

NUCLEAR ENERGY IN NEW JERSEY



New Jersey maintains a comprehensive nuclear emergency preparedness program designed to protect the public, workers, and the environment. The program is built on decades of operational experience at nuclear generating stations in the state and is continuously strengthened through coordination, training, exercises, and regulatory oversight. Emergency preparedness activities are conducted in accordance with federal and state requirements and are supported by a wide network of public safety, health and regulatory partners.

New Jersey's nuclear emergency preparedness program is a mature, continuously evolving framework built on decades of operational experience, regulatory oversight, and interagency coordination.

While existing nuclear facilities continue to operate under established safety and emergency preparedness protocols, future advanced reactor technologies are expected to further enhance safety performance while maintaining the same rigorous standards that currently protect the public.



A Proven Record of Safe Nuclear Operations

For more than 50 years, nuclear energy facilities in New Jersey have operated under strict regulatory oversight and established emergency preparedness requirements.

Facilities include:

- Salem Units 1 and 2 Nuclear Generating Stations
- Hope Creek Nuclear Generating Station
- Oyster Creek Nuclear Generating Station (permanently shut down and safely decommissioning)

Emergency preparedness programs have evolved alongside these facilities to ensure continued protection of the public and the environment throughout operation and decommissioning phases.



Robust Emergency Preparedness Partnerships

New Jersey's nuclear emergency preparedness program is implemented through coordinated efforts among multiple agencies and organizations, including:

- New Jersey Department of Environmental Protection (NJDEP)
- New Jersey State Police Office (NJSP)
- New Jersey Department of Health (NJDOH)
- Local and county emergency management agencies
- Nuclear power plant operators (NPP)
- Police, fire, and emergency medical services (EMS)
- Federal Emergency Management Agency (FEMA)
- U.S. Nuclear Regulatory Commission (NRC)
- Additional state and federal partners as needed to support coordinated response and recovery efforts

These organizations maintain year-round coordination through training, planning, and joint exercises.



Radiological Monitoring and Assessment Capabilities

New Jersey operates a network of 22 real-time gamma radiation monitoring stations located around nuclear power plant sites.

These systems provide:

- Continuous ambient radiation monitoring
- Meteorological data collection to support dispersion modeling
- Rapid detection and assessment of radiological conditions
- Input to protective action decision-making processes

Field monitoring teams supplement fixed systems by collecting and transmitting real-time data from affected areas during an emergency.



Public Information, Education and Engagement

Public awareness and transparency are integral components of New Jersey's nuclear emergency preparedness program.

Outreach activities include:

- Annual public hearings conducted jointly by NJDEP and the NJSP in designated counties surrounding nuclear facilities
- Public review and comment opportunities on emergency preparedness planning activities
- Distribution of annual emergency preparedness information calendars by PSEG Nuclear LLC to residents near nuclear generating stations
- Educational materials describing nuclear facilities and recommended protective actions during emergencies
- Ongoing communication with communities within the Emergency Planning Zone (EPZ)



Looking Ahead to Advanced Reactors

Advanced reactor technologies represent the next step in the evolution of nuclear energy and are being developed to build upon the proven safety and emergency preparedness framework already in place.

These technologies do not replace existing safety standards or emergency preparedness requirements. Instead, they continue to operate under the same federal and state regulatory structure, while incorporating design enhancements intended to further improve safety performance.

Advanced reactor designs may include:

- Passive safety systems that rely on inherent physical processes rather than active mechanical or human intervention
- Reduced quantities of radioactive material within the reactor system
- Slower and more predictable behavior during abnormal operating conditions
- Enhanced resilience to external hazards such as severe weather events
- Continued use of risk-informed, performance-based emergency preparedness approaches

These developments build upon decades of operational experience and regulatory oversight, reinforcing a long-standing commitment to public health, safety, and environmental protection while supporting innovation in nuclear technology.

