

NUCLEAR CONSTRUCTION ISSUES

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Shaw: Well-Positioned for Nuclear Renaissance

- AP1000 Consortium
 - Shaw owns 20% of Westinghouse
 - Shaw is EPC contractor for domestic AP1000™ projects and EPCM contractor in China
- EPC Contracts
 - Shaw/Westinghouse consortium has the first EPC contracts awarded in 30 years to build new U.S. nuclear plants

Shaw: Well-Positioned for Nuclear Renaissance (cont.)

- Maintenance
 - Shaw provides maintenance at 42 of 104 operating U.S. nuclear plants
- Pipe Fabrication
 - Shaw supplies more than 50% of fabricated pipe in the United States
 - Shaw is largest U.S. supplier of nuclear-grade fabricated pipe

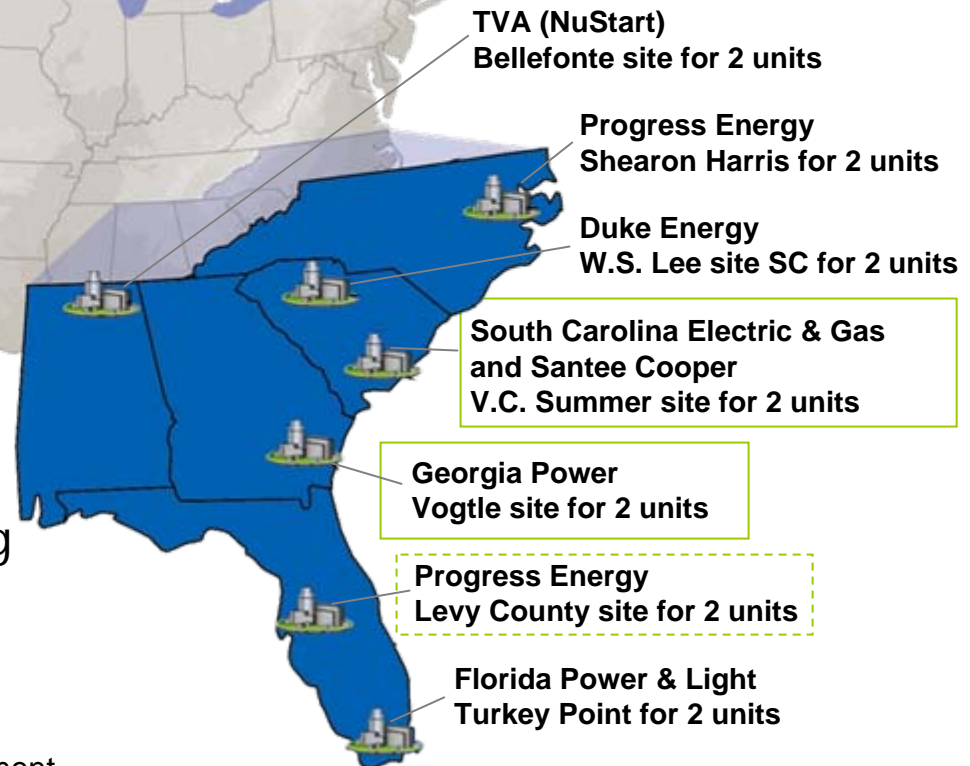
Module Fabrication and Assembly Facility


- 600,000 square-foot facility located in Lake Charles, Louisiana
- Joint venture with Westinghouse
- Will assemble structural, piping and equipment modules for new nuclear plants using AP1000™ technology
- Facility will employ 1,400 workers or more at full capacity

AP1000™ U.S. Projects/Prospects

Westinghouse/Shaw Consortium furnishes AP1000™ to domestic utilities:

- Conceptual design
- Integrated EPC team
- Detailed engineering
- Project management
- Construction management
- Site-specific engineering
- Startup and commissioning



 = EPC Contract signed  = Interim Agreement

Supply Chain Challenges

- Limited safety-related certified suppliers
- Competition for shop space with other infrastructure projects
- Need to validate that shop QA programs meet requirements

Supply Chain Challenges (cont.)

- Confirm suppliers have appropriate attention to document detail
- Re-evaluate progress to prevent fraudulent parts and components

Nuclear Construction Readiness

- Lessons learned from recent nuclear projects including MOX, LES, Browns Ferry 1, AP1000s and Olkiluoto 3
- Evaluation of INPO reports on industry lessons learned from last generation of nuclear construction

Nuclear Construction Readiness (cont.)

- Realignment of construction procedures with NRC programs, including ITAAC inspections
- Flow mapping of construction installation activities, turnover and documentation processes
- Implementation of construction readiness reviews in accordance with CII guidelines

New Construction Workforce Development

- Dedicated team focused on growing nuclear construction talent
- Establish initial resource profile by construction discipline and skills required
- Complete labor surveys to forecast discipline-specific needs

New Construction Workforce Development (cont.)

- Partner with outside organizations to attract skilled resources
- Work with NCCER to develop standardized craft training and certification programs

How the Commission Can Help

- NRC should allocate resources based on which applicants are closest to actual construction
- Module fabrication facilities are most similar to construction; should come under NRC construction inspection program
- NRC should continue to emphasize support of vocational/technical training programs

Table of Acronyms

- AP1000™ – Advanced pressurized water reactor technology developed by Westinghouse
- CII – Construction Industry Institute
- EPC – Engineering, procurement and construction
- EPCM – Engineering, procurement and construction management
- INPO – Institute of Nuclear Power Operations

Table of Acronyms (cont.)

- ITAAC – Inspections, tests, analyses and acceptance criteria
- LES – Louisiana Enrichment Services
- MOX – Mixed-oxide nuclear fuel
- NCCER – National Center for Construction Education and Research
- QA – Quality assurance