

Nuclear Non-Proliferation and Peaceful Use of Nuclear Energy

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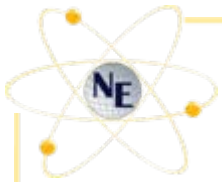
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U.S. Department of Energy**

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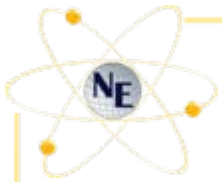
U.S. Commercial Nuclear Plants

Current:

- ◆ **104 Plants with 100 GWe Nuclear Capacity (20% of US electricity generation)**
- ◆ **License Renewal Applications (48 approved, 10 in NRC review, 26 announced)**

New:

- ◆ **Early Site Permits:**
 - 2 issued by Nuclear Regulatory Commission (NRC)
 - 2 currently under NRC review
- ◆ **Construction and Operating Licenses (COLs):**
 - 16 power companies announced intentions to submit 20 license applications (COLAs) to NRC
 - First COL application submitted to NRC on September 25, 2007
- ◆ **Reactor Design Certification:**
 - Two designs certified (GE ABWR, Westinghouse AP 1000)
 - One design under NRC review (GE ESBWR)
 - Two design certification applications to be submitted to NRC in late 2007 (AREVA US-EPR and Mitsubishi US-APWR)
- ◆ **No nuclear plant ordered to date though long lead equipment is being procured**



Deployment Support Programs

Government/industry cooperative effort to support early NPP deployment (50-50 cost-shared industry projects)

◆ **Demonstrating key regulatory processes**

- Early Site Permit (3 Plants)
- Combined Construction and Operating License (3 Plants)

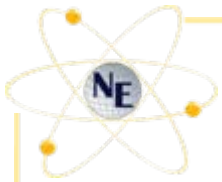
◆ **Developing new light water reactor designs**

- Design Certification for new reactors (AP-1000 and ESBWR)
- Design finalization engineering for new standardized nuclear plant designs (AP-1000 and ESBWR)

Government sponsored financial support for initial deployments

- ◆ Loan Guarantees
- ◆ Production Tax Credit (COL application before 2009, Construction begins before 2014, & Placed in service before 2021)*
- ◆ Risk Insurance (6 Plants)

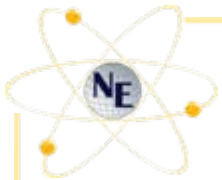
* Department of Treasury



Global Nuclear Energy Partnership

The Global Nuclear Energy Partnership (GNEP) aims to expand the use of safe, clean nuclear power to meet increasing global energy demand through:

- ♦ **Developing advanced recycling reactors to consume transuranic materials while generating electricity**
- ♦ **Recycling of spent nuclear fuel using advanced, proliferation-resistant fuel cycle technologies**
- ♦ **Developing proliferation resistant reactors more suitable for needs and capabilities of developing countries**
- ♦ **Establishing reliable fuel services**



Developing The PARTNERSHIP

On September 16, 2007 representatives from 16 nations joined in a GNEP partnership which envisions the expansion of nuclear energy for peaceful purposes worldwide in a safe, secure manner

The partnership members agreed to a set of guiding principles for the partnership, to the establishment of a basic structure for the partnership, to the development of an Action plan and to charter a Working Group to address infrastructure development and a Working group to address reliable fuel services

