

BPA NT Customer-Led Workshop

August 14, 2024

Agenda

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- **Introduction: Who We Are**
- **Acknowledgement: BPA, We Hear You – Hear Us, Too**
- **BPA's Relevant Statutory Obligations**
- **BPA's Relevant Obligations Under Its Open Access Transmission Tariff**
- **NITS Customer Problem Statement**
- **NITS Customer Objective: Timely Load Service**
- **Proposed and Preliminary Solution Set/Action Items**

Who We Are

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- **Benton PUD**
- **Clark Public Utilities**
- **Clatskanie PUD**
- **Columbia River PUD**
- **Consumers Power Inc.**
- **Cowlitz PUD**
- **Eugene Water & Electric Board**
- **Flathead Electric Cooperative**
- **Forest Grove Light & Power**
- **Grays Harbor PUD**
- **Harney Electric Cooperative, Inc.**
- **Klickitat PUD**
- **Mason PUD #3**
- **Northern Wasco Co. PUD**
- **Umatilla Electric Cooperative**
- **Northwest Requirements Utilities**
- **PNGC Power**
- **Western Public Agencies Group**

Who We Are, Cont'd

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Northwest Requirements Utilities (NRU)

- 57 Load Following preference customers located in 7 states across the region
- All NRU members rely on NT contracts with BPA for reliable load service
- NRU members make up 30% of BPA's Tier 1 load
- Includes many rural and low density distribution system utilities

Western Public Agencies Group (WPAG)

- 25 preference customer utilities located in Washington and Oregon
- Includes some of BPA's smallest Load Following and some of its largest Slice/Block customers
- Some WPAG members are full requirement customers of BPA
- Other WPAG members have significant Network Resources of their own that they use to serve their loads (in addition to the power they receive from BPA)
- All WPAG members are NT customers of BPA

PNGC

- 18 cooperative utility preference customers with service territories in 7 states
- PNGC Power is the sole operating G&T cooperative in NW region
- PNGC is BPA's largest Tier 1 customer (758 aMW)
- PNGC represents 10.86% of all BPA customer load
- All members of PNGC are NT customers of BPA

BPA, We Hear You - Hear Us, Too

- **The NT Customer Group has heard BPA and understands its difficulties with planning and integrating new large loads seeking to locate in the region, including within the service territories of BPA's NT customers**
 - Currently reviewing the information and research provided by BPA (including BPA's industry scan) and are performing our own research
 - Concerned as to what BPA's possible proposal would mean for load growth (including new large load growth) previously provided to BPA in prior LaRC submittals and for which BPA should already be planning for
 - Also concerned with placing any component of NITS load growth in BPA's TSEP process given TSEP's focus on commercial transmission rather than NITS and reliability transmission needs
 - Grateful for BPA's announcement that it is extending the timeline for the NITS Loads and Resources Workshop Series
- **In acknowledging the problems identified by BPA in its presentations of March 20th, April 12th, and July 10th, we likewise expect BPA to acknowledge and address the NITS related planning and service problems its NT customers are experiencing as discussed in our comments and presentations over the last six months (including today's presentation)**

BPA's Statutory Obligations

- **BPA's power marketing obligations include:**
 - Ensuring that BPA has sufficient revenue to recover its costs, including to repay the U.S. Treasury
 - Fixing rates with a view toward encouraging the widest possible diversified use of electric power at the lowest possible rates to consumers consistent with sound business principles, while giving preference and priority to public body and cooperative customers
 - Whenever requested, sell electric power to each requesting preference customer and each requesting regional IOU sufficient to meet their net requirements
- **After first ensuring that it can meet the above power marketing obligations (both current and future), BPA must make any excess transmission capacity available to all utilities on a fair and nondiscriminatory basis**

BPA NITS OATT Obligations

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- **To plan and construct its transmission system in a timely manner so that BPA’s NITS customers can deliver power generated by Network Resources (both Federal and non-Federal) to their respective Network Loads**
- **To make available transfer capability on its transmission system available to Eligible Customers on a non-discriminatory basis**
- **To reserve existing capacity for network load growth reasonably forecasted within the transmission provider’s current planning horizon**
- **To establish a Network Operating Committee for the purpose of coordinating operating criteria in support of implementation of Network Integration Transmission Service**
- **To conduct system planning in accordance with OATT, Attachment K (FERC Order No. 890 and Order No. 1000), i.e., regional planning intended to produce a regional transmission plan or the “BPA Plan”**

Current Assumption of NT Customer Group

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- **That BPA can meet the above statutory obligations through its OATT, provided it addresses the concerns and undertakes the action items identified in this presentation**

