



# **NRC International Activities**

**Nader Mamish**

**Director, Office of International Programs**

**R. William Borchardt**

**Executive Director of Operations**

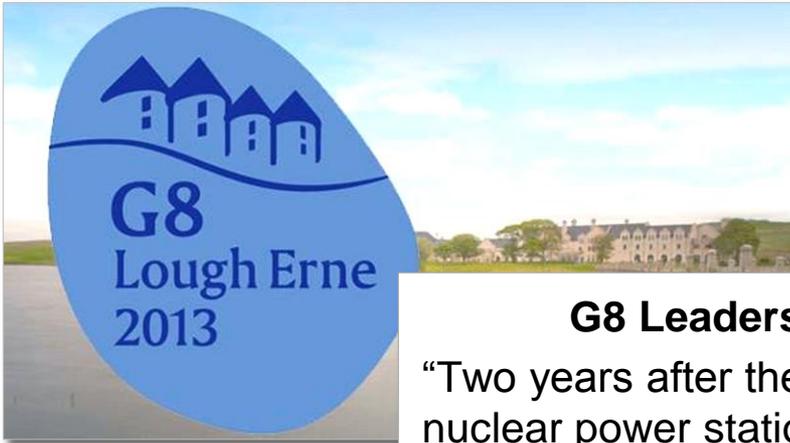
**July 10, 2013**

# Overview

- **Key U.S. Policies**
- **NRC International Program Areas**
  - Security Initiatives
  - Conventions and Treaties
  - Export/Import Licensing
  - Bilateral Activities
  - Multilateral Activities

# Key U.S. Policies and Issues

- Focus on Nonproliferation
- Control Over Materials
- Enhancing International Legal Instruments
- Export and Import Control
- Support for New Build
- Emphasis on Security Policy
- Use of Bilateral and/or Multinational Means to Accomplish Goals
- NRC Actions to Support Policy and Goals



### **G8 Leaders' Communique June 2013: Nuclear Safety**

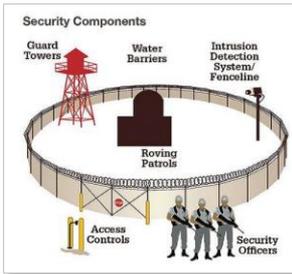
“Two years after the accident at the TEPCO's Fukushima Daiichi nuclear power station, achieving and maintaining the highest levels of nuclear safety worldwide remains a priority. We reaffirm the importance of international cooperation and our full support to the International Atomic Energy Agency's (IAEA) Action Plan on Nuclear Safety. We will continue, in our national capacity as well as collectively, to take our full share in its implementation. In this regard, we commend and support the work being done at the IAEA for improving the effectiveness of the Convention on Nuclear Safety and stress the need to further strengthen the implementation of other relevant conventions as well as national capabilities and international mechanisms for nuclear emergency preparedness and response.”

# Security Initiatives

- International Regulators Conference on Nuclear Security Initiating New Dialogue
- Physical Protection Bilateral Meetings Supporting U.S. Export Licensing Decisions
- NRC Involvement Increasing to Support U.S. Government Security Policies

# Three-Tiered U.S. Nuclear Security Strategy

1. Site level: the U.S. works with other countries to minimize the civilian use of highly enriched uranium, to eliminate unneeded weapons usable material and to improve security at specific sites.



2. Country level: the U.S. cooperates at the country level with foreign governments to exchange best practices.



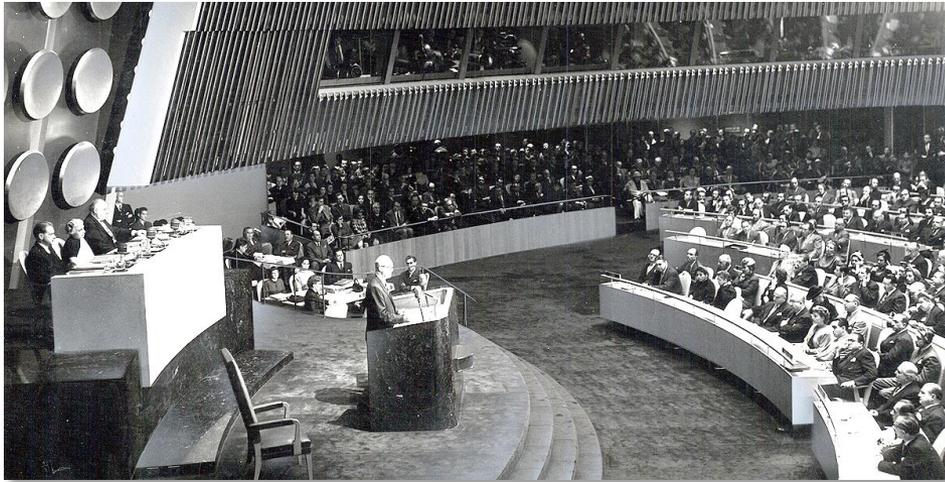
3. Global level: develop global initiatives through the nuclear security summit process, the United Nations, and other fora to improve nuclear security around the world.



