



A Regulator's Perspective

Texas Radiation Regulatory Conference Sept. 2, 2010

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Nuclear Materials

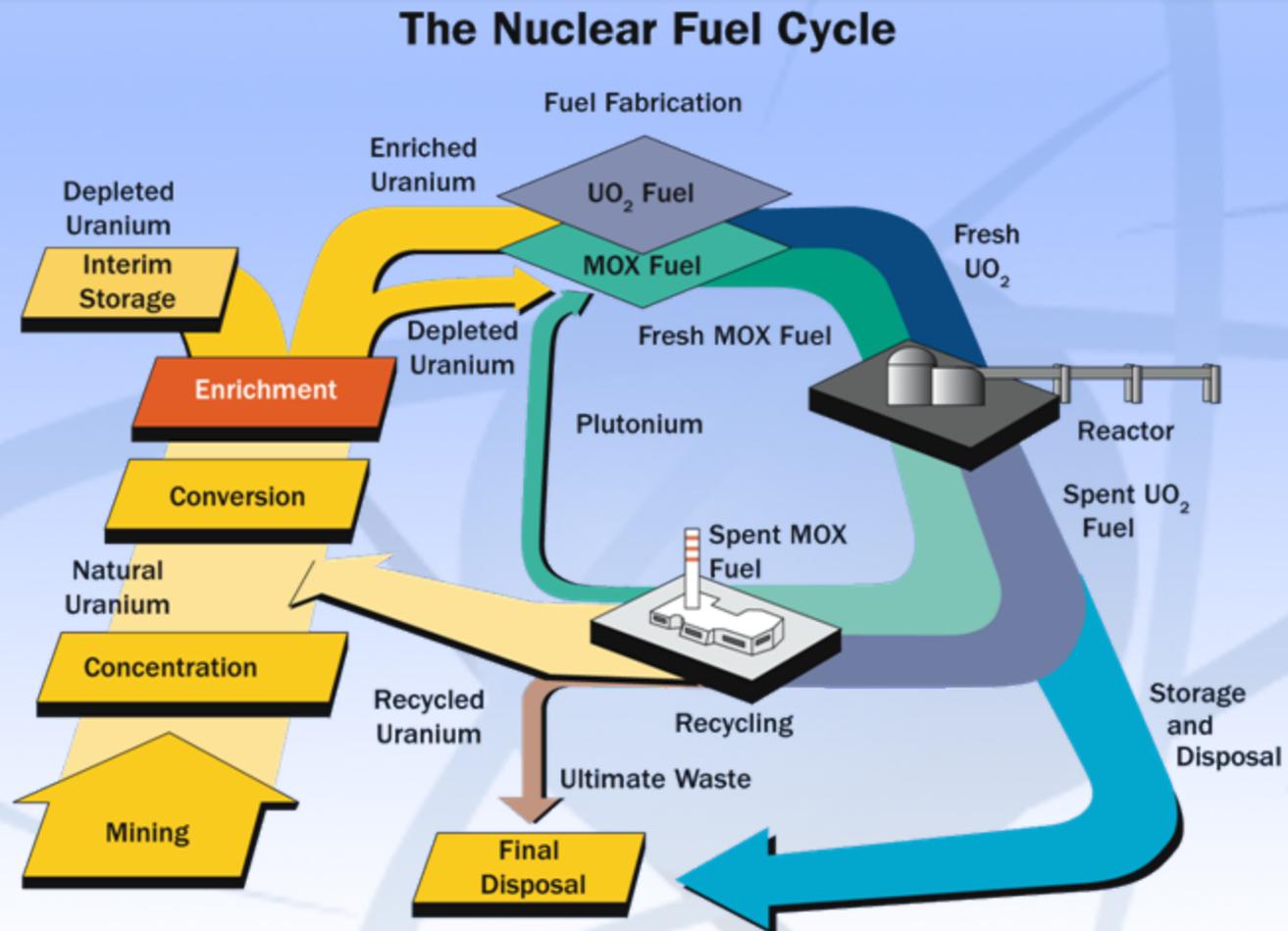


NRC regulates isotopes for medical and industrial uses.





