

LS Power



Sunrise River Energy Station Chisago County, Minnesota

June 2009

Bringing Energy Forward



LS Power

- LS Power is a power generation and transmission group

Power Generation

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

Transmission

- Advanced development of Southwest Intertie Project and Wyoming-Colorado Intertie Project
- Designated to build 200+ miles of 2-345 kV in Texas to support renewable resources
- Active development of transmission infrastructure

Acquisition

- Over \$4 billion in private equity capital dedicated to energy sector
- Acquired ~ 12,000 MW of power generation

Functional Expertise

Project Development

Licensing & Environmental

Regulatory & Transmission

Power Marketing

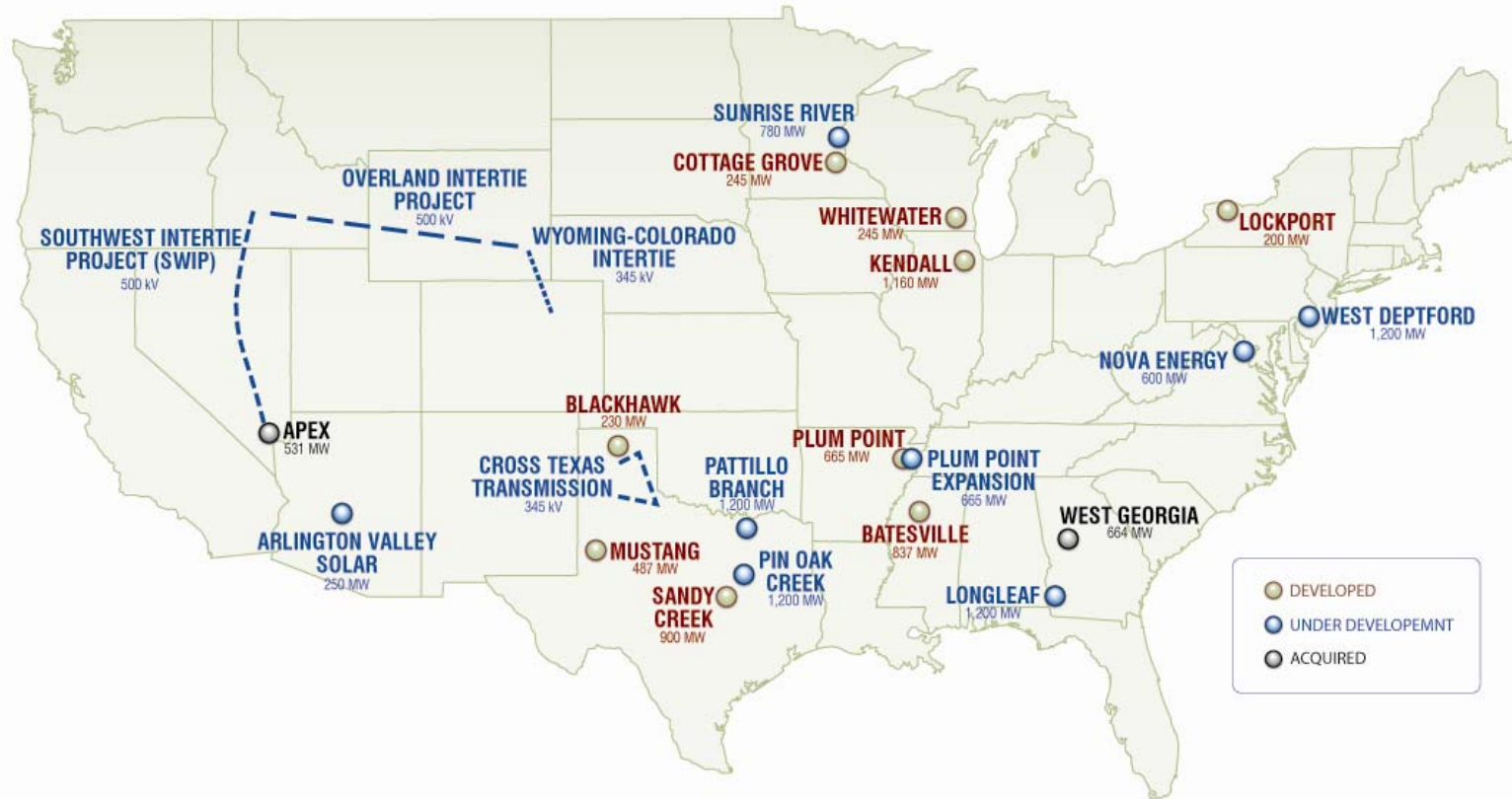
Project Finance

Construction & Operations

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Project Portfolio



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Development Philosophy

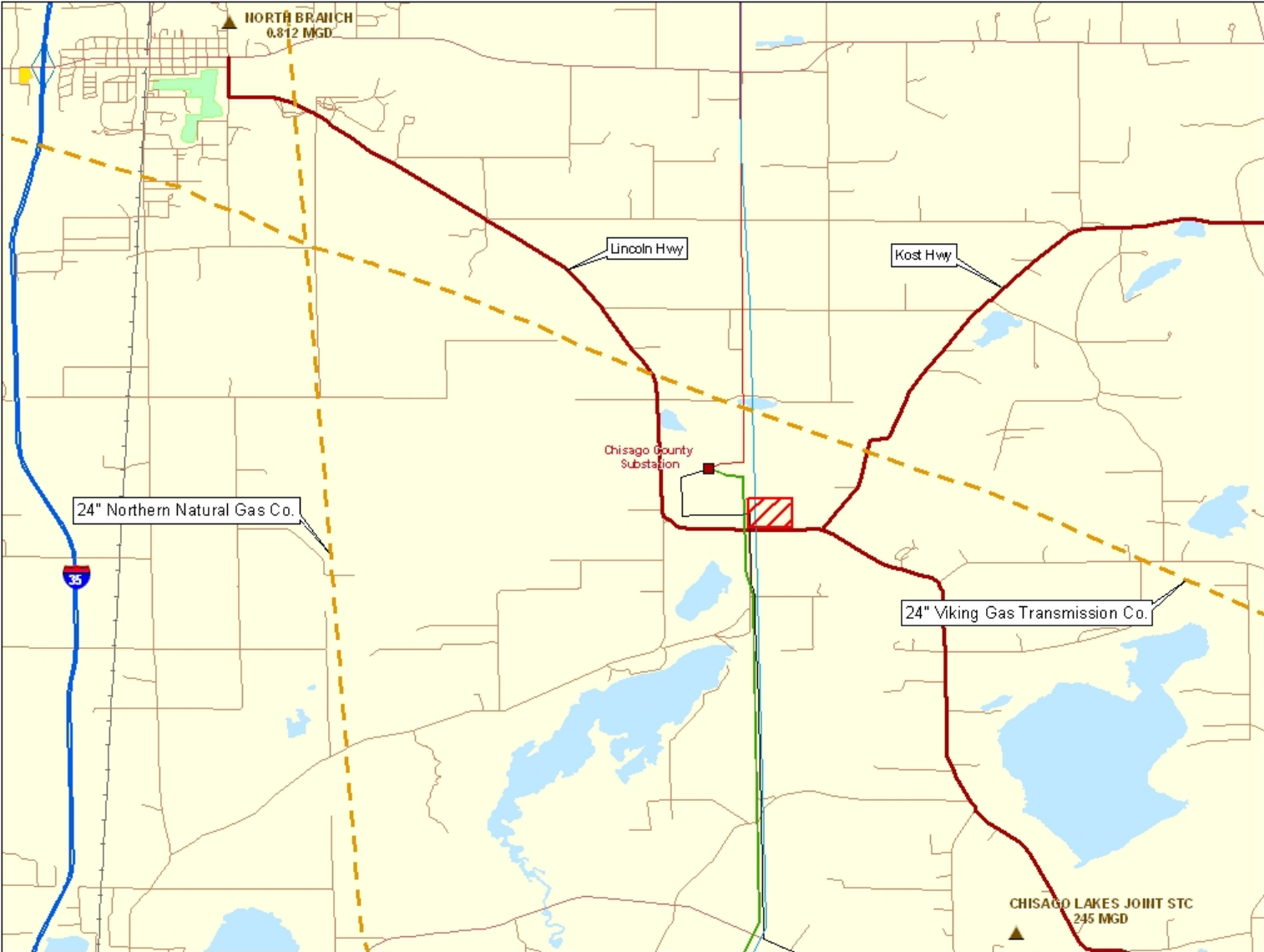
- Meet the needs of our customers
 - Safe, reliable and competitive energy
 - Renewable and fossil power generation
 - Transmission infrastructure
- Safe and protective of the environment
 - Modern designs with advanced technologies
 - Tailor projects sensitive to the locality and region
- Work with communities
 - Projects that fit with community plans and goals
 - Encourage using local subcontractors and hiring local workers



