TC-27 Pre-Proceeding Workshop

Oct. 28-29, 2025

Workshop Schedule & Agenda*

Schedule (Day 1 & 2)

- 9 am: Meeting Start
- 12 pm to 1 pm: Lunch
- 4 pm: Workshop Conclusion
- Schedule will include regular breaks as necessary

**Day 2 will resume with topics per the agenda where discussion was concluded on Day 1*

Agenda

- Norms and Principles
- Pre-Proceeding Workshop Schedule and Approach
- TC-27 Scope
- Grid Access Transformation Planning Program Transition (Steps 1 & 2: Background and Issue Description)
  - Problem Statement
  - Long-Term Firm Queue Pause
  - Queue Management
  - Evaluation Criteria
  - Network Integration Transmission Service (NITS) Forecasts
  - Conditional Firm Service
- Next Steps

Workshop Norms

- Participants are encouraged to speak respectfully, be mindful of the limited time for discussions, and allow other participants and BPA staff to share their feedback.
- Participants are required to use the “raise hand” feature and chat in Webex to provide comments.
- Participants are encouraged to limit their speaking time to 3 minutes per topic.
- BPA will facilitate the conversation to ensure all participants have the opportunity to provide their input in a timely manner.
- Participants will refrain from discussing prior positions or comments submitted by other participants.

TC-27 Principles

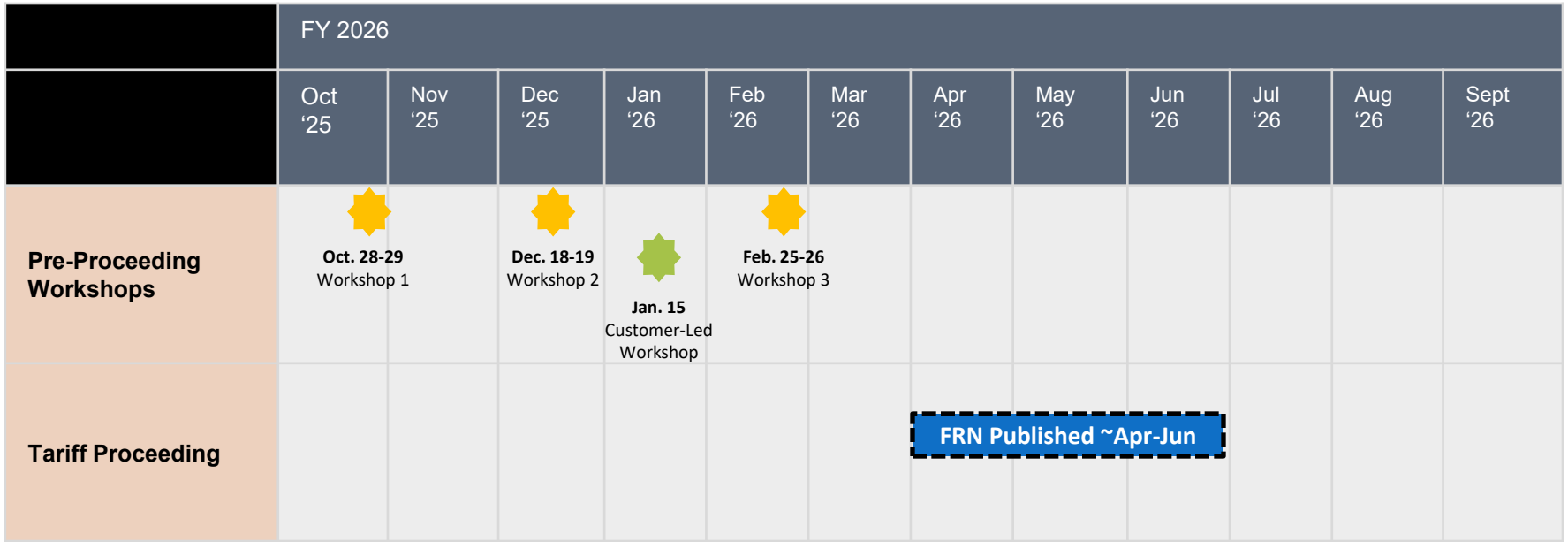
- Maintain a tariff that is consistent with the FERC *pro forma* tariff to the extent possible.
- BPA will consider differences from the FERC *pro forma* tariff if the difference is necessary to:
  - Implement BPA's statutory and legal obligations, authorities, or responsibilities;
  - Maintain the reliable and efficient operation of the federal system;
  - Prevent significant harm or provide significant benefit to BPA's mission or the region, including BPA's customers and stakeholders; or
  - Align with industry best practice when the FERC *pro forma* tariff is lagging behind industry best practice, including instances of BPA setting the industry best practice.

Approach to Customer Engagement

Most issues are 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 3: Analyze the Issue**	**Step 5: Discuss Customer Feedback**
Step 2: Description of the Issue	**Step 4: Discuss Alternatives**	**Step 6: Staff Proposal**

TC-27 Pre-Proceeding Workshop Schedule



- Workshop dates are subject to change.
- All workshops will be held in the BPA Rates Hearing Room with a virtual option.
- TC-27 Federal Register Notice (FRN) publish date depends on when workshops conclude.
- Draft TC-27 procedural schedule will be shared no later than the last workshop.