(Source: Thomas Countryman, Assistant Secretary, Bureau of International Security and Nonproliferation, Department of State, March 2012  
"Managing Interagency Nuclear Nonproliferation Efforts: Are We Effectively Securing Nuclear Materials Around the World?")

# Conventions and Treaties

- Incorporate Lessons Learned from Fukushima within Safety and Joint Conventions as Appropriate
- Implement International Safeguards in the U.S.
- Demonstrating Support for Peaceful Uses of the Treaty on the Non-Proliferation of Nuclear Weapons



President Dwight D. Eisenhower delivers his Atoms for Peace speech before the United Nations General Assembly on December 8, 1953.

President Lyndon B. Johnson looking on as Secretary of State Dean Rusk prepares to sign the NPT, July 1, 1968.



# Export/Import Licensing

- Reduce Use of Highly Enriched Uranium for Production of Medical Isotopes
- Incorporate Amended Guidelines of the Nuclear Suppliers Group
- Enhance Implementation of the Code of Conduct on the Safety and Security of Radioactive Sources

# Four Agencies Control U.S. Civil Nuclear Exports

- Department of Commerce
- Department of Energy
- Department of State
- Nuclear Regulatory Commission

“U.S. nuclear exports increase the transparency of the importing country’s nuclear programs, thus indirectly supporting our nonproliferation policies. When we export U.S. technology, we are also exporting our safety and security cultures. The NRC is widely regarded as the most effective and independent nuclear regulator in the world. By setting the bar for such safety standards we are also working to raise standards for nuclear safety around the world.”

(Rose Gottemoeller, Acting Under Secretary for Arms Control and International Security, Department of State, May 2013  
“Geopolitics and Nuclear Energy: The View from the State Department“)

# Bilateral Activities

- Exchange Programs with 42 Countries, EURATOM and Taiwan to Support Regulators
- Foreign and NRC Assignee Program
- Cooperation with Countries with Mature Nuclear Programs to Exchange Operational Information
- Assistance to Regulators in Reactors and Materials

# THE INTERNATIONAL REGULATORY DEVELOPMENT PARTNERSHIP

Assisting countries with emerging nuclear power programs to develop regulatory agencies capable of licensing and regulatory oversight for operation of new reactors.



The International Regulatory Development Partnership (IRDP) assists countries with new or expanding nuclear power programs in their efforts to establish and maintain an effective regulatory authority. All work is conducted in accordance with an action plan developed jointly by the NRC, contractors, and the management of participating national regulatory authorities.

