

NRC International Activities



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International Programs
August 15, 2000

International Arena Share of NRC's FY 2000 Budget

**\$ 4.7 Million = One Percent
of the NRC's FY 2000 Budget**

NRC International Nuclear Activities

- **Non-Proliferation Support, Including
Export Licensing and Safeguards**
- **Information Exchange**
- **Safety Assistance**
- **Cooperative Safety Research**

Export Activities

- **143 Licensing Actions**
- **12 Executive Branch Consultations**

Non-Proliferation Activities

- **NPT Review Conference**
- **Core Conversion**
- **Strengthening IAEA Safeguards**
- **MPC&A Assistance to FSU**
- **Physical Protection Convention**

FSU Nuclear Safety Assistance

Accomplishments:

- **Chornobyl Closure
Commitment**
- **BN-350 Reactor Closure**
- **Regulatory Profile**
- **Sunsetting G-24**

FSU Nuclear Safety Assistance

Challenges:

- **High-Risk Reactor Closure**
- **Ukraine (Cumulative Impact)**
- **NRC Funding/Resources**
- **GAO Recommendation**

Possible Exchange Activities

South Africa:

**Licensing Approach for
Advanced Modular Pebble-
Bed Reactor**

New Country Contacts

**Probable Requests for
Nuclear Safety Assistance:**

Vietnam

North Korea

Foreign Assignees

9 Assignees from 6 Countries:

France (2)

Japan (2)

Spain (2)

Brazil, China, Switzerland

Foreign Visits to NRC

**Over 100 Foreign Visits since
October 1, 1999:**

- **28 Countries, plus Taiwan**
- **5 International Organizations**
- **19 Commission-Level Visits**

IAEA Participation

- **Nuclear Non-Proliferation**
- **Conventions**
- **Standards**
- **Advisory Services**
- **Technical Assistance**