Customer Led Workshop

- Workshop participants can request a “customer led” workshop that would focus on topics presented in the previous workshops.
  - This is an opportunity to ask further questions on materials previously presented or for participants to provide a presentation or information related to a workshop topic.
- *BPA will not create new content or provide written responses to customer presentations.*

Additional Workshop Information

- All TC-27 pre-proceeding workshops will be held in the Rates Hearing Room with a virtual option.
  - Webex webinar format for BPA led workshops
  - Webex meeting format for customer-led workshop
- Workshop materials will be posted at least two business days in advance to the TC-27 Tariff Proceeding webpage.
- The TC-27 pre-proceeding workshops will *not* be recorded.

Process for Responding to Comments

- Responses to comments from the July Grid Access Transformation (GAT) workshops will be posted to the GAT webpage.
- For the TC-27 pre-proceeding workshops, BPA is using the same comment tracking and response process used in the past several rate and tariff proceedings, which includes the following:
  - All customer comments will be posted to the TC-27 Tariff Proceeding webpage.
  - BPA will create 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 TC-27 workshops where BPA expects to provide a response.
    - To the extent possible, BPA will endeavor to provide responses prior to the next workshop in the Comments section on the TC-27 webpage (updated CCR will be posted with workshop materials)
    - All comments will have a response.

TC-27 Scope

Scope of GAT Project

Readiness Criteria
Eligibility standards for a valid request

Interim Service
Offer earlier access with informed risk

LTF Queue Management
Activating what can move forward

Proactive Planning
Move ahead of requests

NITS Forecasts
Anchored in customers' own forecasts, for which they are accountable

Accelerate Expansion
Restructure plan, design, and build processes to meet regional urgency

Scope of TC-27

Evaluation Criteria
Requirements to submit a completed application

LTF Queue Management
Activating what can move forward

NITS Forecasts
Anchored in customers' own forecasts, for which they are accountable

Interim Service
Offer earlier access with informed risk

Out of Scope

Proactive Planning
Move ahead of requests

Accelerate Expansion
Restructure plan, design, and build processes to meet regional urgency

More on Scope

- BPA will hold Proactive Planning and Accelerate Expansion discussions in future engagement series.
- Network Integration Transmission Service (NITS) Forecasts
  - BPA will resume discussions on staff leaning and customer feedback at TC-27 workshops.
    - Please see previous materials that reviewed steps 1-6.
  - The Network Integration (NT) Transmission Service Business Practice may be updated in parallel with the TC-27 tariff proceeding.

Workshop Schedule

Date	Topic + Engagement Step
Oct. 28-29	• Steps 1-2 (Background & Issue Description)
Dec. 18-19	• Steps 3-4 (Analyze Issue & Alternatives) • NITS Forecast Discussion
Feb. 25-26	• Steps 5-6 (Customer Feedback & Staff Proposal) • Proposed draft redline tariff

Impacts to Other BPA Initiatives

- As we develop solutions, we will continue coordinating with:
  - Provider of Choice
  - Day Ahead Market
  - Implementation of TC-25 Generator Interconnection reforms.
  - Attachment K (Transmission Planning Process)
- Where applicable we will bring subject matter experts from these other initiatives to join the TC-27 workshop discussions.

Grid Access Transformation Planning Program Transition

Steps 1-2

Background and Issue Description

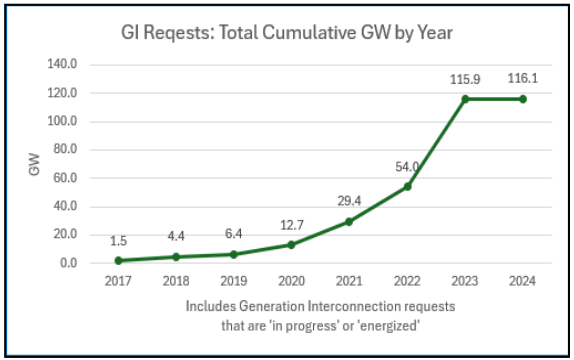
BPA's Transmission Queues

BPA identifies transmission upgrades in response to customer needs in three general areas: 1) Generator Interconnection; 2) Transmission Service; and 3) Line/Load Interconnection

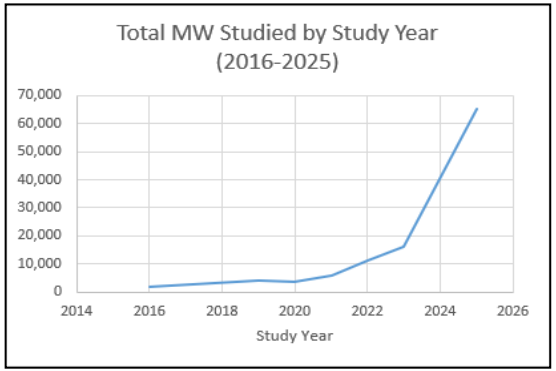
Point of Receipt

Point of Delivery

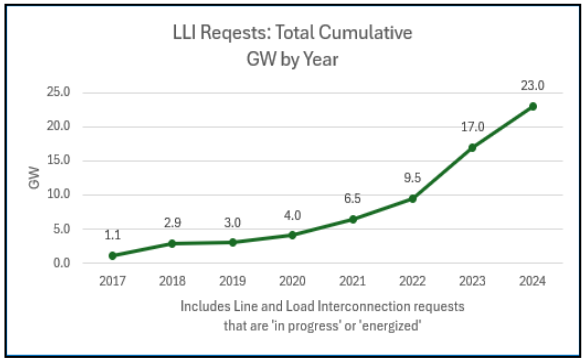
1. Generator Interconnection



2. Transmission Service



3. Line/Load Interconnection



Problem Statement

- BPA's current means of processing its rapidly growing transmission service request queue no longer leads to solutions that support the region's economic needs.
- An actionable 60+ GW study of BPA's transmission system is not currently possible due to:
  - Having many TSRs with insufficient data to accurately define a plan of service and/or assess capability for Conditional Firm Service; and
  - Unintended consequences of modeling unrealistic load increases or unrealistic generation dispatch patterns to achieve load/resource balance necessary to perform a power flow study; or
  - Inability, using BPA's current processes, to conduct scenario analysis on the scale required to reflect generation dispatch uncertainty; or
  - 7-8 years required to batch TSRs into smaller MW studies.