Power plants, fuel fabrication and waste



Source: U.S. Nuclear Regulatory Commission



Inspection & Enforcement



**The NRC can
issue notices
of violations.**

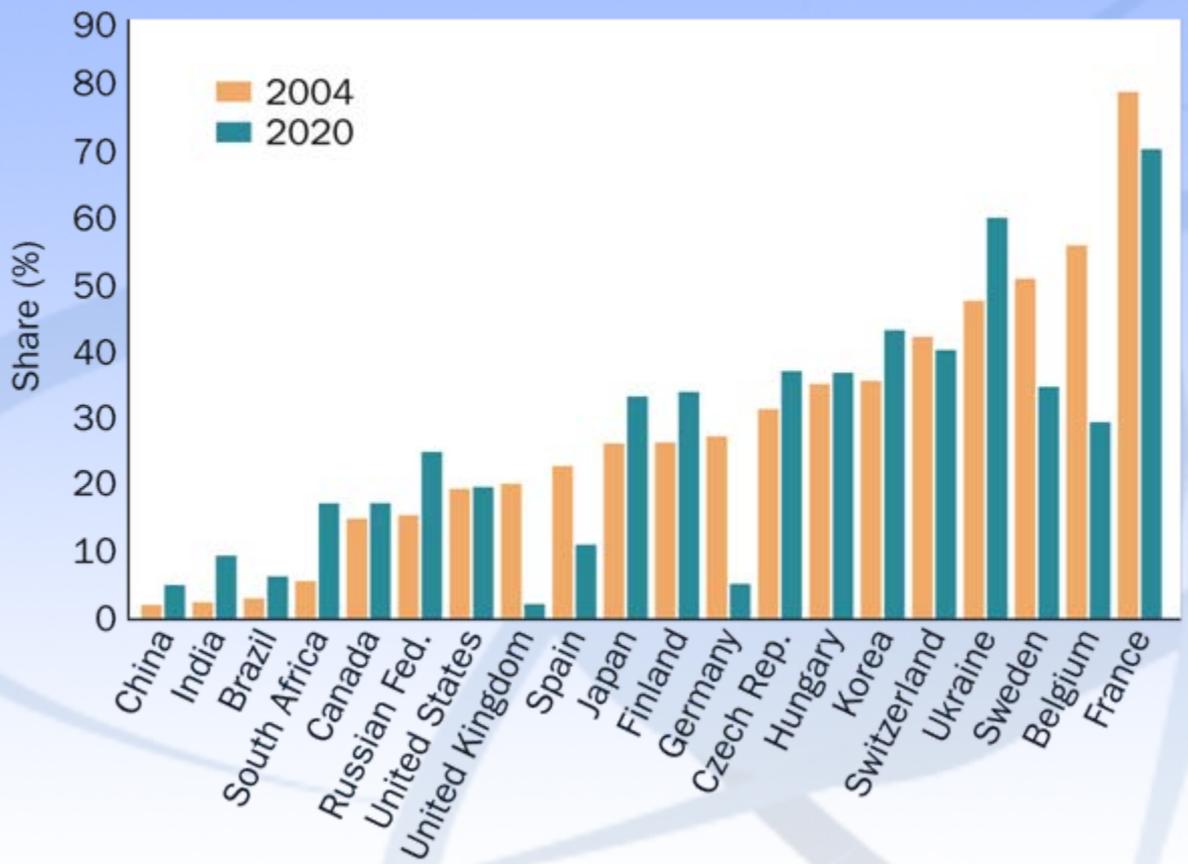


**We maintain at least two
Resident Inspectors at every
nuclear reactor site.**



