



# Product Conversion Process Customer Education

June 21, 2019



# Topics

- Transmission Service Products Comparison
- Characteristics of Network Integration Transmission Service
  - ✓ Cycle of NT Service
  - ✓ Description of NT Service
  - ✓ Application for NT Service
  - ✓ Review Service Agreement
  - ✓ Network Operating Agreement
  - ✓ Planning for NT Service
  - ✓ Managing Curtailments for NT Service
- BPA's Approach to Product Conversion
  - ✓ Conversion Principles
  - ✓ Transition to NT Service
- Billing & Rates
  - ✓ Components of an NT Bill
- Power Service Contract Considerations
- Things to watch for

# Transmission Service Products Comparison



# Tariff Transmission Service Products

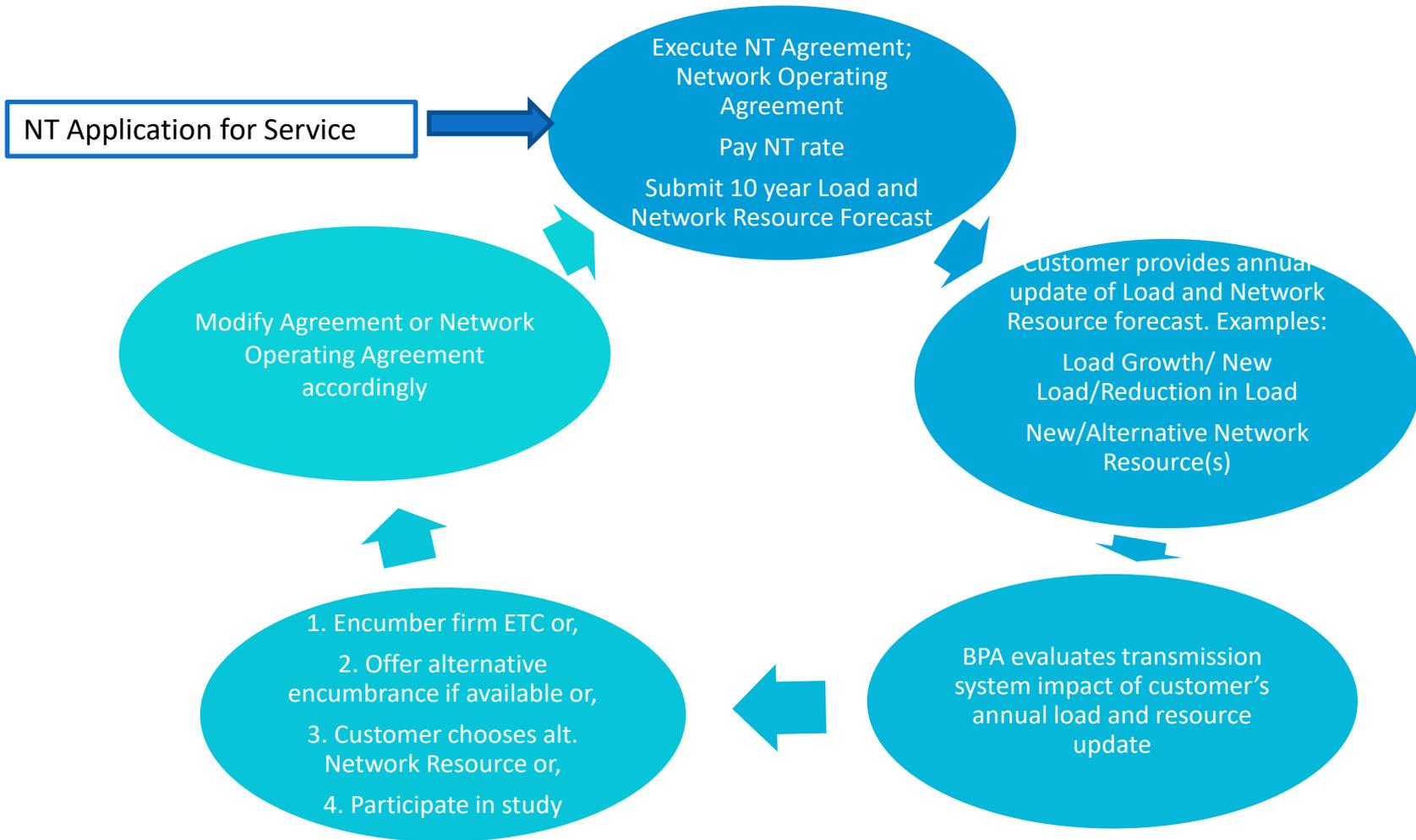
The Open Access Transmission Tariff (the Tariff) delineates the terms and conditions of providing and taking transmission service.

