



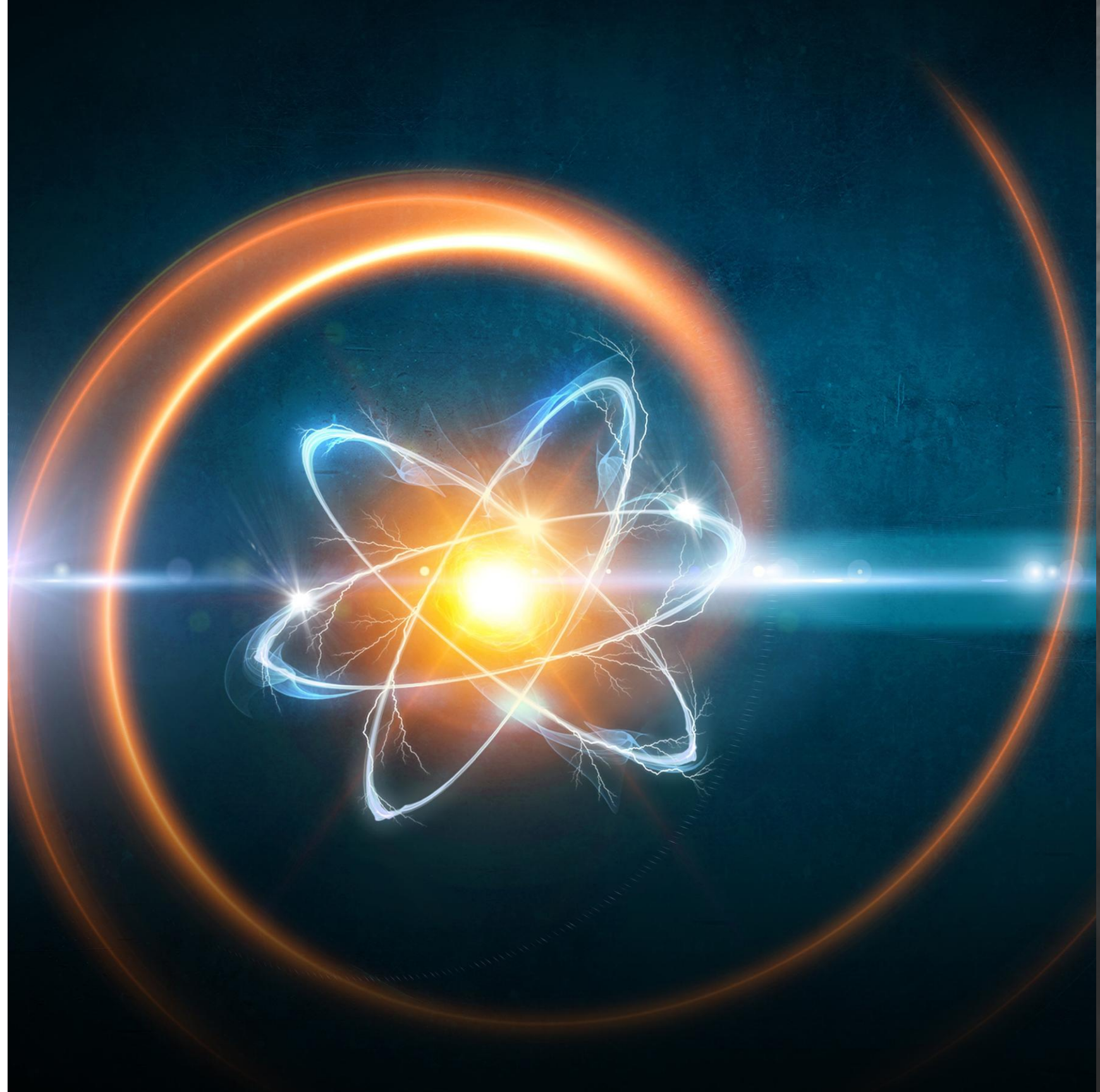
Current Status of Microreactor Transport

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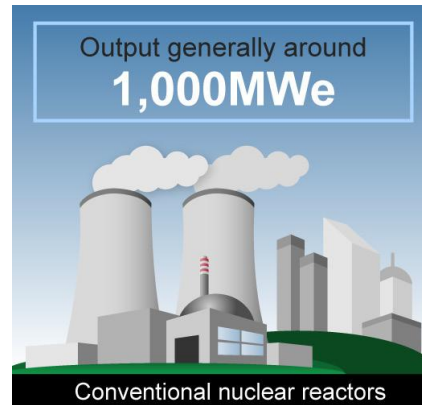
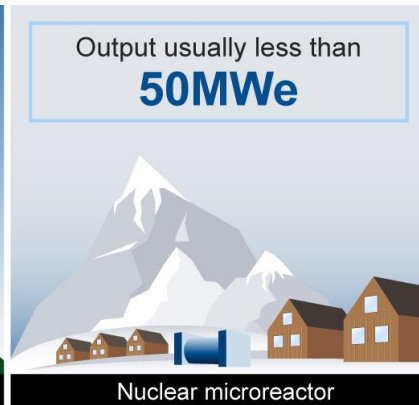
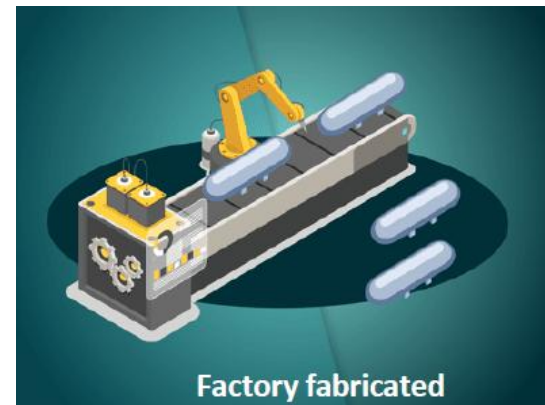
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Topics

- Introduction to microreactors
- Microreactor transportation
- Microreactor transportation studies
- Recent reactor criticalities
- Department of Energy and Department of War advanced reactor activities
- Transportation rulemaking changes

What Are Microreactors?



