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U.S. –Canada Cooperative Nuclear Facilities and Safeguards Experience (NFASE)

The U.S. Department of Energy's Office of Nonproliferation and Arms Control collaborated with its partners in Canada to advance awareness and acceptance of safeguards for Advanced and Small Modular Reactors (A/SMRs). During cooperative technical exchanges, several U.S. based A/SMR developers and vendors participated in a Nuclear Facilities and Safeguards Experience (NFASE), where they learned how the IAEA works with state regulators to apply safeguards in non-nuclear weapons states. Vendors learned that considering operational safeguards requirements early in the design and production process (safeguards by design, or SBD) can mitigate additional cost or design changes necessary to comply with international requirements. Building on Canadian expertise with developing safeguards methods for on-line refueled reactors, these technical exchanges allowed designers that intend to use circulating fuel, like molten salt or pebble-based fuels, to interact with subject matter experts and regulators with knowledge of similar accountancy methods. In addition, participants learned that early engagement with customers and local regulators is key to identifying and mitigating development and deployment risks.

This paper will share impressions from participants of these cooperative efforts, identify lessons learned from international collaborations between U.S. and Canadian partners, and discuss how these exchanges contributed to the strategic objectives of each partner.

Country OR International Organization

United States and Canada

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YES

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