



Briefing on the Future of the Operating Reactor Business Line

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Purpose

- **Provide the Commission with a strategic look at the Operating Reactor Business Line**



Eric Leeds, Director
Office of Nuclear Reactor Regulation

Agenda

- **Constants**
- **Environmental Drivers**
- **Strategic Outlook**

Agency's Mission

License and regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.

Operating Reactor Major Product Lines

- **Licensing**
- **Oversight**
- **Rulemaking (Regulatory Framework)**
- **Incident Response**

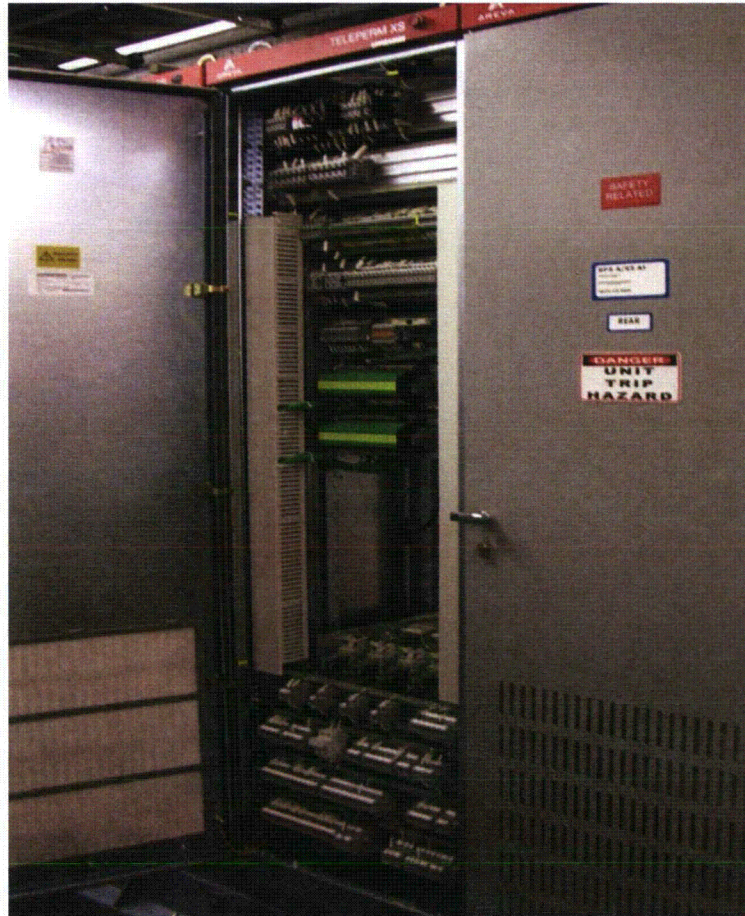
Environmental Drivers

