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Abstract.
The National Reactor Innovation Center (NRIC) Advanced Construction Technology Initiative (ACTI) supports a transformation in nuclear energy construction and deployment costs as various nuclear energy economic studies have identified the major cause of cost overruns are due to civil construction and schedule risks. Enabling this transformation will increase the confidence of investors, energy system planners, policymakers, and ultimately consumers in the capability of nuclear energy to meet future needs. The initiative considers regulatory requirements for commercial nuclear implementation and will incorporate strategies to develop regulator experience in review of the technology.
The advanced construction technologies explored have significant cost and productivity impacts on the design, permits, construction, and operation of a nuclear facility and NRIC seeks to further demonstrate these technologies.
In 2021, NRIC awarded a cost-shared, multi-year project to GE-Hitachi Nuclear Energy (GEH) and other key stakeholders on the first ACTI project that aims to reduce the construction costs of building new reactors by more than 10% and significantly lower the scheduling risks and uncertainties associated with them. Included in this work are three key technologies –vertical shaft construction, fabricated steel/concrete modular wall systems, and monitoring and digital twins.

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Confirm that the work is original and has not been published anywhere else

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