

## Quick Statistics

Early Site Permits issued	3
Permits under review	1
Total COL applications submitted	12
COL applications docketed	9
Certified reactor designs	2
Reactor designs under review	4
Expected license applications	23
Expected number of reactors	34
Announced plant locations	20
Companies applying for COL	20

## Number of Planned Reactors (34)



## Status of License Applications (23)



## Announced Nuclear Locations

- Bell Bend (PA)—PPL (formerly Susquehanna)
- Bellefonte (AL)—Tennessee Valley Authority
- Elmore County (ID)—Alternate Energy Holdings
- Callaway (MO)—AmerenUE
- Calvert Cliffs (MD)—UniStar
- Clinton (IL)—Exelon
- Comanche Peak (TX)—Luminant
- Fermi (MI)—DTE Energy
- Grand Gulf (MS)—Entergy
- Shearon Harris (NC)—Progress Energy
- Levy County (FL)—Progress Energy
- Nine Mile Point (NY)—UniStar
- North Anna (VA)—Dominion Energy
- River Bend (LA)—Entergy
- South Texas Project (TX)—STP Nuclear
- V.C. Summer (SC)—SCE&G
- Turkey Point (FL)—Florida Power & Light
- Victoria County (TX)—Exelon Generation
- Vogtle (GA)—Southern Nuclear
- William States Lee III (SC)—Duke Energy

## Vendor Technologies Under Consideration

### General Electric

- Advanced Boiling Water Reactor (ABWR) – 1,356 MWe (*certified 10CFR52 App A*)
- Economic Simplified Boiling Water Reactor (ESBWR) – 1,560 MWe

### Westinghouse

- Advanced Passive Pressurized Water Reactor (AP1000) – Twin units 1,117 MWe each (*certified 10CFR52 App D*)

### AREVA

- United States Evolutionary Pressurized Water Reactor (US EPR) – 1,600 MWe

### Mitsubishi Heavy Industry

- United States Advanced Pressurized Water Reactor (US APWR) – 1,700 MWe



U.S. Department of Energy  
Office of Nuclear Energy

# Nuclear Power Deployment Scorecard

## Powering Future Decades



U.S. Department of Energy  
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Updates available at  
<http://www.nuclear.gov>

## What's New

Exelon submitted a COL application to build two ESBWR reactors at its site in Victoria County, TX, on September 3, 2008.

On August 27, Westinghouse and Shaw signed a letter of intent to create a joint venture for the fabrication and assembly of modules for AP1000 reactors.

On August 26, TVA requested reinstatement of its construction permits for Bellefonte Nuclear Plant, Units 1 and 2.

NRC concluded on August 18 that there are no environmental impacts that would prevent Southern Nuclear from obtaining an ESP for its Vogtle site.

NRC held a public meeting in Bloomsburg, PA, on August 19 to discuss review of PPL's COL for Bell Bend.







UniStar held a meeting with NRC on August 14 to plan logistics of all EPR COLs.

Progress Energy submitted a COL application to build two AP1000 reactors in Levy County, FL, on July 30.

Ameren UE submitted a COL application to build one EPR at Callaway in Missouri on July 28.

NRC docketed SCE&G's COL application to build two AP1000 reactors at V.C. Summer in South Carolina on July 22.

## Legend

-  Implementation proceeding according to plan and schedule
-  Progress being made; however, issues or uncertainties exist that could impede progress
-  Unlikely to realize objectives absent significant management attention
-  No dates or end state established
-  Indicates change in status or progress since last evaluation
-  Regulatory Demonstration completed. No further government assistance is warranted.

## Nuclear Power Deployment Scorecard



### Early Site Permit (ESP)

- Three site permits issued by NRC (*Clinton, Grand Gulf, North Anna*)
- One site permit application under NRC review (*Vogtle*)
- Submission of three other ESP applications expected in 2010-2012



### Combined Construction and Operating License (COL)

#### License Applications Submitted to NRC

- Nine COLAs docketed (*STP, Bellefonte, Harris, Grand Gulf, North Anna, Lee, Calvert Cliffs, Vogtle, and V.C. Summer*)
- Three COL applications submitted to NRC awaiting acceptance (*Callaway, Levy Co., Victoria Co.*)
- Submission of 11 additional COLs expected in 2008-2010
- Four applications expected in September (*Comanche Peak, Fermi, Nine Mile Pt., and River Bend*)



#### Status of Reference R-COLs

- Of four R-COLs submitted, three (*Bellefonte, North Anna, Calvert Cliffs*) have held public meetings and begun Phase 1 of the Safety Review. South Texas Project delayed due to vendor support issues.
- Comanche Peak, the remaining R-COL (US-APWR), estimated submission – September 2008.



### Reactor Design Certification (DC)

- Two advanced reactor designs certified by NRC (*ABWR and AP1000*)
- Four reactor designs undergoing NRC review (*ESBWR, US-EPR, AP1000 amend., and US-APWR*)



### New Nuclear Plant Orders

#### Long-Lead Equipment Orders

- Nine utilities have ordered large, long-lead nuclear component forgings from three reactor vendors
- Twenty-four reactor coolant pumps have been ordered for AP1000 units
- Japan Steel Works is only manufacturer of ultra-large forgings; worldwide-capacity limited



#### Engineering, Procurement, and Construction Contracts (EPC)

- Two EPC contracts initiated (*Vogtle and V.C. Summer*)
- Plant engineering is in progress; completion required to start construction



### New Nuclear Plant Construction, Operation, & Deferral

- No utility has committed to constructing a new advanced reactor
- TVA has resumed construction of Watts Bar Unit 2 with completion scheduled in 2013



### Federal Financial Incentives

#### Standby Support (Risk Insurance)

- Final 10 CFR Part 950 Rule issued August 11, 2006
- Two Notices of Intent to Request a Conditional Agreement received by DOE



#### Production Tax Credits

- Internal Revenue Bulletin 2006-18 published May 2006



#### Energy Facility Loan Guarantee

- DOE issued solicitations for \$18.5 billion in loan guarantees for new nuclear facilities and \$2 billion for the nuclear fuel cycle on June 30, 2008
- Five power companies have responded to the Department's nuclear power facilities solicitation. One fuel cycle facility has submitted a full loan guarantee application
- As construction cost estimates rise, authorized amount for loan guarantees may be insufficient to catalyze follow-on nuclear construction fully financed by the private sector.