BIG STONE II
POWER PARTNERS IN GENERATION

Applicants' Witness
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Summary
Applicants' Exhibits 11 and 48

Overview

- Integrated Resource Planning Process
- Need for Big Stone Unit II
- Demand-Side Management Programs and Renewables

Integrated Resource Planning

- Montana-Dakota's IRP process:
  - Load forecasting
  - Demand-side analysis
  - Supply-side analysis
  - Integration analysis
- Input from the IRP Public Advisory Group
- Load Forecast
  - End-use model develops long-range load forecast for integrated system (Montana, North Dakota, and South Dakota)
  - Energy projected to grow 1.3 percent annually for ten years
  - Peak demand projected to increase 1.0 percent annually for ten years

Need for Big Stone II

- MDU projected capacity deficits: 101 MW in 2011, 134 MW in 2016, and 164 MW in 2021
  - Expiration of 66.4 MW baseload power purchase agreement in 2006
  - Projected increasing demand
- Big Stone II share (116 MW) is the best-cost resource option:
  - Baseload coal has lower and less volatile prices, and more stable fuel supply than natural gas; provides a better long term value for our customers
  - Big Stone II is a timely opportunity to participate in a baseload plant with significant economies of scale

Demand-Side Management and Renewables

- DSM programs
  - 2.5 MW of current peak-shaving programs
  - 6.5 MW of DSM and conservation planned for 2006-2010
- Renewables
  - Power purchase agreement for 31.5 MW of wind in South Dakota
  - Additional 30 MW of renewable power generation by 2015

Intervenors Wind/Gas Combo

- Assessment of the 800-1200 MW of wind alternatives:
  - Our pro-rata share would be too large for MDU system
  - Would cause reliability and operating stability problems
    - 36% to 51% of total system peak demand
  - Negative Locational Marginal Pricing: $4 - 6 million/year penalty

Summary

- MDU could justify 126 MW of baseload
  - Compared to our proposed 116 MW share of Big Stone Unit II
    - Two additional years of customer growth
    - Defer next baseload addition
- MDU is pursuing DSM *and* renewables *and* Big Stone Unit II