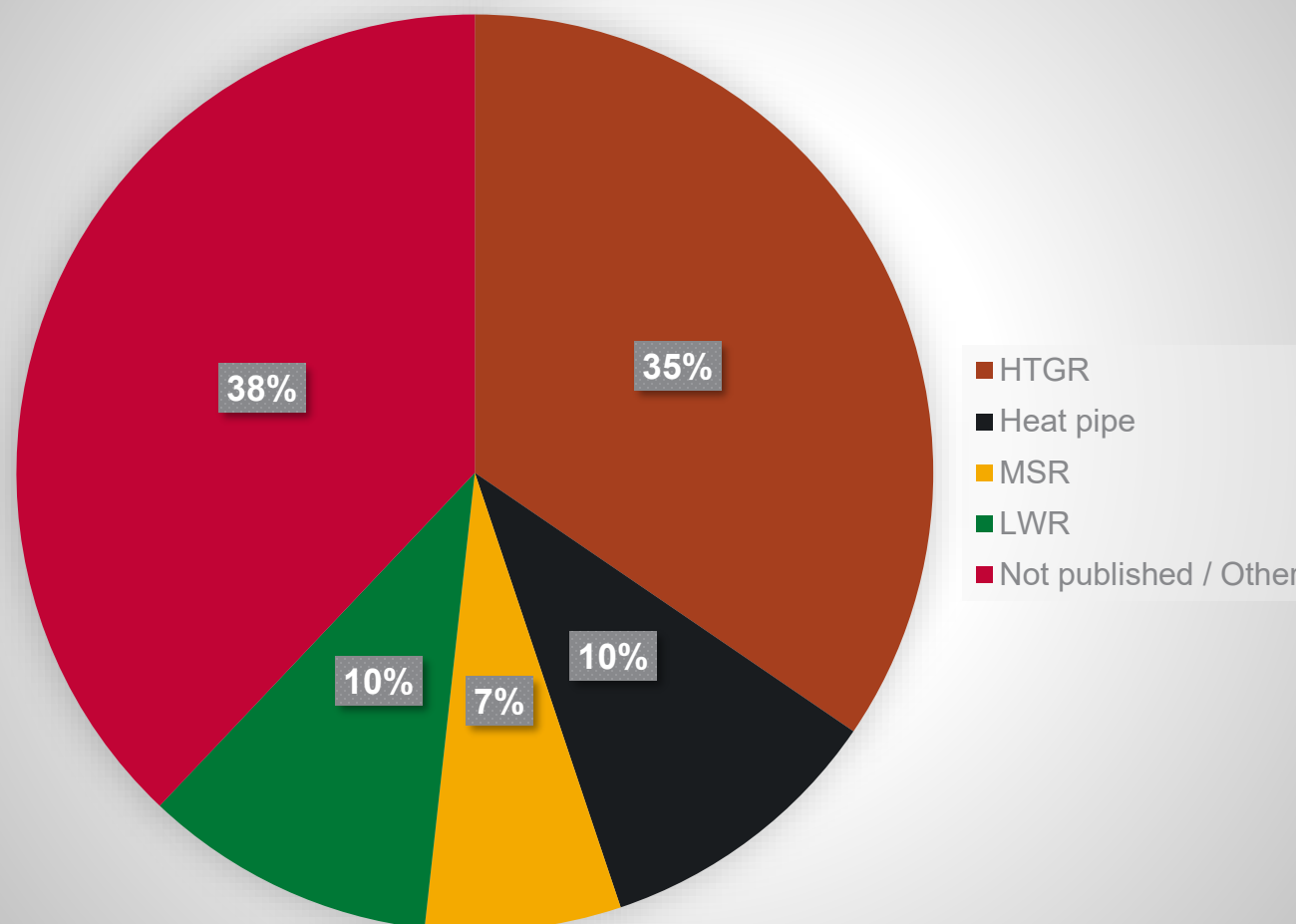
Source: GAO. | GAO-20-380SP

- Electrical output up to 50 MWe
 - Transportable microreactors up to 20 MWe
 - Also known as Transportable Nuclear Power Plants (TNPPs)
- Much smaller and simpler than traditional nuclear power reactors
- There are a variety of microreactor/advanced reactor designs, including gas, liquid-metal, molten-salt, and heat-pipe-cooled concepts
- Refueling: 2-10 years
- Operational Lifetime: 5-20 years
- Potential microreactor applications are:
 - Data Centers
 - Remote communities
 - Mining sites
 - Remote defense bases
 - Back-up generation for power plants
 - Humanitarian aid and disaster relief (HADR) missions

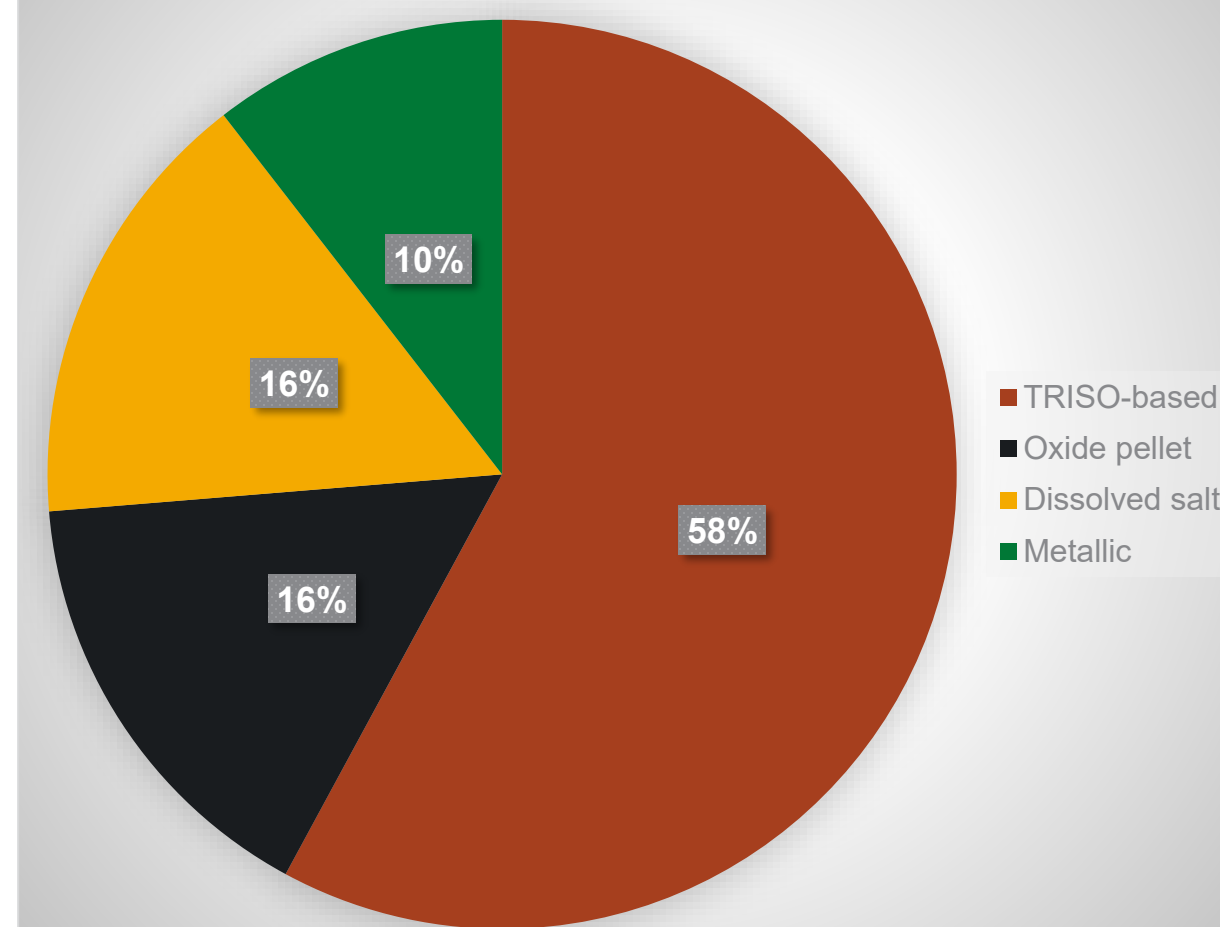
U.S.-Based Microreactor Developer Landscape

