Stakeholder Engagement Review Meeting

The U.S. Department of Energy (DOE)-sponsored Light Water Reactor Sustainability (LWRS) Program Stakeholder Engagement Review Meeting was held on January 17 and 18, 2019, in Rockville, Maryland. The purpose of the meeting was to provide information on the accomplishments and plans of the LWRS Program and obtain input from stakeholders on priorities in order to identify needs for future research and development (R&D) activities. More than 130 individuals from over 41 organizations were represented at the meeting, including representatives from the U.S. commercial nuclear power industry, vendors and suppliers, regulators, and research organizations.

Shane Johnson, Deputy Assistant Secretary for Reactor Fleet and Advanced Reactor Deployment, Office of Nuclear Energy, Department of Energy, welcomed meeting participants. He was followed by an Industry Overview and Direction presentation given by Tim O'Connor, Senior Vice President and Chief Nuclear Officer, Xcel Energy. Tim provided compelling remarks on reinventing and repurposing nuclear plants to ensure their competitiveness as the key to their long-term sustainability. He presented a roadmap for transformation that is tied to Xcel's plans for its nuclear fleet going forward.

Bruce Hallbert, LWRS Program Technical Integration Office Director, described the LWRS Program accomplishments and plans. Kate Jackson, formerly Westinghouse, Chief Technology Officer, Senior Vice President, now Director, Energy and Technology Consulting at Key Source, reported on the results of a recent LWRS Program external review.

A panel discussion entitled, "Industry Challenges and Perspectives for Long-Term Operation," was then moderated by Jack Cadogan, Senior Vice President of Site Operations, Arizona Public Services, Palo Verde Generating Station. The panel consisted of the following leaders in nuclear energy:

- Scot Greenlee, Senior Vice President, Engineering and Technical Support at Exelon Nuclear
- Paul Harden, Senior Vice President/Chief Operating Officer at FirstEnergy Nuclear Operating Company
- Brad Adams, Vice President Engineering at Southern Nuclear
- Robert Coward, Principal Officer at MPR Associates.

The panelists shared their perspectives on industry challenges for the long-term operation of the existing nuclear fleet. Panelists noted that the best outcomes for industry from the LWRS Program's R&D are: (1) digitization of the entire plant; (2) risk-informed approaches that have been accepted by the U.S. Nuclear Regulatory Commission (NRC) and the Institute of Nuclear Power Operations (INPO); (3) continued long-term R&D, such as in the areas of Materials, as well as executing near-term results; and (4) research in the areas of physical and cybersecurity.

After the panel discussion, Doug True, Senior Vice President and Chief Nuclear Officer of the Nuclear Energy Institute, gave a presentation regarding the current Industry Initiatives to Sustain the Existing LWR Fleet. Doug's presentation highlighted the value of nuclear energy and some recent performance achievements of the industry. He

Panelists: (from left to right) Brad Adams, Robert Coward, Paul Harden, and Scot Greenlee. Moderator: Jack Cadogan

Bruce Hallbert, Alison Hahn, Heather Feldman (EPRI), and Jack Cadogan.

described NEI's targeted outcomes to achieve meaningful cost reductions and described a call to action in the near term to ensure the viability of the existing nuclear fleet.

During the afternoon, attendees met in parallel sessions that were conducted to address the gaps and opportunities for LWRS R&D to enable improved plant performance and address industry needs in the following areas:

- Plant Modernization, Craig Primer, Plant Modernization Pathway Lead
- Materials Research, Keith Leonard, Materials Research Pathway Lead
- Risk-Informed Systems Analysis, Curtis Smith, RISA Pathway Lead

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Ray Fursteneau, Director of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission

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- Integrated Energy Systems, Richard Boardman, Research Lead
- Physical Security, Mitch McCrory, Research Lead.

Meeting participants highlighted the needs, opportunities, and provided fresh perspectives on needed timeframes for results that are needed to have the type of impacts required to sustain and achieve improved performance by the existing U.S. fleet.

Raymond Fursteneau, NRC Director of Nuclear Regulatory Research, gave a presentation during the meeting. In summary, he noted that the NRC will continue to: (1) collaborate with DOE and the Electric Power Research Institute (EPRI) on aging management research to reduce regulatory uncertainty; (2) build on the successful cooperation that has established the technical basis for long-term operation of nuclear power plants; and (3) conduct regulatory research supporting operational safety to support the revision of aging management guidance and associated aging management plans.

In the closing comments, Brad Adams, Vice President Engineering, Southern Nuclear, noted that the nation's nuclear plants are valuable national assets and encouraged those of us in the industry to believe in what we do and be proud of it. He provided a positive outlook on the construction progress of Vogtle Units 3 and 4 and optimism of their future operation, shared his perspectives that current plants will bridge to next generation plants, and that we will get next generation plants with advanced designs built and get them operating in the future. He said that some in the industry may be skeptical of those plans, but that we should maintain a positive attitude because attitude makes a difference.

Alison Hahn, Federal Program Manager, Department of Energy, thanked the meeting participants for providing valuable information and contributions during the presentations and parallel sessions. The meeting and discussions emphasized opportunities to increase LWRS Program engagement with the U.S. commercial nuclear power industry, vendors and suppliers, research organizations, and the regulator focusing on issues of sustainability, safety, and enhanced economic performance of the light water reactor industry.

The presentations from the conference can be downloaded at the following link: (https://lwrs.inl.gov/Meetings/2019 Meetings/01-17 Stakeholder Engagement/Presentations). A meeting summary report is being prepared and will be posted on the LWRS Program website at Technical Integration Office Reports.