

# New Nuclear Plants Outlook

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# New Nuclear Plants Global Status

- 53 plants under construction
- 137 plants on order or planned in 26 countries
- 295 projects under consideration in 36 countries
- 20% increase in global construction since the beginning of 2009
  - 44 plants under construction 12/31/08 vs. 53 plants under construction currently

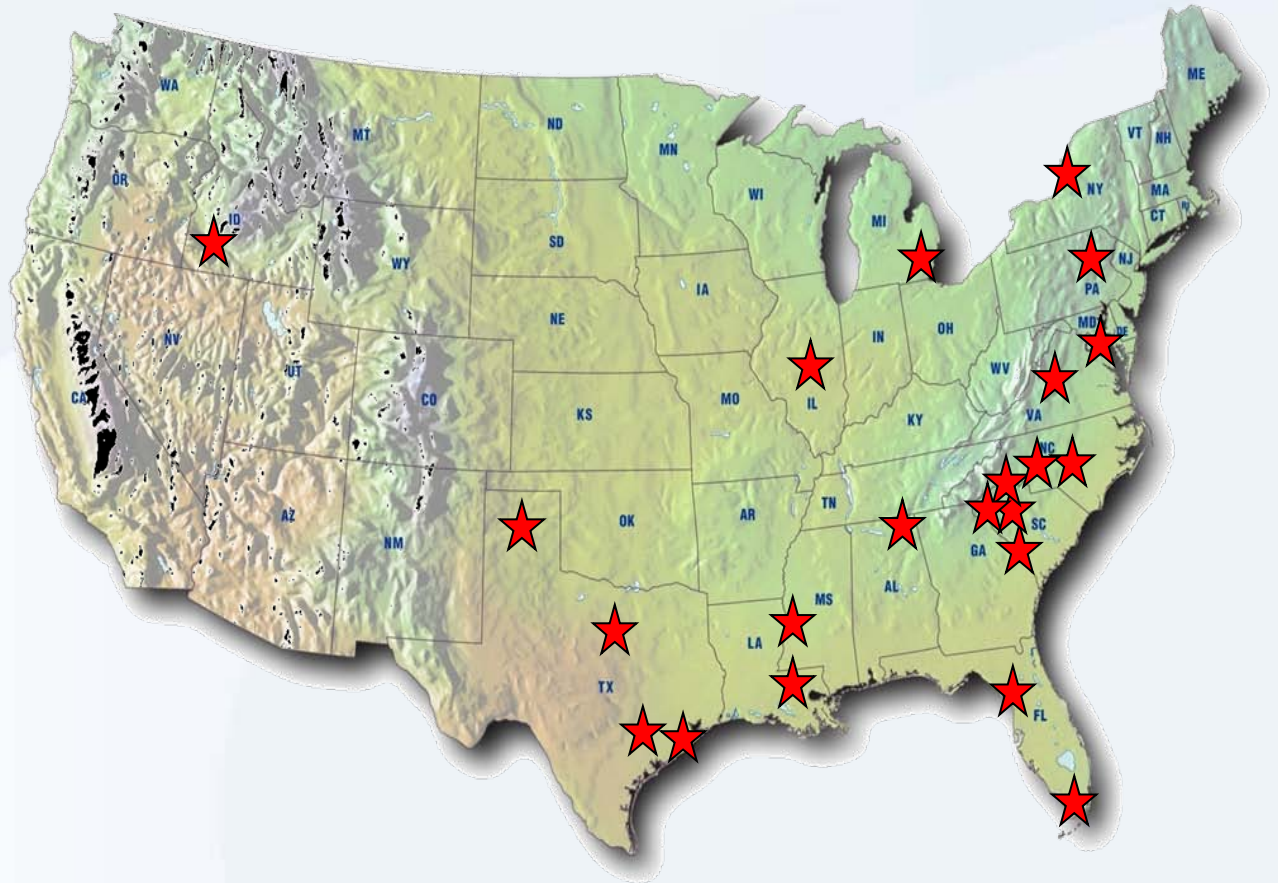


Sources: - WNA "World Nuclear Power Reactors & Uranium Requirements," Sept 1, 2009  
- International Atomic Energy Agency PRIS database