Technology Diversity Snapshot (25+ Active Designs)

Reactor Type



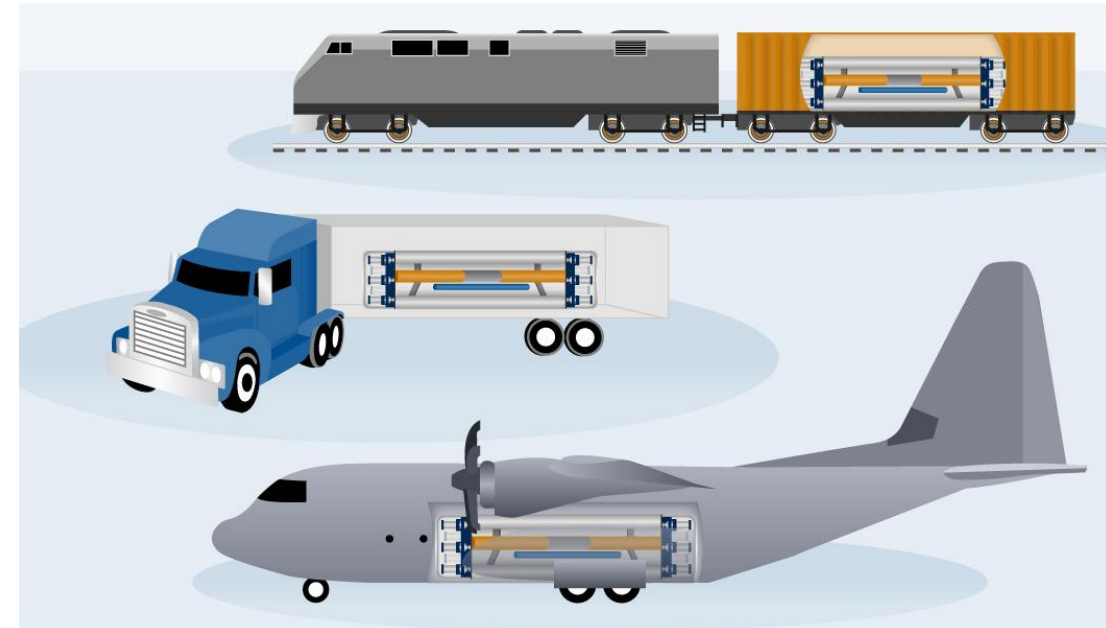
Fuel Form



HTGR= High Temperature Gas-Cooled Reactor
 MSR= Molten Salt Reactor
 LWR= Light Water Reactor
 TRISO= tri-structural isotropic

Microreactor Transportation

- Current microreactor concepts include transporting a microreactor containing its unirradiated or irradiated fuel
- A microreactor containing its unirradiated fuel or irradiated fuel is unlikely to meet the entire suite of regulatory requirements in U.S. Nuclear Regulatory Commission (NRC) transportation regulations (10 CFR Part 71) or IAEA Specific Safety Requirements SSR-6
 - Shipping nuclear fuel in a reactor that is designed to go critical presents unique challenges
- A risk-informed process may be used for NRC transportation package approval
 - Demonstrate equivalent safety and that the risk to the public is low
 - This may require the use of compensatory measures



Source: GAO. | GAO-20-380SP

Potential Compensatory Measures Include

- Transportation routing
- Heavy haul truck or superload permit requirements
- Establishment of an exclusion zone around reactor
- Realtime health/fitness onboard monitoring
- Escorting of microreactor shipment
- Avoiding bodies of water
- Bridge controls
- Time-of-day and day-of-week restrictions
- Avoiding severe weather
- Training for emergency responders
- Rolling road closures

Security implications of potential compensatory measures are not well explored

Current US Domestic Approach

- The microreactor shipment would be a commercial shipment and would require transportation package approval from the NRC, likely through the application of a risk-informed approach
 - Highway risk-informed methodology received NRC endorsement in October 2024
 - Maritime risk-informed methodology under review by NRC (submitted August 2025)
- Strategy is Crawl-Walk-Run
 - Concentrate on highway transport first
 - Then other surface modes (rail and barge/ship) – evaluation of transport by vessel underway
 - Finally, air transport
- The microreactor containing its irradiated fuel would contain a highway route-controlled quantity (HRCQ) of radioactive material (i.e., $> 3000 A_2$)
 - For truck shipments this means that a Commercial Vehicle Safety Alliance (CVSA) Level VI inspection and safety permit would be required (see 49 CFR Part 385 and 49 CFR Part 397)
 - For rail shipments this means that the transportation planning requirements in 49 CFR 172.820 would apply
- The microreactor would be fueled by LEU or HALEU (not HEU)
- For rail shipments, transport would be via Association of American Railroads (AAR) Standard S-2043 railcars
- Marine shipments would be via a Class INF-2 or INF-3 ship