- **Technological**
- **Societal**
- **Economic**
- **International**

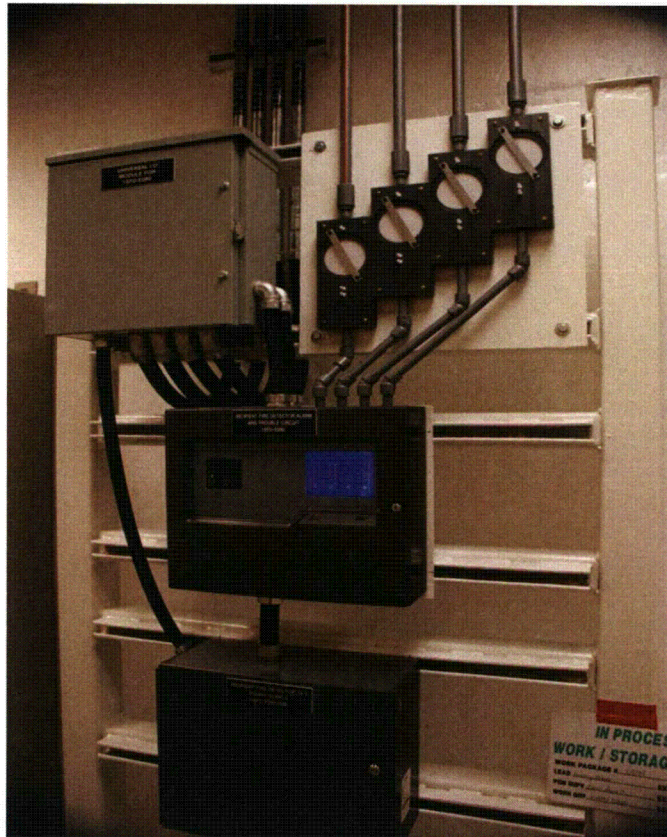
Catawba Service Water Piping



Oconee Digital Instrumentation & Control



Shearon Harris Incipient Fire Detection



Environmental Drivers

Societal

- **Stakeholders**
- **U.S. Government Policies**

Environmental Drivers

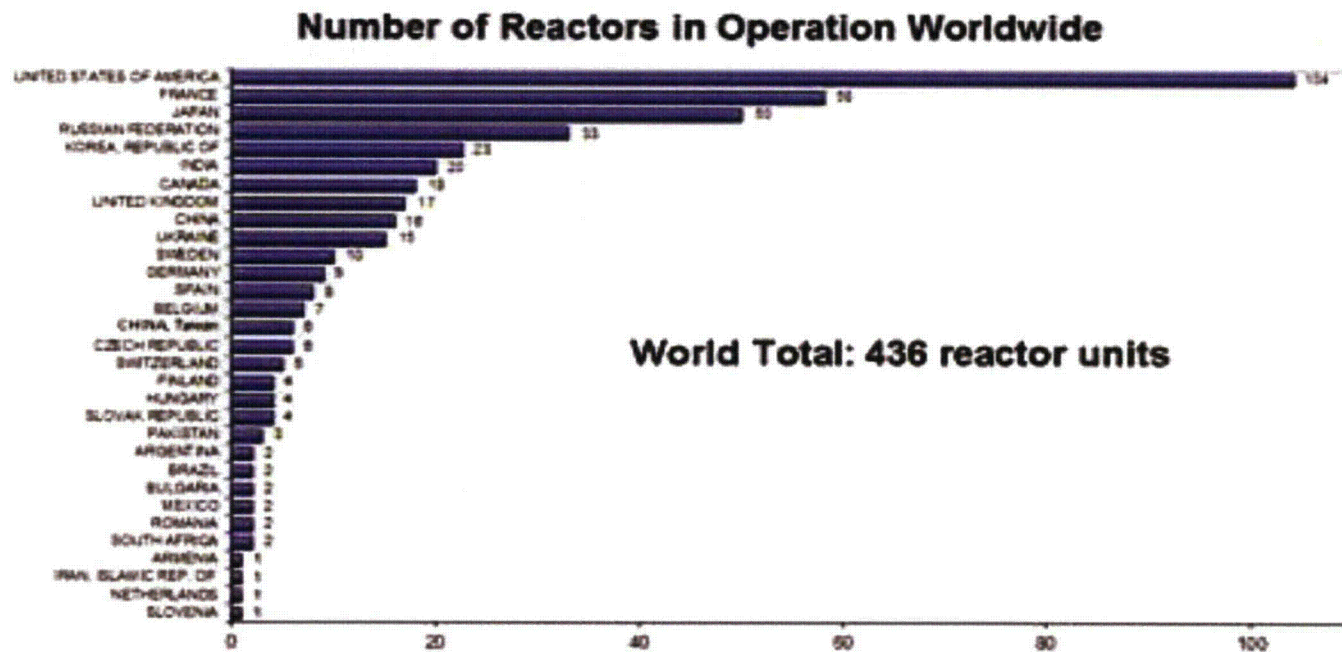
Economic

- **Natural Gas Prices**
- **Electricity Demand**

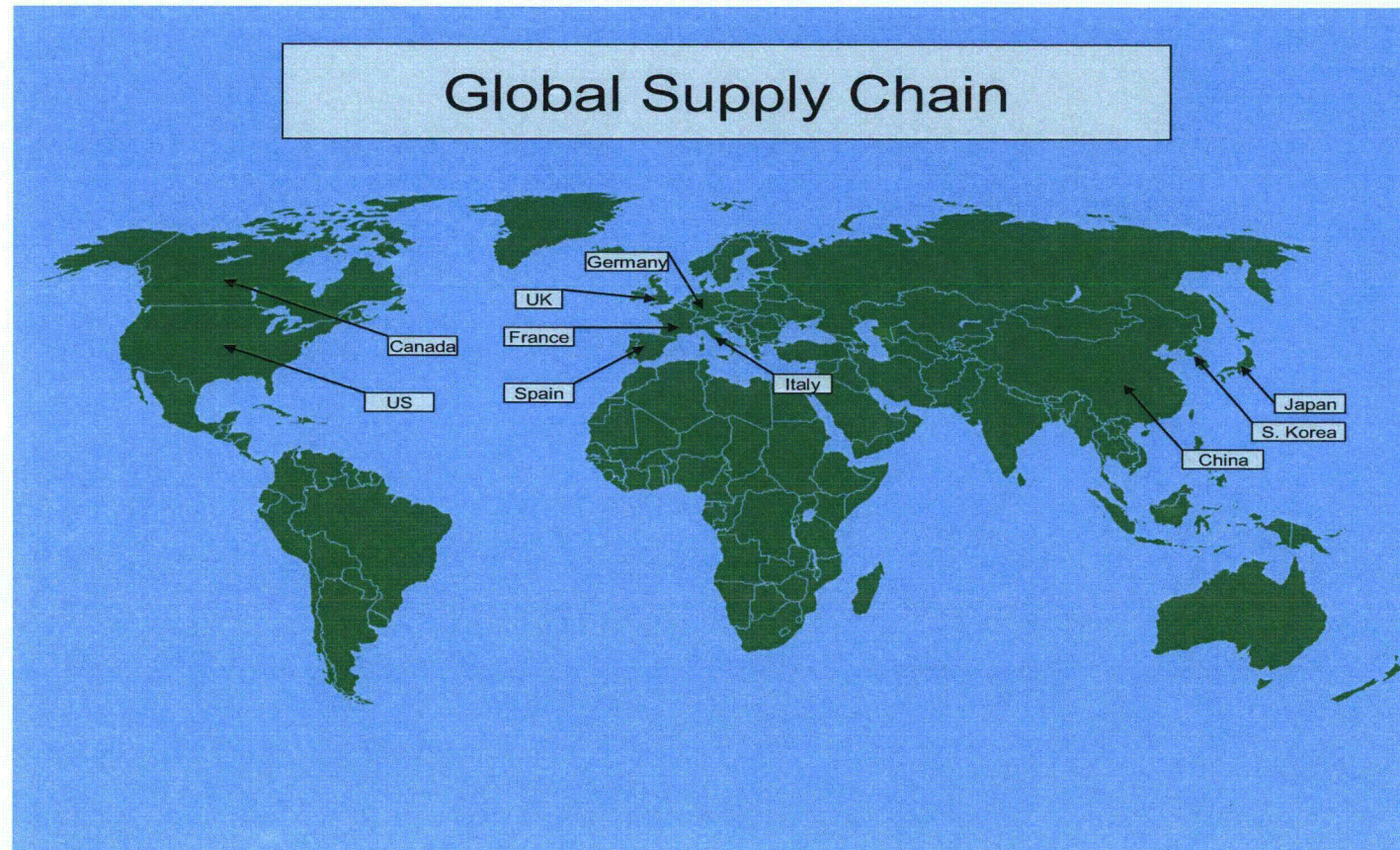
Environmental Drivers International

- **Global Operational Experience**
- **Vendor Supply Chain**
- **IAEA/NEA**

Nuclear Plants World Wide



Global Supply Chain