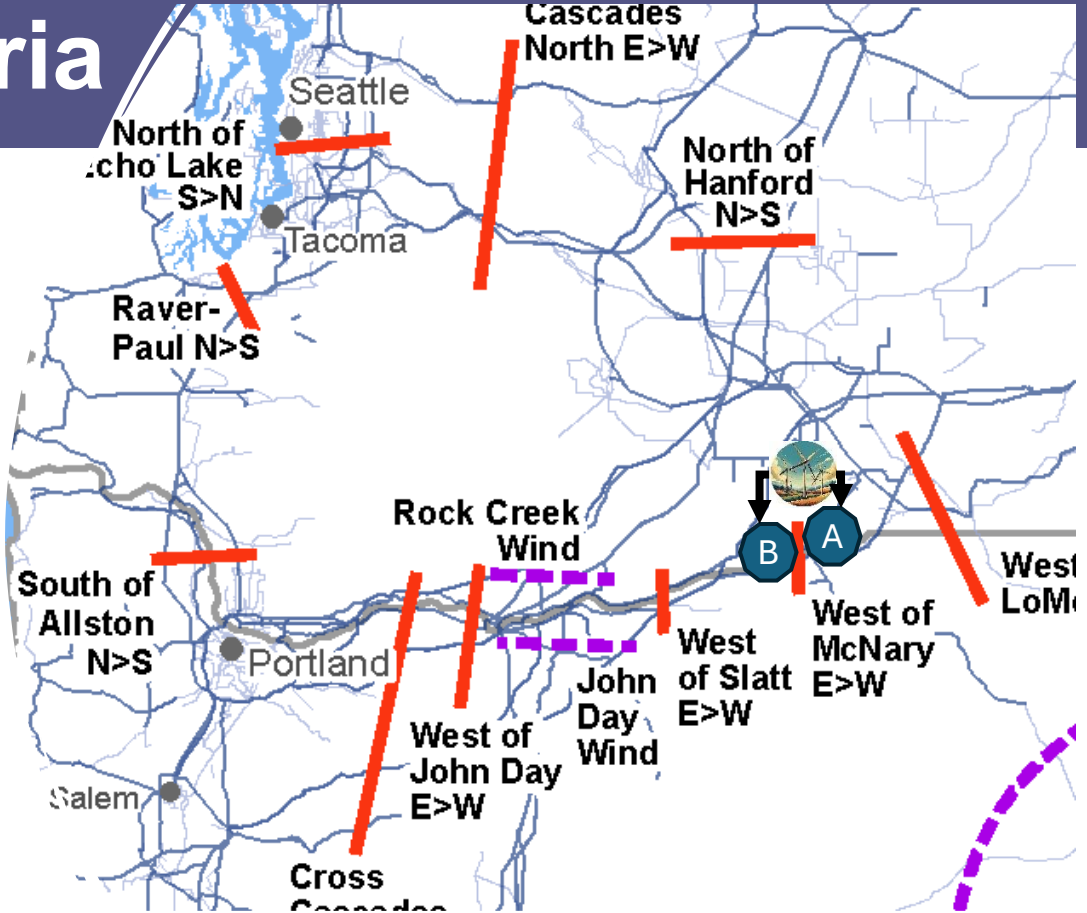
Evaluation Criteria

Evaluability: Why does accurate data matter?

In this example, new generation in eastern Washington requesting to sink to the Portland area.

A. If a resource injects at point A, it impacts West of McNary E>W and West of Slatt E>W.

B. If a resource injects at point B, it impacts only West of Slatt E>W.



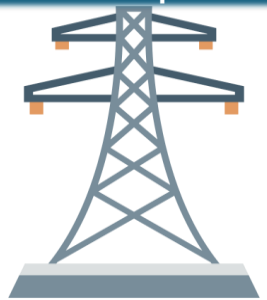
Load Balance with Variable Resources

Electric power systems require that resources and load are balanced at all times for reliable operation. Long-term transmission planning studies also require this balance to accurately identify the transmission expansions needed to keep the lights on.

The assumptions we use to achieve load/resource balance in our planning models directly impact the transmission reinforcements identified.

System Balance Keeps the Lights On!

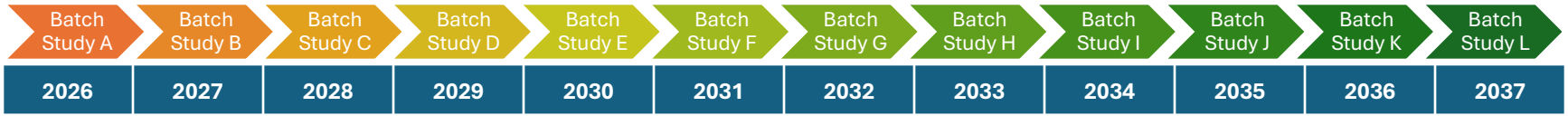
Variable resource penetration at the scale projected in the NW results in a significant increase in volume of needed scenarios beyond the binary “on/off” assumptions currently used.