Interest in nuclear power is to meet rising electricity demand worldwide

Nuclear Share of Electricity Generation in 2004 and Projected in 2020



Source: Nuclear Energy Agency



Around the world, 61 new plants are scheduled to open by 2015

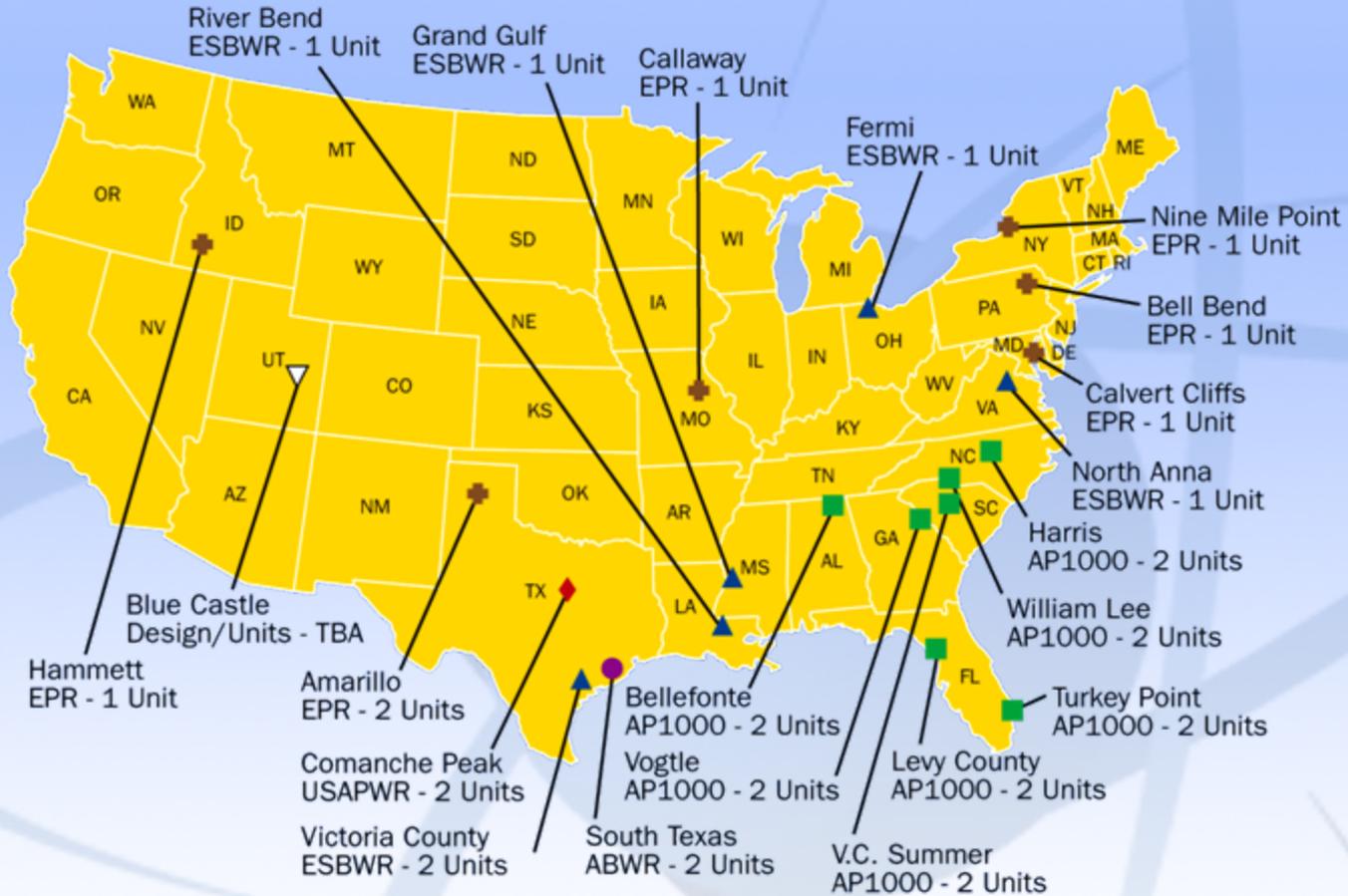
China alone is building 21 new plants.