- BPA's Tariff provides for two types of Transmission Service:
  - Point-to-Point (PTP) Service
    - Terms and conditions of PTP Service are located in Part II of the Tariff.
    - PTP Service allows the Customer to move power from a Point of Receipt to a Point of Delivery
    - Billed on reservation capacity
  - Network Integration Transmission Service (NT Service)
    - Terms and conditions of NT Service are located in Part III of the Tariff
    - Available only for service to Network Load
    - Billed based on metered Network Load

# Characteristics of NT Service



# Cycle of NT Service



# Characteristics of NT Service cont.

NT Service may only be used to serve the Customer's Network Load.

- ✓ NT Service allows the Customer to integrate, economically dispatch and regulate its current and planned Network Resources to serve its Network Load.
- ✓ NT Customer may deliver energy purchases to Network Load from non-designated resources on Secondary NT transmission.
  - No additional charge for Secondary NT
  - "As available" basis
  - NERC Curtailment Priority 6NN non-firm
- ✓ Behind the meter resources are not netted with Network Load.
  - The effect is to include the behind the meter resource with metered load for NT billing purposes.
  - Reason: TP must plan the system to meet the NT customers entire Network Load, including load served by behind the meter resources.
- ✓ To facilitate planning, NT customers must provide BPA with an annual update of load and resources forecasts for the next ten years

# Characteristics of NT Service

- Designating Network Load
  - ✓ NT Customer must designate Network Load at discrete Points of Delivery (POD) to be served through NT Service.
- Designating Network Resources
  - ✓ NT Customer designates a Network Resource (DNR) to serve Network Load on firm transmission.
  - ✓ Designation of a Network Resource (federal or non-federal) requires the submittal of TSR.
  - ✓ Designation requires the customer to attest that it has rights to generation.
  - ✓ BPA may require detailed information about the Network Resource.

# Characteristics of NT Service

- Undesignating Network Resources

- ✓ Third-party sales of a DNR
- ✓ Loss or contractual-rights or generation output for one year or longer requires undesignation

- ✓ Only PTP transmission may be used for third-party sales

## Temporary Undesignation

- ✓ NT Customer may temporarily undesignate all or a portion of a DNR
- ✓ NT Customer will forfeit rights for the term of undesignation
- ✓ ATC rights will be reinstated after the term of undesignation

## Permanent Undesignation

- ✓ NT Customer forfeits ETC rights and reservation priority

# Characteristics of NT Service

- **Redirects**

- ✓ NT Service may not be Redirected or Resold in a manner comparable to Point-to-Point
- ✓ Network service instead provides for the integration of new network resources and permits designation or substitution with another network resource, which has the same practical effect as redirecting network service.

- **Assignments and Transfers**

- ✓ NT service may not be assigned or transferred except through annexation.

# Application for NT Service

- Customers provide:
  - A description of Network Load at each delivery point. Including a 10 year forecast of peak Summer and Winter loads and resource needs.
  - Description of Network Resources (current and 10 year projection).
  - Detailed description of NT customer's local distribution or transmission system.
  - Service requests may be made for up to 30-years
  - Requests for service may be shaped/profiled.
  - Signed statement that customer meets the Attestation requirements associated with the Network Resources listed in the application.
    - ✓ Network Customer owns the resource or has committed to purchase a defined amount of generation from the resource.
    - ✓ No portion of the Network Resource has been committed for a sale of one-year or more to a third party on a non-interruptible basis.