Modeling unforecasted loads and/or increased export capability, beyond the current ratings, could result in identification of the wrong system upgrades.

Batching Approach Challenges

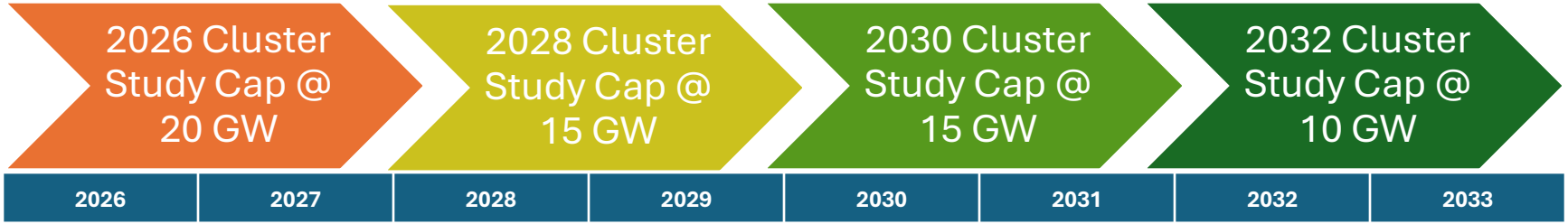
- Implementing a batching approach to a 60+ GW queue would provide a non-strategic, tactical, response to a sub-set of TSRs. Unlike a strategic cluster study approach, any common impacts and/or synergies between batches would not be known for several years.
- Batches would be limited to ~5 GW in order to run the studies annually.
- In other words, there might be TSRs in Batch G that could utilize a project identified in Batch A, but the TSR would have to wait 6 years before the study to associate the TSR with the new project.



- The projected timeline would only be to get through a series of batched studies for the current queue of 60+ GW and does not consider new TSRs entering the queue.

Capping the Cluster Study Challenges

- BPA staff could conduct a general cluster study initially capped at ~20 GW, removing all other un-studied requests, and then additional cluster studies at reassessed MW caps every two years.
- Due to study limitations related to balancing and scenario analysis, BPA forecasts that future cluster study caps will likely decrease in line with the study capabilities.
- However, capping the cluster study would not allow BPA to fully understand the common impacts and/or synergies from all long-term transmission requests on the FCRTS.
- It is highly likely, based on initial POR/POD analysis, that there will be common impacts in the 2028 and 2030 cluster studies with the 2026 cluster study.



- The projected timeline would only be to get through the current queue of 60+ GW and does not consider new TSRs entering the queue.

Long-Term Firm Queue Pause

LTF Queue Pause

- As part of initiating GAT in the spring, BPA paused a number of processes including but not limited to:
  - 2025 TSR Study and Expansion Process (TSEP) Cluster Study
  - Transmission Service Request (TSR) evaluation process (for any new TSRs requesting new or modified capacity impacting BPA's internal Network)
    - TSRs with *de minimis* impacts are included
  - TSR Data Exhibit evaluation process
  - Network Integration Transmission Service (NITS) Load and Resource Forecast Evaluation and Closeout (LaRC) Process

Requesting Transmission Service Actions - Projected Impact	Status
2025 TSEP Cluster Study	Impacted
Before Noon 08/15/2024, TSRs requiring Network capacity above existing commitments (including Data Exhibit Validation)	Not Impacted (with limited exceptions)
On or After Noon 08/15/2024, TSRs requiring Network capacity above existing commitments (including Data Exhibit Validation)	Impacted (with limited exceptions)
TSRs requiring Southern or Montana Intertie capacity above existing commitments	Not Impacted
LaRCs submitted prior to 8/15/2024	Not Impacted
LaRCs submitted after 08/15/2024 – including “out of cycle” forecasts	Impacted
De Minimis TSRs	Impacted
Deferral PTP TSRs	Not Impacted
Renewal TSRs	Not Impacted
Short Term Market Transactions	Not Impacted
Renewal/PTP Deferral Competition	Not Impacted
Part/Full Transfer PTP TSRs of existing service from Reseller to Assignee	Not Impacted
NITS TSR/DNR that is netting/designating/displacing existing capacity already encumbered by an FTSR	Not Impacted