Construction at Qinshan, China



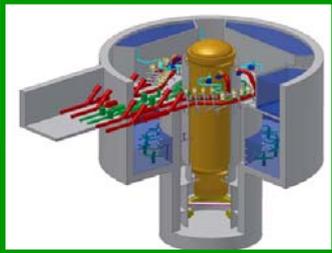
Applications to build new plants



● ABWR
 ■ AP1000
 + EPR
 ▲ ESBWR
 ◆ USAPWR
 ▽ Design/Units - TBA

Source: U.S. Nuclear Regulatory Commission

New Reactor Applicants - Plant Designs



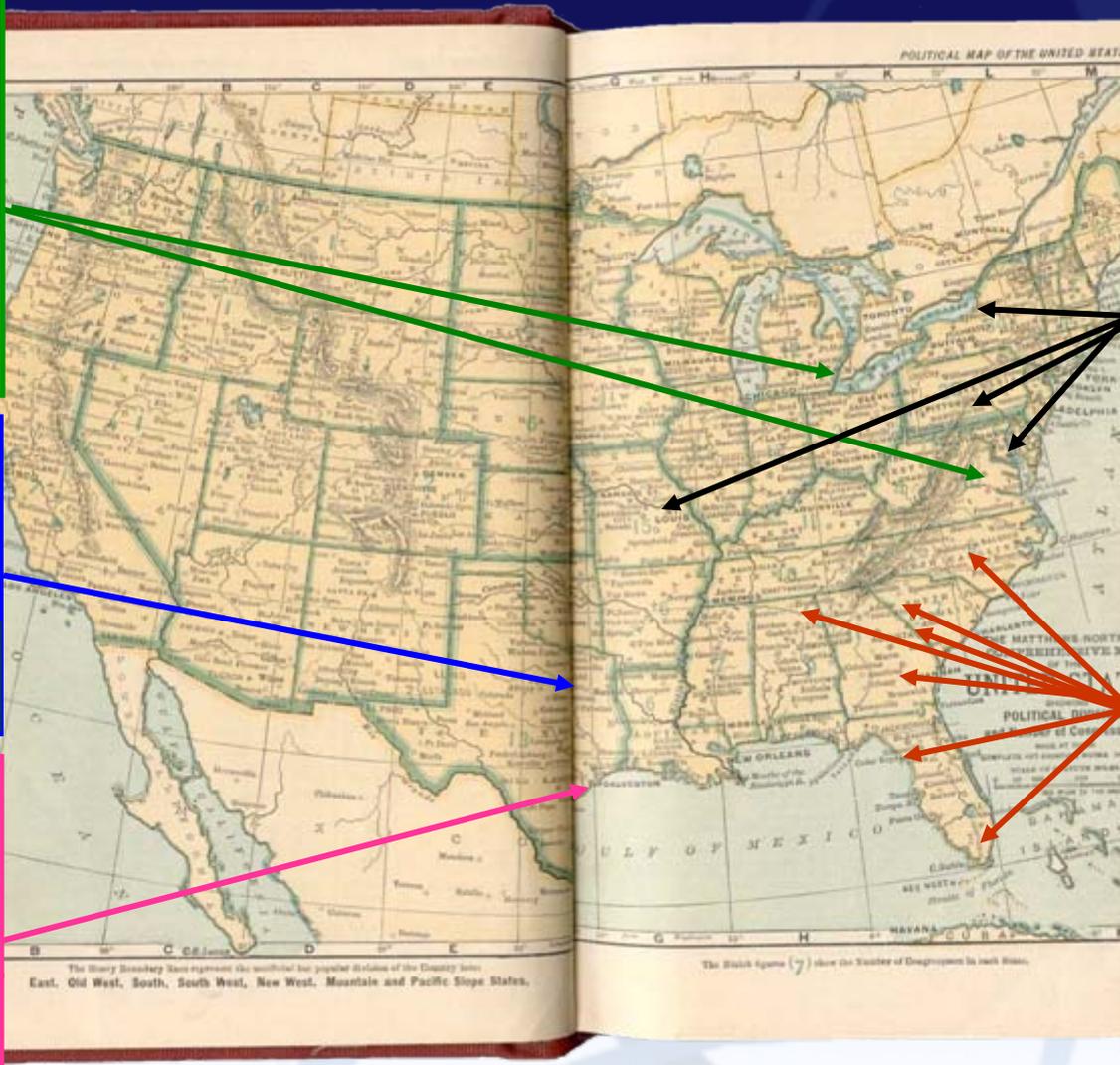
ESBWR
Dominion
DTE