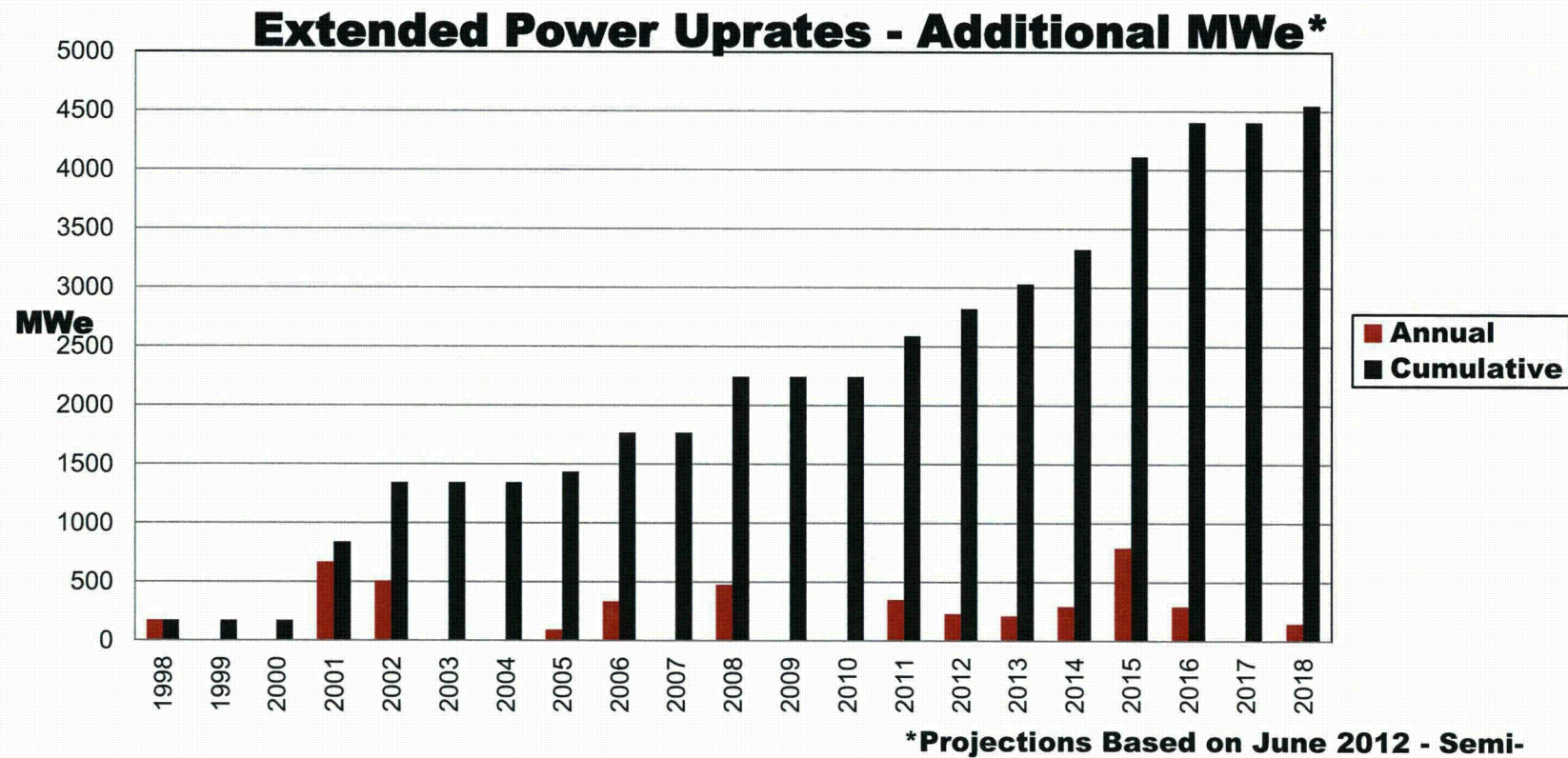
Risk-Informed Regulatory Framework

- **NTTF Recommendation No. 1**
- **Risk Management Task Force Report**
- **Level III Probabilistic Risk Assessment**
- **State of the Art Reactor Consequence Analysis**

Licensing

- **Digital Instrumentation & Control**
- **Extended Power Upgrades**
- **NFPA 805 (Fire Protection)**

Extended Power Uprates



Harris Reactor Coolant Pump Back Up Seal Injection



Licensing

- **License Renewal**
- **Subsequent Renewals (Beyond 60 Years)**
- **Medical Isotopes**

Monticello Fire Protection Piping



Farley Containment Hoop Tendon



Reactor Oversight Process

- **Significance Determination Process Improvements**
- **Fukushima**
- **New Plant Transition**
- **Cyber Security**

Incident Response

- **New Operations Center**
- **Hostile Action-based Exercises**
- **National Exercise Program**

Fukushima Response

- **Fukushima Lessons Learned**
 - **Tier 1 Implementation Underway**
 - **Tier 2**
 - **Other Natural Hazards**
 - **Emergency Planning**
 - **Tier 3 Plans initiated**

Summary

- **Constants**
- **Environmental Drivers**
- **Strategic Outlook**

Acronyms

- **IAEA – International Atomic Energy Agency**
- **NEA – Nuclear Energy Agency**
- **NFPA – National Fire Protection Association**
- **NTTF – Near Term Task Force**