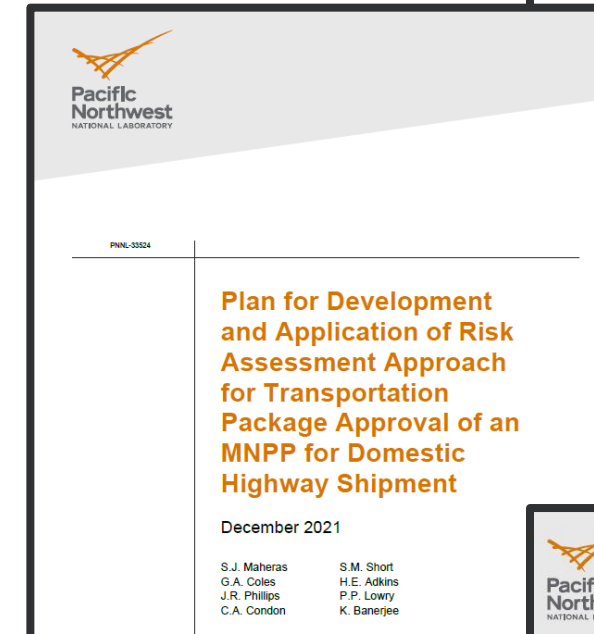
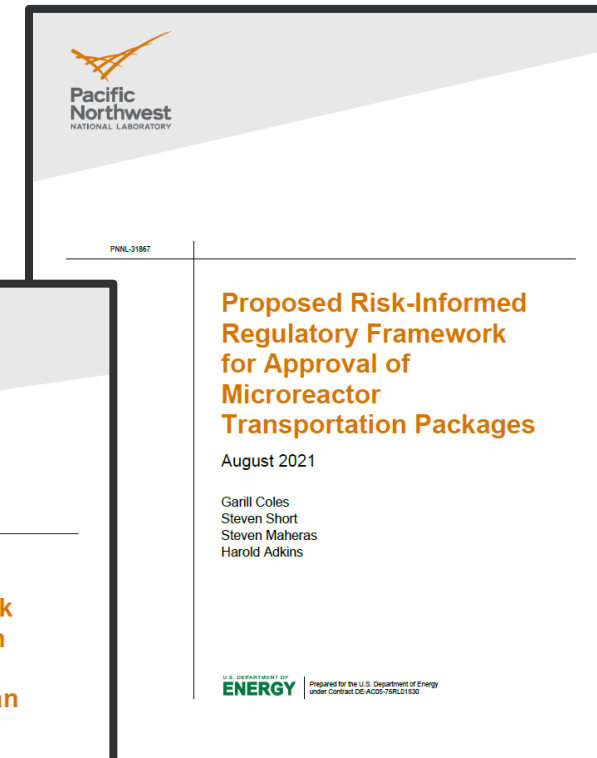
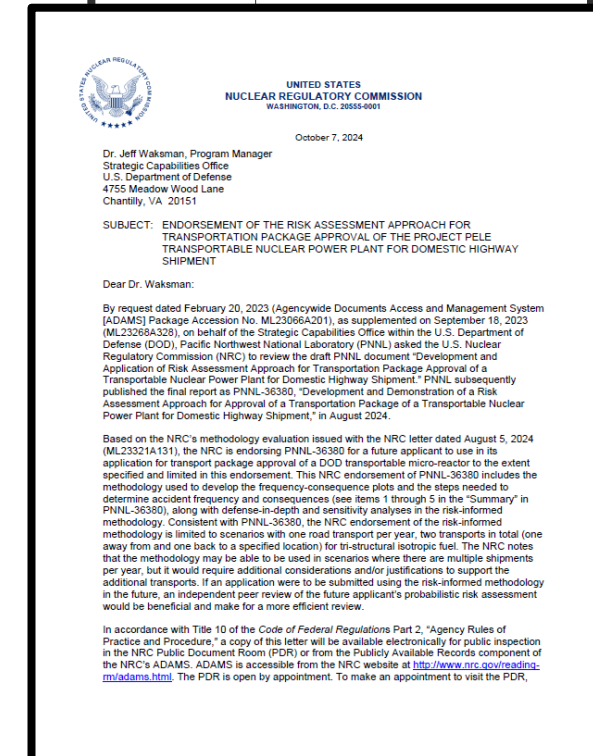
LEU= Low Enriched Uranium ($< 5\%$ U-235)

HALEU= High Assay Low Enriched Uranium (5-20 % U-235)

HEU= High Enriched Uranium ($> 20\%$ U-235)

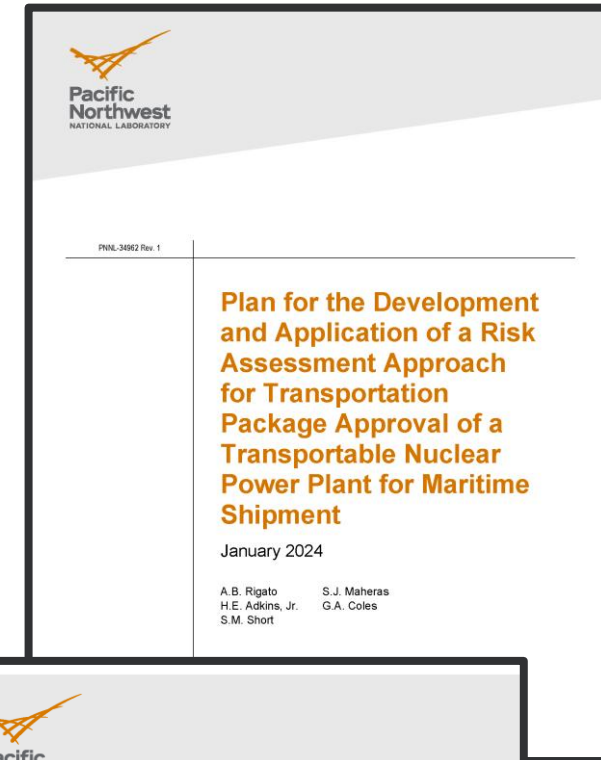
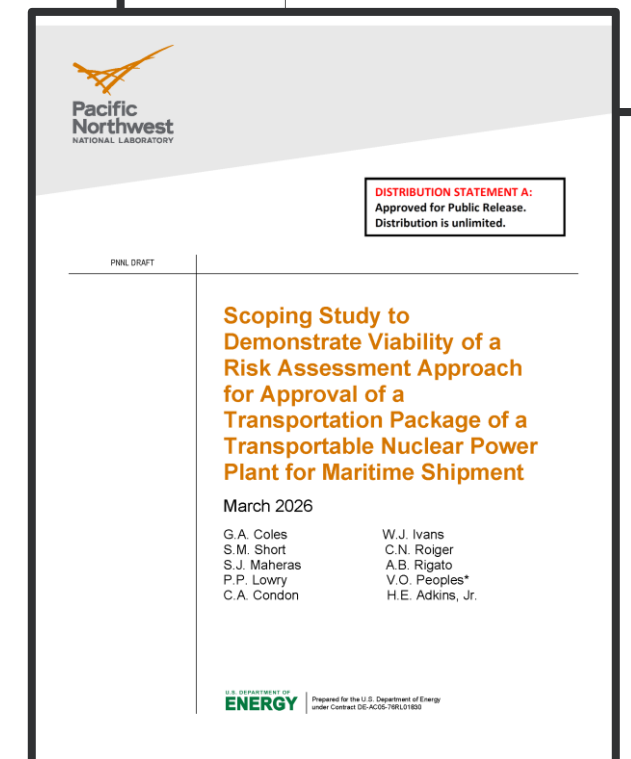
Highway Risk-Informed Transportation Package Approval Process