Problem Statement

- **There is a lack of clarity as to BPA's ability to measure existing and future transmission constraints as well as the decision process BPA uses to make the network transmission investments necessary to support NITS customer forecast load growth**
- **BPA appears increasingly unable to timely meet the load growth needs of NITS customers, whether from Federal or non-Federal resources**
- **It appears that the needed reliability upgrades and expansion, new PODs, line extensions, and other work are being delayed because of lack of staffing, procedural inefficiencies, and an undue focus in BPA's planning processes on commercial rather than regional load service transmission needs**

Problem Statement, Cont'd

- **It is time for BPA to renew its commitment and take affirmative action to ensure that it can meet its statutory obligation to plan, invest, and construct the necessary transmission reinforcements to provide timely transmission service for its preference customer loads through its OATT, and specifically through the NITS product**
- **This includes distinguishing such obligations to BPA's preference and NITS customers from the commercial transmissions service BPA provides on the Federal Columbia River Transmission System, and providing such customers the consideration and service they are due under BPA's statutes and OATT**

NT Customer Experience No. 1: Forest Grove Light & Power

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- **Utility approached by 2 data centers; 36 & 150 MW, respectively (Both NLSL)**
 - Both consistently included in LaRC forecasts, as well as the 2023 Cluster Study – resulting in a projected in-service date of **2038**
 - Expected sub-grid upgrades within ~7 years
 - After roughly 3 years in the process, 150 MW facility has been accepted in the SCM process and has invested ~\$6m, with commitment for ~\$100m more
 - Given expected sub-grid investment, Forest Grove worked with BPA to discuss potential for mixed 6nn/firm utilization
 - Told by BPA staff that the system and impacted flowgates are too tight; *“It’ll be 14 years before Firm power will be available,”* and that Non-Firm 6NN power was not guaranteed to be provided and that the availability of this product was getting very limited
 - *Larger facility couldn’t wait 14 years for service, decided to accept sunken costs and pull out*
 - 150 MW facility represents >\$1billion investment in the City of Forest Grove, with projected local income greater than \$8m/year
 - 36 MW facility hoping, despite BPA staff claims to the contrary, that sub-grid upgrades will provide for sufficient Non-Firm 6NN power for service, and continues to wait

NT Customer Experience No. 1: Forest Grove Light & Power

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- **Smaller data center also is planning a potential chip manufacturing facility**
 - Not an NLSL – projected load ramp below the threshold, with an initial total projected load of ~18MW after several years of growth and possibly 30MW if the business is successful
 - Included in Transmission Planning discussions for several years and 2024 LaRC, with a requested initial energization of Fall 2025
 - Until recently, BPAT staff have had concerns that load may not materialize, asking that Forest Grove provide additional “documentation”.
 - Staff have not provided final 2024 LaRC close-out letter, which has been in process for “many months”
 - Forest Grove has done everything requested of it. The City has annexed land, and all relevant land use permits are in place. Aside from power purchases, which require transmission, what further documentation could there be?
 - Earlier this year, Forest Grove submitted a request for 12 MW for 2025, which BPAT verbally said it could provide, but that it wouldn’t provide more without “further studies”
 - BPA staff have not defined what “further studies” mean or how long they will take. Additionally, BPA staff have not disclosed what additional capacity is available beyond native load growth: *“We can serve some additional growth, but we can’t tell you how much”*
 - On more than one occasion, Forest Grove has been forced to tell customers and potential customers *“We can deliver the power to you, but we don’t know if we’ll be able to receive it from BPA”*

NT Customer Experience No. 2: Eugene Water & Electric Board

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Uncertainty about load service for our load forecast

- We asked and learned BPA has encumbered transmission for EWEB in the next 10 years, well above our peaks
- BPA staff say they have been planning based on trended load forecasts: “Low and slow”
- University of Oregon projects 2-10 MW, 2-5 yrs, well under our encumbrances
 - How do we access our encumbered transmission?
 - How has the LaRC been interpreted and applied in BPA’s planning processes and modeling?
 - What assumptions are used in BPA’s planning for trended loads?
 - What happens when your load growth doesn’t match BPA’s precise planned trajectory?

EWEB needs to understand how BPA plans and builds for our trending load growth and how to access our encumbered transmission

NT Customer Experience No. 2: Eugene Water & Electric Board

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- **Our IRP is showing us short starting in 2026 and we need to understand how our resource choices may be impacted or not viable due to transmission constraints**
- **Options for evaluation: (1) BPA CTIM tool, (2) submit LLIR and LaRC which kicks off conversations and study with BPA**
- **Same situation applies regarding responding to prospective customer inquiries**
 - CTIM tool was developed for PTP customers; has limitations for NITS customers in understanding our Tx availability
 - How are “what if” resource & load scenarios addressed in the LaRC?
 - Are “what if” scenarios getting entered into the study process? Appears to be the only way to get a formal response, but seems counterproductive to efficiency and effectiveness of the study and creates a lengthy timeline for response

EWEB needs better tools to conduct scenario analyses to define the best options for our future generating resources to meet trended load growth in our integrated resource planning efforts.

