
NRC Preparations for Advanced Reactor Exports

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**National Academies' Committee on Laying the Foundation for New and
Advanced Nuclear Reactors in the United States**

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Preparations for Advanced Reactor Exports from the United States

- Formation of the NRC's Advanced Reactor Exports Working Group (AREWG).
- Focused only on advanced reactor exports (not imports).
- Addressed tangible items associated with advanced reactors only; did not consider dual-use or intangible technology.
- Cross-agency effort that included both licensing and technical experts.

AREWG Purpose and Background



- Forward looking in the spirit of innovation and transformation.
- Keep pace with fast moving developments in the field of advanced reactors.
- Ensure that the NRC is prepared to license the export of these technologies in an independent, predictable and efficient way.

AREWG Mandate

- Evaluate NRC's readiness to complete exports (10 CFR 110) of "advanced reactors" to other countries consistent with NRC's Principles of Good Regulation (independence, openness, efficiency, clarity, and reliability).
- Assess if current level of review for advanced reactors is still appropriate.
- Conduct outreach to prospective vendors of advanced reactors on NRC's export licensing process.
- Develop a communication plan for future outreach.



Design Types Studied

AREWG focused its efforts on the advanced reactor concepts that were most likely to be developed and exported by U.S. companies in the next 5-10 years:

1. Sodium-cooled fast reactors
2. High temperature reactors, including gas-cooled and fluoride salt-cooled reactors
3. Molten salt reactors, including liquid fluoride salt and liquid chloride salt-cooled reactors
4. Small heat pipe reactors

Conclusions and Recommendations

1. 10 CFR Part 110 is generally ready to license the materials and components associated with the advanced reactor designs studied, even though the regulations are mostly based on LWR technology.
2. AREWG recommended several clarifying changes to Part 110 to remove any ambiguity that advanced reactors and their EDP components are covered under Part 110.
3. Applications to the NRC for the export of advanced reactors and their associated materials and equipment will continue to be reviewed by the NRC's 5-member Commission.

The U.S. Government and international community are also continuing to assess the international safeguards and security implications of advanced reactors. Those factors will be taken into account on a case-by-case basis when licensing exports.

AREWG Public Report

- Public Website <https://www.nrc.gov/about-nrc/ip/us-nrc-prep-export-advanced-reactors.html>
- ADAMS
<https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML21194A213>
- Hyperlink

[The Advanced Reactor Export Working Group
Public Report](#)

Thank You!

Any questions?