- Risk-Informed Transportation Package Approval for Domestic Highway Shipment of a TNPP Methodology Document
 - Final report published and docketed
 - ML24268A101 - 1. PNNL-36380 Rev 1, "Development and Demonstration of a Risk Assessment Approach for Approval of a Transportation Package of a Transportable Nuclear Power Plant for Domestic Highway Shipment August 2024" (8/21/2024)
 - ML24268A102 - 2. List of Updates to 2024 Version of Pele PRA Report (8/21/2024)
 - Endorsement letter published and docketed
 - Endorsement of the Risk Assessment Approach for Transportation Package Approval of the Project Pele Transportable Nuclear Power Plant for Domestic Highway Shipment. Docket No. 71-9396. U.S. Nuclear Regulatory Commission. Washington, D.C. October 7, 2024. <https://www.nrc.gov/docs/ML2427/ML24271A054.pdf>



Maritime Risk-Informed Transportation Package Approval Scoping Study

- Risk-Informed Transportation Package Approval for OCONUS Maritime Shipment of a TNPP Methodology Document
 - Completed draft document and submitted to NRC for review on August 18, 2025
 - NRC review included the U.S. Coast Guard
 - Engagement meetings with NRC commenced in March 2026
 - Received Request for Additional Information (RAIs) from NRC on August 5, 2026
 - RAI responses submitted October 14, 2026
 - Endorsement targeted for end of CY26
 - Documents available at
 - ✓ <https://www.nrc.gov/docs/ML2607/ML26078A347.html>
 - ✓ http://www.pnnl.gov/main/publications/external/technical_reports/PNNL-34962Rev1.pdf



DOE Microreactor Program – Transportation Activities

- Microreactor Transportation Emergency Planning Challenges
- Prototype Microreactor Transportation Safety Program
- Recommendations for Revising ANSI N14.24, American National Standard for Highway Route Controlled Quantities of Radioactive Material – Domestic Barge Transport
- Use of AI to streamline the preparation of Transportation Safety Analysis Reports
- Transportation Shock and Vibration testing associated with shipping the MARVEL microreactor
- Cost analyses for shipping microreactors
- Gaps in codes and standards
- Much of this work is applicable to the transport of a microreactor containing its unirradiated fuel (front-end) or irradiated fuel (back-end)
- Available at <https://gain.inl.gov/doe-microreactor-program/technical-reports-doe-microreactor-program-2/>



Department of War Operational Energy Capability Improvement Fund (OECIF)

- Maritime Nuclear Asset Transportation Capability Development (MNATC)
 - In-Depth Study to Analyze Maritime Options Available to the DoD To Transport Nuclear Reactors
 - Subset of Study will also Examine Options to Retrofit a DoD Cargo Vessel or Procure Vessels to Meet INF Code Requirements and DoD Objectives
 - Looking at 3 types of vessels
 - Roll-on/Roll-off (RORO) ships – Cape D, Cape H, Cape I classes
 - Large, Medium-Speed Roll-on/Roll-off (LMSR) ships – Gordon and Bob Hope classes
 - Fast Sealift Ships (FSS) – Algol class
- Legal and Regulatory Taxonomy for Maritime Nuclear Defense Applications (TMNDA)
 - In-Depth Study to Analyze Legal and Regulatory Frameworks, Gaps and Seams Relevant to DoD Maritime Nuclear Reactors
- Target completion for both studies end of CY26

Military Sealift Command

10 large medium speed roll-on/roll-off ships

USNS Gilliland
USNS Gordon
USNS Benavidez
USNS Mendonca
USNS Shughart
USNS Watson
USNS Yano
USNS Bob Hope
USNS Brittin
USNS Fisher



5 roll-on/roll-off/ container ships

USNS SGT Matej Kocak
USNS LCPL Roy M. Wheat
USNS 1st LT Larry L. Martin
USNS PFC Eugene A. Obregon
USNS MAJ Stephen W. Pless



Maritime Administration

27 roll-on/roll-off ships

MV Cape Decision
MV Cape Diamond
MV Cape Domingo
MV Cape Douglas
MV Cape Ducato
MV Cape Edmont
MV Cape Race
MV Cape Ray
MV Cape Rise
MV Cape Washington
MV Cape Wrath
MV Cape Kennedy
MV Cape Knox
MV Cape Taylor
MV Cape Texas
MV Cape Trinity
MV Cape Victory
MV Cape Vincent
GTS ADM William Callaghan
MV Cape Henry
MV Cape Horn
MV Cape Hudson
SS Cape Inscription
SS Cape Intrepid
SS Cape Isabel
SS Cape Island
MV Cape Orlando



8 fast sealift ships

SS Antares
SS Denebola
SS Altair
SS Bellatrix
SS Pollux
SS Regulus
SS Algol
SS Capella



6 auxiliary crane ships

SS Cornhusker State
SS Flickertail State
SS Gopher State
SS Gem State
SS Grand Canyon State
SS Keystone State



2 aviation logistics support ships

SS Wright
SS Curtiss



1 offshore petroleum discharge system

SS Petersburg



2 heavy lift ships

SS Cape May
SS Cape Mohican



Recent Reactor Criticalities

- Westinghouse eVinci Microreactor
 - TRISO-fueled heat-pipe cooled reactor
 - 5 MWe/15 MWt
 - Zero-power criticality testing completed August 24, 2026
- Oklo Groves-1 Isotope Test Reactor
 - 100 watt pilot isotope production reactor
 - Low enriched UO_2
 - Criticality August 5, 2026
- Aalo Atomics Aalo-X Reactor
 - Low-enriched uranium–fueled, sodium-cooled reactor
 - Zero power version of 10 MWe reactor
 - Criticality July 4, 2026
- Deployable Energy Unity Microreactor
 - 1-MWe low enriched UO_2 , water-moderated, gas-cooled microreactor
 - Criticality July 1, 2026
- Valar Atomics Ward 250
 - 100-kWt helium-cooled, TRISO-fueled, high-temperature gas-cooled reactor
 - HALEU
 - Criticality June 18, 2026
- Antares Mark-0 Reactor
 - Sodium heat pipe–cooled, TRISO-fueled microreactor
 - Criticality June 4, 2026

Department of Energy and Department of War Advanced Reactor Activities

- Project Pele
 - Nuclear fuel shipped to INL – November 2025
 - Reactor and power conversion modules shipped to INL – late 2026
 - Initial criticality, first power generation, begin 3-year operational evaluation program by 30 September 2028
- Microreactor Applications Research, Validation & Evaluation (MARVEL)
 - DOE Microreactor Program
- Eielson Air Force Base, AK Microreactor Pilot Project – operations by 2030
 - Oklo
- Janus Program – deploy reactors by September 30, 2028
 - Antares and Fort Bragg, NC
 - BWXT and Fort Campbell, KY
 - General Atomics and Fort Hood, TX
 - Radiant and Fort Benning, GA
 - Westinghouse and Fort Drum, NY
- Naval Weapons Station Crane, IN – executed jointly with Janus, deploy by September 30, 2028
 - Reactor vendor not announced yet
- Advanced Nuclear Power For Installations (ANPI) Program – operations by 2030
 - Radiant and Buckley Space Force Base, CO
 - Westinghouse and Malmstrom Air Force Base, MT
 - Antares and Joint Base San Antonio, TX