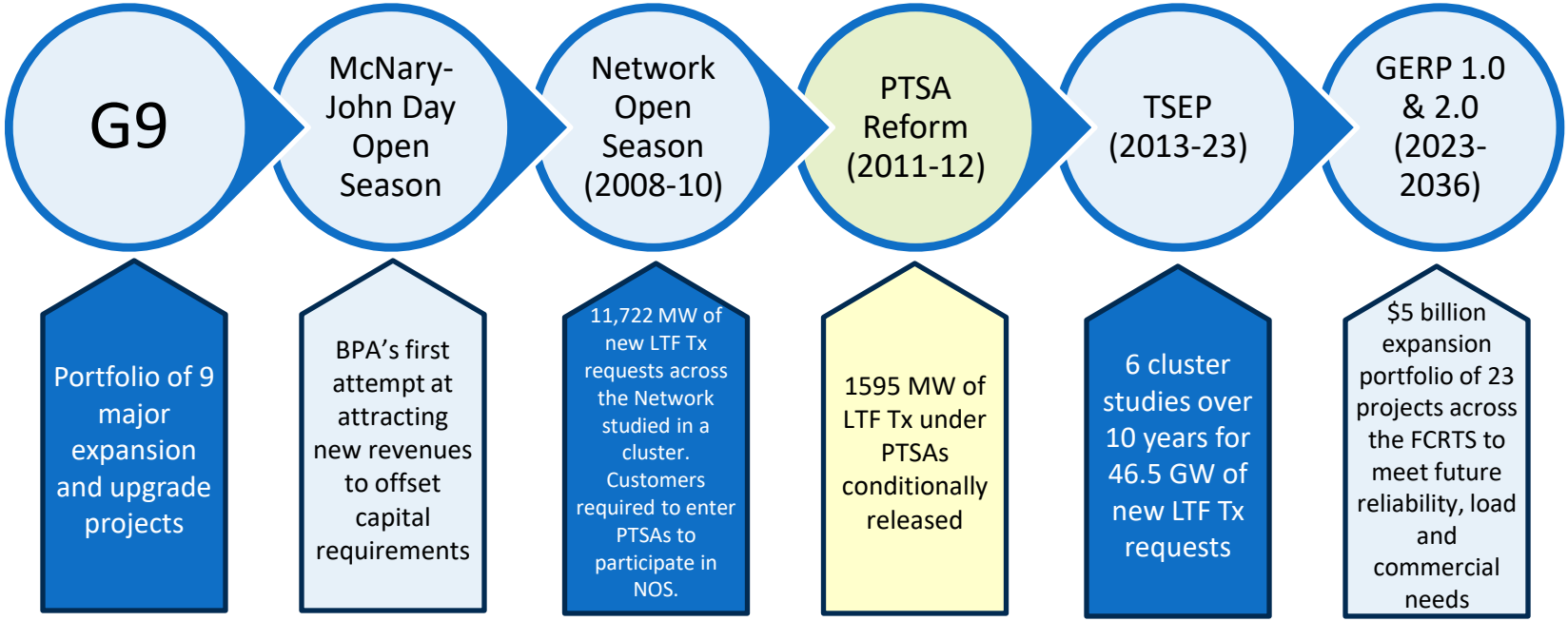
BPA Process/Policy Projected Impact	Status
Post-TSEP Cluster Study phases associated with transmission projects identified in previous TSEPs (e.g., Preliminary Engineering, Environmental Study, Construction & Energization)	Not Impacted
Grid Expansion & Reinforcement Portfolio (GERP) 1.0 & 2.0 projects Previously referred to as Evolving Grid projects	Not Impacted
LLIR (line & load)	Not Impacted
SGI (small generator interconnection)	Not Impacted
PARS (Portland Area Reinforcement Study)	Not Impacted
LGI Transition Process	Not Impacted
NITS New Load vs. Large Load Policy Development	*In scope of GAT/TC-27*
AGC Upgrade	Not Impacted

LTF Queue Pause (cont.)

- BPA received requests from customers to re-consider the scope of the pause, including allowing *de minimis* requests to proceed.
  - At this time, BPA does not plan to create FTSRs to encumber commercial capacity for NITS LaRC forecasts (received after August 15, 2024) or process *de minimis* PTP requests but will continue to evaluate whether these processes may be resumed sooner as part of the pre-proceeding workshops.
- This pause serves two functions:
  - Allows BPA staff normally processing TSRs and NITS forecasts to focus on updating the process(es) to accommodate customers' needs and timelines;
    - Adjusting the pause to allow forms of requests, including *de minimis* requests, will take resources away from TC-27, potentially causing additional delays to that timeline; and
  - Ensures BPA doesn't grant capacity that may be necessary for unstudied requests and outstanding NITS forecasts
    - Difficult to quantify the impact of lifting the pause because BPA anticipates a flood of requests.

Queue Management

History of FCRTS System Expansion Strategy



TSEP Example

100 MW TSR that needs 3 x $200M expansion projects

Project direct cost = $200 million

Preliminary Engineering Agreement (PEA) = $40 million

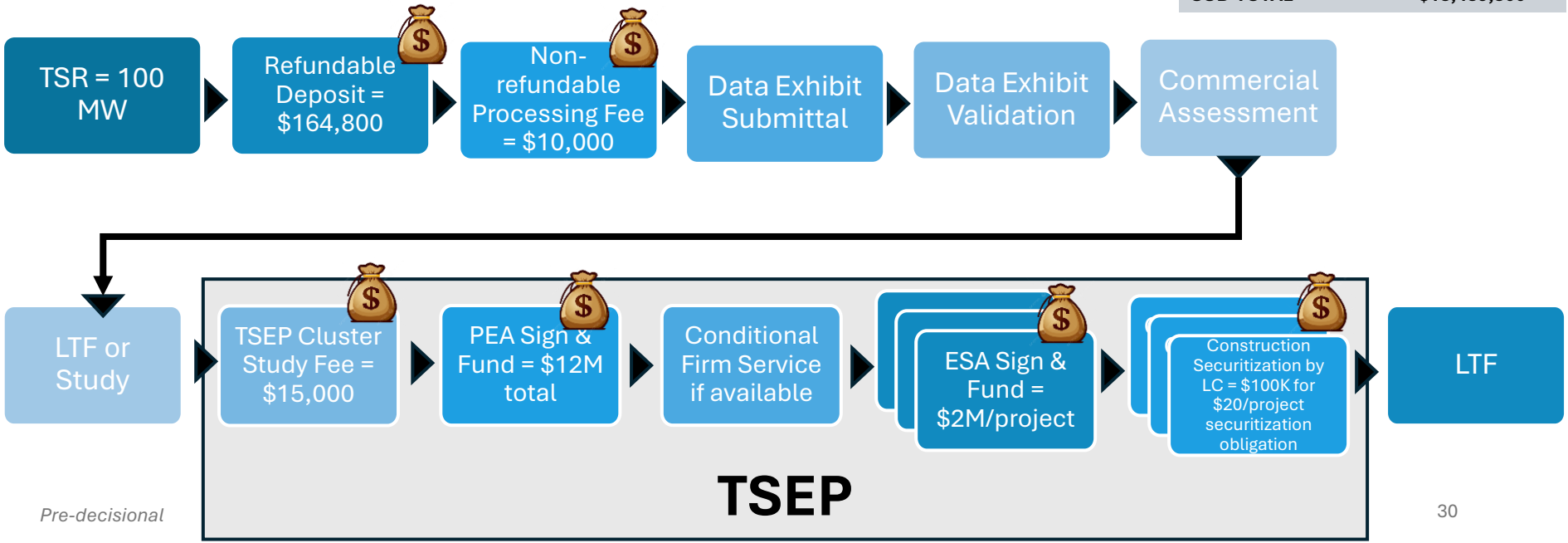
Environmental Study Agreement (ESA) = $20 million