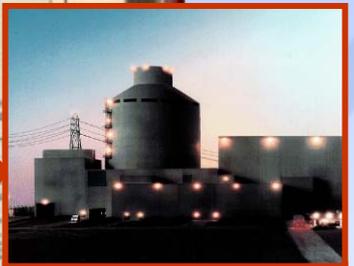
US APWR
Luminant



US ABWR
South Texas Project



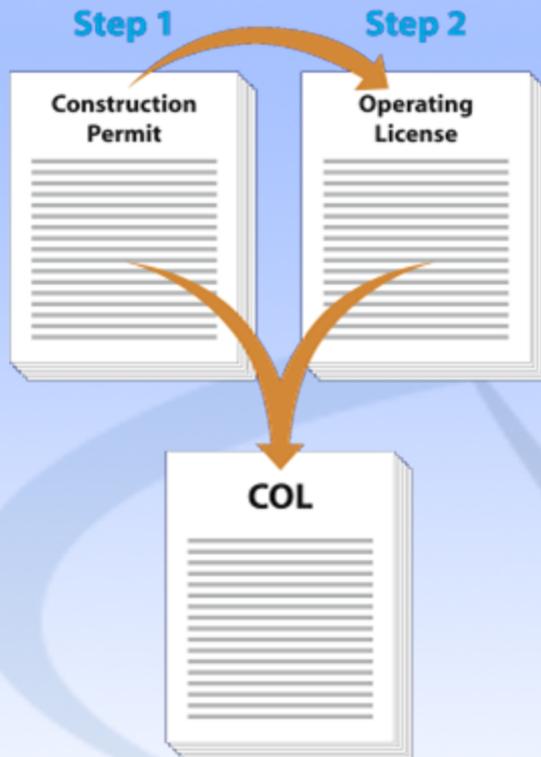
EPR
Ameren UE
UniStar
PPL Generation



AP1000
Duke
TVA
Progress
South Carolina E&G
Southern Co.
Florida Power & Light



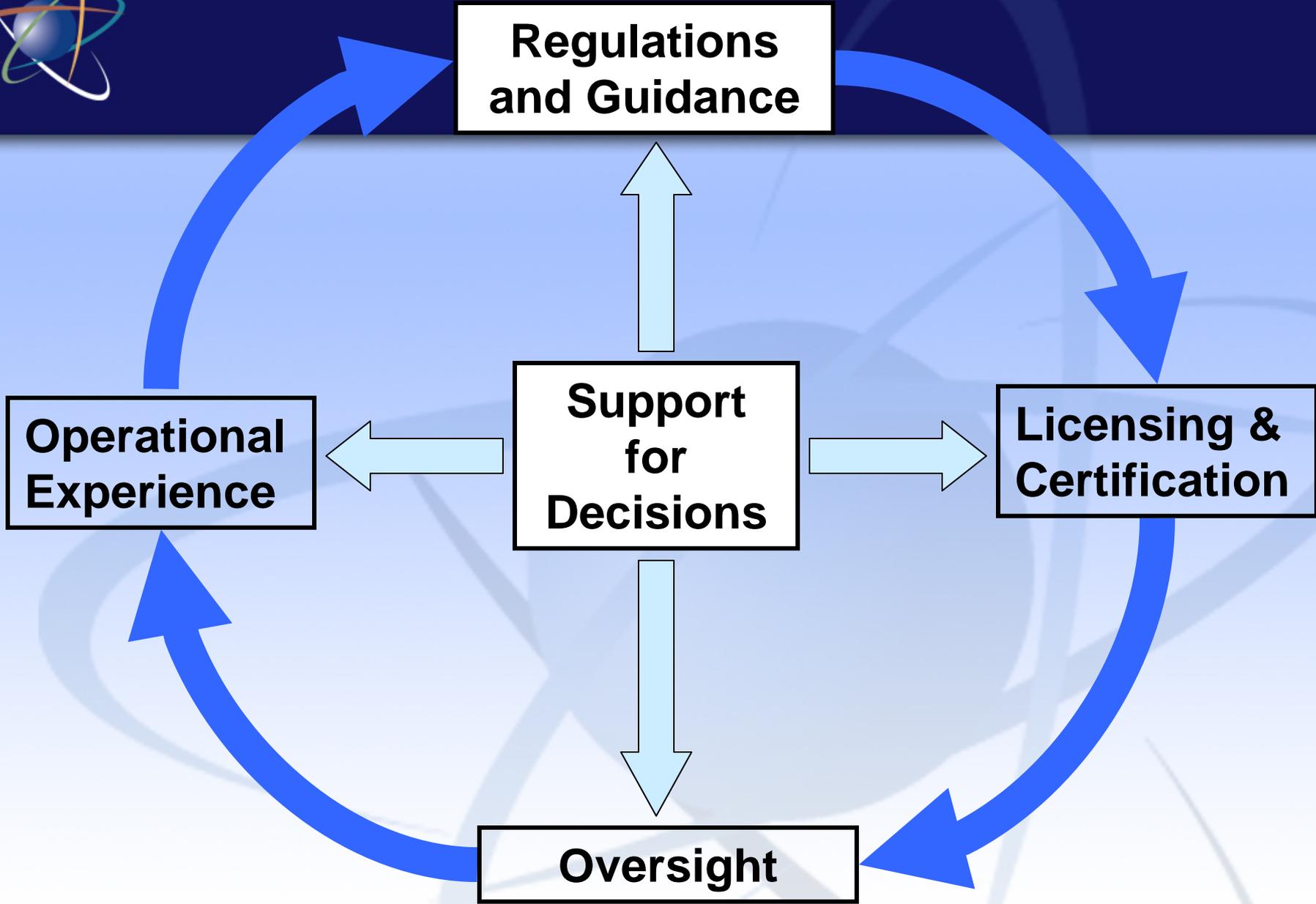
What is different today?



