

# Regulatory Issues Related to Small Modular Reactors

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# Overview

- **Role of SMRs in the future of nuclear**
- **NEI support for SMRs**
- **SMR Licensing Task Force**
  - **Mission**
  - **Membership**
  - **Activities**
- **SMR regulatory issue priorities**
- **NRC interactions**

# Role of SMRs in the Future of Nuclear

- **SMRs could**
  - Enable more companies to site, construct, and operate nuclear power plants in more locations in the U.S.
  - Reduce financing challenge for average small utility or generating company
  - Provide process heat for industrial applications
  - Use existing fossil-fueled power generating supporting infrastructure
  - Recycle used nuclear fuel
  - Enable U.S. nuclear industry to increase the number of U.S. manufacturing and engineering jobs
  - Contribute to the reduction of greenhouse gases by replacing fossil generation

# NEI Priorities (In Order)

- **Support of current fleet**
- **Support for large Generation III reactors**
- **Stability for waste and fuel cycle issues**
- **SMR design support**

# NEI Regulatory Support for SMRs

- **Support of changes in NRC regulatory approach as appropriate**
- **Lead SMR Licensing Task Force to collectively reach resolution for key generic regulatory issues**

# SMR Licensing Task Force Mission and Membership

## ■ Mission

- Identify key regulatory issues
- Resolve regulatory issues in a timely manner
- Develop generic industry positions
- Work with NRC achieve issue resolution

## ■ Membership

- Utilities: Duke, Entergy, Exelon, First Energy, MidAmerican, PSEG, SCE, Southern, TVA
- Vendors: AREVA, B&W, GE, Hyperion, NuScale, Westinghouse
- Other stakeholders: DOE, EDF, NGNP, NRECA, Oglethorpe

# Task Force Activities

- **Chartered March 2010**
- **Meetings held every six weeks**
- **Developed prioritized list of regulatory issues**
- **Drafted project plan for timely resolution of regulatory issues**
- **Focal point for industry-NRC interactions**

# Prioritized Regulatory Issues

- **Offsite Emergency Preparedness**
- **Physical security and security force staffing**
- **NRC annual fees**
- **Price-Anderson (liability)**
- **Decommissioning funding**
- **Pre-application engagement**
- **Modularity**
- **Control room staffing and layout**
- **Overall plant staffing**
- **Defense in depth**
- **Risk metrics**

# NRC Interactions

- **Series of public workshops on licensing**
  - **Approximately every six weeks**
  - **Several meetings held to date**

**July 28**  
**November 4**

**September 22-23**  
**December 16**

- **Variety of topics discussed**

**Annual fees**  
**Price-Anderson**  
**Emergency Preparedness**  
**50.54(hh)(2)**  
**Manufacturing licenses**

**Decommissioning funding**  
**Modularity**  
**Pre-Application Engagement**  
**Risk-informed licensing**  
**Part 52 Lessons Learned**

# NRC Interactions

- **Industry position papers on regulatory issues**
  - **Being developed by task force subgroups**
  - **Some complete**
    - **Annual Fees**
    - **Decommissioning**
    - **License structure (modularity)**
  - **Others near completion**
    - **Emergency preparedness**
    - **Pre-application engagement**
  - **Intent is to foster early engagement with NRC**

# Summary

- **SMR Licensing Task Force working toward resolution of numerous generic issues**
- **Regular engagement with NRC planned**
- **Several issues require near-term resolution to support vendor application schedules**