Total Project MW Commitment = 1,000 MW

= some form of financial commitment

For All 3 Projects

Source (100 MW TSR)	Amount
Deposit	$164,800
Processing Fee	$10,000
Cluster Study Fee	$15,000
PEA Funding (x3)	$12,000,000
ESA Funding (x3)	$6,000,000
Construction Securitization (x3)	$300,000
SUB-TOTAL	**$18,489,800**



Evaluation Criteria

Evaluation Criteria – Background

- OATT sections 17.2 (PTP) Completed Application and 29.2 (NITS) Application Procedures provides the basis for the Data Exhibit requirements
  - Specific elements of focus include
  - 17.2 (iii) The location of the Point(s) of Receipt and Point(s) of Delivery and the identities of the Delivering Parties and Receiving Parties;
  - 17.2 (iv)The location of the generating facility(ies) supplying the capacity and energy and the location of the load ultimately served by the capacity and energy transmitted…
  - 17.2 (x) Any additional information required by the Transmission Provider's planning process established in Attachment K
  - 29.2 (iii) a description of the Network Load at each delivery point…
  - 29.2 (v) a description of the Network Resources…
  - 29.2 (vi) a description of the Eligible Customer's transmission system
- Additional details have been required over time in Bulletins, Business Practice documents, and Data Exhibit template & instructions.

Evaluation Criteria – Early History

- First efforts occurred in the early 2000s related to NEWPOINT
  - Appears to have been related to early practice of using existing proxy points not being sufficiently electrically accurate to support sound assessment.
  - Early requirements in Bulletins and Business Practices contained requirements to identify the geographic and electrical location of associated generation under development, including associated GI number when relevant. Various iterations became clearer and more defined over time.
  - Information was required in comment field on OASIS and could not be changed after the TSR is submitted.
- After multiple cluster studies BPA adopted data exhibits in 2013 to provide more structure to the needed information (rather than a free-form comment field).

Data Exhibit History

- Early Data Exhibits were somewhat simpler but included information to clarify many of the same elements that BPA continues to need today:
  - Ultimate Resource - Location of generation facility including substation name and voltage, identity of the Delivering Party, and GI number of name of the other Transmission Provider.
  - Ultimate Load – Substation and voltage on BPA's system and identity of Receiving Party.
  - Original requirement was for ultimate source and ultimate sink to demonstrate a complete path. TSRs associated with NWHUB or MIDCRemote were required to provide a companion TSR.
- Later Data Exhibits added requirements for information regarding resource type, maximum generating capability, details of intermittent resource characteristics, whether source includes a battery, etc. to support accurate resource modeling in various powerflow scenarios; removed requirement to provide "companion TSR" for NWHUB/MIDCRemote.
- Current focus on increased stringency is to try to increase the degree of quality of that information - OATT application requirements, including those in Data Exhibits are intended to provide meaningful information, not simply function as a "fill-in-the-blank" exercise.

Evaluation Criteria – Current State

- Evaluation Requirements ensure that the completed application information, currently received through the OASIS TSR, LaRC forecast, and/or data exhibits, supports two needs:
  - Ability to assess offerability/define an accurate plan of service
  - Ability to assess capability to provide Conditional Firm Service
- BPA has endeavored to be accommodating to Customers' submission of Data Exhibits, but the need for quality information has continued to increase due to factors like:
  - Volume of TSRs in the queue
  - Complexity
  - Increasingly disparate resource mix
- BPA has responded by trying to be clearer about the quality of information needed.
- In previous TSEP Cluster Studies BPA was able to manage uncertainty associated with points of interconnection (for both loads and resources) due to a smaller volume of TSRs; however, due to the size of the current queue of unstudied requests, BPA is no longer able to manage this level of uncertainty.

Network Integration Transmission Service (NITS) Forecasts

NITS Forecasts Problem Statement

- The current-state planning environment was not designed to handle the rapid increase in load growth and resources integration driven by federal and state-level policy, regional economic growth, and rapid technological development.
- This results in extended evaluation periods for firm transmission, delaying customer certainty about BPA's ability to serve load growth.

