Transmission Integrated Planning

November 12, 2019

Agenda

- Objective
- What is TIP
- How Will TIP Affect You

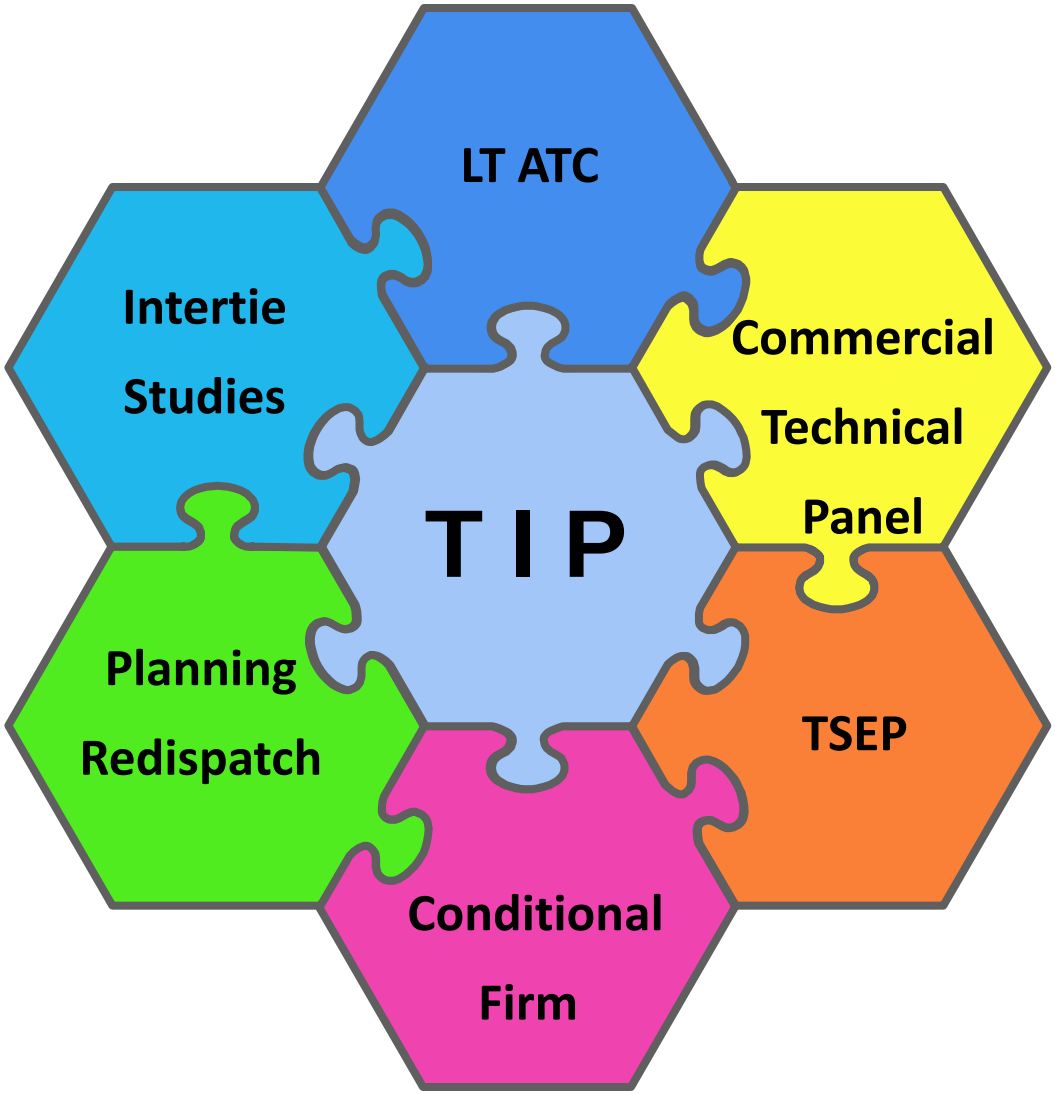
Why TIP

- The TIP effort was initiated to help BPA evolve from a reliability centric planning organization into a balance of reliability and commercial focused organization
- A commercial focus was needed to allow BPA to plan for non-wires alternatives and a changing landscape of renewable resources and load center development

Objectives

- Help you understand how each TIP element will support BPA in responding quicker to requests and forecasts for long-term transmission service
- To have a risk-informed, flexible, and scalable study process for all long-term transmission requests and forecasts

What is TIP?


