GEAUX GREEN!

The Challenges of the Owner/Operator

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Nuclear remains the only economically viable and technically proven source for the large scale, baseload generation of clean, affordable power

“Key Mitigation Technology” per IPCC

- Environmentally friendly
- Long and outstanding track record
- Low and stable fuel cost
- Zero emissions with no carbon output
A great time to act

Entergy ranks among cleanest U.S. utilities.

Named ‘Best in Class’ since ‘05 by Carbon Disclosure Project.

Awarded ‘07 Climate Protection Award by EPA.

Listed on Dow Jones Sustainability Index since ‘01.

New power plants are required to provide the electricity for the future.

Right now, no new nuclear plants are being built. It takes years to build new nuclear facilities.

Steps are being taken today to ensure that efficient and environmentally friendly plants can be built.

The sooner new power can be brought online, the sooner businesses, consumers, and our Earth will benefit.
New Nuclear self supply option for 2017-2025 timeframe

Entergy is developing new nuclear options for both Louisiana & Mississippi.

Our decision to build will be dependent on how well we can resolve or mitigate the project risks and overcome the challenges.

- We are developing options to build two new nuclear plants in the 2017 to 2025 timeframe to meet supply planning needs.
- Nuclear development will utilize a phased decision approach.
- Initial phase is to submit NRC applications for combined Construction and Operating License (COLAs) by 12/2008 for 2 sites - Grand Gulf and River Bend.
- We are currently taking actions, along with NEI and the industry, to manage and mitigate the risks associated with the challenges the renaissance faces.
The need for New Nuclear is compelling, but the challenges must be overcome:

- Untested Licensing Process
- EPC Terms and Conditions
- Financing
- Skilled Talent to Build and Operate
- Supply Chain
- Certainty in Cost and Schedule
New, Untested Licensing Process

Removing risk from the licensing process...

- Restructured process
- Stable regulatory requirements
- Defined hearing procedures
- Oversight of licensing boards
- Design-centered review groups
- Ongoing ITACC verification
- High threshold, limited window for intervention after COL approval

Developers have regulatory approvals before significant capital spent; federal standby support covers delays from licensing, litigation
To keep new nuclear renaissance moving forward, the next critical hurdle after Licensing is to structure a mutually-agreeable EPC
Economics and Financing

Economics of new baseload...

- New capacity will be expensive; total costs not yet known
- Evolving costs surrounding commodities, labor
- Supportive rate policies at the state level
- Loan guarantees from the federal government
- New nuclear plants competitive with other baseload electricity
The work force challenge...

- Aging nuclear workforce
- Knowledge retention
- Nuclear not on radar screens of many grads
- Challenges exist in areas of both construction and operation
Skilled Talent to Build and Operate

Addressing the work force challenge...

• Nuclear engineering enrollments up dramatically
  • Undergraduate: from 470 in ’98/’99 academic year to 1,933 in ’06/’07
  • Graduate: from 220 in ’98/’99 academic year to 1,153 in ’06/’07

• Joint initiatives with organized labor and the Departments of Labor, Education, Defense

• Industry/community college programs in 14 states

• Skilled crafts: collaborative programs in 10 states
Is the supply chain adequate...

- Much interest from companies, few suppliers for certain components
- New nuclear is well underway around the world, not yet in the United States
- Questions about availability of supply chain vendors add cost uncertainty to projects
Supply chain moves to respond...

- Supply chain adequate for "first wave"
- Long-lead materials (e.g., forgings) already fabricated or ordered for first wave
- Component manufacturing will respond to sustained demand
- Early signs that suppliers are gearing up
Entergy has secured the ultra-large forgings for the reactor pressure vessel and the steam turbine generator rotors.
Certainty in Cost and Schedule

These challenges must be met to provide certainty...

- Licensing, EPC, Financial, Talent, Supply Chain uncertainties all can impact cost and schedule of a new nuclear project
- Commodity availability and escalation
- Manufacturing capacity
- Labor (availability, productivity)
- EPC (risk allocation, demand, delivery)
Cost and Schedule Certainty

Road map for success...

- Detailed design complete before construction
- Integrated engineering, construction schedule
- Standardization
- Focus on quality assurance
- Improved planning and construction management tools
- Improved construction techniques
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