NITS Forecasts Background

- BPA needs to develop a policy that differentiates and balances the transmission needs of NITS customers experiencing trended and large load growth. The development of this policy will provide clarity to NITS customers on what load growth will require Commercial Planning.
- BPA has conducted workshops since March 2024 regarding the need to refine policy around large load forecasts.
  - BPA discussed the issue, background, shared alternatives, and requested and responded to customer feedback through the workshops, including in the GAT process.
- BPA presented a staff leaning in July 2025 to establish an annual new large load threshold.
  - Any 13 MW or more forecast increase during any year per POD must participate in Commercial Planning.

NITS Forecasts: Discussion in TC-27 Workshops

- BPA is considering the timing for making an update to the Network Integration (NT) Transmission Service Business Practice to establish the annual new large load threshold.
- Based on customer feedback BPA recognizes there are aspects of the staff leaning which need to be discussed. The following are outstanding issues which is BPA's proposal for the scope of discussion for NITS forecasts in the TC-27 pre-proceeding workshops:
  - The above the line commercial implications (will be discussed with other areas in the pre-proceeding workshops)
  - POD vs. facility level
  - Treatment of resource-only forecasts
  - Contracted For Committed To Loads (CF/CT Loads)
- Other aspects important to customers?

NITS Forecasts Next Steps

- BPA is continuing to use your LaRC forecasts to develop the Agency forecast, used to inform BPA's reliability studies and rates
- Network Integration Transmission Service (NITS) Forecasts
  - BPA will resume discussions on staff leaning and customer feedback at TC-27 workshops.
    - Please see previous materials that reviewed steps 1-6.
  - The Network Integration (NT) Transmission Service Business Practice may be updated in parallel with the TC-27 tariff proceeding.

Conditional Firm Service (CFS)

CFS History

- FERC Order 890, issued on 2/16/2007, introduced rules regarding Conditional Firm Service (CFS), which was a new transmission product.
  - Paragraph 1093: "Transmission providers are free to make a filing under FPA section 205 proposing conditional firm network [integration transmission] service."
- BPA proposed the concept to FERC as a way to provide service that may have increased curtailment risk, when firm is not available 8760 hours of the year. The concept proposal was based on providing LTF service that was available many hours of the year, but not necessarily all hours of the year.
  - Bridge CFS allows the customer to take service while they await their plan of service energization as long as they continue to support the build.
  - Reassessment CFS is service that may be offered for customers not supporting a build.
- The proposal was initially to support Network Open Season and was integrated into Precedent Transmission Service Agreements.
- BPA worked closely with customers, particularly in the wind community, to develop its CFS details.
- BPA has updated its OATT to include specific provisions related to CFS over time:
  - In TC-20, BPA removed NITS CFS from the tariff.
  - In TC-26, BPA updated the CFS contract template.

CFS – BPA OATT Provisions

Section 15.4

- Provisions for offering CFS based on number of hours and system conditions

Attachment A

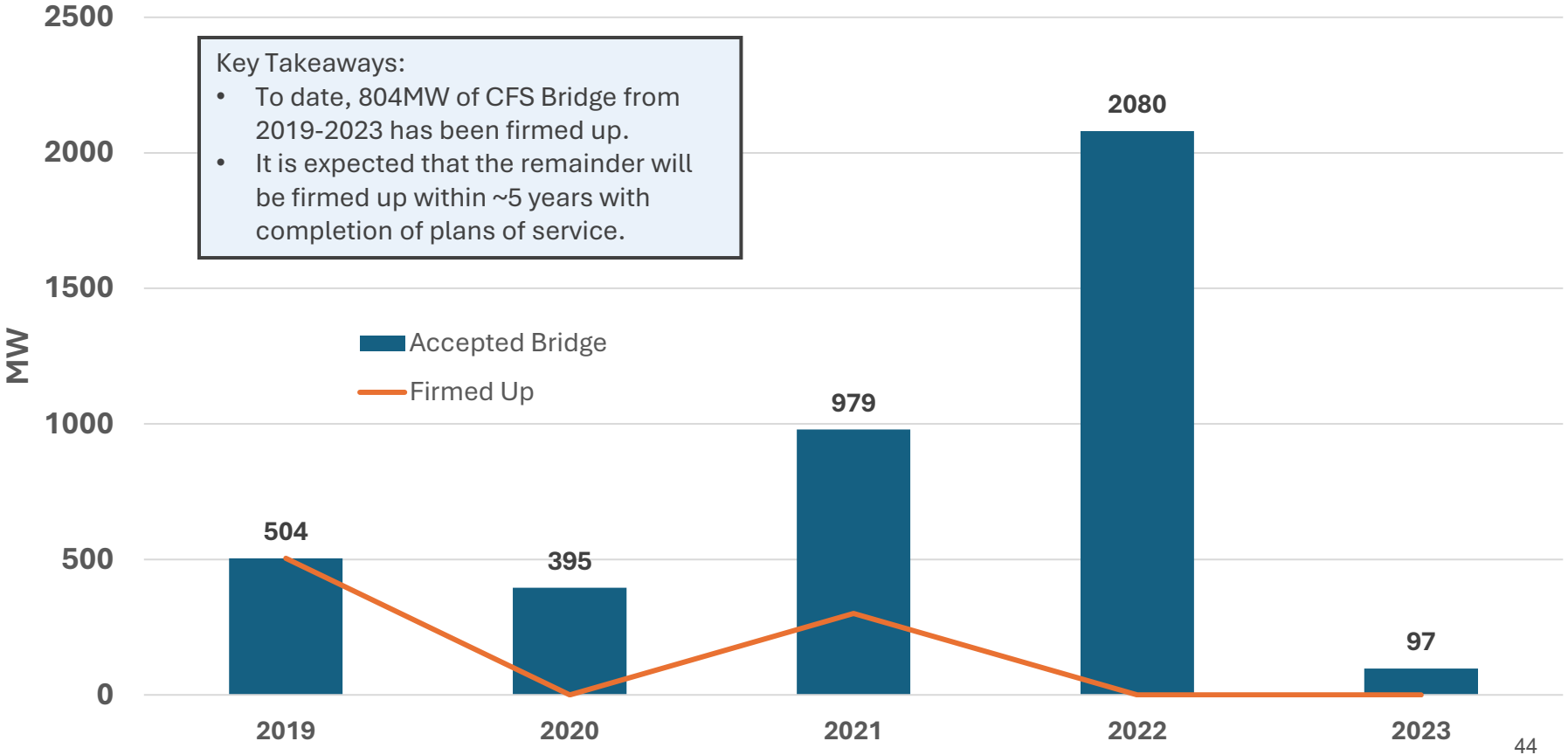
- Exhibit F, Specifications for Conditional Firm Point-to-Point Transmission Service