Rulemaking Changes

- US proposed regulation 10 CFR Part 57, “Licensing Requirements for Microreactors and Other Reactors With Comparable Risk Profiles,” released 1 May 2026, comments were due 15 June 2026
 - In response to the ADVANCE Act and Executive Order 14300, “Ordering the Reform of the Nuclear Regulatory Commission”
- Four transportation questions
 - Q7-1: Provide feedback on the need for alternate dose rates for transportable microreactors, the technical basis for those alternate dose rates, and the safety implications for those alternative dose rates.
 - Q7-2: Are there cost-benefit considerations beyond the costs and benefits associated with rulemaking (e.g., the costs of additional shielding due to lower dose rates) that the NRC should consider with respect to alternate dose rates for transportable microreactors? Please provide a basis for your response.
 - Q7-3: Provide feedback on the impact to international and interstate shipments if there were alternate transportation package dose rate limits for transportable microreactors.
 - Q7-4: What assumptions should the NRC use when estimating the number of shipments, exposure scenarios, and expected dose rates for fresh and irradiated transportable microreactors? Please provide a basis for your response.
- 10 CFR Part 71 proposed rulemaking “Modernizing Package Certification Requirements,” released 27 July 2026, comments were due 26 August 2026
 - In response to Executive Order 14300
 - Revises 10 CFR 71.41 to allow use of NRC-endorsed methodology for transportation package approval
 - Revises 10 CFR 71.47 to establish higher radiation dose rate limits (50 mrem/h) for some packages (e.g., microreactors) under exclusive use controls

Risk-Informed Alternatives for Transportation Package Approval

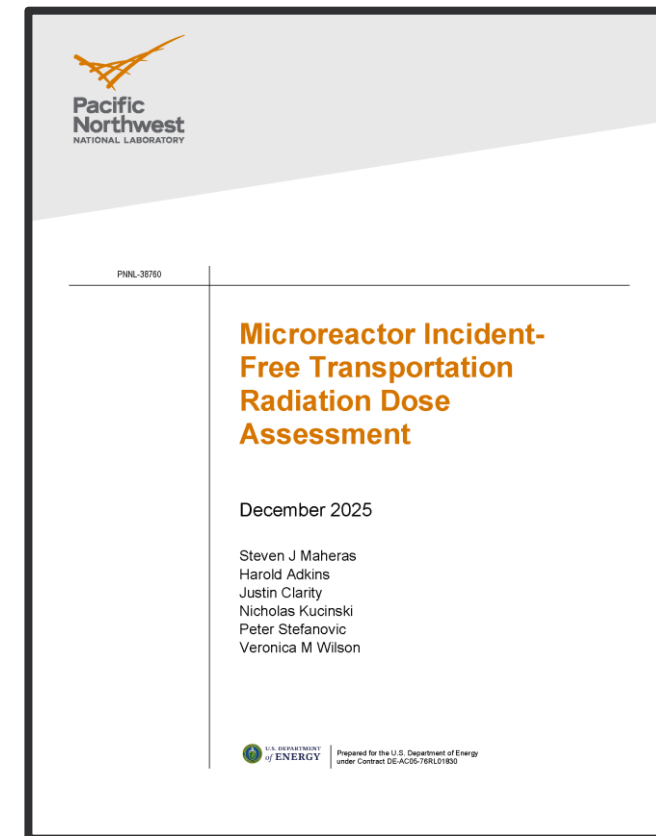
- Proposed rule would add 10 CFR 71.41(e), giving applicants an alternative way to obtain transportation package approval through a risk-informed or performance-based methodology
 - Applicant must demonstrate that the transportation package meets or exceeds the current level of safety provided by the 10 CFR Part 71 framework
 - Assess the likelihood and consequences of potential transportation events
- Would be an alternative to the Type B package testing requirements in 10 CFR 71.71 [Normal Conditions of Transport (NCT)], 71.73 [Hypothetical Accident Conditions (HAC)], and 71.61 (200-meter immersion)
- Previously approved methodology or submit methodology for approval
 - In SECY-24-0062, NRC endorsed the methodology developed for highway transport of the Project Pele microreactor (see Slide #8)
 - Maritime transport methodology currently under review by NRC (see Slide #9)

