and exact implementation dates are available
 - a. BPA's ATCID will be updated prior to implementation of any changes
2. Please submit comments by March 31, 2020 to the techforum@bpa.gov
3. Please include your AE to your comments submitted with the specific or topic

Proposed April Workshop(s) Agenda

April 28 and 29, 2020

- TC-22, BP-22 & EIM Topics
 - EIM Charge Code Allocation
 - Steps 5-6
 - Resource Sufficiency
 - Steps 5-6
 - Incremental/Minor Changes to Agreement Templates
 - Steps 1-2
 - Generator Interconnection
 - Steps 3-4
 - Review Tariff Language Approach
- TC-22, BP-22 & EIM Topics
 - Sellers Choice
 - Steps 3-4
 - EIM Losses
 - Steps 3-4
 - Generation Inputs
 - Steps 3-4
 - Creditworthiness
 - Steps 3-4
 - Rates Kick-off

Next Steps

- Comment period
 - Customers should submit comments by March 31, 2020 to the techforum@bpa.gov

- Starting in April there will be two BPA led workshops on a monthly basis. The second workshop following the established monthly workshop.

Summary of Customer Feedback

APPENDIX

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.

Customer Led Workshop Protocol

- Submit a workshop request no later than one week before the scheduled date (see slide 4 for dates).
- Requests must include a list of topics/issues you wish to cover if you are requesting Bonneville SME support.
- Discussions/workshops will only cover previously reviewed materials.
- Customers must inform BPA if A/V resources are required to include remote participants and/or present materials **through virtual meeting**.
- BPA will verify that it will staff for the requested topics within three business days via Tech Forum.

Current Scheduled Workshop Topics and Time