NT Customer Experience No. 2: Eugene Water & Electric Board

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Focus on Local Reliability Reinforcement Builds

- **3.3 mile Alvey to Dillard tap overload contingency: Eugene #2 is subject to overloading during six (6) EWEB N-2 contingencies; N-1 potential with 9 substation rebuilds**
- **Puts significant service area at risk and located in an EWEB high wildfire risk area**
- **Request to BPA's evaluation committee twice since 2020 but didn't pass due to economics NEBR test (Net Economics Benefits Ratio)**
- **Is now in BPA's 2023 Transmission Plan, but we understand it may still be competing against other projects**
 - How is BPA prioritizing and allocating its scarce staff and financial resources to its obligations and strategic objectives, i.e. "Sustain", "Expand", etc...?
 - Should local reliability reinforcement builds, to support load service, be put through the same economic tests as other projects?

We encourage BPA to rethink how they prioritize, evaluate, and approve load reliability reinforcement builds

NT Customer Experience No. 3: Harney Electric Cooperative (HEC)

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- **HEC continues to experience significant delays (8 years) in terms of BPA's responsiveness to phase unbalance which is exacerbated in the summer, wildfire season, which is HEC's high load irrigation season.**
- **HEC's north system is affected by service to other transmission systems including PacifiCorp, Idaho Power, Midstate Electric, and Central Electric. While BPA is considering expansion or upgrades investments to individual systems, HEC has encouraged BPA to conduct a multi-utility study (a "deep-dive" evaluation) that could result in a plan of service that could benefit a number of these systems.**
- **HEC's south system is completely dependent upon transfer service, which under the proposed Provider of Choice Agreement is expected to double the cost of service to HEC's NLSL relative to treatment under the Regional Dialogue. BPA has a statutory obligation to HEC's *total* load but instead utilizes transfer service to some customers such as HEC, rather than build out its transmission system. Transfer service saves BPA's transmission customers the cost of significant system expansion while imposing incremental costs on customers requiring transfer service.**

NT Customer Experience No. 4: Northern Wasco PUD (NWCPUD)

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“BPA is an engine of the Northwest’s economic prosperity....”

2024–2028 Strategic Plan

Building on a solid foundation

BPA is an engine of the Northwest’s economic prosperity and environmental sustainability.



[Read the complete 2024–2028 Strategic Plan.](#) →

- NWCPUD has experienced decline in BPA’s NT transmission service. BPA is no longer able to grant NT encumbrances at the level we have traditionally been accustomed and expect.
- BPA’s planning processes are out-of-sync (e.g. LaRC vs TSEP) causing significant confusion, and hypothetical resource studies are not helpful in a practical sense.
- Resolving BPA’s planning process inefficiencies is important, but alone, it will not resolve transmission system capacity deficiencies in a timely manner to meet load service needs.