South Texas Nuclear Power Plant

1. Improved licensing process

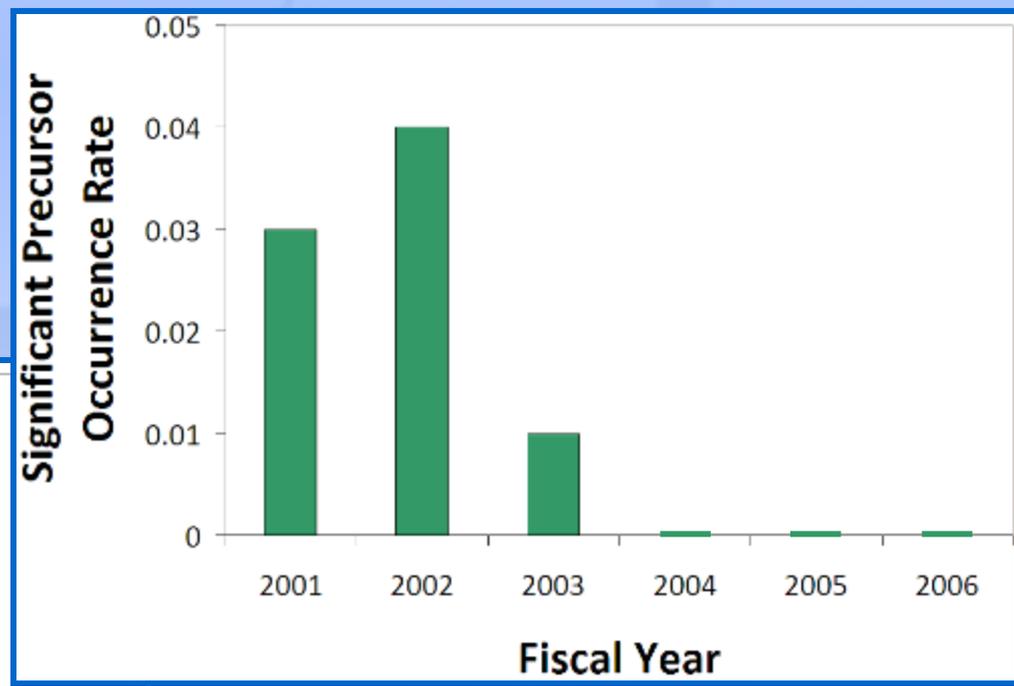
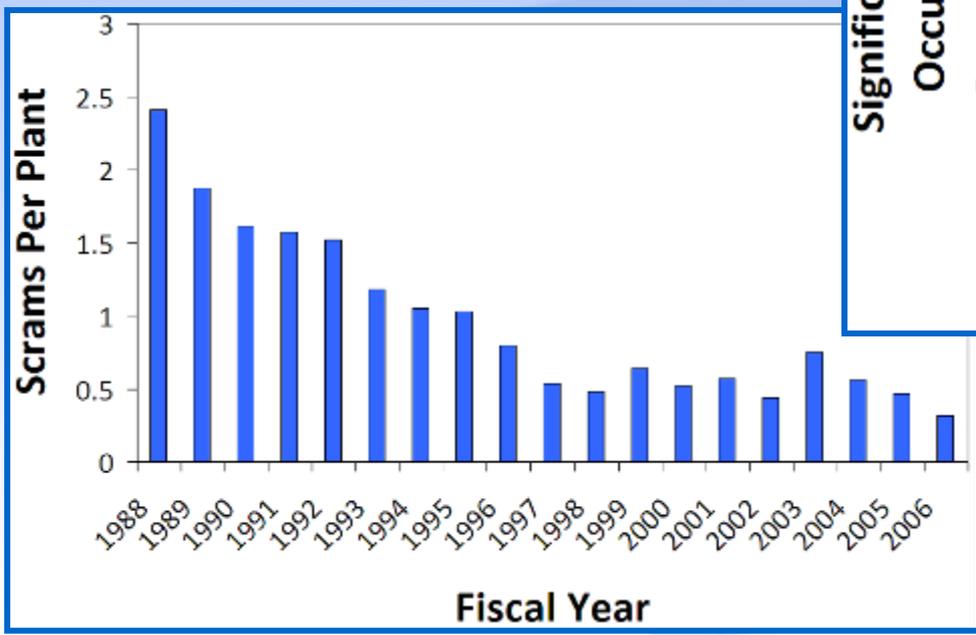
2. Brownfield sites