# Multilateral Activities

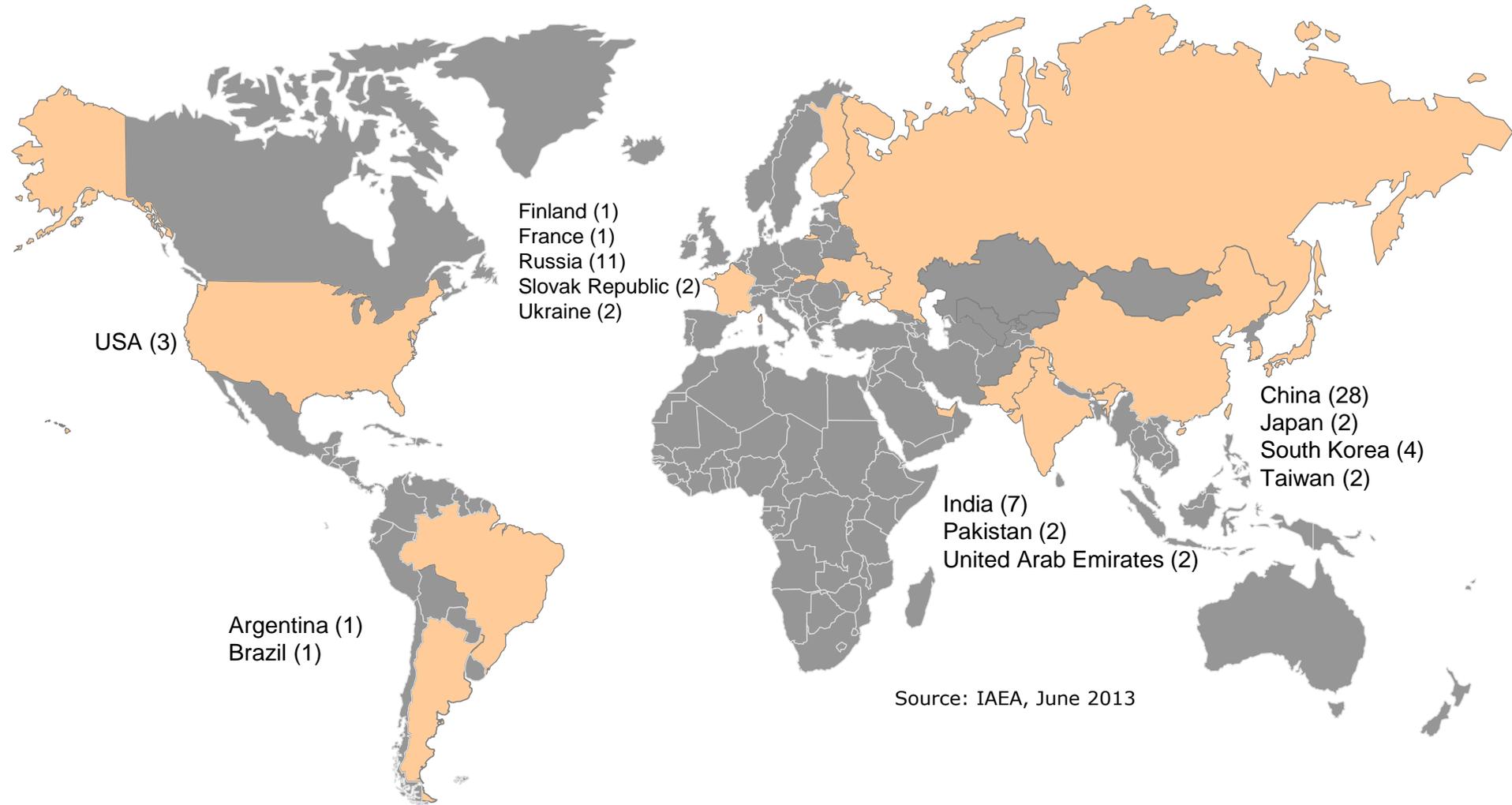
## International Atomic Energy Agency

- Supporting the Action Plan for Nuclear Safety
- Support for Nuclear Security Guidance Committee
- Cost-Free Experts to Leverage NRC Experience

## Nuclear Energy Agency

- Participate in Crisis Communication and Public Outreach Initiative
- Leadership in the Multinational Design Evaluation Program

# 69 Plants Under Construction in 15 Countries

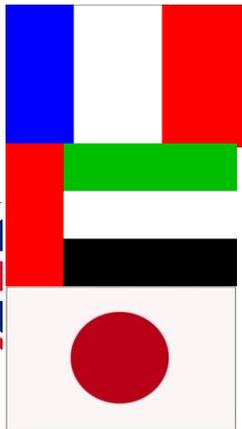
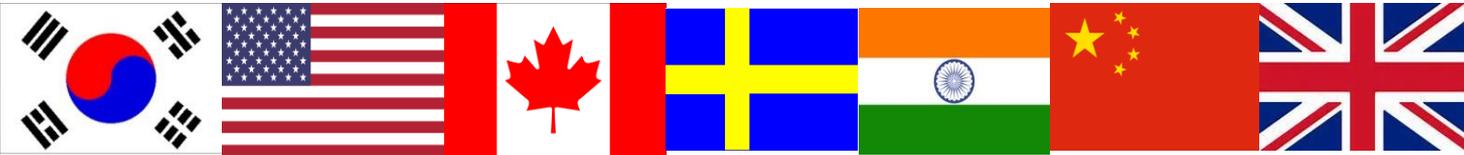


# Post-Fukushima Activities

- IAEA Action Plan
- NEA Activities
  - Fukushima Senior Task Group Report
  - Reaffirming Defense-in-Depth
  - Benchmark Study of the Accident at Fukushima
- Focus Areas:
  - External Hazards
  - Long Term Station Blackout
  - Severe Accident Management

# Multinational Design Evaluation Program

- 13 Regulators and IAEA Participating
- Benefits of Participation
  - Design Reviews
    - (AP1000, EPR, APR 1400)
  - Vendor Inspections
  - Digital Instrumentation & Control
  - Fukushima Requirements for New Reactors



# AP1000 Construction in China

- First AP1000 at Sanmen to Begin Commissioning Fall 2013
- China/U.S. Cooperation on AP1000 Oversight and Design Issues
- U.S. to Observe Pre-Op Testing and Start-up Activities in China

# AP1000 Construction Sites



**Sanmen Site, China**

## Vogtle Site, Georgia



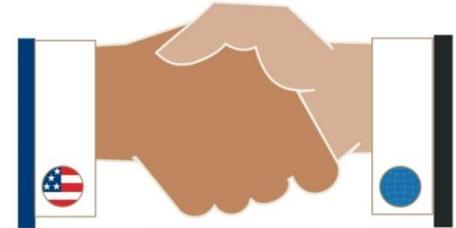
# IAEA Peer Review Missions

- International Physical Protection Advisory Service (IPPAS)
- Integrated Regulatory Review Service (IRRS)
- Operational Safety Team (OSART)



IRRS at Limerick, 2010

# Research Activities



- 100+ Bilateral and Multilateral Agreements
- Direct Nexus to NRC Research
  - High Energy Arching Faults, Sump Clogging, Fuels, Spent Fuel Pool
- Leverage Staff and Financial Resources

# Summary

## Priorities Looking Forward

- Commission Views on U.S. Government Peaceful Uses Agreements Impacting NRC Export/Import Licensing
- Nuclear Safety Focus within International Community
- Nuclear Security and Non-Proliferation Impact on NRC Priorities