

# OHIO VALLEY ELECTRIC CORPORATION

## Open Planning Meeting

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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 2012 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

Dearborn

(AEP, Dayton, Duke)  
400MW

G

Pierce

D  
O  
E

Kyger

5 x 205MW

G

Clifty

6 x 205MW

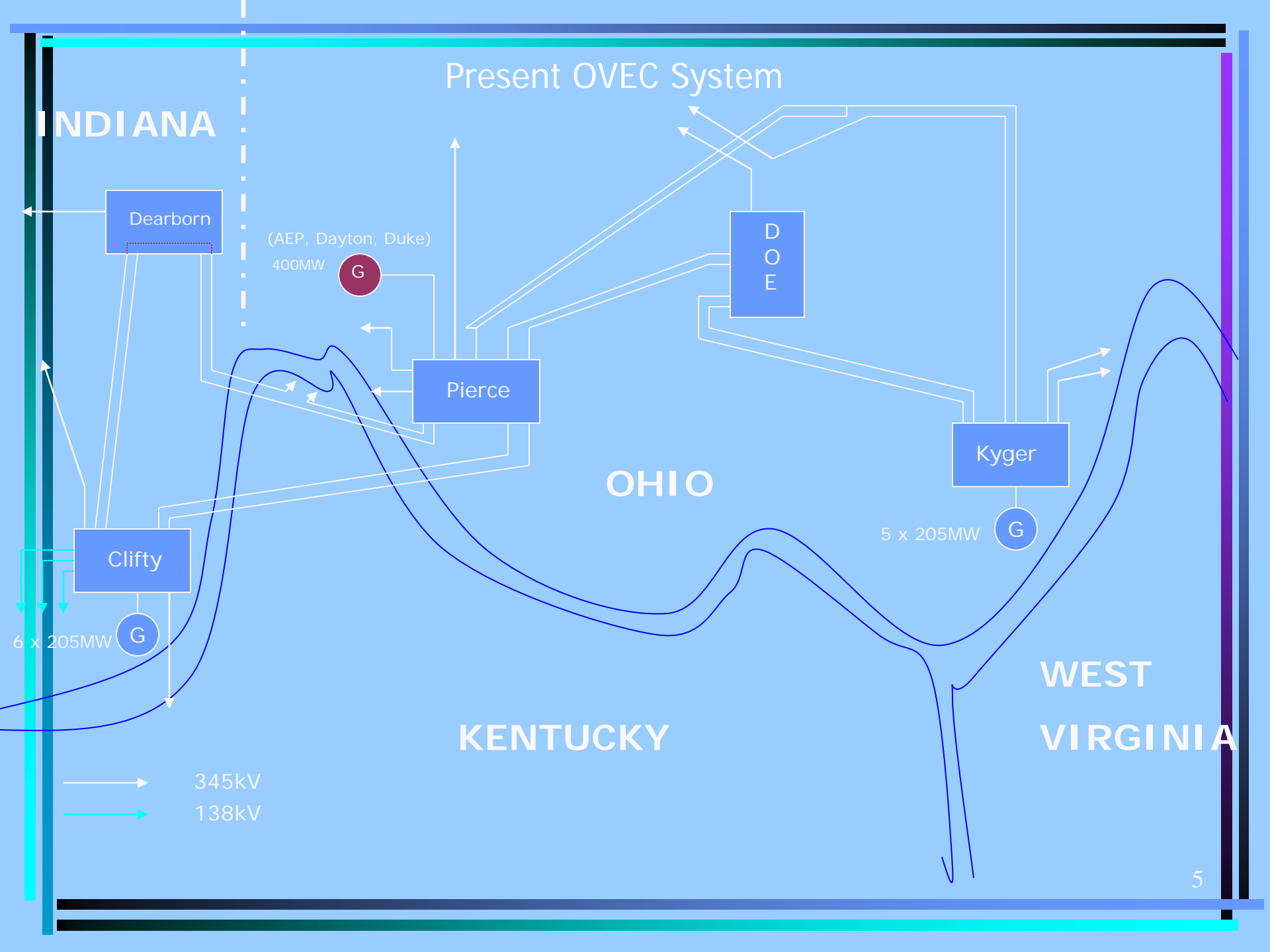
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OHIO

KENTUCKY

WEST VIRGINIA

→ 345kV  
→ 138kV



# RECENT, ONGOING or UPCOMING CHANGES

## Kyger Creek

- Breaker replacements and relay upgrades continuing – expected to be completed in 2013

## Dearborn

- Retire Breakers DA & DD (creates Clifty-Buffington ckt.)
- Retire & remove N.O. Tanners – Dearborn #2
- Dearborn work was accelerated – Large volume oil-filled equipment was removed from service 4<sup>th</sup> Q 2011

# RECENT, ONGOING or UPCOMING CHANGES

(continued)

## Recent nearby PJM Deactivation requests

- Beckjord 1-3 effective 5/1/2012
- Beckjord 4-6 effective 4/1/2015
- Sporn 1-4 effective 6/1/2015
- Tanners Creek 1-3 effective 6/1/2015
- Kanawha River 1,2 effective 6/1/2015
- Muskingum River 1-4 effective 6/1/2015
- Others in PJM further from OVEC

# 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)
- Generator retirement requests

# Recent Studies

## Reliability *First* Corporation assessments

Seasonal: 2011 Summer, 2011/12 Winter  
(abbreviated)

2011 Summer, 2011 Fall (N-1-1),

Near Term: 2016 Fall Light load

Long Term: 2020 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 2011 Planning Studies

- Draft report posted 11/03
- No significant changes from draft
- Final report posted 11/30

## Findings

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

# OVEC 2012 Planning Studies

- 2012 Summer (RFC study model)
  - DC screening TPL-001, TPL-002, TPL-003
- 2017 Summer (ERAG/RFC model + OVEC updates)
  - DC screening, AC to Follow TPL-001, TPL-002, TPL-003 & TPL-004
- 2022 Summer (ERAG/RFC model + OVEC updates)
  - DC screening, AC to Follow TPL-001, TPL-002, TPL-003 & TPL-004

# OVEC 2012 Study Results

- Recent official retirement requests require re-run of initial screening
- Re-analyze after models updated to reflect recent retirement announcements for nearby plants
- Will assume removed generation replaced within respective market unless advised otherwise
- May require use of some queued generation not yet committed
- Sensitivity analysis of alternative dispatch scenarios (High wind output, increased gas utilization)

# 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?