

LS Power



Leeds-Athens PAR Project Introduction North America Transmission, LLC

Presentation to NYISO
Electric System Planning Working Group

August 2010

Bringing Energy Forward



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Project Sponsor

- North America Transmission, LLC, a member of the LS Power Group of companies
 - LS Power is a power generation and transmission group
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Power Generation

- Over 20,000 MW of development, construction, or operations experience
- Active development of renewable and fossil generation resources

Transmission

- ON Line, 235 mile 500 kV Project, to Begin Construction in 2010
- Cross Texas, 200+ miles of 2x345 kV, to Begin Construction in 2011
- Active development of other transmission infrastructure

Acquisition

- Over \$4 billion in private equity capital dedicated to energy sector
- Acquired ~ 15,000 MW of power generation



LS Power Transmission Project Portfolio



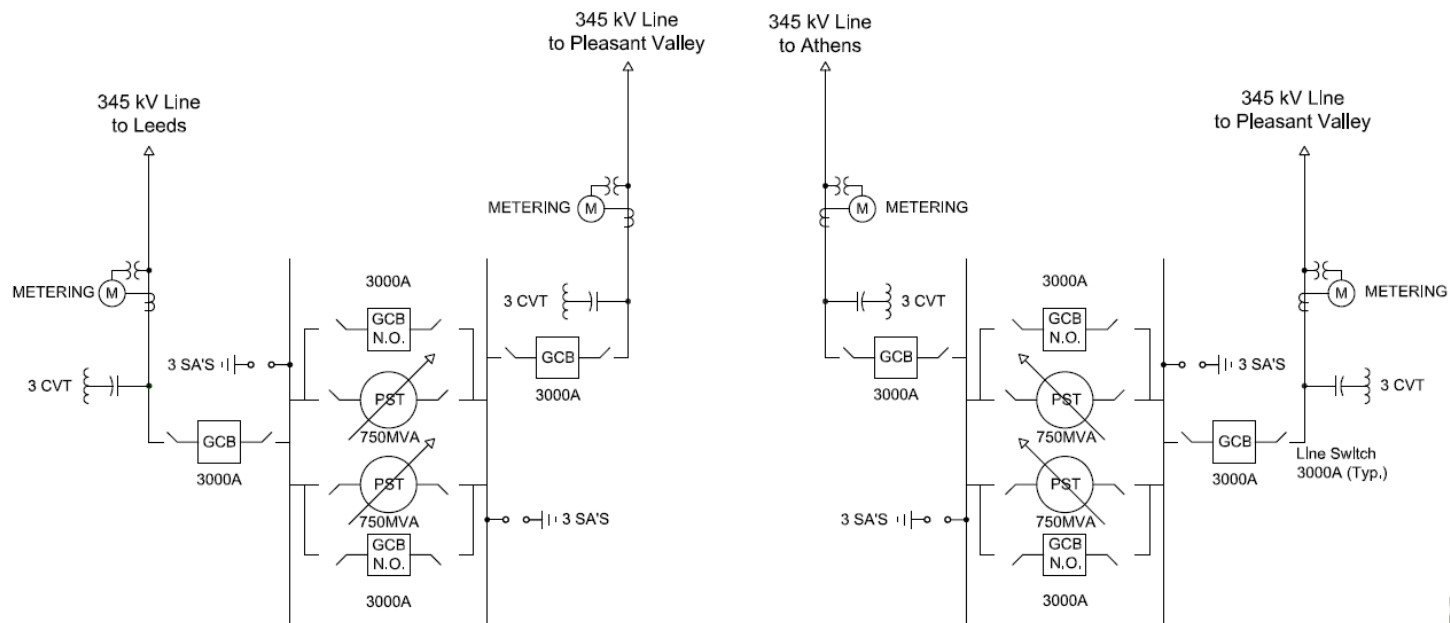
Project Need

- CARIS Phase 1 Report Identified Leeds-Pleasant Valley 345 kV as the Top Congested Element in Cost
 - Over \$2 Billion Historic Congestion in 2009 \$
 - Over \$1.3 Billion Projected Future Congestion in 2009 \$
- NAT considered the following solutions
 - Additional 345 kV AC Transmission Lines
 - Leeds-Pleasant Valley 2
 - Leeds-Pleasant Valley-Millwood
 - Leeds-Pleasant Valley-Sprainbrook
 - Leeds-Pleasant Valley-Rainey
 - Leeds-Pleasant Valley-W 49th Street
 - Leeds-Pleasant Valley-E 179th Street (new 345 kV substation)
 - Additional DC Transmission Lines From Leeds South
 - Series Compensation of Leeds-Gilboa and Leeds-Roseton
 - Phase Angle Regulators on Lines From Leeds
- Performed Production Cost Modeling and Load Flow Modeling
- Leeds-Athens PARs (20 Degree Phase Shift) Had Highest Benefit:Cost Ratio



Project Description

- Addition of Four (4) 750 MVA Phase Angle Regulators (PARs) in Vicinity of Leeds/Athens Substations
 - Two 750 MVA PARs in parallel on Leeds-Pleasant Valley 345 kV
 - Two 750 MVA PARs in parallel on Athens-Pleasant Valley 345 kV





Project Schedule

- 2010 - CARIS Phase 2 Study

Subject to favorable study results and beneficiary approval:

- Q1 2011 – Tariff filing
- Q2 2011 – Procurement and Construction Contracts
- Q3 2011 – Financing and Order Equipment
- Q2 2013 – In-Service Date

Potential to accelerate schedule



Project Cost and Risk Mitigation

- Estimated Total Capital Cost \$67 Million, Including 10% Contingency
- Estimated Production Cost Savings \$14 million in 2015
- Estimated Load Savings \$159 million in 2015
- Risk Mitigation
 - Propose cost-of-service ratemaking
 - Propose option of levelized revenue requirement to better match savings – estimated \$11.2 million
 - Willing to discuss other risk mitigation



Scoping Scenarios

- Base Case
- Scenarios Under Consideration
 - Energy and Demand at High End of Gold Book Forecast
 - High/Low Fuel Price Forecasts
 - Higher CO2 Emissions Cost
 - National Renewable Energy Standard
 - New generation
 - Different mix of reserve units in database extension
 - Indian Point Retirement
 - Others
- ESPWG Scenarios

