

RIC 2024 Hybrid

U.S. Nuclear Regulatory Commission
36th Annual Regulatory Information Conference

**ADAPTING TO A
CHANGING LANDSCAPE**

MARCH 12-14, 2024

Bethesda North Marriott Hotel
and Conference Center
Rockville, Maryland

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NON-PROLIFERATION CONSIDERATIONS OF ADVANCED REACTOR FUELS

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Key Messages

- Exports of advanced reactor fuels present new proliferation considerations
- Timing of export license approval needs to be considered in project planning

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Topics

- New advanced reactors and associated fuel types
- Special nuclear material (SNM) export process and proliferation considerations

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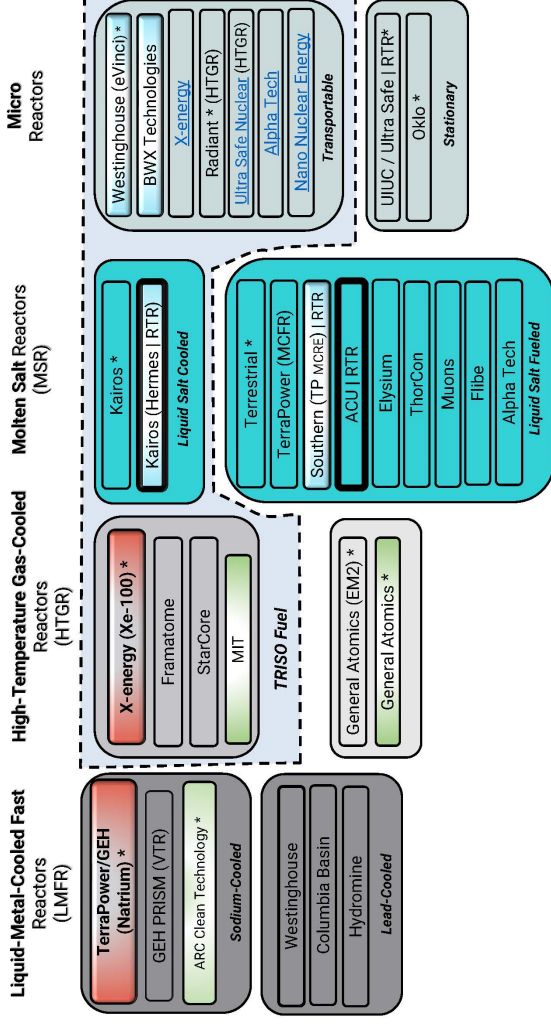
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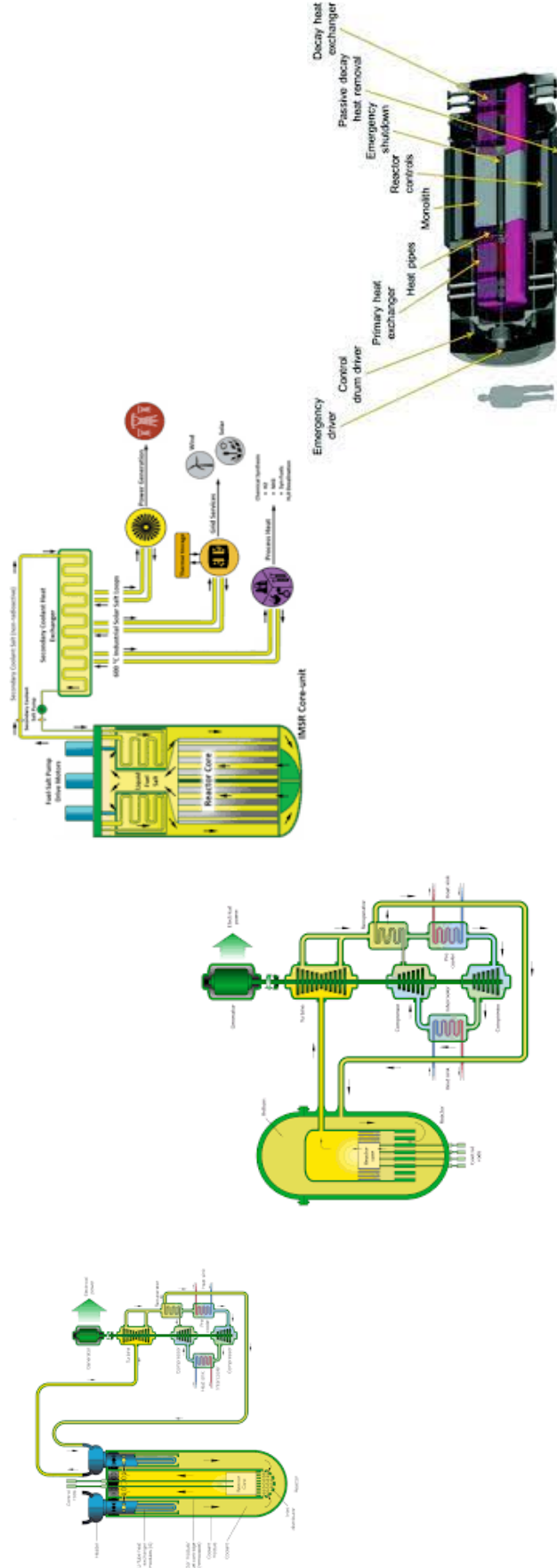
Broad Landscape of Advanced Reactor Designs



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Export Process (proliferation review)

- Statutory Basis
 - Atomic Energy Act of 1954 (AEA), as amended (sec 127)
 - Nuclear Nonproliferation Act of 1978 (sec 304(d))
- Agreements
 - Agreements for Peaceful Nuclear Cooperation (AEA sec 123)

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Export Process (proliferation review)

- Regulatory Basis (10 CFR 110.42)
 - IAEA safeguards will be applied with respect to such equipment or material.
 - No such equipment or material will be used for any nuclear explosive device or for research on or development of any nuclear explosive device.
 - No such equipment or material will be retransferred to the jurisdiction of any other country or group of countries without the prior consent of the United States.
 - The proposed export is not inimical to the common defense and security.



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Physical Protection (proliferation review)

- Regulatory Basis (10 CFR 110.44)
 - Evaluation of physical security measures in recipient countries at least comparable to the recommendations in the current version of IAEA INFCIRC/225
- Commission determinations on the adequacy of physical security measures
 - Considers protection of U.S.-obligated SNM in country
 - Considers threat environment of country

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Questions

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