

# OHIO VALLEY ELECTRIC CORPORATION

## Open Planning Meeting

**April 27, 2011**

Presentation by Jonathan (Jon) Riley  
AEP East Transmission Planning

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# Outline

- History
- Changes affecting the OVEC transmission system
- Participation in the Reliability *First* Process
- Monitoring PJM, MISO and LGEE Developments
- OVEC Planning Study Process
  - Review of Recent Studies
  - Presentation of Latest Transmission Plan
  - Discussion of 2011 Transmission Plan Development
- Input from Stakeholders
- Next Steps
- Questions

# Ohio Valley Electric Corporation (OVEC)

- OVEC was formed in the early 1950s by its neighboring utilities to supply the DOE's uranium enrichment facility in Southern Ohio
- Due to its critical function, OVEC's system was designed using stringent planning criteria with multiple interconnections
  - Load served was about 2,000 MW
  - Current load at facility – approximately 35 MW

# Ohio Valley Electric Corporation (OVEC)

- OVEC owns 2 generating stations, with approx. 2,250 MW of nameplate capacity
- One non-OVEC generator is radially connected to the jointly owned Pierce station
- OVEC has a network of approx. 776 circuit miles of 345 kV lines in Indiana, Kentucky and Ohio, and 4 stations. A 5<sup>th</sup> customer-owned station also lies within the OVEC Balancing Authority Area.
- The OVEC BA has 3-138 kV and 12-345 kV transmission interconnections

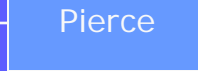
# Present OVEC System

INDIANA



(AEP, Dayton, Duke)

400MW



5 x 205MW



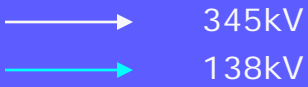
6 x 205MW



OHIO

KENTUCKY

WEST VIRGINIA



# RECENT, ONGOING or UPCOMING CHANGES

## Kyger Creek

- Breaker replacements and relay upgrades (25% completed in 2010; 25% in progress in 2011; 25% expected in 2012; Remainder in 2013)
- Post-X533 re-termination of outlets to Marquis and Pierce
  - Kyger-Marquis was placed in service 11/02/2010
  - Kyger-Pierce was placed in service 12/14/2010

## Dearborn

- Retire Breakers DA & DD (creates Clifty-Buffington ckt.)
- Retire & remove N.O. Tanners – Dearborn #2
- Associated work @Tanners Creek scheduled for late 2011,
- Dearborn work should be completed by September 2012

# RECENT, ONGOING or UPCOMING CHANGES

(continued)

## LG&E/KU

- Added Trimble County #2 and created additional 345 kV outlets by looping in Ghent-Speed 345 kV line

# Participation in Reliability *First* Process

- Model development
- Transmission Performance Subcommittee (TPS)
- TPS Study Teams:
  - Seasonal
  - Near-term
  - Long-term



## Monitor Developments in Neighboring Areas

- Generator Interconnection Queues
- MISO ad hoc study groups
- Stakeholder in Southeastern Inter-Regional Participation Process (SIRPP)

# Recent Studies

## Reliability *First* Corporation assessments

Seasonal: 2010 Summer, 2010/11 Winter

2011 Summer, 2011 Fall (N-1-1, replaces normal winter study),  
2011/12 Winter (abbreviated)

Near Term: 2015 Shoulder (2010), 2016 Fall Light load

Long Term: 2020 Summer (2010), 2021 Summer

# Recent studies

## OVEC Assessments

- Prior to 2010, built on RFC studies and models
- Added sensitivity analyses:
  - Generation levels at nearby plants
  - Transfers: W-E, S-N
  - Transmission Facility Status
- Added analyses of other contingency categories as needed for compliance

# Recent studies

## OVEC Assessments (continued)

- Beginning in 2010, perform complete assessment to meet TPL-001 – TPL-004 requirements
- RFC study models still used as “outside world” starting point when available
- RFC study results may still be used in demonstrating compliance, but as supplemental evidence

# OVEC 2010 Planning Studies

- Draft report posted 10/05
- No significant changes from draft

## Findings

- OVEC facilities planned and approved meet NERC TPL-001 thru -004
- Continue to monitor limited margin on interface with LG&E

# OVEC 2011 Planning Studies

- 2011 Summer (RFC study model + OVEC updates)
  - DC screening TPL-001, TPL-002, TPL-003
- 2016 Summer (ERAG model + OVEC updates)
  - AC & DC screening TPL-001, TPL-002, TPL-003
- 2021 Summer (ERAG model + OVEC updates)
  - DC screening TPL-001, TPL-002, TPL-003

# OVEC 2011 Study Results

- Based on initial screening, OVEC facilities now planned and approved expected to meet NERC TPL-001 thru -004 (pending additional input & study)
- Continue to monitor limited margin on interface with LG&E

# Input From Stakeholders

- New information about load or generation?
- Transmission changes not already represented in MMWG/RFC models?
- Economically beneficial transmission improvements to study?



## NEXT STEPS

- Incorporate additional Stakeholder input
  - Conduct additional analysis as needed
  - Interact with Committee based on results
- Document additional results
- Conference call, email exchange or meeting to discuss significant new findings
- October meeting to finalize report

QUESTIONS?