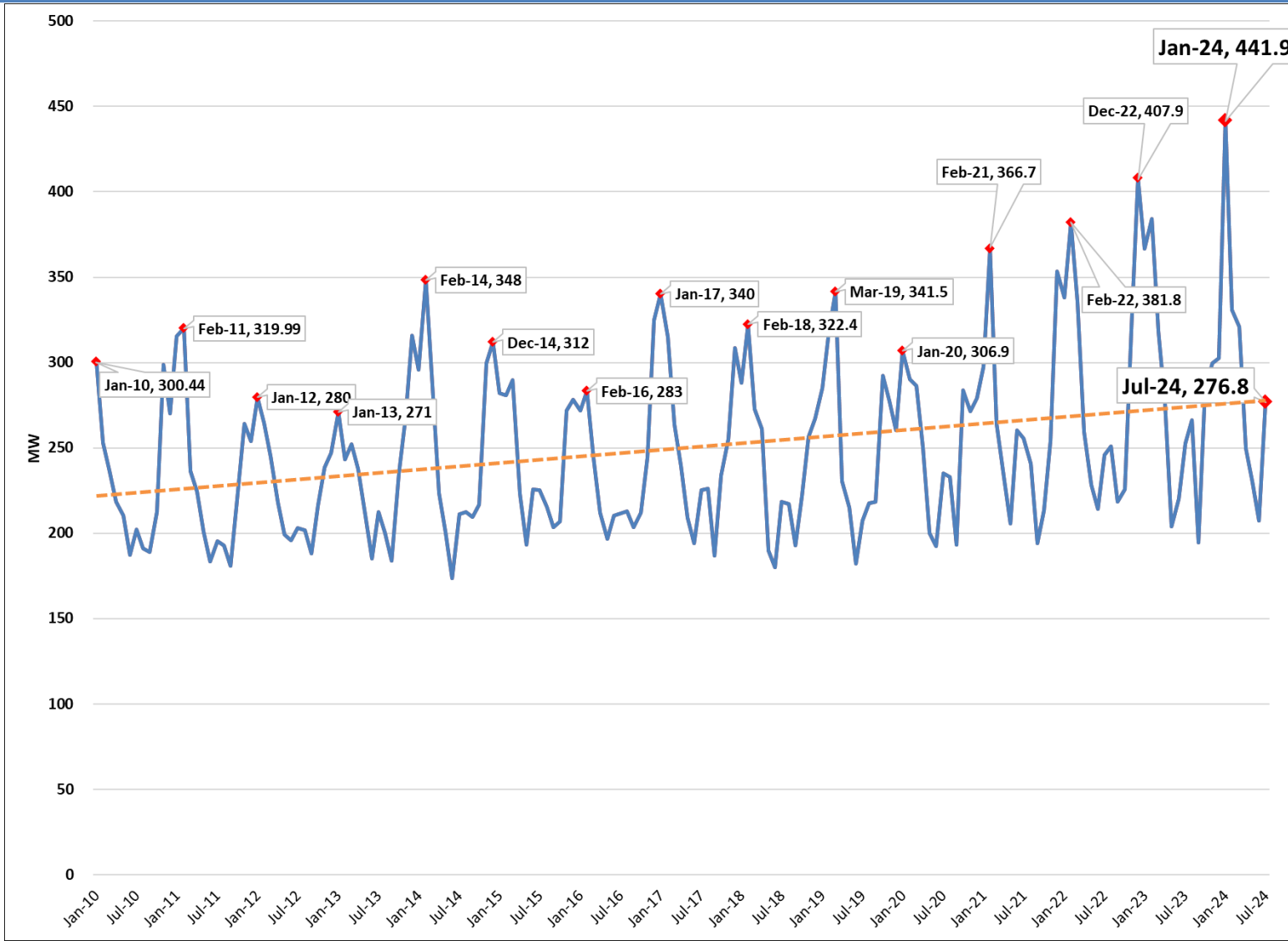
NT Customer Experience No. 5: Consumers Power Inc.

