



The Global Nuclear Energy Partnership (GNEP) and Beyond

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Waste Management '08 Conference
Phoenix, Arizona

February 26, 2008



Outline

- **Energy**
 - Demand
 - Sources
 - Considerations
- **The role of nuclear power**
- **Global Nuclear Energy Partnership**
- **Path Forward**





Energy, Economy and Prosperity

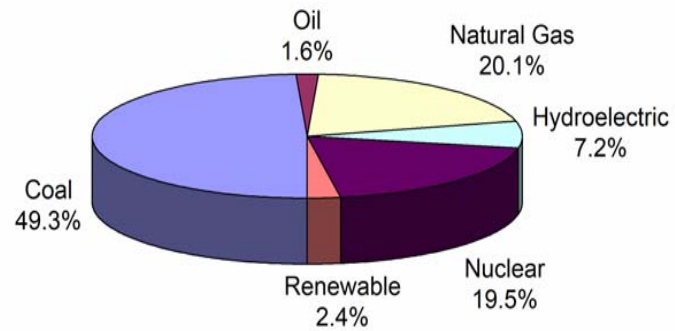
- **Energy is the engine that drives the economy and helps to improve the quality of life**
- **As economies grow, global energy demand will increase**
- **U.S. electricity consumption is projected to increase by roughly 50% in the next 25 years**
- **World energy consumption is projected to nearly double**





Where Will the Energy Come From?

Energy Generation Sources





The Global Environment





Why Nuclear?

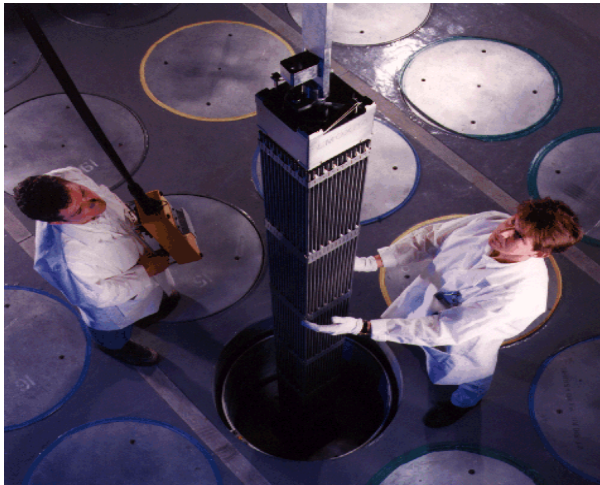
- Nuclear power is a safe, abundant and affordable energy source
- Nuclear power is clean
- Nuclear power is secure and reliable





What About the Waste???

- Nuclear Waste disposal is a significant issue
- No current nuclear nation has completely resolved the issue of long-term high-level radioactive waste disposal
- “Waste” versus “Resource”





Why GNEP?

- **Energy, the environment, and nuclear weapons proliferation are global issues**
- **GNEP provides an opportunity to:**
 - meet the growing demand for clean, reliable and economic energy
 - allow the benefits of nuclear power without the need for additional expansion of enrichment and reprocessing technologies
 - recycle and reuse the valuable components of used nuclear fuel
 - improve the management of “*true*” nuclear waste





A Global Partnership - GNEP Statement of Principles



- Expand nuclear power to help meet growing energy demand in a sustainable manner....
- ...develop enhanced nuclear safeguards.... to ensure nuclear energy systems are used only for peaceful purposes.
- Establish international reliable, cost-effective fuel services and supplies... while reducing the risk of nuclear proliferation by creating a viable alternative to acquisition of sensitive fuel cycle technologies.
- Develop, demonstrate, and in due course deploy advanced fast reactors that consume transuranic elements...
- Promote the development of advanced, more proliferation resistant nuclear power reactors appropriate for the power grids of developing countries and regions.
- Develop...advanced technologies for recycling spent nuclear fuel...that do not separate pure plutonium, with a long term goal of ceasing separation of plutonium... would help substantially reduce nuclear waste, simplify its disposition...
- Take advantage of the best available fuel cycle approaches for the efficient and responsible use of energy and natural resources.



February 26, 2008

WM'08 Conference, Phoenix, AZ

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Will GNEP Work?

- **A technology basis exists for fuel reprocessing and advanced reactor technologies**
 - Additional technology development is required for commercialization
- **Meaningful steps can be taken in the near-term to fully close the fuel cycle in the United States**
- **A business case exists for spent nuclear fuel reprocessing**
- **Legislative, regulatory and policy changes may be required**





How Best to Proceed?

- **Continue to engage with the U.S. and international stakeholder community on GNEP**
- **Government must take a fresh look at nuclear waste management**
- **Develop a detailed GNEP technology roadmap to address any outstanding technical issues**
- **Complete the GNEP Programmatic Environmental Impact Statement**
- **Inform Secretary of Energy Bodman's decision**





Closing Remarks

- **Meeting energy demands, protecting the environment and making the world safe for future generations are global issues**
- **Closing the domestic fuel cycle under GNEP will improve U.S. energy security, industrial competitiveness and national security**
- **Implementing the international components of GNEP will improve the quality of life and make the world safer**
- **The U.S. must be a full participant to exercise any influence over the world-wide nuclear renaissance**

