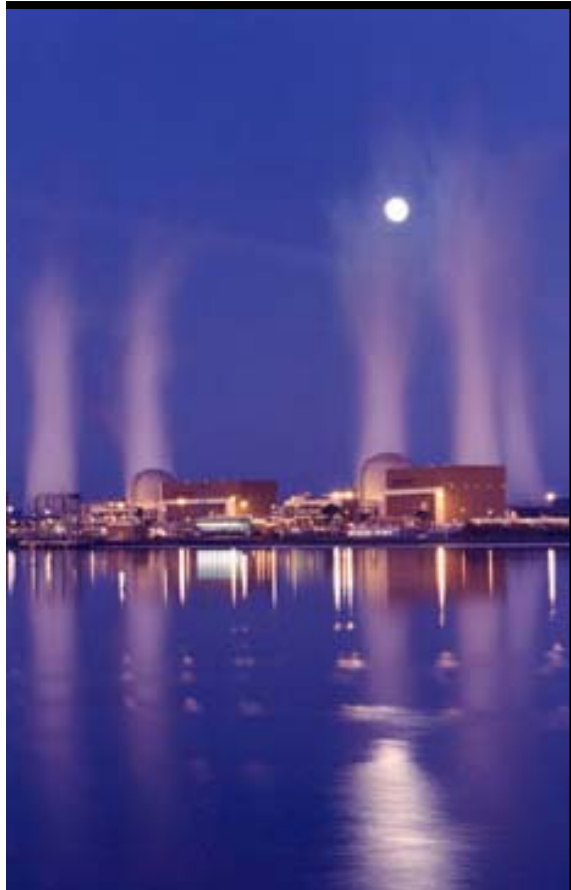




Washington Division



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## **The Nuclear Renaissance: Risk to Reality**

**Jim Little, President**

**Washington Safety Management Solutions, LLC**

***A Nuclear Risk Management Company***

# We Have to Know the History to Move to the Future

**URS**

Washington Division



- **The 1970s**

- **300+ nuclear plants in various stages of planning, licensing, engineering, and construction**
- **Big “events”:** US Nuclear Non-Proliferation Act of 1978, Three Mile Island...
- **A flawed long-term business model**
  - **Cost/schedule overruns**
  - **Unpredictable regulatory process**
  - **Poorly organized and incentivized client-supplier relationships**

# The Result ... The 1980s and 1990s



- **Decline in new nuclear plant investment**
  - 200 new plants never built
- **Termination of the nation's world-leading breeder and fuel recycle programs**
- **But ... ultimately a strong, safe, efficient, consolidated nuclear operations industry emerged**
  - More disciplined operating standards
  - Plant efficiencies rose from ~65% to 90+%
  - Life extension of existing plants
  - Updatings

