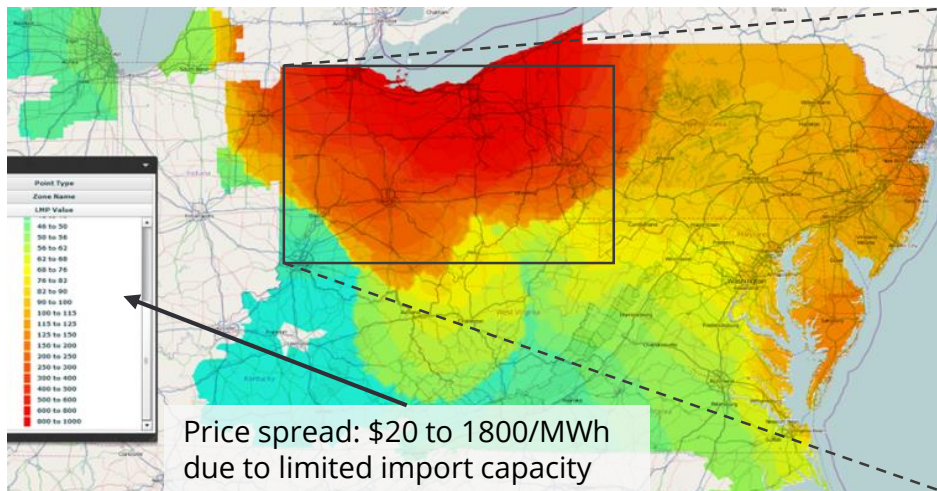


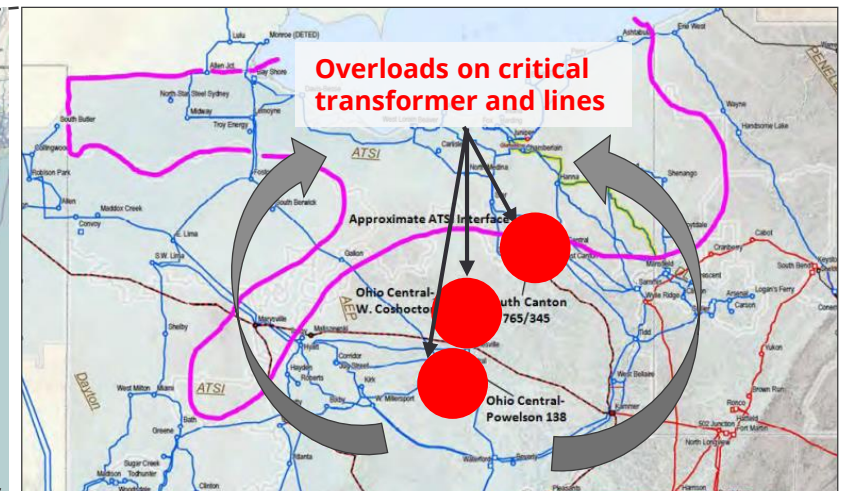
# NewGrid Topology Optimization Software

## Increased Grid Resilience

- Resilience: *"ability to reduce the magnitude and/or duration of disruptive events."*
- NewGrid Router identifies grid reconfigurations to:
  - *Quickly adapt the grid to the disruptive event conditions*
  - *Minimize impacts by more quickly relieving overloads and consumer disconnections*
  - *Expedite recovery from events by providing more operational options*
- Case Study: 15-18 July, 2013 PJM Extreme Peak with Key Outages\*



PJM Real Time Prices, 18/7/2013, 15:30 (pjm.com)



**Fully relieve overloads** by diverting flow around them, and **increase import capacity** to N Ohio

Sources:

National Infrastructure Advisory Council (NIAC), *Critical Infrastructure Resilience Final Report and Recommendations*, 2009, pages 2-11.

<http://www.pjm.com/~media/committees-groups/committees/mrc/20130829/20130829-item-13-hot-weather-operations-presentation.ashx>

\* P. Ruiz et al, "Topology Control Algorithms (TCA) – Simulations in PJM Day Ahead Market and Outage Coordination," presented at FERC Technical Conference on Increasing Market Efficiency through Improved Software, Docket AD10-12-006, Washington, DC, June 2015.