# NT Service Agreement

- **NT Service Agreement**
  - Includes designated Network Loads and Network Resources
  - Customers typically designate sufficient resources to serve load, but they are not required to do so
  - Customers may have more Network Resources than their forecasted load
  - Requires NT customers to pay for service based on Network Load
  - Incorporates BPA tariff requirements and business practices
- **Network Operating Agreement**
  - Technical and operational requirements
  - Redispatch and Transmission Curtailment protocols
    - A transmission curtailment does not normally involve dropping Designated Network Load
    - It is an economic event where a potentially more expensive resource may be deployed
  - Emergency protocols
    - Load Shedding – if redispatch and curtailment do not provide sufficient relief.
- **Third-party sales from a Designated Network Resource must be undesignated and the NT agreement will be updated if the undesignation is a year or longer.**

# NT Service Agreement

## Review Handout

# Network Operating Agreement

- The Network Operating Agreement spells out the operational needs between BPA and its NT customers.
- BPA and customers agreed through the TC-20 Settlement to remove the Network Operating Agreement from Attachment G of the OATT.
  - Replace with bilateral agreements.
  - Develop a NOA template with ability to customize exhibits for each NT Customer on specific needs such as:
    - Reference to existing operational agreements
    - Other operational or Interconnection requirements
    - Special protection or relay schemes

