



NRC NEWS

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NRC Approves Major Digital Upgrade for Commercial Reactor Safety System Controls at Limerick

The Nuclear Regulatory Commission has [amended the operating licenses](#) for Limerick Units 1 and 2, granting approval to replace analog safety-related instrumentation and controls systems with a modern digital system. These amendments enable Constellation to install new I&C equipment as part of Limerick's digital modernization project. Limerick's two boiling water reactors are located in Limerick, Pennsylvania.

As the nuclear industry advances toward next-generation power reactors equipped with state-of-the-art digital I&C systems, much of today's operating fleet still relies on analog controls. While reactor operators have leveraged existing regulatory flexibilities to implement targeted digital upgrades, the NRC's approval of the Limerick amendments represents a broader and more comprehensive approach. Limerick will be the first operating nuclear power plant the NRC has authorized to perform a major digital retrofit that replaces multiple analog safety systems with a single digital plant protection system. The change modernizes the control room by replacing legacy equipment with modern digital controls and displays.

The NRC's review and approval of the Limerick amendments also paves the way for future digital I&C modernization across the nation's nuclear power plants. This milestone highlights the NRC's commitment to the safe adoption of digital technologies in nuclear facilities and supporting innovation and modernization across the operating fleet.

The U.S. Nuclear Regulatory Commission was created as an expert, technical agency to protect public health, safety, and security, and regulate the civilian use of nuclear materials, including enabling the deployment of nuclear power for the benefit of society. Among other responsibilities, the agency issues licenses, conducts inspections, initiates and enforces regulations, and plans for incident response. The global gold standard for nuclear regulation, the NRC is collaborating with interagency partners to implement reforms outlined in new Executive Orders and the ADVANCE Act to streamline agency activities and enhance efficiency.