Increased Radiation Dose Rate Limits for Some Transportation Packages

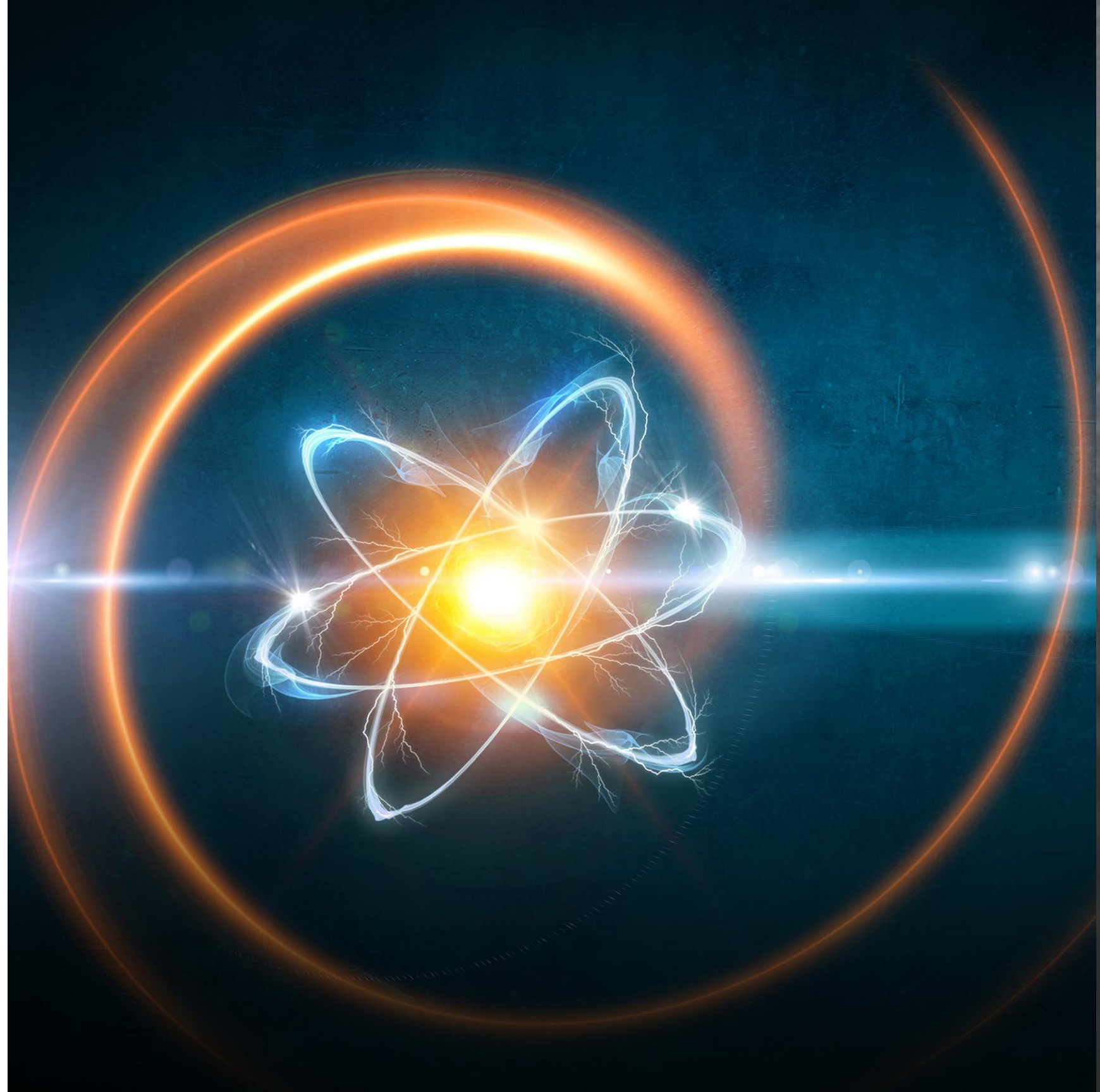
- 10 CFR 71.47(b)(3) would be modified to increase the allowable radiation dose rate at 2 meters from the edge of the conveyance from 10 mrem/h to 50 mrem/h
- Shipment must be exclusive use and be a highway route controlled quantity (HRCQ) (>3000 A₂, see 49 CFR 173.403)
 - Additional planning already required for HRCQ shipments
- Rule would also require coordination with appropriate Federal, State or local inspection authorities to ensure those authorities are aware of the shipment and are prepared to conduct any required vehicle inspections.
 - Coordination must ensure that inspection personnel are informed of the radiological conditions and of any applicable controls needed to support inspection activities, including appropriate radiation dosimetry.
- Would also need DOT Special Permit
- Would be applicable to transport of microreactors used for activities such as humanitarian and disaster relief
- Based on the report PNNL–38760, “Microreactor Incident Free Transportation Radiation Dose Assessment”

Microreactor Incident-Free Transportation Radiation Dose Assessment (PNNL-38760)

- Study estimated the radiation dose to maximally exposed individuals (MEIs) under the current regulatory radiation dose rate limit of 10 mrem/h at 2 meters from the vehicle as well as alternative limits of 50, 100, and 200 mrem/h at 2 meters from the vehicle for highway and rail transport
- Analysis expands on prior incident-free transportation radiation dose assessments conducted for used nuclear fuel and radioactive waste transportation
- The highest public radiation exposures calculated in the report were:
 - (1) for a member of the public that might be caught in traffic within 2 m of a truck shipment of a package of radioactive material, and
 - (2) for vehicle safety inspectors performing an inspection of the vehicle carrying the radioactive material.
- Report considers additional distances that may be associated with compensatory measures to ensure safe transport conditions under varying radiation dose limits, including enhanced routing measures, escort protocols, vehicle inspections, and operational restrictions
- Report available at <https://www.nrc.gov/docs/ML2606/ML26061A014.pdf>



Questions & Discussion



Microreactor Developers



Developer	Design Name	Reactor Type	Power Output (MWe/MWth)	Enrichment	Fuel Form	Coolant	Moderator	Refueling Interval	Transportability	Conversion Technology
Aalo Atomics	Aalo-1; Aalo-X (test reactor)	SFR	10 MWe / 30 MWth	LEU	UO2	Sodium	Graphite	3-5 years	Movable	Steam turbine
Alpha Tech Research	ARC Generator	MSR	12 MWe / 30 MWth	LEU	Uranium-bearing fluoride fuel salt	Fluoride salt	YH	N/A (continuous fuel management)	Movable	Not publicly disclosed
Ampera	AMPERA subcritical thorium microreactor platform	ADS	15-30 MWe	Thorium	TRISO	Not publicly disclosed	Not publicly disclosed	30 years / no planned refueling	Movable	Gas turbine
Antares Nuclear, Inc.	R1; Mark-0 (test reactor)	Heat pipe	0.1-1 MWe (R1 product range)	HALEU	TRISO	Sodium heat pipes	Graphite	4-6 years	Mobile	Gas turbine
Apollo Atomics, Inc.	Apollo compact PWR (commercial name not publicly disclosed)	LWR	1 MW demonstrator 10 MW commercial pilot (basis not publicly specified)	LEU	Commercial-grade uranium fuel (form not publicly disclosed)	Water	Water	Not publicly disclosed	Movable	Steam turbine
Atlas Atomics	Advanced heavy-water reactor (name not publicly disclosed)	Heavy-water reactor	Not publicly disclosed	Not publicly disclosed	Not publicly disclosed	Not publicly disclosed	Heavy water	Not publicly disclosed	Not publicly disclosed	Not publicly disclosed
BWX Technologies	BANR (Project Pele related demonstration program)	HTGR	BANR: 50 MWth (electric output not publicly disclosed); Project Pele: 1.5 MWe	HALEU	TRISO	Helium	Graphite	5 years (BANR target)	Movable	Gas turbine
Deep Fission, Inc.	Gravity / DFBR-1	LWR	Up to 15 MWe / 45 MWth	LEU	Commercial PWR-type UO2 fuel assemblies	Water	Water	4-6 years	Stationary	Steam turbine
Deployable Energy	Unity Nuclear Battery	HTGR	1 MWe	LEU	UO2	Helium	Water	5 years	Movable	Not publicly disclosed
EE Capital LLC	ELYON-5	Heat pipe	5 MWe / 16.7 MWth	HALEU	TRISO	Sodium heat pipes	Not publicly disclosed	10 years	Movable	Not publicly disclosed
Emerald Horizon	ADES	ADS	10 MWe / 25 MWth (current public specification)	Thorium	ThF4-bearing fuel system	Molten salt	Not publicly disclosed	20 years	Movable	Not publicly disclosed
Forge Atomics	Ember	LWR	25 MWe	LEU	UO2 (PWR-derived)	Water	Water	Not publicly disclosed	Movable	Steam turbine
General Atomics	GA-TES	Liquid-metal reactor	5 MWe baseline; scalable to 20 MWe	Not publicly disclosed	Uranium-zirconium-hydride	Liquid metal	Hydrogen-bearing fuel matrix	Not publicly disclosed	Mobile	Steam turbine
Hadron Energy, Inc.	Halo MMR	LWR	10 MWe / 35 MWth (lead configuration)	LEU+	Not publicly disclosed	Water	Water	10 years	Movable	Steam turbine
HolosGen LLC	Holos-Quad	HTGR	3-13 MWe (Holos-Quad configurations)	Not publicly disclosed	TRISO / FCM-type fuel cartridges	Gas (company does not consistently specify one working fluid)	Graphite	~8-10 years	Mobile	Gas turbine