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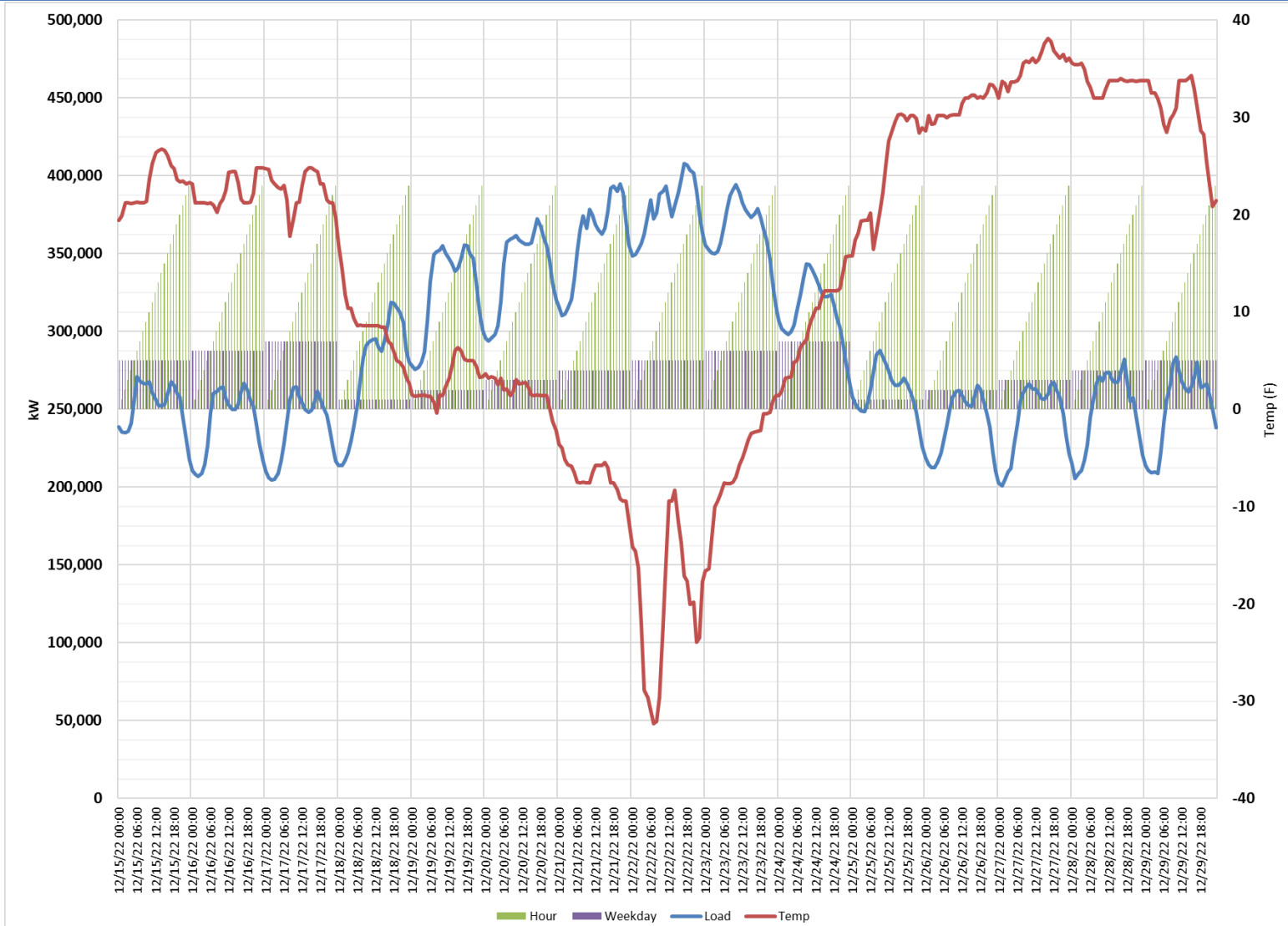
- **CPI contacted by multiple large scale industrial facilities potential to serve up to 500MW by 2030**
 - CPI submitted a LLIR for available capacity at existing POD within a BPA/PAC 115kv loop
 - BPA response included multiple scenarios:
 - 10 MW available- any additional increases would require reconductor of loop >\$60m to increase 65MW
 - Per BPA's analysis- CPI identified that 10 MW of availability on the loop impacts 6 POD's, currently serving 40% of CPI total system load
 - Prior planning study determined >100 MW capacity (including 25 MW of industrial load by 2026)
 - BPA identified the loss of summer generation as possible reasoning for capacity limits- CPI previously informed that at N-1 scenario no impacts to capacity (pending analysis in Q1 of 2025)
 - Current native load growth on 6 POD's will exceed 10 MW
 - FES options failed to identify prior BPA long range plan for 230kv delivery at existing CPI POD
 - Plan of correction may have to be completed by CPI due to staffing shortages, exiting workload, and BPA construction costs

NT Customer Experience No. 6: Flathead Electric Cooperative (FEC)