# Leading to Today



Dr. Patrick Moore  
Founder - Greenpeace

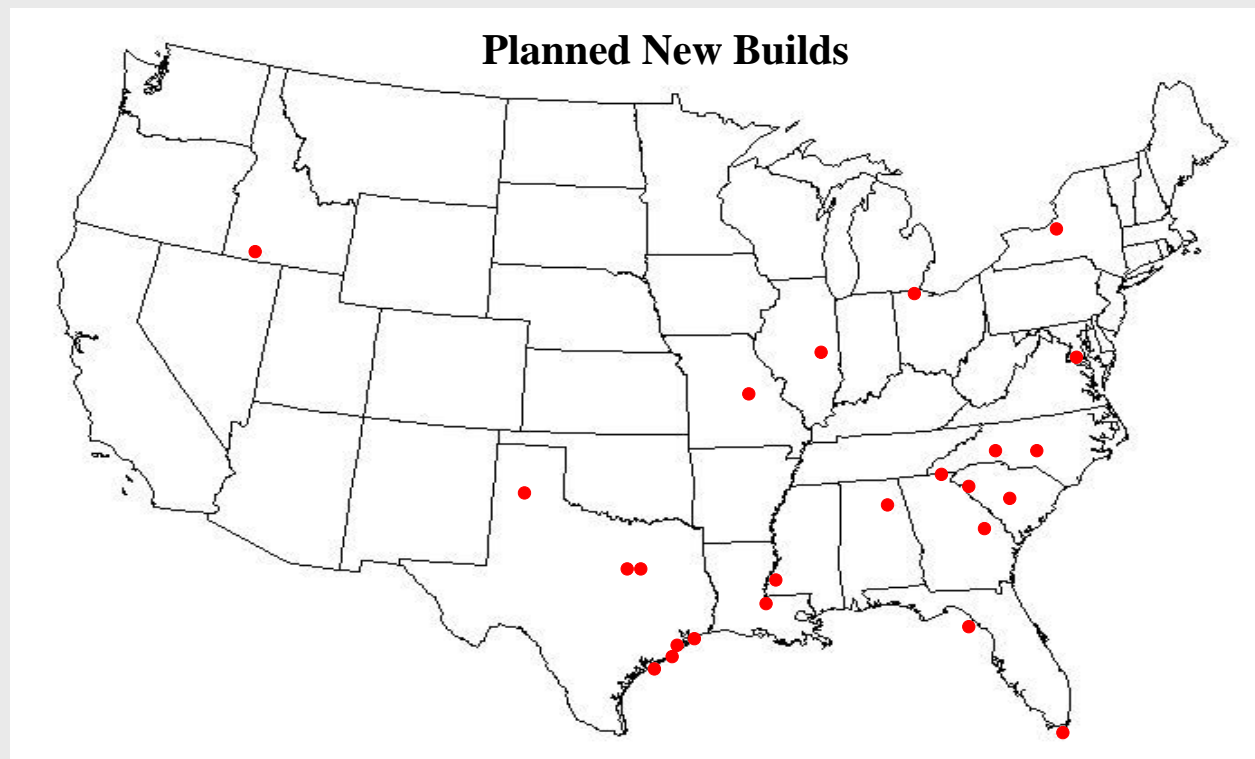
*“Nuclear energy is the only large-scale, cost-effective energy source that can reduce greenhouse emissions while satisfying a growing demand for power.”*

- **Growing consensus that nuclear power is the economic and environmental choice**
  - 70% public support nationwide
  - No greenhouse gas emissions
  - Critical to long-term energy security
- **2005 Energy Policy Act offers important incentives**
  - Energy production tax credit
  - 80% loan guarantees
  - “One-step” licensing (construction and operations)
  - Price Anderson Act renewal for plants online before 2025

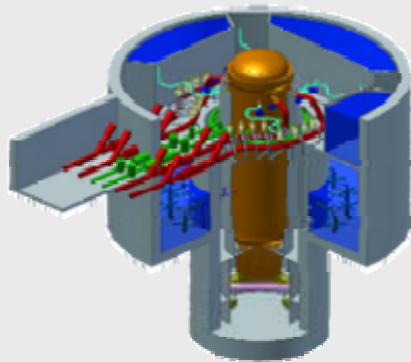
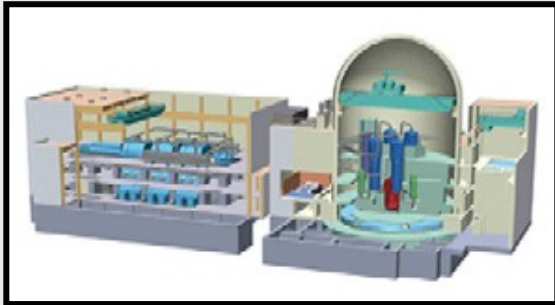
*Combined Operating License and Regulatory Process  
are only the start of the Renaissance/Resurgence*

# Demand

- **40% of US Population will be in SE by 2030**
- **25-30 new nuclear power plants to be built (\$120 billion capital expenditure ... 90% invested in SE USA)**



# Dynamic US Market



- **New entrants to the US market**
  - Toshiba acquisition of Westinghouse
  - UniStar alliance based on Areva technology
  - GE/Hitachi joint venture
  - MHI US APWR
  
