Near-Term Deployment Roadmap

Presented to the

Nuclear Energy Research Advisory Committee

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Near Term Deployment Group

- **Mission** - Identify the technical, institutional and regulatory gaps to the near term deployment of new nuclear plants and recommend actions that should be taken by DOE.

- **Participants** - multi-disciplined nuclear industry group
  - Nuclear Utilities - Duke, Southern Nuclear, Exelon
  - Reactor Vendors - Westinghouse, General Electric, General Atomics
  - National Laboratories - ANL, INEEL
  - Academia - Penn State
  - Industry - EPRI
  - NERAC

- **Oversight by NERAC GRNS members**
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♦ Request for Information (RFI)

  • Issued April 4, 2001, to reactor designers, AEs, nuclear plant owners/operators, Gen IV participants, NEI New Plant Task Force members

  • Public notice through Commerce Business Daily (CBD)

  • Solicits identification of design-specific, site-related and generic barriers to deployment of new nuclear plants by 2010

  • Responses received from 12 organizations

♦ NTD Roadmap

  • Target completion date - September 30, 2001
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RFI requested information in two areas:

♦ Specific Deployment Candidate Designs that meet six criteria
  • Credible plan for gaining regulatory acceptance
  • Existence of industrial infrastructure
  • Credible plan for commercialization
  • Cost-sharing between industry and government
  • Demonstration of economic competitiveness
  • Reliance on existing fuel cycle structure

♦ Generic & Design Specific Gaps
  • Known gaps provided requiring ranking and possible solutions
  • Other gaps to be identified by respondent
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- Design Specific Responses
  - SW 1000 Framatome
  - PBMR Exelon/PBMR
  - AP600 Westinghouse
  - AP1000 Westinghouse
  - IRIS Westinghouse
  - GT-MHR General Atomics
  - ABWR General Electric
  - ESBWR General Electric

- NTD Recognition of other potential candidate designs
  - System 80+ Westinghouse
  - CANDU
  - EPR - Framatome
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- **Generic Gaps Responses**
  - ESP Demonstration
  - COL Demonstration
  - Construction Inspection & ITAAC
  - Rick-Informed Regulation for Future Design Certifications
  - Advanced Fabrication, Modularization and Construction Technologies,
  - Standardized Life-Cycle Information & Configuration Control Systems
  - High Level Waste Disposal Resolution
  - Risk Management Tool
  - Public Influence and Acceptance
  - Appropriate Resource and Financial Arrangements