Plum Point Groundbreaking Ceremony



Sunrise River Energy Station Site Location and Interconnections



Sunrise River Energy Station – Project Overview

- Natural gas-fired electric generating facility with fuel oil backup
- Intermediate and/or Peaking Technology
- Electrical output of up to 780 MW (summer rating) to serve the needs of Minnesota, Wisconsin, and the Upper Midwest (working with customers to determine optimal plant size)
- Capital investment of \$300 million or more
- Employment of hundreds of construction workers over an approximately two-year construction period
- Operating team of up to 25 highly skilled individuals
- Development period of approximately two years



Sunrise River Energy Station – Project Design

- Peaking - Simple Cycle Technology
- Intermediate - Combined Cycle Technology
 - One or Two “F-Class” Combustion Turbine Generators
 - Two Heat Recover Steam Generators with exhaust stacks (150 – 200 ft)
 - One or Two Steam Turbine Generators
- Cooling tower
- Raw water and demineralized water storage tanks
- Fuel oil storage and unloading
- Connections to CLJSTP and possibly NBSTP
- Ground wells for supplemental water supply
- Connect to Northern Natural Gas (24”) and/or Viking (24”) Pipelines
- Connect to 345 kV transmission system at NSP’s Chisago County Substation (adjacent parcel)



Sunrise River Energy Station - Comparable Projects



Cottage Grove, MN 245 MW



Kendall County, IL 1160 MW



Sunrise River Energy Station - Water Supply

- Station water needs
 - Up to 5 million gallons per day (MGD).
 - Typical requirements - approximately 3.5 MGD, or less.
- Preferred supply - effluent from CLJSTP
 - Average flow of approximately 1.1 million gallons per day (MGD).
 - Existing storage – 34 million gallons.
- Potential additional effluent from NB STP
- Backup supply – ground water
 - Most local wells draw from Franconia-Ironton-Galesville (FIG) aquifer or more shallow glacial deposits.
 - We anticipate drawing from wells in the Mt. Simon Hinckley formation
 - Any new wells would require permit from MN DNR.
 - Will not seek more than 2 MGD average groundwater withdrawal.



Sunrise River Energy Station Groundwater Appropriation Process

- **Design test plan to assess ability of aquifer to support project**
Working closely with MDNR to develop plan to include construction of a test well designed to provide data about the pumping impacts (if any) to existing local wells and the aquifer.
- **Additional consultation with MDNR to refine test plan**
Compile data generated during the first pumping test to establish the available yield of the well and determine the locations for additional wells, if necessary. Ongoing coordination with MDNR to modify the testing plan if warranted.
- **Submit application for groundwater appropriation**
An application cannot be submitted until all initial testing is completed, verified, and found to be acceptable by the MDNR.



Sunrise River Energy Station – Wastewater

- Station effluent
 - Up to 1 million gallons per day (MGD) – mostly cooling tower blowdown.
 - Typical requirements – approximately 0.75 MGD, or less.
 - Operation of cooling tower concentrates parameters in supply source.
- NPDES permit from MN PCA required (public input)
- Power project outfall to be co-located with CLJSTP Outfall



Sunrise River Energy Station Major Permits & Approvals

- Lent Township – Building Permits/Approvals
- MN Public Utilities Commission
- MN Pollution Control Agency
- MN Department of Natural Resources – Water Appropriation/Use
- US Army Corps of Engineers – Nationwide and/or individual permits to address potential wetlands/watercourse impacts
- Federal Energy Regulatory Commission – Exempt wholesale generation status and approval of rates
- Federal Aviation Administration – Tall structures
- Midwest ISO – Electrical Interconnection Approval



Sunrise River Energy Station - Benefits

- New Generating Capacity in Minnesota
- Minimum \$300 million investment in Chisago County
- Real property tax payments of approximately \$915,000/year using 2008 tax rates
- Additional Payment-in-lieu of personal property taxes of up to \$600,000 per year
- Purchases from local merchants/vendors
- Minimal new electric and gas lines
- Up to 25 high-paying operating positions
- Creation of hundreds of construction jobs over two-year construction period



Sunrise River Energy Station - Project Timeline