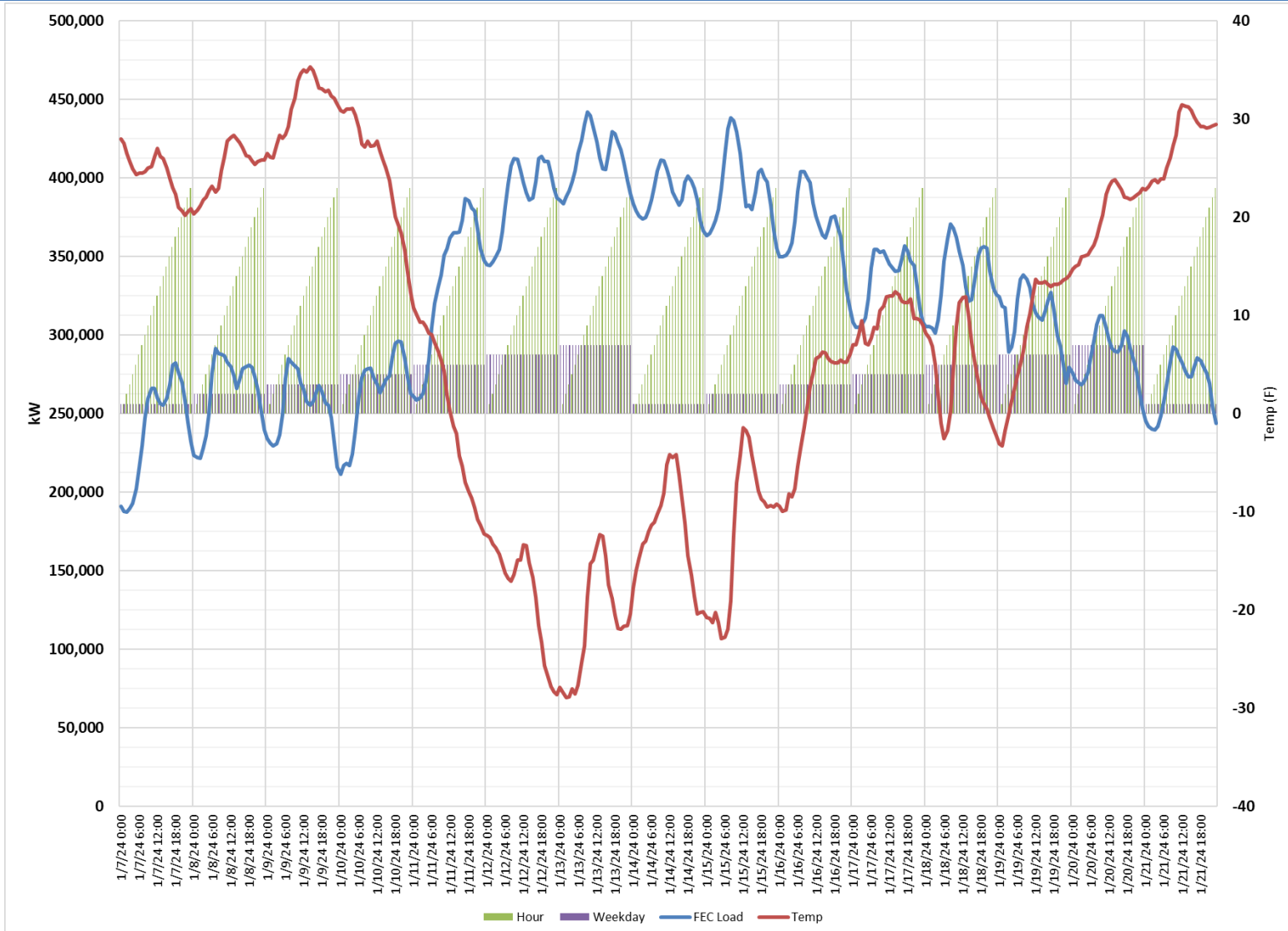
FEC Historical System Peaks by Month



NT Customer Experience No. 6: Flathead Electric Cooperative (FEC) December 2022 hourly FEC Load & Temps



NT Customer Experience No. 6: Flathead Electric Cooperative (FEC) January 2024 hourly FEC Load & Temps



NT Customer Experience No. 6: Flathead Electric Cooperative (FEC)

Forecasting Process

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- **Flathead Electric Cooperatives (FEC) peak load growth has been driven by organic residential (low load factor) and commercial load growth – not large discrete loads**
 - In 2024, FEC’s highest ever winter peak increased by 34 MW and summer peak by 22 MW
 - FEC has submitted LLIRs and been working actively with BPA to plan for anticipated load growth
- **BPA uses a single weather normalized energy and peak forecast (1 in 2 peaks) for both the BPA Power and BPA Transmission planning processes**
 - BPA Power planning process uses average energy to determine power purchases, with marginal rate to true up forecast error
 - BPA Transmission uses the forecast coincidental peak load to study and determine if there’s adequate transmission capacity; however, using weather normalized forecast to ensure transmission capacity for extreme weather events poses reliability issues
- **Using a single weather normalized energy and peak forecast for power and transmission planning presents tradeoffs for FEC:**
 1. Artificially inflate the energy forecast for BPA power, which will increase power costs to FEC members but may give BPA transmission appropriate load forecasts to study, OR
 2. Use a reasonable energy forecast for power planning and hope that recent extreme weather events and continual dialogue with BPA are somehow captured in future transmission planning processes

NITS Objectives: Timely Load Service

- **A transparent and consistent BPA NITS planning and transmission construction process that results in reliable and timely load service**
- **Support the growing demands of NITS customers from both Federal and non-Federal resources in a manner that satisfies BPA's obligations under both its statutes and OATT**

Proposed and Preliminary Solution/Action Item #1: Affirmation of BPA's Statutory and OATT Obligations

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- **Affirm BPA's transmission related statutory obligations to preference customers and its OATT obligations to provide NITS service for both Federal and non-Federal Network Resources**
- **Confirm and demonstrate that BPA has historically and currently is including LaRC forecasts in the Attachment K "BPA Plan" as required under its OATT**
 - See, e.g., BPA OATT § 31.6: NITS customer to provide annual load and resource information pursuant to BPA's Attachment K planning process
 - See, e.g., BPA OATT Attachment K at §§ III.2.1-2.5, 6.1.1 regarding the NITS customer obligation to provide BPA load and resource information for the following 10-year period and BPA's obligation to include such information in its Attachment K planning assumptions
 - Allow for mid-cycle LaRC updates to be incorporated into the annual Planning Cycles
 - For more details see: <https://www.bpa.gov/-/media/Aep/transmission/attachment-k/planning-meeting-1-2024.pdf> at slide 9

