New Approach to Allowing Dynamic Transfers on the Eastern Intertie and the PDCI (Pilot)

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Customer WebEx

What is DTC?

- Dynamic Transfer Capability (DTC) is the ability to ramp a resource up or down over a predetermined range outside the standard ramping timelines by an entity other than the host Balancing Authority Area operator.
  - Bonneville uses DTC as a measure of the transmission system's capability to accommodate dynamic transfers (*i.e.*, dynamic schedules and pseudo ties).
  - Under existing BPs applicable to access to DTC on the network, BPA allocates DTC in a manner that is somewhat analogous to ATC; however, DTC is an operational flexibility that is treated as a component of underlying transmission service.
  - DTC is not ATC, nor does it change ATC or modify Existing Transmission Commitments (ETC).
  - DTC is not a commercial product.

Current DTC Policy

- NWACI – Dynamic Schedules are allowed on NWACI pursuant to an explicit allocation process that takes place at preschedule and is based on long-term firm N-S transmission rights.
- PDCI - Dynamic Transfers have not yet been implemented on the PDCI.
- Network –
  - Up to two-year awards of DTC based on specific source to sink; allow long-term award of DTC for Pseudo-Tie requests that change BAA boundary
  - Use of Upper and Lower Transfer Limits on BPA managed paths during periods that BPA is not in EIM; EIM dispatches limited by VTLs
  - The existing DTC allocation BP excludes NWACI and PDCI but includes other interties as part of the network for the purposes of requesting and allocating DTC.

BPA Is Not Seeing System Issues:

- BPA's DTC policy developed to study and test its DTC methodology and to manage and provide limits on dynamic transfers.

- BPA has had more than ten years of experience with its DTC policies and has greatly increased implementation of Dynamic Transfers on its transmission system (including significant levels of renewable generation).

- During this time, BPA has not experienced issues with voltage fluctuations, increased reactive switching, or other reliability issues associated with Dynamic Transfers on BPA's system.

Industry Scan

- Other TPs in the Western Interconnection allow most, if not all, Dynamic Schedules and other use of DTC on their transmission systems.
- Other TPs do not manage implementation of Dynamic Transfers on their systems through processes that calculates and awards DTC.
- Other TPs use operational approaches (*e.g.*, switching reactive devices) to manage issues such as voltage fluctuations that result from implementation of Dynamic Transfers on their systems.

Proposed Pilot Programs

- BPA is proposing to implement two pilot programs that would apply to Dynamic Transfers on the Eastern Intertie and the PDCI respectively. The pilot programs would allow BPA to test management of Dynamic Transfers on those interties using operational protocols as opposed to BPA's existing network DTC allocation policies.
- BPA's objectives for the pilot programs include:
  - More efficiently use and manage the transmission system
  - Enhance operational control related to implementation of Dynamic Transfers
  - Facilitate BPA objectives related to initiatives such as the EIM and emerging markets
  - Better serve customer needs.

Implementation and Evaluation of Pilot Programs

- Over a set period of time (initially expected to be a two-year period), BPA will test the management of Dynamic Transfers on the Eastern Intertie and PDCI using operational protocols.

- During this time, BPA will perform continuous review of the pilot program results and will adjust its policies based on this evaluation.

- BPA will coordinate with other path operators and will work with Customers to address concerns as the pilot program policies are implemented and tested.

Pilot Program Outline

- BPA will develop and implement two pilot program with unique policies applicable to Dynamic Transfers on the Eastern Intertie and PDCI (once the PDCI is capable of sustaining Dynamic Schedules).
  - Unlike the existing BP applied to the network, under the pilot programs, implementation of Dynamic Transfers will not result in an allocation of DTC.
  - Instead, Dynamic Transfers on the Eastern Intertie and PDCI would be managed by operational protocols.

Pilot Program will Retain Many Existing Practices/Policies

- BPA will continue to monitor dynamic flows on the system and manage Dynamic Transfers under the pilot programs according to operational protocols defined in the existing operating BPs.
- Customers will still need a Dynamic Transfer Agreement (DTA) to implement Dynamic Transfers.
  - The DTA will not include a DTC allocation amount and will instead list specifications studied and approved by BPA.
- Dynamic Transfers are considered a component of transmission service, and Customers will continue to be required to acquire TSRs.
- For non-EIM usage, BPA will continue to monitor in AGC and send the flexibility limits to applicable BAAs.

