



New Remedial Action Scheme

North Hampton RAS

Presentation to PJM



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- PJM System Operations Subcommittee**
- PJM Relay Subcommittee**
- PJM Planning Committee**
- PJM Operating Committee**
- PJM Market Implementation Committee**
- PJM Markets and Reliability Committee**

Yorktown Generation

- Environmental regulations make continued operations impractical
- Yorktown 1&2 coal-fired generators will retire April 2017



- **Under certain conditions**
 - Voltage collapse in the Peninsula area
 - Significant overloads
- **Long list of N-1-1 contingencies that result in voltage collapse and thermal overloads**

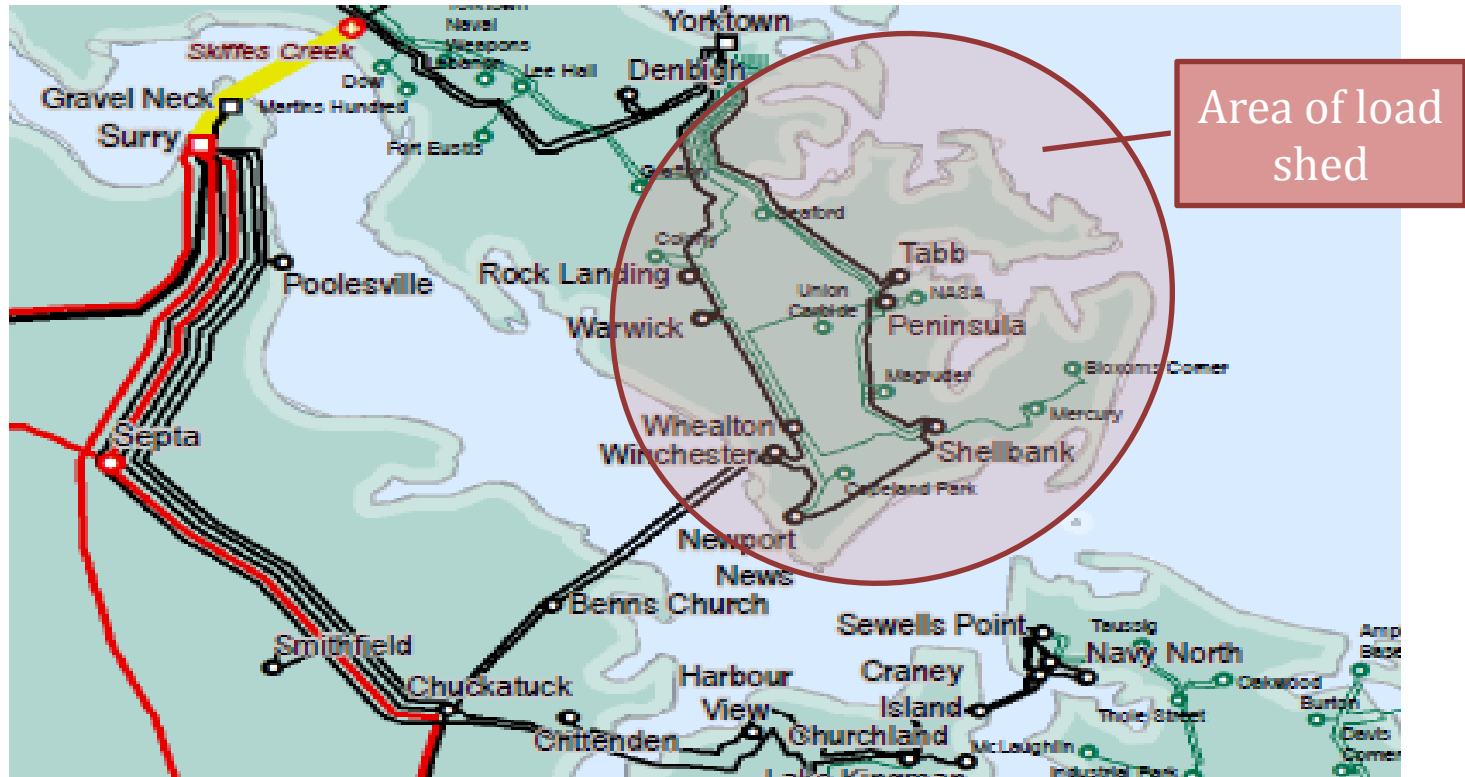
- **PJM project b1905 establishes a new 500kV line across the James River.**
 - PJM's board approved in May 2012
 - Virginia State Corporation Commission (SCC) approved on 11/26/2013 and granted a CPCN
- **Army Corps of Engineers permit submitted**
 - Approval of Army Corps permit is still pending
- **Line cannot be built in time to cover Yorktown retirement**

Temporary North Hampton RAS



- RAS is armed at PJM's discretion
- Detects loss of certain facilities
- Trips remaining feeds to Yorktown area
 - Drops about **150,000 customers**
 - Prevents Voltage Collapse
- Rotating outages will follow until facilities are repaired

North Hampton RAS



— RAS is only a stopgap measure

- Does not provide a long term solution
- Drops too much load
- Repair time could be lengthy
- Per PJM Manual 07, new RASs should be temporary



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