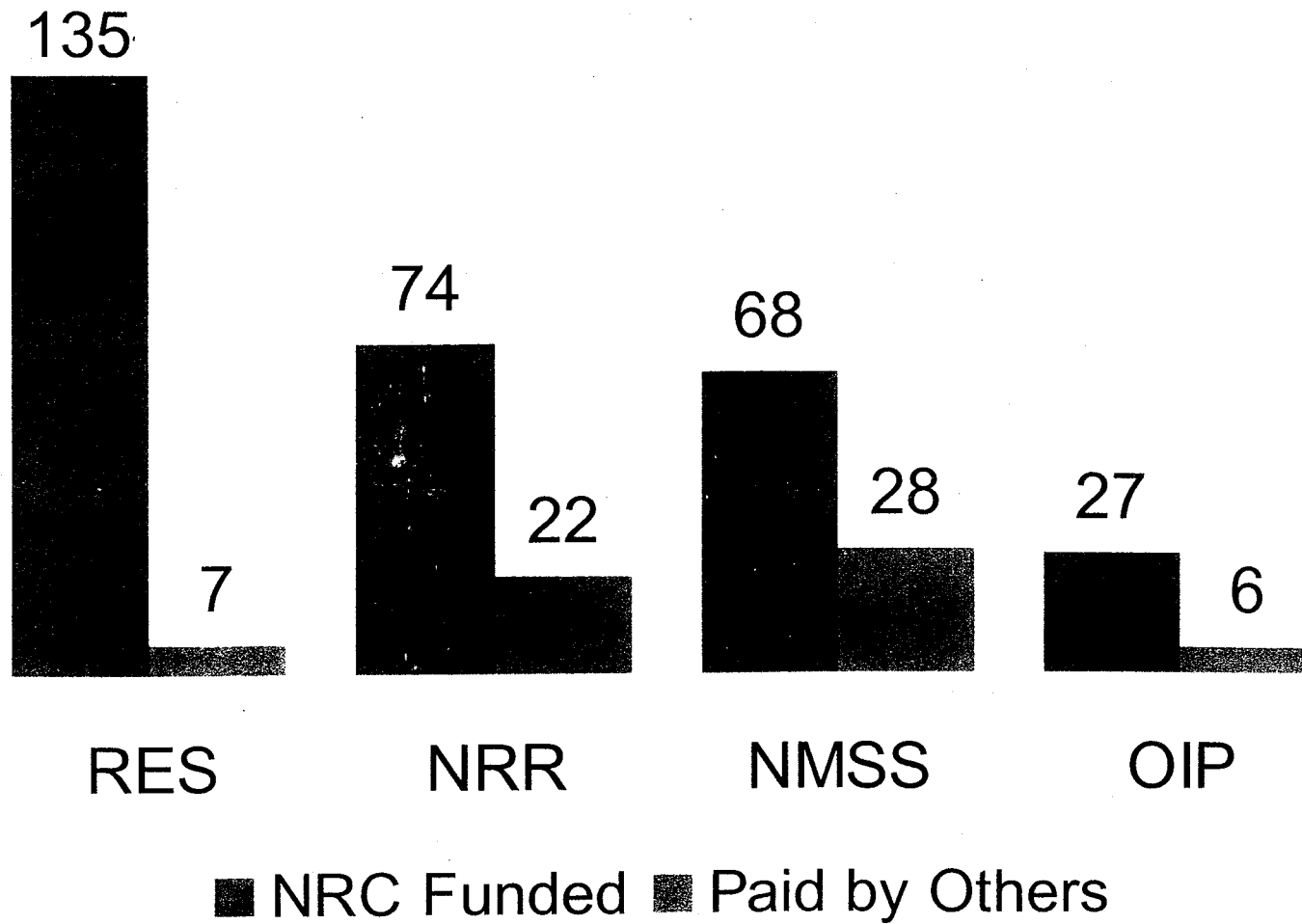
OECD/NEA Participation

- **Strengthening Nuclear Cooperation**
- **Harmonizing Approaches**
- **Multilateral Research**
- **Avoiding Duplication**

Notifications

- **Y2K Early Warning System (YEWS)**
- **Nuclear Information Exchange System (NIXS)**

Foreign Trips in FY 2000



Improvement Plan

- **Information Management**
- **Reorganization**
- **PBPM Process/Strategic Plan**
- **International Council**

NMSS

International Activities

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August 15, 2000

NMSS Primary Purposes

- **Gain Access to Non-U.S. Safety Information**
- **Assist Other Countries Regulatory/Safety Cultures**
- **Influence International Regulatory Standards, Policies and Practices**

NMSS Primary Purposes

- **Implement U.S. Treaties and Agreements**
- **Strengthen Countries' Domestic Safeguards Systems**
- **Support and Strengthen the Non-Proliferation Regime**

Non-Proliferation

- **International Physical Protection Support**
- **Convention on Physical Protection**
- **Counter Terrorism: Design Basis Threat**

Safeguards

- **Strengthening of International Safeguards**
- **FSU MPC&A Support**
- **Trilateral Initiative – Verification of Fissile Material**

Safety

- **Transportation and Storage Safety**
- **IAEA Waste Safety Standards
Advisory Committee (WASSAC)**
- **IAEA Radiation Safety Standards
Advisory Committee (RASSAC)**

Safety

- **Fuel Cycle/Waste Information Exchanges**
- **Radiation Source Safety/Radioactive Material Security**
- **Lisbon Program Safety Support**

International Obligations & U.S. Priorities

- **Import/Export Licensing Reviews**
- **Agreements for Peaceful Nuclear Cooperation**
- **U.S. - IAEA Safeguards Agreement**

International Obligations & U.S. Priorities

- **Nuclear Materials Management and Safeguards System (NMMSS)**
- **International Treaty on Nuclear Waste Safety (“Joint Convention ...”)**

Accomplishments

- **Completion of Project Sapphire Downblending**
- **New Revision (#4) of IAEA INFCIRC/225**
- **Interagency Agreement with DOE**

Nuclear Regulatory Research International Activities

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August 15, 2000

Research Outcomes

Access to Foreign Research, Experience & Facilities:

- Enhanced Focus on Safety**
- Supplements U.S. Developed Info**
- Leverages NRC Resources**
- Promotes International Understanding**

International Research

- **Agreements: ~78 - 25 Countries**
- **Contributions: \$1.7 Million/Year**
- **For ~\$4M, and In-Kind Research-Receive Benefit Over \$55M**
- **NRC Plays Active Role with International Organizations on Safety Issues**

Examples of Cooperation Programs

- **Experimental/Analytical: Severe Accidents, Containment, Seismic, Fuels, Human Factors, Digital I&C**
- **Analytical Code Applications**
- **Irradiation Assisted Stress Corrosion Cracking (IASCC)**

Examples of Research Outcomes

- **Realistic Regulatory Basis –
Fuel Performance**
- **Enhanced Analytical Tools**
- **Fragility Info. For Risk Analysis**
- **Enhanced Understanding of Aging
Effects - License Renewal**

Research Outlook

- **Worldwide Declining Research:**
 - Declining Budgets
 - Loss of Expertise and Facilities
 - Loss of Education and Training
- **Importance of International Cooperation**

Future Challenges

- **Maintain Research Infrastructure**
- **Ageing**
- **MOX and High Burn-up Fuels**
- **Digital Technology**
- **Advanced Designs**

Future Challenges

- **Waste and Decommissioning**
- **Increased use of Risk Assessment**
- **Deregulation – Power Upgrades, Staffing**

Nuclear Reactor Regulation International Activities

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August 15, 2000

NRR Activities

- **Bilateral Foreign Technical Exchanges**
- **Participation in Multilateral Technical Working Groups and Committees**

Foreign Assignees

- **France, Spain: Digital Instrumentation & Control Systems**
- **Japan: Non-Power Reactors**
- **China: Probabilistic Safety Assessment, Revised Reactor Oversight Process**

Bilateral Support

- **Czech Republic: Temelin NPP Digital I&C**
- **Taiwan: Lungmen NPPs Regulatory Review – SRP**
- **Russia & Ukraine: Ongoing Dialog**
- **France: NRC Observer at Nuclear Safety Authority**