Pilot Outline (Cont.)

- A Customer seeking to implement a Dynamic Transfer (Applicant) on the Eastern Intertie or the PDCI will need to submit a request using the Dynamic Transfer Capability Access Request form consistent with the existing BP requirements.
- Under timelines prescribed by the BP, BPA will notify the Applicant whether the request has been granted.

Pilot Outline (Cont.)

- Evaluation of Dynamic Transfer Requests under the Pilot Program:
  - Applicant will need to provide specific source-to-sink or system-to-system information (system dynamics).
  - BPA will study the request and, if acceptable, grant the ability to implement a Dynamic Transfer.
  - BPA will provide the Applicant with the specifications that BPA studied and approved, including the maximum allowable transfer with the award.
  - Specifications will be documented in a DTA.
- For Pseudo-Ties into, out of, or through BPA's BAA on the Eastern Intertie or the PDCI:
  - Eastern Intertie: Pseudo-Ties will be permitted on the Eastern Intertie as part of the pilot.
  - PDCI: Initially, BPA will not allow Pseudo-Ties on the PDCI. BPA anticipates implementing Pseudo-Ties on the PDCI at a future date and will continue to work with LADWP (the operator of the southern portion of the PDCI) to evaluate the operational requirements that are unique to the PDCI.

Pilot Program Operational Protocols

- BPA will set the limits within which dispatch of resources can change.
- Once the DTA and telemetry is in place, the Customer may begin to submit Dynamic Transfers according to specifications approved by BPA.
- BPA will track the use of all Dynamic Transfers with real-time telemetry and will take action, if needed.
  - BPA may implement an operational limit to the amount that can be dispatched resources for reliability purposes.
  - BPA will continue to apply its existing operational practices, including the potential to limit or freeze a Dynamic Transfer (including ramp rates) into, out of, or through BPA's BAA.

Pilot Program Request Process

- Customer submits a Dynamic Transfer request and identifies source, sink and maximum dynamic loading.
- BPA evaluates the Dynamic Transfer request
  - Analysis includes assessing potential reliability impact of dynamic transfers over affected paths.
    - If there are impacts, BPA will work with the Customer to find methods to mitigate those impacts.
  - BPA will reach out to the Customer if needed during the analysis.

Process, cont'd

- Approval of Submission
  - BPA anticipates that most requests under the pilot programs will be approved consistent with the Customer's requested parameters
- DTA Updated with Parameters
  - Upon agreement by BPA and Customer, the DTA will be executed/amended to include approved specifications (source, sink, maximum flow)
- EMS Modifications
  - BPA will modify its EMS to include the new Dynamic Transfer
    - In EMS there will be maximum transfer, ramp rate and capability to limit Dynamic Transfer in real-time for reliability.

Process, cont'd

- Go Live
  - BPA will receive and process new requests to implement Dynamic Transfers under the pilot programs.
  - Customers with requests approved under the pilot program will implement Dynamic Transfers consistent with the pilot program policies.
  - BPA will perform continuous monitoring of system voltages and RAS settings that may be affected by the dynamic flows.
  - If reliability issues emerge, limits on dynamic ramping may be implemented by BPA
- Example: multiple Dynamic Transfers over a path, exceeds dynamic path limits in total.
  - Customer 1
  - Customer 2
  - Customer 3

Pilot Example

- Eastern Intertie
  - Planning DTC = 170 MWs
- Example:
  - Customer 1 requests 350 MWs of DTC
  - Customer 2 requests 300 MWs of DTC
  - Customer 3 requests 50 MWs of DTC

  - Total DTC requests 700 MWs

Pilot Example (Cont.)

- BPA analyzes the Dynamic Transfer request
  - BPA approval of submissions
  - BPA notify Customer 1 that they can dynamically schedule up to 350 MWs
  - BPA notify Customer 2 that they can dynamically schedule up to 300 MWs
  - BPA notify Customer 3 that they can dynamically schedule up to 50 MWs

- Preschedule and Operation
  - Customers begins dynamically scheduling
  - BPA continuously monitors of system voltages and RAS settings
  - If reliability issues emerge, BPA sends limits on dynamic ramping to each customer

Next Steps

- BPA will draft Business Practices for the Pilot Program.
- BPA will release the draft Business Practice for customer comment as outlined in the Business Practice Process.

Questions?