



Integrated Resource Plan

Generation Technology Reports

Nuclear Industry Overview & IRP Analysis Parameters

Navigant Consulting, June 2005

****PUBLIC VERSION****

Generation Technology Reports for AmerenUE Integrated Resource Planning

Summary:

These reports summarize the various analyses and studies that were completed to provide generation technology inputs for the AmerenUE integrated resource planning process. The studies included assessments of various potential generation technologies to supply capacity for AmerenUE. The assessments consisted of both “screening level” and, in some cases, detailed evaluations of different generation technologies. Several of the evaluations included a comparison of technical features, as well as a comparison of costs, performance and emissions.

The eight reports, in chronological order, are:

1. **Venice Combined Cycle Study** – Black & Veatch, December 2002
2. **Strategic Siting Study** – Burns & McDonnell, September 2004
3. **Missouri Pumped Storage Project Concept Study** – Montgomery Watson Harza, September 2004
4. **Rush Island Unit 3 Feasibility Study** – Black & Veatch, October 2004
5. **Rush Island Unit 3 Conceptual Cost & Performance Study** – Sargent & Lundy, October 2004
6. **Generation Technology Assessment** – Burns & McDonnell, November 2004
7. **Nuclear Industry Overview & IRP Analysis Parameters** – Navigant Consulting, June 2005
8. **IGCC Technology Assessment Report** – Sargent & Lundy, September 2005

Report Number: 7

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In this presentation, Navigant Consulting provides an overview of the current status of the nuclear power generation industry and recommendations on which nuclear technologies Ameren should model in its IRP analysis. The report reviews recent events in the market and at the regulatory and corporate levels that are driving renewed interest in nuclear power in the United States. It provides survey information and discussion of capital costs, operating costs, construction schedule and decommissioning.

It lists several competing nuclear plant designs and recommends that AmerenUE model the two on which NuStart, a consortium of six utilities, GE and Westinghouse, is focusing. Those two nuclear technologies are:

- Westinghouse AP1000 pressurized water reactor, 1,150 MW
- General Electric ESBWR boiling water reactor, 1,340 MW

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