Developer	Design Name	Reactor Type	Power Output (MWe/MWth)	Enrichment	Fuel Form	Coolant	Moderator	Refueling Interval	Transportability	Conversion Technology
Kairos Power	ANPI microreactor offering (name not publicly disclosed)	HTGR	Not publicly disclosed	Not publicly disclosed	TRISO	Molten fluoride salt	Graphite	Not publicly disclosed	Not publicly disclosed	Not publicly disclosed
Last Energy, Inc.	PWR-20	LWR	20 MWe / 80 MWth	LEU	UO2	Water	Water	6 years (company design basis)	Stationary	Steam turbine
Micro Nuclear, LLC	Microscale Nuclear Battery (MsNB)	MSR	5 MWe reference configuration	HALEU	UF4-bearing fuel salt	Molten fluoride salt	YH	~10 years	Movable	Gas turbine
NANO Nuclear Energy	KRONOS MMR; ZEUS; LOKI MMR	Multiple / design-dependent	KRONOS: 45 MWth; LOKI: 10 kWe-3 MWe / 1.5-5 MWth; ZEUS: not publicly disclosed	HALEU (design-specific details vary)	KRONOS/LOKI: TRISO; ZEUS: sealed solid core	KRONOS/LOKI: Helium; ZEUS: no in-core fluid	Graphite (KRONOS/LOKI)	Design-dependent; up to ~20 years claimed for some products	Movable	Multiple / design-dependent
Natura Resources	MSR-1	MSR	Non-power research / demonstration reactor (thermal rating not consistently disclosed in current public materials)	HALEU	Fuel dissolved in molten salt	Molten fuel salt	Graphite	N/A (research operations)	Stationary	Heat only / none
Nuclea Energy USA	Morpheus Microreactor	LFR	3.5-50 MWe product range	HALEU	Not publicly disclosed	Lead	Graphite	5 years	Movable	Not publicly disclosed
NuCube Energy, Inc.	NuSun-1; NuSun-15; ART (research/test reactor)	Heat pipe	NuSun-1: ~1.3 MWe; NuSun-15: ~15 MWe	LEU+ / HALEU	TRISO	Heat pipes (working fluid not publicly standardized)	Graphite	Not publicly disclosed	Movable	Thermophotovoltaic
NuGen, LLC	NuGen Engine	HTGR	2-3 MWe	Not publicly disclosed	Not publicly disclosed	Gas	Not publicly disclosed	15 years	Mobile	Gas turbine
NuScale Power	NuScale Microreactor	Heat pipe	<10 MWe; 8-40 MWth concept range	HALEU	Metallic / liquid uranium concept	Liquid metal / heat pipes	Not publicly disclosed	~10 years	Movable	Thermophotovoltaic
Odin Electric, Inc.	Odin thorium-fueled generator (name not publicly disclosed)	Not publicly disclosed	10 kWe	Thorium	Not publicly disclosed	Not publicly disclosed	Not publicly disclosed	Not publicly disclosed	Not publicly disclosed	Not publicly disclosed
Oklo, Inc.	Aurora (15 MWe microreactor configuration)	SFR	15 MWe qualifying configuration (Aurora family extends above 50 MWe)	HALEU	U-Zr metal	Sodium	None (fast spectrum)	10-20 years (configuration-dependent)	Stationary	Not publicly disclosed
Radiant Industries	Kaleidos	HTGR	~1 MWe / 3 MWth	HALEU	TRISO	Helium	Graphite	4-6 years	Mobile	Gas turbine
Scaled Atomics	MN-350	Not publicly disclosed	350 kWe / ~1 MWth	Not publicly disclosed	Not publicly disclosed	Not publicly disclosed	Not publicly disclosed	10 years	Mobile	Gas turbine

Developer	Design Name	Reactor Type	Power Output (MWe/MWth)	Enrichment	Fuel Form	Coolant	Moderator	Refueling Interval	Transportability	Conversion Technology
Tam Fortis Solutions	Tam Fortis mobile microreactor (product name not publicly disclosed)	Heat pipe	40 kWe continuous	HALEU	TRISO	Liquid-metal heat pipes	Not publicly disclosed	5 years	Mobile	Gas turbine
Terra Innovatum	SOLO	HTGR	1 MWe / 5 MWth	LEU (4.95% U-235 baseline); higher enrichment options under evaluation	UO2 pellets in Zircaloy cladding	Helium	Solid moderator (not consistently identified in public summary)	Not publicly disclosed	Movable	Gas turbine
Valar Atomics	Ward 250	HTGR	250 kWth research reactor (public DOE design rating)	HALEU	TRISO	Helium	Graphite	Not publicly disclosed	Stationary	Thermoelectric
Vulcaris	VERMI	Heat pipe	~1 MWe	HALEU	Proprietary metallic fuel	Heat pipes	Not publicly disclosed	15+ years	Movable	Not publicly disclosed
Westinghouse	eVinci	Heat pipe	0.2-5 MWe / ~13-15 MWth (configuration-dependent)	HALEU	TRISO	Sodium heat pipes	Solid moderator (company design)	8+ years	Movable	Not publicly disclosed
X-energy	XENITH	HTGR	3-10 MWe	HALEU	TRISO-X	Helium	Graphite	~3 years (current public design basis varies)	Movable	Gas turbine

Mobile = intended for routine relocation; Movable = transportable for deployment/retrieval but not routine relocation; Stationary = permanent installation.

ADS = accelerator-driven subcritical reactor, HTGR = high-temperature gas-cooled reactor, LFR = lead-cooled fast reactor, LWR = light-water reactor, MSR = molten salt reactor, SFR = sodium-cooled fast reactor, TRISO = tri-structural isotropic nuclear fuel

HALEU = High assay low enriched uranium (5–20% enriched), LEU = low-enriched uranium (< 5% enriched), LEU+ = low-enriched uranium plus (5–10% enriched)