# Proposed New Nuclear Plants

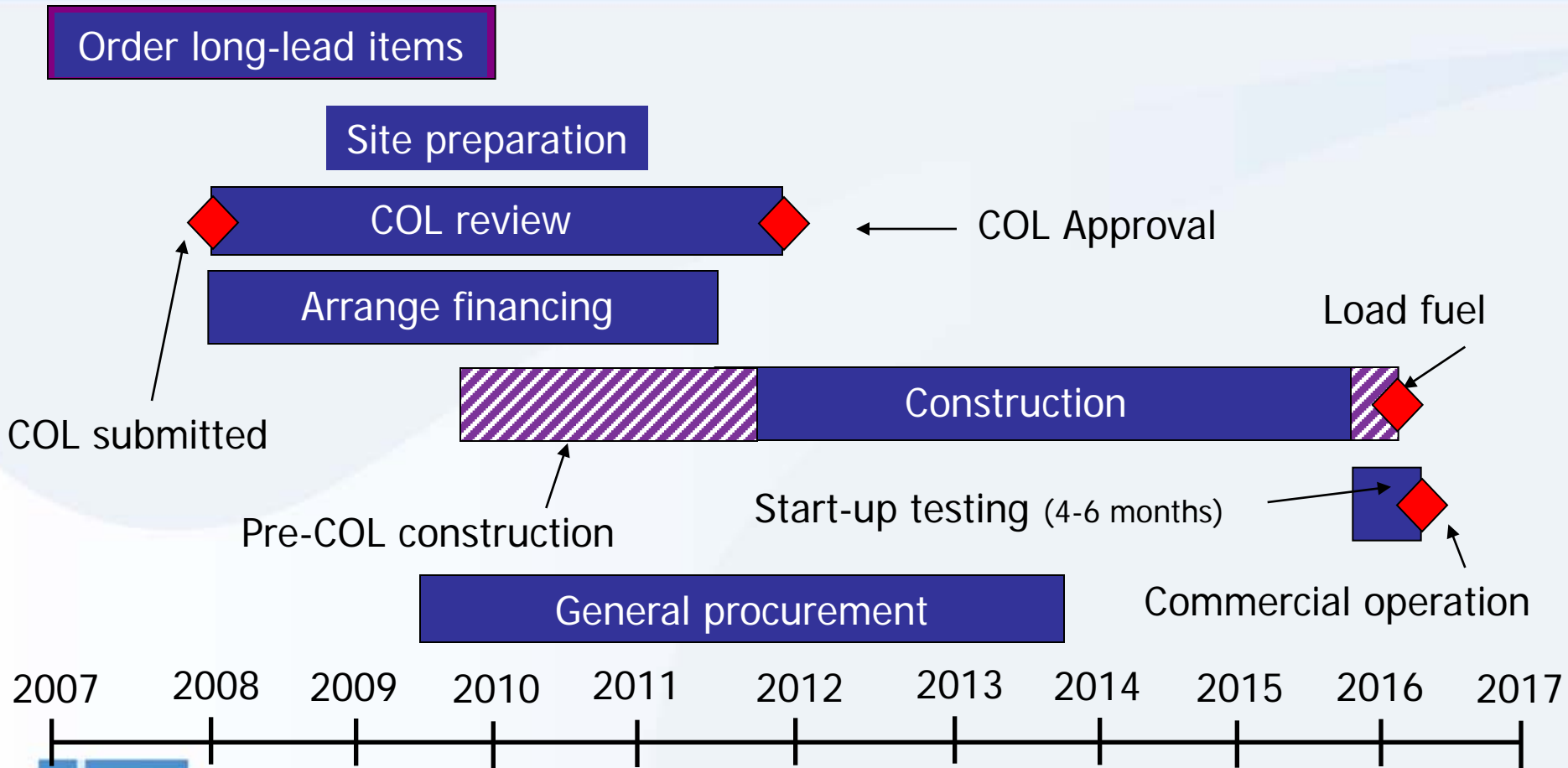
## Projects under Active Review

- 13 Applications
- 22 Units
- 5 Designs



Source: U.S. Nuclear Regulatory Commission

# Short-Term



# Licensing & Construction Then and Now

THEN	NOW
Design as you build	Plant designed before construction begins
Changing regulatory standards and requirements	More stable process: NRC approves site, design, construction & operation before construction begins and significant capital is placed "at risk"
No design standardization	Standard NRC-certified designs – 70+% Standard
Inefficient construction management practices	Lessons learned from overseas projects Modular construction practices
Main opportunity public intervention when plant is essentially complete	More opportunities to intervene at well-defined points in process. Intervention at the end of the process must be based on objective evidence that acceptance criteria, defined in the license, have not been, and will not be met



# US Commercial Outlook

- Expect 4-8 plants operating in 2016/17
  - Site preparation underway for first movers
- Additional 10 – 12 plants in 2020
- Possible 35+ plants by 2030
- Build rate and schedules based on the success of the first projects



# Equipment & Commodities for First Eight Plants (Examples)

- Cable – over 1800 miles
- Nuclear grade valves – 4000 to 24000
- Pumps -- 1000 to 2000
- Nuclear grade piping – 30 – 150 miles
- Concrete – over 3 million cubic yds
- Electrical components -- Over 700,000
- Structural & reinforcing steel -- 500,000 tons
- Large and small heat exchangers -- 500 to 1300



# Equipment & Commodities for First Eight Plants - Steel

- Reinforcing Steel & Embedded Parts
  - 80,000-270,000 Tons
- Structural Steel
  - Nuclear Grade – 16,000-1,120,000 Tons
  - Non-Nuclear Grade – 640,000-800,000 Tons
- Pipe (carbon, stainless & alloy)
  - >2.5 inches – 240,000-3,200,000 Feet
  - <2.5 inches – 300,000-1,840,000 Feet



# Support for New Nuclear & Expanded US Manufacturing Base

- Bipartisan political support
- Strong public support
- Solid support from labor
- Strong support from other industries
- Growing support from environmental community
- Consistent with Obama Administration goals
  - Jobs
  - Clean Air
  - Energy Security



nuclear  
manufacturing  
outreach

# The Future

- New nuclear power plants will be built
  - Need for power, environmental limitations and need for long-term stability in electricity prices
- Opportunity is there -- will US-based manufacturers be able to take advantage?

