

New Nuclear Plants Industry Needs and Plans

NRC Regulatory Information Conference

March 13, 2007

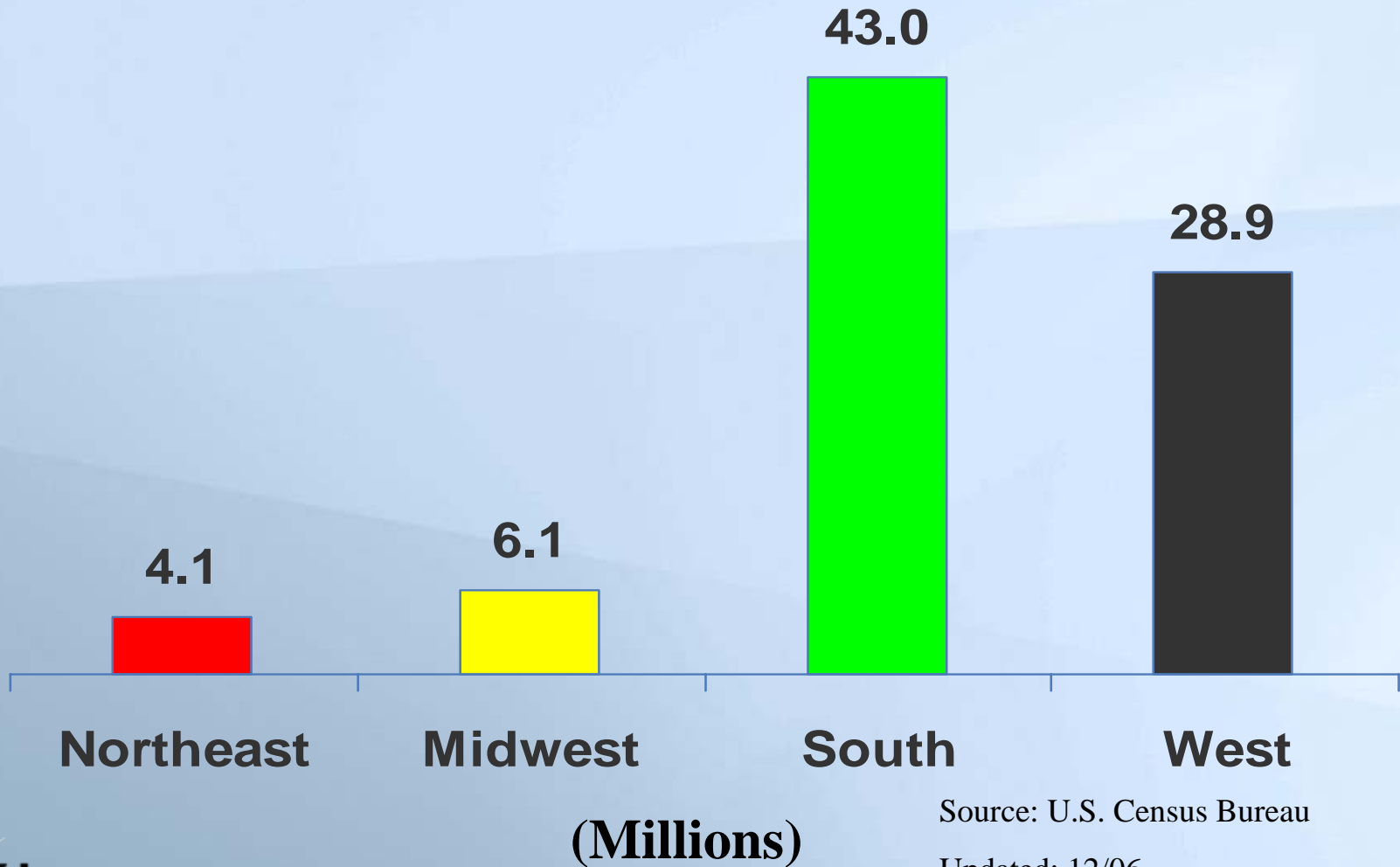
Adrian Heymer, NEI

(aph@nei.org, 202-739-8094)

The Need

- **Need for base-load generation**
- **– 292 GW by 2030**
- **Uncertainty over emission controls & energy supplies**
- **Need for predictability in energy prices**
 - **Stable & low-cost electricity**
- **Balanced & diverse energy portfolio**
- **Movement towards increased conservation & efficiency**

Change in US Population 2000 to 2030



Source: U.S. Census Bureau

Updated: 12/06

Needs

- **Predictable & stable licensing process**
 - **Extensive industry & NRC resources being applied**
 - **Moving towards a common understanding on implementation of Part 52**
- **Reduce time-to-market post first-of-class**
 - **Current 120+ months**
 - **LWR Target –78 mths announcement to operations**
 - **The key -- *Standardization***

Standardization

- **Standard certified designs**
- **Improve efficiency and effectiveness of license preparation, NRC and public review**
- **Common applications ex-site specific**
 - 65 – 90 percent standardization
 - Design-Centered Working Groups
- **Beyond reference plant majority of NRC reviews can be focused on consistency**

Improve Application Review Process

- **Environmental Report**
 - **Strong candidate for process improvement**
 - **Need for a more effective and efficient review process consistent with NEPA**
- **Implement changes to mirror license renewal process improvements**
- **Other potential improvements**
 - **Early submittal of ER supplement or report**
 - **Earlier and more intensive pre-applications interactions**

Status & Near Term Plans

- **Industry expending over \$2 billion**
- **Three ESPs this year**
 - **Vogtle – under review**
 - **Three other companies considering ESPs**
- **Too early to discard ESP process**
 - **Greenfield sites**
 - **Enabler to reducing time-to-market**
- **Reach a common understanding on construction inspection**

Status & Near Term Activities

- **Four designs certified**
 - **Change process to address impact from construction interferences & detailed design**
- **ESBWR -- under review**
- **EPR and APWR submittals being prepared**
- **20 COL applications being prepared**
 - **Focus & attention on complete quality applications**
 - **Majority of applications by 2009**
 - **Land clearing 2008 -- Operational 2014/2015**

Industry Plans

- **Integrated used fuel management**
- **Modular high temperature reactors**
 - **Process heat & generation**
- **Technology neutral requirements (Part 53)**
 - **Test against a specific application/design prior to final issuance**