

WELCOME



State of Nuclear Power in U.S.A.

- Largest producer in world by number of plants and reactors
- 100 reactors in service at 62 plants
- 5 more under construction
- Combined generation of 100 gigawatts of electricity per year
- 19 percent of U.S. generation
- 70 percent of carbon-free generation

Lean Years

- Regulatory changes in 1970's and 1980's often added billions to construction costs
- About 100 reactors canceled
- From 1980 to 2007, no new permits issued by NRC
- 12 reactors closed between 1989 and 1998 before reaching end of 40-year licenses
- Yet, output increased 20 percent due to greater efficiency

Resurgence

- **Realization of Nuclear's status as clean energy**
- **Advances in safety record and fading memories of past problems**
- **NRC issued 3 site permits**
- **24 applications for construction and operating licenses for 30 reactors**
- **Increased government support**

Energy Boom; Coal Bust

- **Energy boom in North America**
 - **Shale Oil and Natural Gas**
 - **Generally Good for U.S. and Canada**
- **BUT, it has had an impact on energy market and put nuclear at a disadvantage**
- **Environmental Protection Agency (EPA) imposing strict regulations on emissions**
 - **That will cause closing of hundreds of coal-fired plants**

Challenges Facing Nuclear

- Only 4 new reactors under construction
- 7 applicants have suspended applications
- 7 announced projects canceled
- 4 plants closed in 2013-14
 - Crystal River
 - Kewaunee
 - San Onofre
 - Vermont Yankee
- Fewer skilled workers to replace aging work force

Challenges Facing Nuclear

- **Gas prices fell almost by half in 2012**
- **Gas already had advantage of efficiency, lower capital costs and cleaner emissions**
- **Low price has lowered market for electricity and made nuclear uncompetitive**

Entire System Must Be Brought Back Into Balance

- **Stability in pricing needed to reflect value of total system and importance to society**
- **Closing of coal-fired plants will damage baseload generation ability, risk reliability**
- **Nuclear cannot make up the difference under current market conditions**
- **May take a crisis to shock system back into balance**

THANK YOU