Proposed and Preliminary Solution/Action Item #2: Perform Root Cause Analysis

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- **Conduct a root cause analysis to address transparency and procedural inefficiencies**
 - Is the LaRC forecast being used in BPA's various planning and operational tools?
 - If LaRC forecasts are being used, how are they being used, and when is the LaRC incorporated into the various planning and operational tools?
 - Are there exclusions?
 - Are there gaps?
 - Are there delays?
 - Does BPA find the information included in the LaRC to be insufficient?
 - Is there is lack of sufficient staff to carry out the necessary duties?
 - Does BPA treat load service differently than resource connectivity?
 - Do the Business Practices provide adequate guidance for BPA staff, and for BPA customers?
 - Could the Network Operating Committee be leveraged to enhance coordination between BPA and its NITS customers?

Proposed and Preliminary Solution/Action Item #3: Review and Revise NITS Related Processes

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- **Review and revise as necessary the current processes that BPA uses to ensure timely and reliable service**
 - Line Load Interconnection Requests (LLIR)
 - LaRC (Agency and Transmission application)
 - Is the schedule needing attention, e.g., to be coordinated with the TSEP process?
 - Is the LaRC used to populate other planning and operational tools?
 - The “BPA Plan” (Attachment K)
 - Timely inclusion in WECC Base Cases
 - Reflected as “firm capacity reserved” for NITS in the calculation of Long-term and Short-Term ATC

Proposed and Preliminary Solution/Action Item #4: Deep Dives

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- **Develop Master Plans of Service by Sub-region evaluations (a.k.a., “Deep Dives”) focused on the interaction among several customers geographically co-located to optimize and sequence solutions that may include both wires and non-wires projects**
- **These evaluations have been used in the past to produce “head room” calculations**
 - How much ATC is currently available for one or more utility loads in a particular geographic area?
 - What are the co-located utilities that share this head-room?
 - What wires/non-wires options are available to increase the ATC
 - Near-term
 - Capacitor banks
 - Reactive devices
 - Medium-term
 - Redispatch
 - Conditional Firm service
 - Long-term
 - Upgrade
 - Expansion

Proposed and Preliminary Solution/Action Item #5: Develop a strategy and timeline to achieve the NITS objectives

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- **Develop a strategy and timeline to achieve the NITS objectives (this could include a short list of priority efforts to tackle immediately, e.g., updating NITS Business Practices that have aggravated the uncertainty around BPA's Network Integration Transmission Service)**

Proposed and Preliminary Solution/Action Item #6: Put Network Operating Committee to Better Use

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- **Potentially expand both the use and scope of the Network Operating Committee to conduct the action items above and to include additional BPA and NITS customer executive oversight**

Proposed and Preliminary Solution/Action Item #7: Hire Staff to Plan and Construct Transmission for timely NITS Load Service