LT ATC
Intertie Studies
Commercial Technical Panel
TIP
Planning Redispatch
TSEP
Conditional Firm

TIP Elements

- **Network Long-Term ATC Methodology (LT ATC)**
  - The current processes do not always provide a good indication of Network availability
  - BPA is looking into process improvements that would provide better indications of availability and/or congestion
  - Metrics will be established to evaluate these improvements, which could occur in many areas:
    - More frequently updated ATC Studies
    - Modified input assumptions to ATC Studies
    - Different or expanded scenario analyses
    - Different data interfaces to display results (for example, a "Commercial Transmission Inventory Map - CTIM")

TIP Elements Cont.

- **Commercial Assessment Technical Panel (CTP)**
  - BPA's inventory calculations for the Network have transitioned to being primarily study-based
  - Evaluation of Network transmission service requests (TSRs) remains Power Transfer Distribution Factor (PTDF-based)
  - This panel of subject matter experts reviews all long-term TSRs and NT forecasts to evaluate whether the PTDF-based impacts are an appropriate reflection of anticipated impacts if service were granted
    - If not, BPA determines the impacts using studies, similar to those use to calculate ETC and/or TTC values

TIP Elements Cont.

- **<u>TSR Study and Expansion Process (TSEP)</u>**
  - TSEP serves as BPA's study and upgrade process necessary to respond to long-term firm TSRs for which BPA does not have adequate transmission capability
  - TSEP consists of: Cluster Study, Preliminary Engineering activities for identified new facilities, NEPA review, and construction of the identified facilities
  - 'Cluster Study' consists of: all eligible TSRs, the System Impact Study, and the Facility Study into a single, 120-day study to identify necessary upgrades

TIP Elements Cont.

- **Conditional Firm Service (CF)**
  - BPA is in the process of enhancing its Conditional Firm capabilities to increase the quality of service for customers. This effort includes:
    - Transitioning to a study-based methodology for evaluating a TSR's impact on the system
      - Discontinuing CF Inventory
      - Developing conditions of service that align with study-based constraints.
      - Offering Reassessment CF, on a case by case basis, beyond the minimum term of two years consistent with FERC guidance
    - Implementing OATI's Conditional Curtailment Option software to manage CF reservations

TIP Elements Cont.

- **Planning Redispatch (PR)**
  - OATT option (PTP or NT) studied upon customer request to enable LTF service
  - Best used to bridge short-term ATC deficiencies at a specific constraint during a defined period of time
  - If requested, BPA will provide the required study outputs regarding resources that can provide incremental and decremental capacity and an indication of resource impacts
  - BPA plans to review policies and update its Business Practices to define Planning Redispatch requirements
  - Customers are responsible for securing contractual arrangements to procure redispatch from 3rd parties that comply with business practice requirements

TIP Elements Cont.

- **Intertie Studies**
  - No System Impact or Facilities Study have been done recently
  - Cost to increase capacity is prohibitive
  - Historically customers have been willing to wait for capacity on the existing system
  - In the TC-20 settlement BPA committed to collaboratively come up with a repeatable process and Business Practices for how the intertie requests will be handled