Attachment O

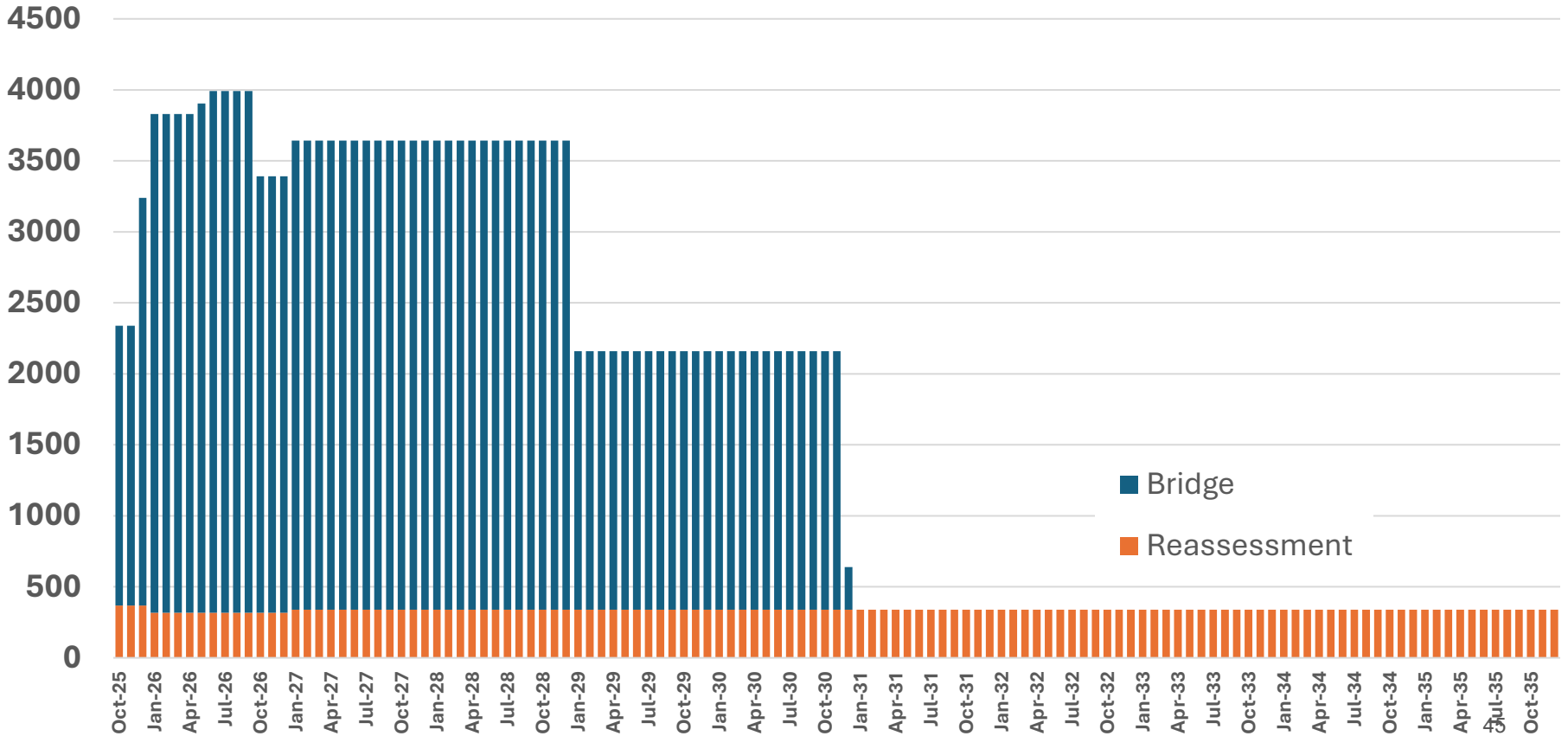
- Precedent Transmission Service Agreement (PTSA) language (Attachment O of BPA's OATT), which included language to offer CFS to both NITS and PTP requests.

Conditional Firm Service Bridge from 2019-2023 Study Years

Key Takeaways:
- To date, 804MW of CFS Bridge from 2019-2023 has been firmed up.
- It is expected that the remainder will be firmed up within ~5 years with completion of plans of service.



CFS Demand Over Time Integrating Estimated Energization Date



Next Steps

Next Steps

- **Nov. 12:** Please send feedback to techforum@bpa.gov, with a cc to your Account Executive.
- The next TC-27 pre-proceeding workshop will be held **Dec. 18-19**.