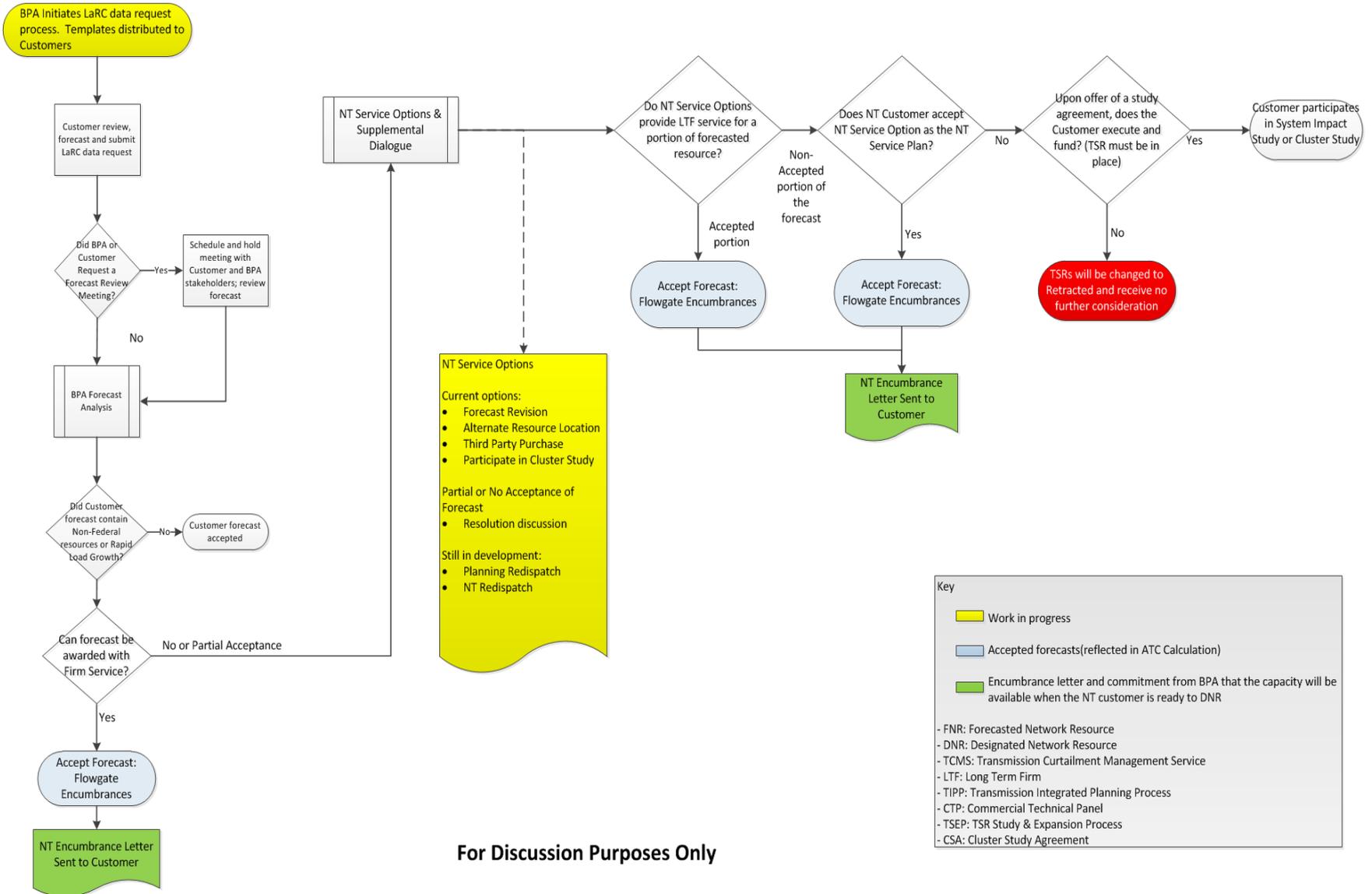
# NOA Work

- Hosted Network Operating Committee meeting April 30
  - Shared redline NOA with NT participants/representatives
- NOA comments were due May 29
- NOC Meeting June 24
  - Continue revision of NOA
- One more NOC Aug. 15
- Draft and execute NOAs for 10/1/21 Start date

# Planning for NT Service

## NT Dialogue

- NT Dialogue is BPA's annual process to update NT Customers' 10-year forecasted Network Load and Resource information
  - NT Customers are required to submit annual 10-year Network Load and Network Resource Forecasts.
  - Participation in Annual NT Dialogue meetings encouraged for those making changes to their forecasts
  - Submittal of Load and Resource changes as soon as possible – not necessary to wait for the start of the NT Dialogue.



**NT Service Options**

Current options:

- Forecast Revision
- Alternate Resource Location
- Third Party Purchase
- Participate in Cluster Study

Partial or No Acceptance of Forecast

- Resolution discussion

Still in development:

- Planning Redispatch
- NT Redispatch

**Key**

- Work in progress
- Accepted forecasts(reflected in ATC Calculation)
- Encumbrance letter and commitment from BPA that the capacity will be available when the NT customer is ready to DNR

- FNR: Forecasted Network Resource  
 - DNR: Designated Network Resource  
 - TCMS: Transmission Curtailment Management Service  
 - LTF: Long Term Firm  
 - TIPP: Transmission Integrated Planning Process  
 - CTP: Commercial Technical Panel  
 - TSEP: TSR Study & Expansion Process  
 - CSA: Cluster Study Agreement

**For Discussion Purposes Only**

# Managing Congestion for NT Service cont.

- During a transmission system constraint, BPA will proceed with curtailing service in accordance with the BPA Tariff and NERC Priority Codes.
- If a customer's Secondary NT schedules are curtailed, the customer is to find alternative means for serving load or will be subject to imbalance charges.
  - SLICE and/or Block customers: subject to Energy Imbalance
  - Load Following customers: subject to a UAI under the Regional Dialogue contract provisions unless TCMS is being taken. If TCMS is being taken then the charge is reflective of the Energy Imbalance charges applied by BPA.
- To provide relief during a transmission constraint that requires curtailment, BPA will:
  - Curtail Non-Firm transmission service in order of NERC Curtailment Priority Codes (0 – 6)
  - Then if more relief is needed:
    - Curtail Firm PTP transmission service (cut Firm PTP schedules/deliveries); and
    - Perform NT Redispatch in accordance with Section 33 of the OATT to maintain NT Service to load.
  - The pro-rata allocation for firm relief is determined by calculating the firm PTP flow and the firm NT Service flow impacting the system constraint.
- NT Redispatch is performed by BPA in lieu of cutting schedules to load.
  - No etags are associated with deliveries from the Network Resources are changed.
  - The cost of NT Redispatch is built into the NT rate

