

August 3, 2017 UPDATE: Policy Issues – Non-Light Water Reactors

Policy Issues – Non-Light Water Reactors		
Issue as presented on web page & previous meetings – raised questions related to applicability for LWR SMRs and non-LWRs	Updated Note/Status to specifically address activities related to non-LWRs	
<i>Issues with Ongoing Activities for non-LWRs</i>		
License for Prototype Reactors	NRC staff drafting white paper	White paper issued (ML17025A353) and discussed in August 3 rd periodic stakeholder meetings
Appropriate Source Term, Dose Calculations, and Siting	SECY-16-0012, “Accident Source Terms and Siting for Small Modular Reactors and Non-Light Water Reactors,”	Parts of this topic related to Licensing Modernization Project (LMP) and other activities (e.g., siting in close proximity to populations)
Key Component and System Design Issues		Related to LMP and future white paper on SSC safety classification
Offsite Emergency Planning (EP) Requirements	SECY-15-0077 Drafting Regulatory Basis	Draft Regulatory Basis issued for public comment (NRC-2015-0225), SECY and final regulatory basis under development
Insurance and Liability	Evaluating for periodic report to Congress on Price-Anderson Act	Plans to discuss in future periodic stakeholder meetings (Nov 2017) and prepare input for Commission paper (2019)
Use of Probabilistic Risk Assessment in the Licensing Process	SRP Revisions (safety focused review)	This topic is related to LMP and white papers/guidance. Also related to NRC participation in development of non-LWR PRA Standard (ASME/ANS)
Implementation of Defense-In-Depth (DiD) Philosophy for Advanced Reactors	SECY-15-0168 (part of licensing framework)	This topic is related to LMP and future white papers/guidance
Security and Safeguards Requirements for SMRs	NEI White Paper	Current topic of interactions between NRC staff and stakeholders in context of NEI white paper. NRC security design considerations issued for public comment (NRC-2017-0073) and currently on hold.

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Licensing Basis Event Selection	Ongoing discussions	This topic is related to LMP and submitted white paper (ML17104A254)
Fuel qualification, materials qualification	Issues vary by fuel type and reactor technology	Ongoing discussions with advanced reactor technology groups and developers. Topic of discussion at August 3 rd stakeholder meeting
Increased enrichments	Ongoing discussions	Awaiting white paper(s) from NEI/NIC

New Policy Issues - Warranting Immediate Actions?

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<i>Open Issues for non-LWRs but no current activities</i>		
Annual Fees	Final Rule (May 2016) - Annual fees scalable based on licensed thermal power rating, applicable only to LWR SMRs	Part 171 definitions: <i>Small modular reactor (SMR)</i> for the purposes of calculating fees, means the class of light-water power reactors having a licensed thermal power rating less than or equal to 1,000 MWt per module. This rating is based on the thermal power equivalent of a light-water SMR with an electrical power generating capacity of 300 MWe or less per module. Expect that changes will be needed to address non-LWRs
Manufacturing License Requirements	Pending determination of possible interest from non-LWR developers	SECY-14-0095 states no interest in obtaining a manufacturing license from near-term SMR applicants was expressed. Questions raised by stakeholders regarding possible approaches for non-LWRs given desire to use manufacturing/modular approaches
Industrial Facilities Using Nuclear- Generated Process Heat	SECY-11-0112 (assess as necessary)	Expect that additional guidance will be needed to address non-LWRs and possible process heat applications (also tied to siting and EP issues)
Fuel cycle facilities (front end)	Ongoing discussions	Generally deferred to NRC mid-term IAP activities pending specific needs/timeline for technology or design-specific licensing and deployment.
Waste Issues (back end)	Ongoing discussions	Generally deferred to NRC mid-term IAP activities pending specific needs/timeline for technology or design-specific licensing and deployment.

New Policy Issues - Not Warranting Immediate Actions?

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<i>Issues with no current plans to undertake activities (resolved or need input from stakeholders)</i>		
License Structure for Multi-Module Facilities	SECY-11-0079	Staff committed to provide Commission with a specific proposal using an actual SMR application for insights, status updated in SECY-14-0095
Operator Staffing for Small or Multi-Module Facilities	SECY-11-0098 (flexibility w/ existing guidance)	Long term solution to possibly include changes to NRC regulations (rulemaking), status updated in SECY-14-0095
Operational Programs for Small or Multi-Module Facilities	SECY-11-0112 (flexibility w/ existing guidance)	Confirmed in SECY-14-0095
Installation of Reactor Modules During Operation of Multi-Module Facilities	SECY-11-0112 (existing guidance)	Confirmed in SECY-14-0095
Decommissioning Funding Assurance	SECY-11-0181 (Site-specific exemptions)	Long term solution to possibly include changes to NRC regulations (rulemaking), status updated in SECY-14-0095
Aircraft impact assessments	Final rule (June 2009)	Confirmed in SECY-14-0095