Safe Operation: Trends in Safety

A smaller number of events reflects a focus on safety.

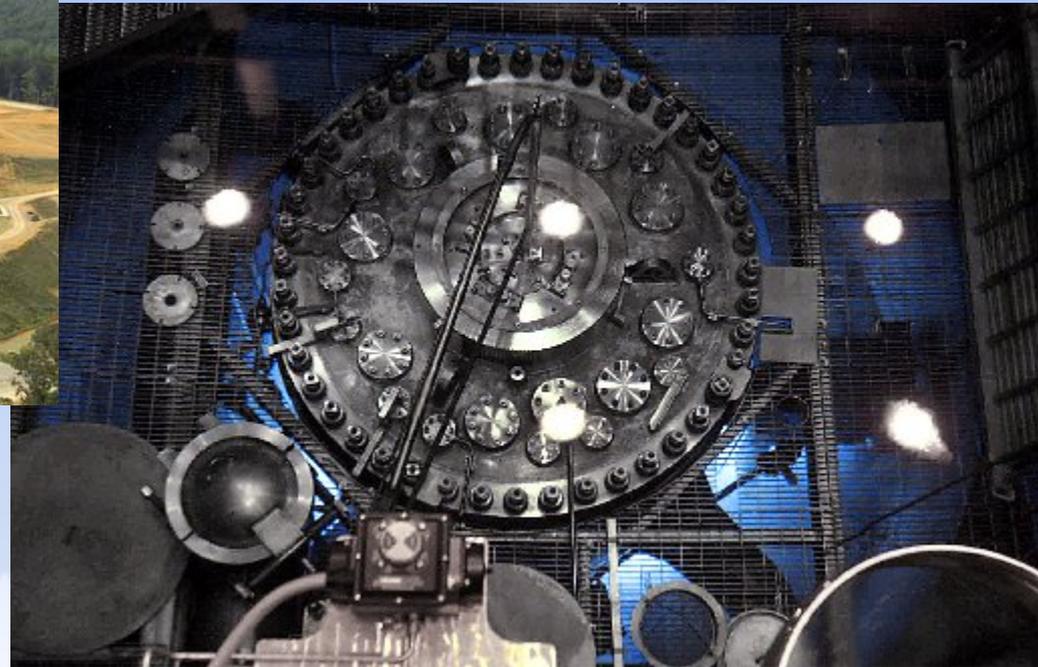




Gen IV and advanced fuel cycle research



Oak Ridge National Laboratory

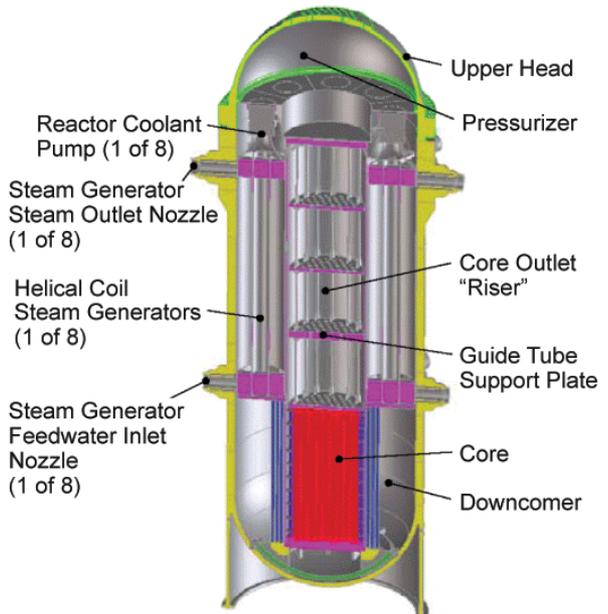


High Flux Isotope Reactor

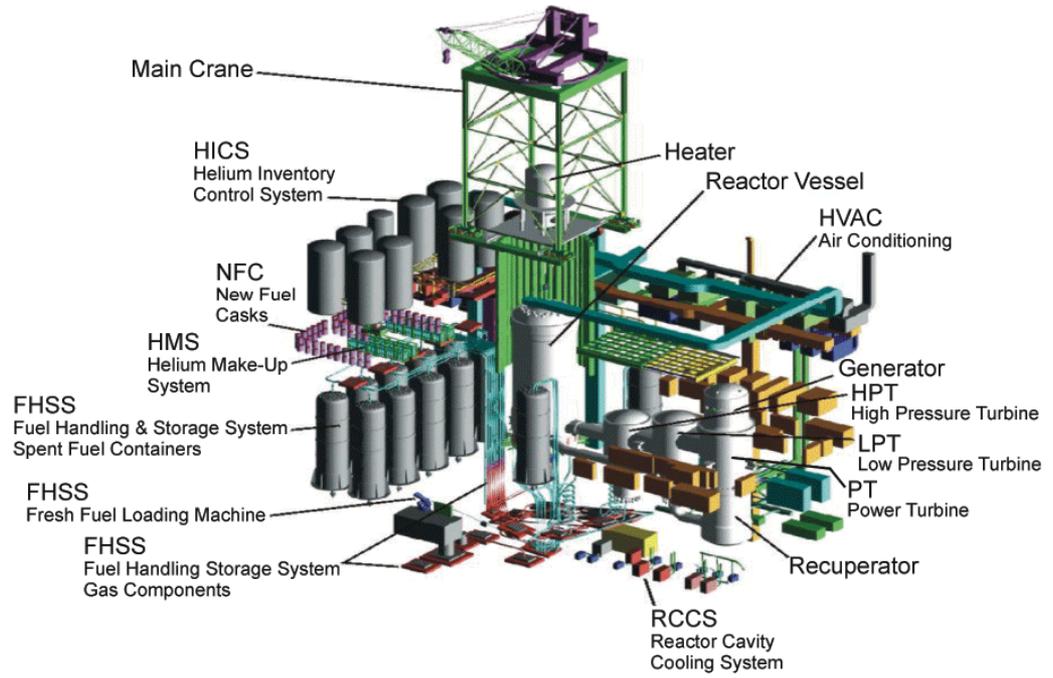


Modular reactor technologies

International Reactor Innovative & Secure



Pebble Bed Modular Reactor Main Power System with Support Systems





Quality Assurance is an ongoing challenge

A burst pipe at a Chinese coal-fired power plant.





The industry will need new skill sets



Digital Instrumentation & Controls



Cyber Security



Spent fuel storage and disposal



Yucca Mountain



Dry cask storage



Future of nuclear power is a glass “half full.”

Public confidence in a safe and secure future for nuclear power is well-grounded.