# Managing Congestion for NT Service

## NERC Curtailment Priorities

Priority 1 – NS	Redirected Firm Service — NS
Priority 2 – NH	Purchased Non-Firm Point-to-Point Hourly Service — NH
Priority 3 – ND	Non-Firm Point-to-Point Daily Service — ND
Priority 4 – NW	Non-Firm Point-to-Point Weekly Service — NW
Priority 5 – NM	Non-Firm Point-to-Point Monthly Service — NM
Priority 6 – NN/CF	Network Integration Transmission Service from sources not designated as network resources — NN PTP Conditional Firm
Priority 7 – F/FN	Firm Point-to-Point Transmission Service — F and Network Integration Transmission Service from Designated Resources — FN

- Firm NT and Firm PTP share the same Curtailment Priority (7).
- Non-Firm NT (Secondary Network Service) has the same curtailment priority as PTP Conditional Firm but a higher curtailment priority (6) than non-firm PTP (0 – 5).
- During a transmission constraint, BPA will redispatch Firm NT Service consistent with Section 33 of the OATT to avoid curtailment.
  - Generally, NT 7F = Redispatch, PTP 7F = Curtailment
- If curtailment is required, BPA will curtail service pro rata starting with NERC Priority Code 1

# BPA's Approach to Conversion



# Proposed Conversion Principles

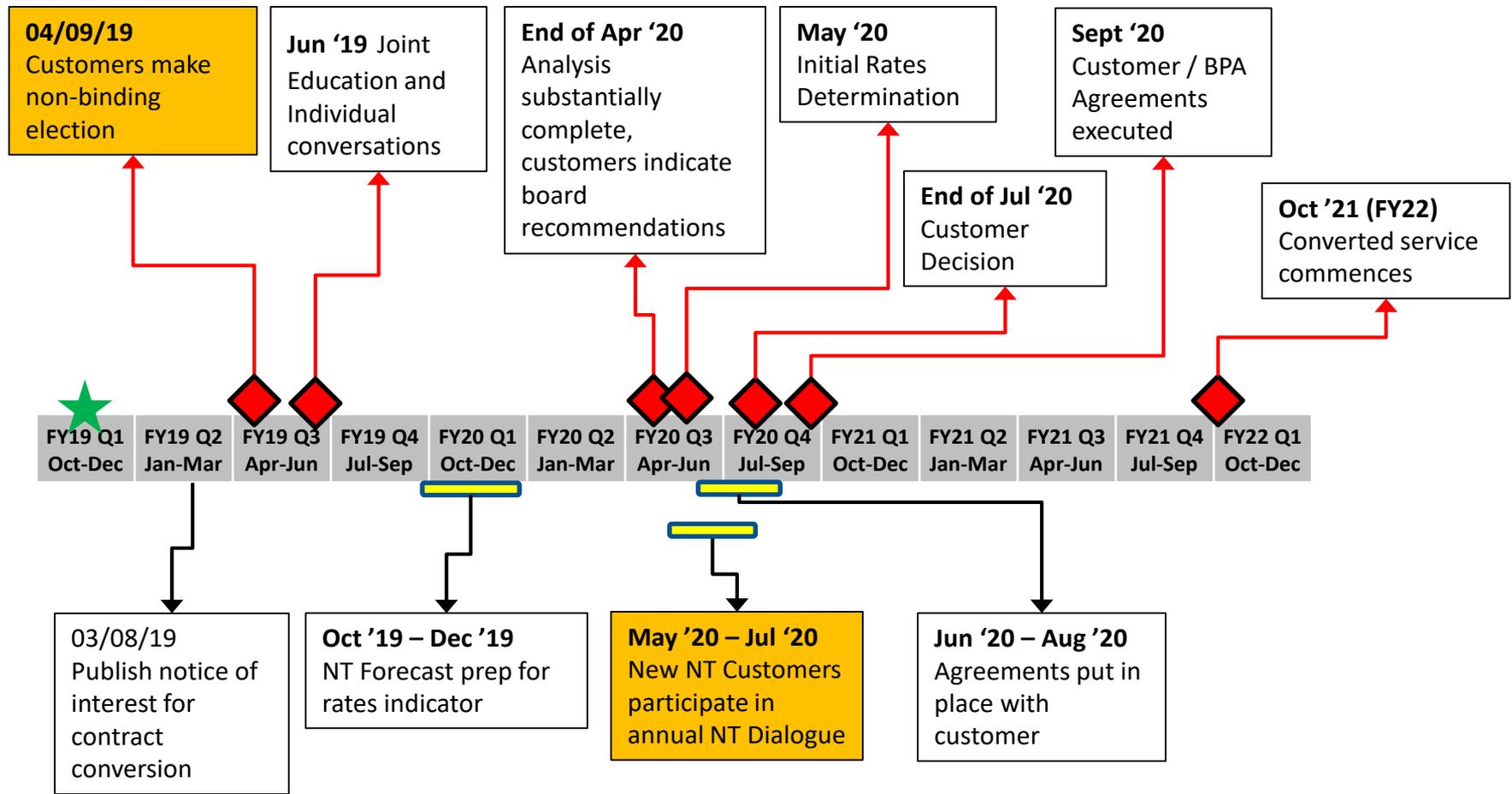
*These proposed principles will apply to treatment of Point-to-Point (PTP) rights in consideration of potential conversion to Network Integration (NT) service.*

