The Global Nuclear Market

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Westinghouse Electric Company

• Founded in 1886 in Pittsburgh, Pennsylvania, by George Westinghouse
• Responsible for some of the world’s most important achievements:
  – Alternating current technology
  – First train airbrake
  – USS Nautilus nuclear-powered submarine
  – First camera on the moon
  – Commercial nuclear power
World energy consumption grows 70 percent by 2040*
Global Challenges in Managing Carbon Emissions

Source: IEA World Energy Outlook 2015
Greenhouse gas emissions by energy source

1 GWH of coal and 1 GWH of gas generate 1,400 more tons of CO2 than 2 GWH of nuclear

Source: Nuclear Energy Institute
Why nuclear energy?

- Meets policy goals to reduce greenhouse gas emissions
- Highly reliable and safe baseload power source
- Stable fuel price
- Competitive costs
- Supply security
- Fuel diversity
- Large number of well-paying jobs and an anchor of the local tax base
444 Nuclear Power Plants in Operation in 30 Countries

Provides nearly 11 percent of the world’s electricity generation

Source: Nuclear Energy Institute, May 2016
Nuclear Power Units Under Construction

- **China**: 22 units under construction
- **Russia**: 8 units under construction
- **India**: 6 units under construction
- **United States**: 4 units under construction
- **UAE**: 4 units under construction
- **South Korea**: 3 units under construction
- **Taiwan (China)**: 2 units under construction
- **Belarus**: 2 units under construction
- **Japan**: 2 units under construction
- **Pakistan**: 2 units under construction
- **Slovakia**: 2 units under construction
- **Ukraine**: 2 units under construction
- **Argentina**: 1 unit under construction
- **Brazil**: 1 unit under construction
- **Finland**: 1 unit under construction
- **France**: 1 unit under construction

- **63 new units under construction***
- **160+ new units planned**

*Source: NEI 4/16
**Source: WNA 4/16
AP1000® Plant Value Proposition

Proven Technology and Innovative Passive Safety Systems

Passive safety replaces mechanical and electrical systems – harnesses natural forces like gravity, convection and condensation to achieve safe shutdown

Delivery Certainty
Standard design, experience from current projects and modular construction enable “Nth of a Kind” delivery performance

Regulatory Certainty
Reviewed by multiple countries; first Generation III+ reactor to receive design certification from the U.S. NRC
Eight AP1000 units under construction
- Four units in China (Sanmen and Haiyang)
- Four units in the United States (Vogtle and V.C. Summer)

Establishing an efficient and standard delivery platform from eight units’ worth of experience
China AP1000 Plant Progress

Sanmen site – April 2016

Sanmen 1 – March 2016

Haiyang 1 and 2 – April 2016

Haiyang 2 – May 2016

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China Projects Recent Achievements

• Commissioning of SMS (Special Monitoring System) at Sanmen 1
• Four Reactor Coolant Pump (RCP) installations completed at Sanmen 1 and Haiyang 1
• Cold Hydro Test at both Sanmen 1 and Haiyang 1 completed
• Reactor Vessel Internals (RVIs) final cleaning and inspection completed and lifted in Reactor Vessel (RV) at Haiyang 1
U.S. Projects Updates

- **Vogtle 4 Nuclear Island and Turbine Building** – May 2016
- **Vogtle 3 Shield Building panel placements** – April 2016
- **V.C. Summer 2 Nuclear Island** – May 2016
- **V.C. Summer 3 CV Ring 1 placement** – April 2016

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U.S. Projects Recent Achievements

- Containment Vessel first ring set for both units at each site; fabrication of additional rings continues
- All Reactor Vessels delivered for both units at each site; all Vogtle Steam Generators delivered; 3 of 4 VC Summer Steam Generators delivered
- Vogtle Unit 3 CA02 and CA03 modules set in May
- V.C. Summer Unit 3 CA05 module set in May
- Vogtle Unit 4 CA05 module set in June
- All four Vogtle Unit 3 RCPs received onsite by early June
Market Opportunities to Grow the AP1000 Plant Fleet

Expected Market Timing:

Active - Near Term -
Summary

• Nuclear energy can play a role in our clean energy future
• The AP1000 nuclear power plant features proven technology and innovative passive safety systems
• Westinghouse continues its legacy of bringing the most advanced technologies to the nuclear industry
Thank you!

The above illustration is an artist rendering of the AP1000 PWR and may not depict actual design and layout.