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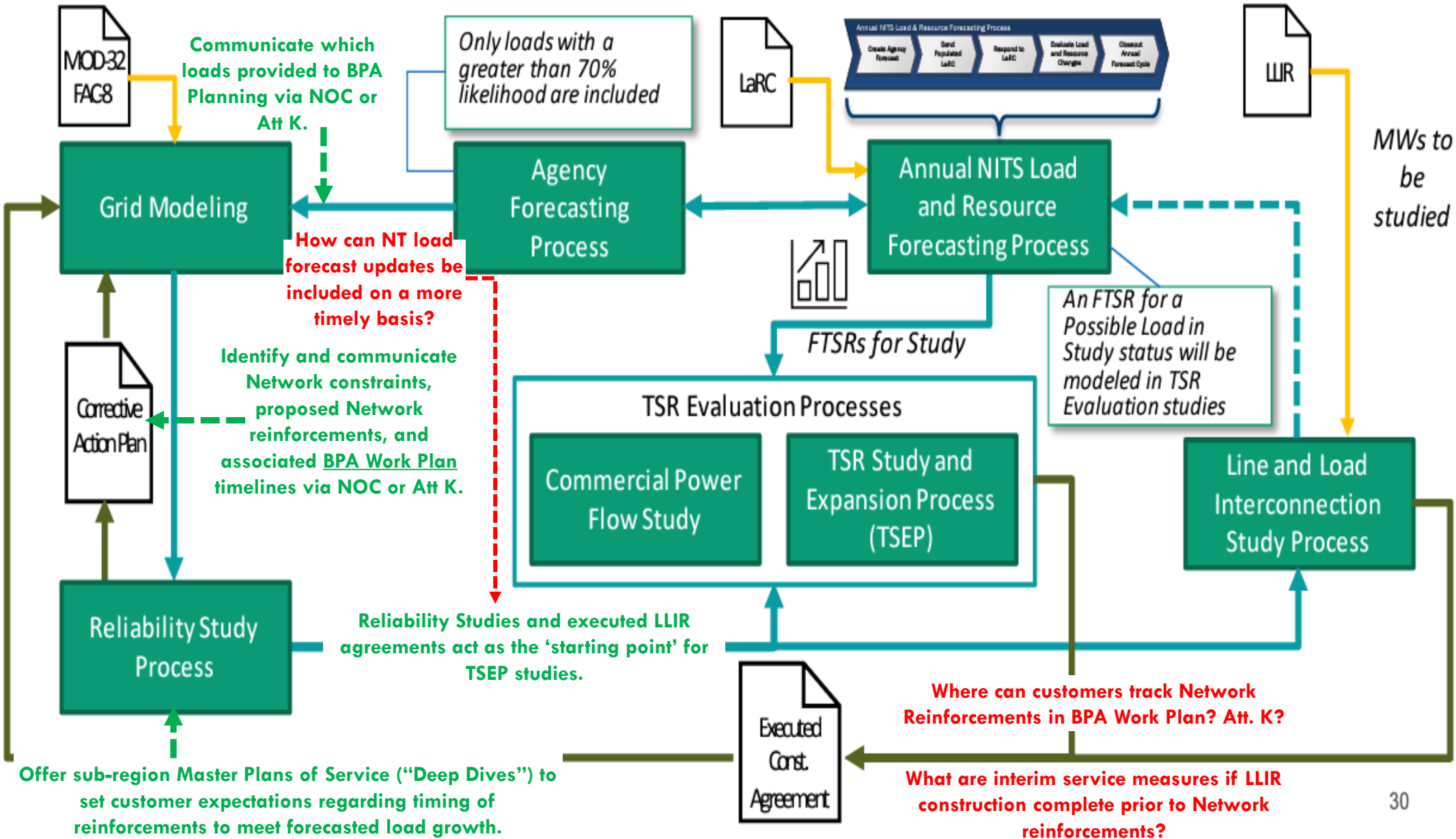
- **BPA needs to get back in the business of planning and constructing transmission facilities to meet the NITS objectives of:**
 - A transparent and consistent BPA NITS planning and transmission construction process that results in reliable and timely load service to NITS customers
 - Supporting the growing demands of NITS customers from both Federal and non-Federal resources in a manner that satisfies BPA's obligations under both its statutes and OATT
- **BPA should continue its efforts to hire the engineering, technical, and construction staff necessary to achieve the above objective**
- **NITS customers support BPA's efforts to do so and will say so in this IPR**
- **BPA needs to better demonstrate that the \$2 billion in transmission upgrades identified in its Evolving Grid Process will include reliability builds that will support the above objectives**
 - Currently BPA has only shown that its Evolving Grid projects will serve commercial rather than regional/NITS reliability purposes

Specific Process Recommendations

- **Several process recommendations were included in the NT customer group comments submitted in June:**
 - Proposed a root cause analysis to address procedural inefficiencies
 - Focus on transparency and communication to implement best one-utility plan of service. Proposed process recommendations in **green** on the next slide
 - Rely heavily on existing or past processes (e.g., Network Operating Committee, Transmission Planning Deep Dives)

- **Observations since comments were filed:**
 - Attachment K process provide an additional, existing process to increase information sharing
 - Process improvement may be iterative—BPA and customers will likely identify ways to facilitate the planning process when more transparency exists. Aligning NT customer group recommendations with BPA process map raised several questions in **red** on the next slide
 - Pushing NT load growth to TSEP addresses cost allocation but does not advance NT transmission planning or expedite transmission builds

Specific Process Recommendations



Proposed Next Steps

- **Develop a strategy and timeline to achieve the NITS objectives (this could include a short list of priority efforts to tackle immediately, e.g., updating NITS Business Practices that have aggravated the uncertainty characteristic of BPA’s Network Integration Transmission service)**

- **Review and revise as necessary the current processes that BPA uses to ensure timely and reliable service, for example:**
 - LARC process timing and alignment with other BPA processes
 - Does the current LARC process allow for timely inclusion in reliability studies and WECC Base Case
 - Develop Scope for Master Plans of Service by Sub-region evaluations (a.k.a., “Deep Dives”)
 - How much ATC is currently available for one or more utility loads in a particular geographic area?
 - What wires/non-wires options are available to increase the ATC, for example:
 - Near-term (Capacitor Banks, Reactive Devices)
 - Medium-term (Redispatch, Conditional Firm service)
 - Long-term (Upgrade, Expansion)

QUESTIONS?