- BPA will treat all conversion participants in a manner that is just and reasonable, and not unduly discriminatory or preferential, consistent with open access transmission service, rate schedule and Business Practice provisions.
- The customer must specify which load will be covered under conversion.
- To manage the scope of the conversion process, and in the common interest of completing the conversion process in accordance with the draft timeline, early termination of non-converted PTP rights will not be considered as part of the conversion process.
- To manage the scope of the conversion process and to establish starting parameters for planning purposes, BPA will consider long-term PTP capacity used to serve load as of April 9, 2019 to be eligible for conversion.,

# Proposed Conversion Principles (cont.)

- Long-term PTP capacity associated with a resource eligible for designation as of April 9, 2019, will be considered to be eligible for conversion.
- BPA will work in collaboration with customers and make reasonable efforts to accommodate needs of both parties to deliver on the conversion process commitment.
- Customers may retain existing PTP service.
- Costs associated with implementing converted service (for example, any required metering and equipment additions) will be assigned consistent with current business practices and cost allocation guidelines.
- BPA will inform eligible customers whether their current PTP transmission rights are sufficient to accommodate the NT service.

# DRAFT Product Conversion Timeline



# Billing & Rates



# Components of a NT Customer Bill

The following charges will always appear on the NT bill

- NT Service Rate:
  - Billed monthly based on the customer's Network Load on the hour of the Monthly Transmission System Peak Load.
  - BP-20 Initial proposal is \$1.771 kw/mo
- Scheduling, System Control and Dispatch Service Rate
  - An Ancillary Service required to schedule the movement of power through, out of, within, or into a Control Area.
  - BP-20 Initial proposal is \$.365 kw/mo
- Reactive Supply and Voltage Control from Generation Sources (GSR)
  - Maintain voltage levels on BPA's transmission facilities within acceptable limits.
  - Currently the charge is zero

