

A large, white, lattice-structured transmission tower stands against a clear blue sky. Several power lines extend from the tower across the frame. The tower is the central focus of the background image.

# Transmission Expansion Advisory Committee Meeting

## 2010 Market Efficiency Analysis Update

January 6, 2011



# Summary COMED AREA Proposed Upgrades

Proposed Projects	Expected ISD	Expected Costs* (\$ millions)	Benefit/Cost Ratio**	Results	Notes
Byron-Cherry Valley-Pleasant Valley 345 KV	6/1/2015	112.5	1.57	Pass	
Byron-Pleasant Valley 345 KV	6/1/2015	105	2.02	Pass	Optimal configuration pending cost review
Cherry Valley - Pleasant Valley 345 KV	6/1/2015	67.5	3.04	Pass	High congestion created on Byron-Cherry Valley 345 KV line
Byron - Charter Grove- Wayne 345 KV, Charter Grove 345/138 KV TX.	6/1/2015	275	0.71	Fail	
Byron - Wayne 345 KV	6/1/2015	175	1.08	Fail	
Lasalle Project Single Circuit: Pontiac Midpoint -Reynolds-Dumont 345 KV	6/1/2014	265	0.08	Fail	
Lasalle Project Double Circuit: Pontiac Midpoint -Reynolds-Dumont 345 KV	6/1/2014	335	0.08	Fail	
LaFayette Project Single Circuit: Quad Cities-Kewanee-Pontiac Midpoint-Reynolds-Dumont 345 KV, Kewanee 345/138 KV TX	6/1/2015	520	0.36	Fail	
LaFayette Project Double Circuit: Quad Cities-Kewanee-Pontiac Midpoint-Reynolds-Dumont 345 KV, Kewanee 345/138 KV TX	6/1/2015	655	0.33	Fail	
Byron - Pleasant Valley 345 KV + Lasalle Project Single Circuit	6/1/2015	370	0.66	Fail	
* Costs greater than \$50 million require independent review					
**Benefit/cost ratio must exceed 1.25 and is calculated as NPV Benefit/NPV Cost for 15 years starting from projected in-service date.					



# Market Efficiency New Proposed Projects

Proposed Projects		Driver	Date submitted	Company	Expected ISA*	Estimated Costs*
1	<p>Liberty East:</p> <ul style="list-style-type: none"> <li>• New 500/230 kV transformer at the Hunterstown substation</li> <li>• New Conewago 230 kV substation connecting the Jackson – Three Mile Island 230 kV and West Shore - Brunner Island 230 kV transmission lines near their intersection in York County</li> <li>• New single or double-circuit 230 kV transmission line from the Hunterstown to new Conewago Substation</li> </ul>	Congestion in Pennsylvania including 50045005 Interface	11/23/2010	LS Power	6/1/2015	Single Ckt. \$110-\$140 million Double Ckt. \$130-\$165 million
2	<ul style="list-style-type: none"> <li>• Reconductor Quad Cities-Cordova 345 kV</li> <li>• Reconductor Nelson-Electric Junction 345 kV</li> <li>• Reconductor Woodstock-Marengo 138 kV</li> <li>• Reconductor Glidden-Glidden Tap 138 kV</li> <li>• Combinations of above line reconductoring</li> </ul>	COMED congestion	12/21/2010	ComEd	TBD	TBD
3	<ul style="list-style-type: none"> <li>• New 230 kV transmission line from Keystone to Shawville</li> </ul>	Congestion in Pennsylvania including Altoona-Bear Rock and 5004500 Interface	12/22/2010	LS Power	6/1/2015	\$120-\$155 million
4	<ul style="list-style-type: none"> <li>• New 345/138 kV transformer at the Shenango substation</li> <li>• New 345 kV transmission line from Shenango to Handsome Lake</li> </ul>	Congestion in around Ohio and Pennsylvania including Elrama-Mitchell, Mitchell-Union Junction, and AP South Interface	12/22/2010	LS Power	6/1/2015	\$90-\$110 million
5	<ul style="list-style-type: none"> <li>• New single or double 500/345 kV transformers at the Bath County substation</li> <li>• New single or double-circuit 345 kV transmission line from Kanawha River-Bath County</li> </ul>	Congestion in and around West Virginia and Virginia including AP South Interface	12/29/2010	LS Power	6/1/2015	\$255-\$325 million

\*Expected ISA and Estimated Costs developed by company proposing project.

- Evaluate new COMED proposed upgrades and affect on previous project study results.
- Perform Independent Review of costs associated with Byron-Pleasant Valley 345 KV upgrade and alternative projects
- Perform sensitivity analysis on key input assumptions for Byron-Pleasant Valley 345 KV upgrade
- Run reliability analysis on all upgrades
- Based on cost review, sensitivity analysis, and reliability analysis will determine recommendation to PJM board
- Study new proposed Market Efficiency Projects
- Determination of assignment for recommended projects – outside of scope of TEAC
- Develop 2011 Market Efficiency Input Assumptions