

AEP Local Plans 2010 RTEP Planning Process

PJM Sub-Regional RTEP Committee
Western Sub-Regional Meeting
March 5, 2010

Functional Control

1. PJM has Functional Control of Transmission Facilities in AEP Transmission Zone of PJM
2. Total Transmission Facilities: 22,667 Miles
 - a) 765 kV 2116 Miles
 - b) 500 kV 113 Miles
 - c) 345 kV 3807 Miles
 - d) 230 kV 106 Miles
 - e) 161 kV 46 Miles
 - f) 138 kV 8873 Miles
 - g) Sub-T 7606 Miles

Demand & Generation

1. Demand Modeled in AEP Transmission Zone

a) 2015 Summer	Internal	23,010 MW
	Non-Internal	2,310 MW
	Connected	25,320 MW
b) 2015/16 Winter	Internal	22,550 MW
	Non-Internal	2,270 MW
	Connected	24,820 MW

2. Generation Modeled in AEP Transmission Zone

a) 2015 Summer	AEP	27,340 MW
	IPP	7,430 MW
	Other	650 MW
	Total	35,420 MW

Demand by Operating Company

1. Connected Demand Forecasted in 2015 Summer and 2015/16 Winter in AEP Transmission Zone

a) Appalachian	7,080 MW	8,640 MW
b) Columbus Southern	5,370 MW	4,310 MW
c) Indiana Michigan	5,030 MW	4,380 MW
d) Kentucky	1,310 MW	1,620 MW
e) Ohio	6,620 MW	6,050 MW

2. Since AEP Transmission Zone has Summer and Winter Peaking Sub-Zones, Both Summer and Winter Planning Studies are Conducted

Power Flow Models

1. AEP Supported Development of 2015 Summer RTEP Base Case by PJM and Updates (Retool) to Prior-Year RTEP Base Cases; Used by AEP
2. AEP Supports Development of Annual Series of ERAG MMWG Base Cases via RFC, Including Development of Seasonal, Near-Term, and Long-Term Study Base Cases Used in ERAG and RFC Assessments of Transmission System Performance; Also Used by AEP
3. Above Base Cases Available via PJM or RFC

Baseline Projects (B-Series)

1. Projects to Resolve Reliability Violations per Following Reliability Standards and Criteria:
 - a) NERC Reliability Standards (TPL-001 thru TPL-004)
 - b) PJM Transmission Planning Criteria (Manual 14B)
 - c) AEP Transmission Planning Criteria (Filed Under FERC Form 715 and Posted on PJM Website)
2. PJM Evaluates Compliance and Adherence to Above Standards and Criteria from Regional Perspective (Top Down), and AEP Does Same from Local Perspective (Bottom Up)

AEP Transmission Planning Criteria

1. Noteworthy Differences Between AEP Criteria and NERC Standards and PJM Criteria:
 - a) EHV Facilities Must Stay Below Normal Ratings Under N-1 (Category B) Contingency Conditions
 - b) EHV Facilities Must Stay Below Emergency Ratings Under N-2 Contingency Conditions (Without Manual System Adjustments Allowed Under Category C3)
2. AEP Plans to Update AEP Criteria Document Included Under Part 4 of FERC Form 715 to Provide Needed Clarity to Above Requirements

Network Projects (N-Series)

1. Projects to Enable Interconnection of Queued Transmission Customer Projects (such as IPP)
2. Must Meet Same Standards and Requirements
 - a) NERC Reliability Standards (TPL-001 thru TPL-004)
 - b) PJM Transmission Planning Criteria (Manual 14B)
 - c) AEP Transmission Planning Criteria (Filed Under FERC Form 715 and Posted on PJM Website)
3. PJM Evaluates Regional Impacts, While AEP Evaluates Local Impacts of Queued Projects; PJM Sends Consolidated Reports to Customers

Supplemental Projects (S-Series)

1. Projects Not Covered Under Previous Series
2. Typically are Transmission Load Connections
3. Must Meet “Connection Guidelines to AEP East Transmission System” Posted on AEP Website
 - a) www.aep.com (About Us / Required Internet Postings / AEP Transmission Studies and Guidelines)
 - b) These Guidelines Also Apply to Generator Connections and Transmission Interconnections with Other Utilities
4. Do Not Require Approval by PJM Board
5. Reviewed in Sub-Regional & TEAC Meetings

Questions ???