



**RIC 2010**  
**International Activities in Long**  
**Term Research Projects**  
**USNRC Long-Term Research Program**

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## **NRC's Definition of Long-Term Research (LTRP)**

- Research not already funded or otherwise being worked on that will provide the fundamental insights and technical information needed to address potential technical issues or identified gaps to support anticipated future (>5 years) NRC needs



## LTRP Purpose

- Determine what needs to be done to prepare for the future, by whom it needs to be done, and when work needs to start.
- Prepare to meet licensing decision needs
  - Confirmatory information or tools
  - More efficient review and decisionmaking
  - Identify research licensees need to provide to support potential regulatory submittals



## LTRP Purpose, con't

- Focus on innovative technologies that may become important 5-10 years in the future
- Scoping in nature
  - Identify gaps or potential safety issues
  - Follow-on by NRC, if necessary, absorbed into regular budget process



# LTRP Process

- Solicit proposals from all NRC staff
- Review Committee comprised of Senior Level Technical Advisors from RES and Regulatory Offices
- Prioritize proposals using criteria and weighting factors below
  - Leveraging resources (10%)
  - Advancing state-of-the-art (30%)
  - Providing independent tools (10%)
  - Applying to more than one area (20%)
  - Addressing gaps created by technology (30%)



## LTRP Process, con't

- Scores provided to RES Office Director to inform the budget process
- RES Office Director, with concurrence of Regulatory Office Directors, decides which proposals will be funded
  - Buy-in through the regular budget process
  - Working 2 years ahead, e.g., in 2010 for 2012



## LTRP Process, con't

- Given the nature of Long-term research, budget priority has historically been “low”
  - In times of restricted budgets, long-term research would not be funded
- Commission approved a process of giving funding for long-term research a “high” priority



# LTRP Projects

- FY 2009 projects
  - Advanced Level 2/3 PRA Modeling Techniques
  - Integral Effects Test Facilities for Advanced Non-Light-Water Reactors





## **LTRP Projects, con't**

- FY 2010 projects
  - Lead Cask Demonstration
  - Extended In-Situ Real-Time Monitoring
  - Fire Safety of Digital Instrumentation and Control and Electrical Systems
  - Advanced Fabrication Techniques



## LTRP Projects, con't

- FY 2011 project recommendations
  - BWR Burnup Credit and Evaluation of Newly Available Isotopic and Criticality Data
  - Advanced PRA
  - Smoke Effects and Transport
  - Advanced Light Water Reactor Fuels
  - Surveillance of Civil Structures
  - Materials Behavior in PA



## LTRP Funding

- FY 2009
  - \$0.7M 1.3 FTE
- FY 2010
  - \$2.4M 2.6 FTE
- FY 2011
  - \$2.2M 2.5 FTE