AMPT Transmission 2025 Local Planning Assumptions for PJM RTEP Projects

PJM Sub-Regional RTEP Western Meeting December 13, 2024



AMP Transmission (AMPT) Overview

- AMPT owns and operates PJM network transmission facilities in Ohio:
- AMPT has transmission facilities in the ATSI, AEP, and the DAY Zones
 - Three (3) 138 kV stations
 - Three (3) 138/69 kV stations
 - Fourteen (14) 69 kV stations
 - Total of 46 miles of combined 69 and 138 kV transmission line



AMPT Planning Assumptions

- AMP Transmission (AMPT) plans all facilities in accordance with North American Electric Reliability Council (NERC), ReliabilityFirst (RF), and PJM planning requirements
 - AMPT follows PJM Reliability Planning Criteria as stated in Manual 14B
 - https://www.pjm.com/library/manuals.aspx
- AMP Transmission will conduct a yearly planning assessment in accordance with
 - AMPT FERC 715 planning criteria
 - https://www.pjm.com/planning/planning-criteria/to-planning-criteria.aspx



AMPT Planning Models

- AMPT participates in the development of PJM's RTEP base cases for power flow, short circuit, and stability models
 - Additional information on PJM's Process is described in <u>Manual 14B</u>
- AMP Transmission uses RTEP power flow models and:
 - Performs near-term & long-term annual assessments
 - Studies utilize the latest available PJM RTEP base cases
 - 5-year assessment 2030 PJM RTEP Case
 - Contingencies are updated as per NERC TPL-001 Standards
 - Works with PJM to develop RTEP base case ensuring accurate topology
- All deviations from the above stated assumptions and models will be otherwise noted



AMPT PJM Planning Criteria

- AMPT develops three different categories of PJM projects :
 - Baseline projects are developed to address planning criteria violations which originate from internal and/or PJM RTEP Planning analysis
 - Supplemental projects are not covered by baseline PJM Planning analysis and address internal AMPT drivers that will be covered in more detail
 - Network upgrade projects are developed in conjunction with PJM to provide facilities for connection of new generation facilities and/or upgrades in output of existing generation facilities



Baseline Project Planning Process

- AMPT will:
 - Evaluate projected future system conditions identifying all potential reliability criteria violations
 - Develop associated system improvements to resolve any identified violations to ensure adherence with all related planning criteria
 - Coordinate with PJM to verify accuracy of modeling information and violations identified through PJM's and AMPT's planning analysis
 - Submit any Baseline violations to PJM in accordance with PJM's annual RTEP process
- PJM will review all validated violations at TEAC and/or Sub-regional RTEP Committees
- All Baseline violations and Baseline solutions will be presented and vetted through the PJM TEAC or Sub-regional RTEP Committees
 - All cases, analysis files and available results will be made accessible through PJM's CEII process $A\Lambda$

Supplemental Project Criteria

AMPT will develop supplemental projects (Attachment M-3) that are identified based on the following drivers:

- Customer Service
- Operational Flexibility & Efficiency
- Equipment Material Condition, Performance and Risk
- Infrastructure Resilience
- Other
- All needs and solutions will be reviewed at the sub-regional TEAC meeting for stakeholder input as part of the PJM M-3 Process.



Supplemental Project Planning Categories

Customer Service

- Service to new and existing customers, interconnect new customer load, address load growth, customer outage exposure, and equipment loading
- Customer Service interconnections that follow the M3 process are based on:
 - AMPT's <u>Transmission Facilities Interconnection Requirements Document</u>

Operational Flexibility & Efficiency

- Optimize system reliability through improved system configuration and restoration capabilities
 - Improve system reliability and safety by reducing operator interventions and actions
 - Address safety hazards and reliability risks to system operations



Supplemental Project Planning Categories

Equipment Material Condition, Performance and Risk

- Degraded equipment performance, material condition, obsolescence, including at the end
 of the useful life of equipment or a facility, equipment failure, employee and public safety
 and environment impact
- Enhance legacy facilities to modern engineering design standards

Infrastructure Resilience

Improve the system's ability to anticipate, absorb, adapt to, and/or rapidly recover from a
potentially disruptive event, including severe weather, geo-magnetic disturbances or
physical and cyber security challenges, critical infrastructure reduction, optimize inventory
of replacement facilities

Other

Meet objectives not included in other definitions such as, but not limited to, technological pilots, good utility practice/industry recommendations, environmental and safety impacts, governmental/utility commission regulations, etc. $\Delta \Lambda \Lambda T$

Questions?