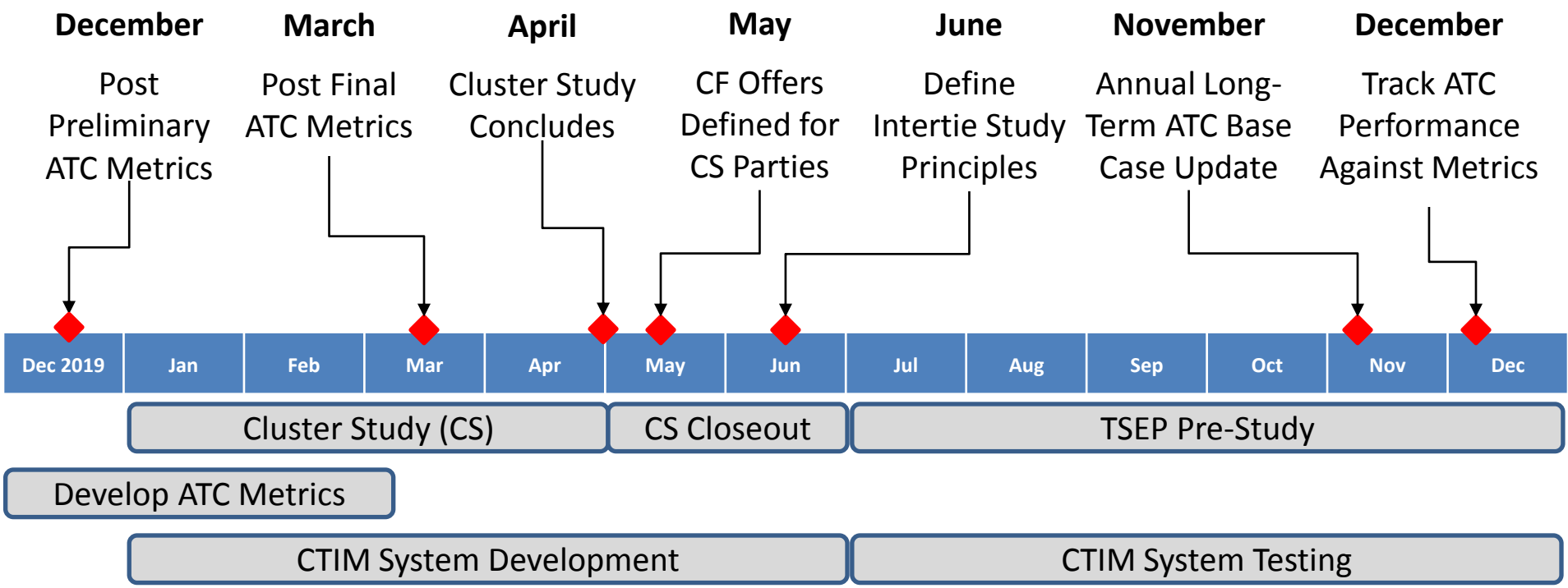
2019 Accomplishments

- The 2019 Long-Term ATC Update indicates positive ATC across all of BPA's flow based constraints
- NT Customer forecasts for non-federal resources were processed for action and are reflected in LT ATC and the commercial needs assessment
- The CTP has offered firm service totaling 1,311 MW which otherwise would not have been awarded
- The 2019 Cluster Study resulted in over 1,675 MW of awardable transmission service
- Significant reduction in the time required to issue all Preliminary Engineering Agreements and Transmission Service Agreement following Cluster Study completion
- For the first time in a decade BPA is poised to conduct a back-to-back Cluster Study

2019 Accomplishments Cont.

- Issued the 2019 Cluster Study Report, 17 close out letters, and 5 Preliminary Engineering Agreements
- Responded to nearly 4,000 MW of incremental TSRs through the cluster study process
- For the first time BPA offered CF on an external path (West of Garrison)
  - Resulted in 150MW of accepted CF
- In addition to the firm transmission offers, we are processing 1,090MW (43 TSRs) of CF offers (approved by the CTP)
- Added requirement to the CF Business Practice that requires customers to request CF as part of a study (next Cluster Study is 2020)
  - Enables efficient CF study and offer process

2020 TIP Commercial Assessment & Studies



Continuous Activities Throughout the Year:

- Commercial Assessment (CTP)
- Planning Redispatch Program Development
- Intertie Study Process Evaluation

Next steps:

1. Develop ATC metrics and deploy in 2020
2. Commercial Transmission Inventory Map will be rolled out in 2020
3. Intertie study process under development
4. Customers should see continual improvement in how their Network Long-Term TSRs get evaluated
5. BPA will provide updates in FY20 as needed