# Components of a NT Customer Bill cont.

The following charges will appear on the NT bill if applicable

- Regulation and Frequency Response
  - Only customers with load in BPA's BA.
  - Provides for the continuous balancing of resources with load and for maintaining scheduled Interconnection frequency at sixty cycles per second (60 Hz).
  - BP-20 Initial proposal is 0.49 mills per KWh
- Operating Reserves (i.e. Spinning/Supplemental Reserves)
  - Generating capacity available to meet system contingency.
  - Only applies to customers with resources and loads in BPA's BA.
  - BP-20 Initial proposal is 9.53 mills per KWh-spinning
  - BP-20 Initial proposal is 8.32 mills per KWh-supplemental
  - Defaults subject to default rate
- Energy Imbalance
  - Energy supplied to make up difference between scheduled and actual energy delivered to load in the BPA Control Area, settled at the Mid-C index.
  - Applies to customers that schedule non-federal resources or FCRPS
  - There are three bands see rates schedule
- Short Distance Discount
  - A customers bill will be adjusted when the customer has a resource that is designated as a Network Resource for at least 12 months
  - Use the facilities for less than 75 circuit miles for delivery to Network Load.
  - See calculation in the rates schedule.

# Power Services Considerations



# Power Service Contract Considerations

## Regional Dialogue

- Customers are responsible for the transmission delivery of energy from the FCRPS to their loads.
- Section 14 is the section of the Regional Dialogue Contracts that speaks to delivery.

# Power Service Contract Considerations

## Customers with NT Service:

For customers meeting load with a Federal system sale (Regional Dialogue contract) and holding a NT Service Agreement, BPA Power manages the resources comprising the System Sale directly with Transmission.

- NT Customers have a Federal System Sale as the Network Resource (not individual resource compromising the Federal system sale).
- BPA Power provides the more granular resource information to BPA Transmission to enable BPA Transmission to manage the transmission system.
- BPA Power designates and undesignates Network Resources comprising the System Sale.
- BPA Power provides 10 year resource forecasts
- BPA Power works directly with BPA Transmission to provide NT Redispatch, when available, at the resource level.
- When needed, BPA Power schedules non Network Resources using a subset of the NT customer's secondary NT service provisions.

The arrangement between the applicable NT customers, BPA Power and BPA Transmission is documented in the [Memorandum of Agreement](#) for the Management of Network Integration Transmission Service for delivery of Federal Power to Network Customer Loads (Contract No. 11TX-15395) and is referred to as the NT MOA.

- The NT MOA is posted under the Network Integration (NT) Transmission Service tab.

# Power Service Contract Considerations

- **Conversion from PTP to NT:**
  - BPA Power will send a letter asking for the ability to schedule on the customer's secondary NT service for the portion of their non-SLICE load that is served by the Regional Dialogue contract (Load Following minus non-federal resources and Block).
    - Only applicable to loads within the BPA BA
    - Only applicable to non-scheduled loads, if customer agrees to provide BPA Power the ability to schedule secondary NT for their load served by Block energy then the Block delivery will become unscheduled.
- **Conversion from NT to PTP:**
  - Customer would have to schedule delivery of energy to load.
  - Requires BPA Power to provide customers with Scheduling points of receipt (PORs) associated with the Federal System Sale.
    - A within BAA system sale is not a valid long-term POR for PTP service so customer needs actual resource based Points of Receipt.
    - Regional Dialogue Section 14 provides potential protection if a curtailment occurs and the customer is curtailed because BPA provided energy at a point not identified in their initial Scheduling PORs.
  - If a Load Following customer, would need to figure out how to align the load following nature of the RD contract with the requirement to schedule under PTP.
    - Currently there are no Regional Dialogue Load Following Customers holding PTP for load service.

# Things to Watch



# Things to Watch

- NT Redispatch (possible future TC proceeding)
- BPs related to NT Service
- TC-20 Updates
- Hourly Firm activities
- ATC Updates
  
- Reference Materials
  - NT BP
  - OATT: TC-20 OATT
  - NT Attestation: Network Resource Designation Form
  - NT MOA: Memorandum of Agreement

# Questions?

**Please provide comments/questions to your  
Transmission AE**

