Local Supply Chain Development

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GE Hitachi Nuclear Alliance

- Wilmington, NC
- Tokyo, Japan
- Wilmington, NC
- Wilmington, NC
- Peterborough, ON

- Nuclear Power Plants, ABWR, ESBWR, and PRISM
- Nuclear Services
- Advanced Programs … Recycling, Isotopes

- Uranium Enrichment … Third Generation Technology

- Nuclear Fuel Fabrication ….BWR and CANDU
- CANDU Services
- Fuel Engineering and Support Services
ABWR

- Best in class CDF
- The only advanced Gen III technology in operation today
- Licensed in 3 countries
- 4 ABWRs in operation today
- 4 ABWRs under construction

ESBWR

- Industry best CDF
- Generation III+ design further leverages ABWR innovations
- Natural circulation principles
- Passive safety design
- Completing NRC certification
- Strong global interest

Safest plant designs based on the industry standard for plant safety -
Advanced construction...
Confidence for investors and regulators

High quality and reliable supply chain

Predictable construction schedule and cost

Highest construction safety and quality

Simplified design

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Expanding the role of new build suppliers

- Accurate cost and schedule estimations
- Collaboration on reducing cost and schedule
- Design engineering support
- Supplier driven solutions
- More than just a supplier....

New build suppliers need to be close
Establishing BWR technology in RSA

Operator Training and Qualification
Training management and engineers on BWR technology and operating practices
- Design training by GEH
- Operational training by a BWR utility
- Complete licensed operator courses

Labor Force Training & Qualification
Training the construction force to meet nuclear requirements
- Led by EPC firm with nuclear construction experience
- Incorporate into the local union & trade school curriculum
- Skilled workers are qualified prior to entering jobsite
Expanding the local universities’ nuclear technical programs

New Construction Suppliers
Selecting and qualifying local equipment suppliers
- Completion of audits by technology supplier demonstrating quality capabilities
- Management commitment to quality requirements
- Ability to meet N-Stamp requirements
Keys to becoming a successful supplier

- Integrity
- Safety
- Environmentally Responsible
- Quality
- Fully Understand the GEH’s Quality, Design Engineering, Customer & Commercial requirements
- Ask questions…Challenge the ‘Status Quo’

Be the best of the ‘best’
Opportunities for new build supply

Nuclear
- Reactor Pressure Vessel
- Reactor Internals

Mechanical
- Steam Turbine
- Condenser
- Heat Exchangers
- Pumps
- Valves

Electrical
- Generator
- Transformers
- Switchgear

Construction
- Concrete
- Rebar
- Buildings
- Doors & Windows
- Piping
- Fencing
- Sand & Gravel

Equip. Modules
- Nuclear & non-nuclear

Chemical
- Radioactive Waste
- Nitrogen & CO2 Storage

Misc.
- Fire Protection Systems
- HVAC Systems
- Cranes & Hoists
- Elevators

Everything from pressure vessels to concrete
Establishing BWR Technology in ZA

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Modularization
On-site work reduction and improved quality
Module supply

- Equipment and building modules critical to meeting schedule and cost of new build
- Modules can be built in a local (on or offsite) facility or a dedicated module factory
- Modular plan developed based on local supply requirements and availability
- Requires a substantial independent labor force for assembly
New suppliers

- Nuclear Island: N-Stamp Required
- Turbine Island: ASME Code Requirements

Local and global suppliers critical for new build’s success