- **Immediate focus is on barriers on how to serve this market**

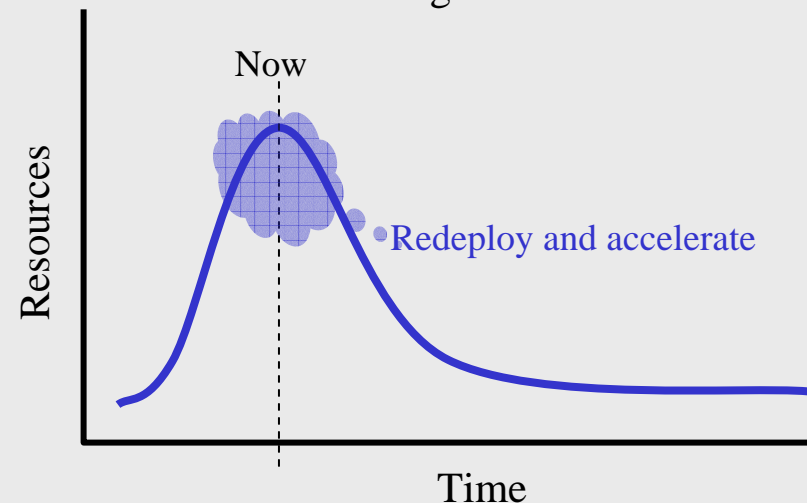
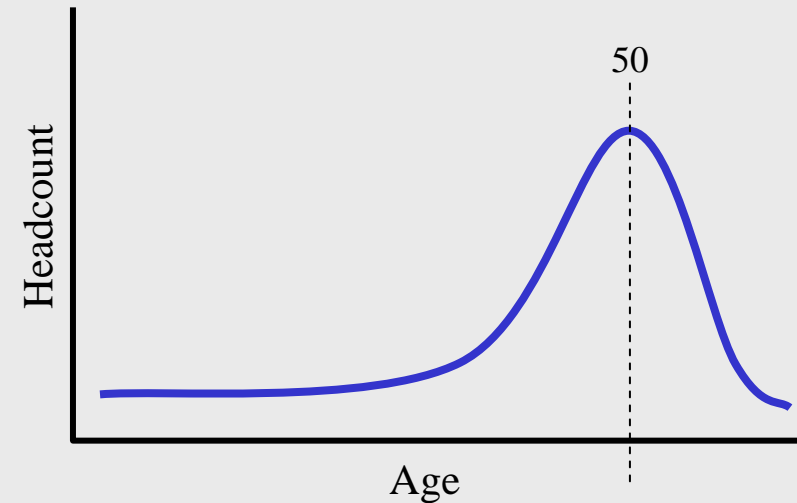
# Risks Ahead

- **Clear bounding and intermediate outcome scenarios exist**
  - One more chance to get it right
- **Highly visible risk element**
  - Untested licensing process
  - Aging workforce...war on talent
  - Long lead equipment
  - Deteriorated domestic supply base
  - Global competition for critical materials
- **Ultimate outcome will be determined by how well we manage risk**

*Synthesis vs. Analysis is Key*

# Example: Aging Workforce

- **View Risk as Threat**
  - Hire/steal more talent
  - War on Talent
  - Critical knowledge will be lost
  - Lack of new talent entrants
  
- **View Risk as Opportunity**
  - We have resources now
  - Accelerate Talent Growth



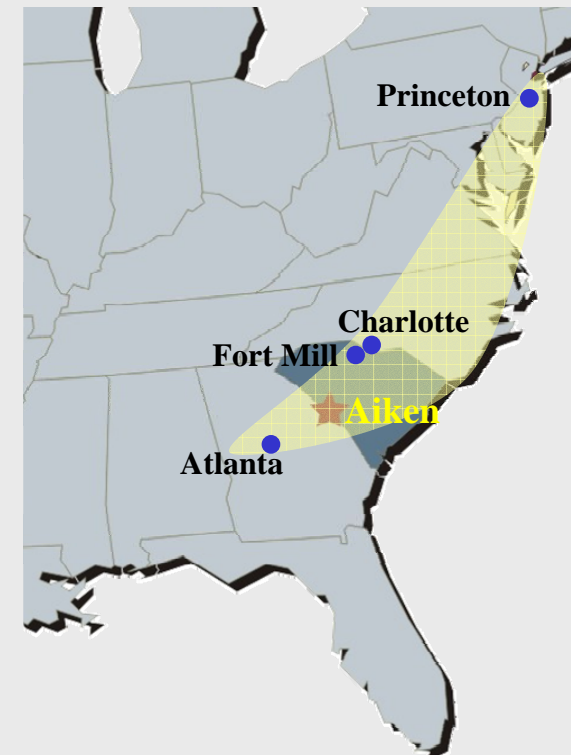
*Focus on starting...then build the industry*



# Talent Stockpile

- **Since late 1980s, talent migrated to DOE Complex because of the challenge of complex, leading-edge projects and missions**
  - K-Reactor restart
  - New Production Reactor
  - High level waste management
- **Nuclear talent enriched by the DOE nuclear lifecycle experience**
- **URS Corporation is moving forward**
  - **Talent in Southeast and creating synergism among Business Units**

## Fertile Crescent for New Nuclear



# The Path Ahead

- **Build upon initial success and replicate**
- **Utilize success to attract government and investor support to advance the industry**

