

## Mission Statement

The NRC licenses and regulates the Nation's civilian use of radioactive materials to provide reasonable assurance of adequate protection of public health and safety, and to promote the common defense and security, and to protect the environment.

## Commission

Chairman Kristine L. Svinicki	Term ends June 30, 2022
Commissioner Jeff Baran	Term ends June 30, 2023
Commissioner Stephen G. Burns	Term ends June 30, 2019
Commissioner Annie Caputo	Term ends June 30, 2021
Commissioner David A. Wright	Term ends June 30, 2020

## Locations

### Headquarters:

U.S. Nuclear Regulatory Commission 301-415-7000, 800-368-5642  
Rockville, MD

### Regional Offices:

Region I—King of Prussia, PA	610-337-5000, 800-432-1156
Region II—Atlanta, GA	404-997-4000, 800-577-8510
Region III—Lisle, IL	630-829-9500, 800-522-3025
Region IV—Arlington, TX	817-860-8100, 800-952-9677

### Headquarters Operations Center:

Rockville, MD 301-816-5100  
The NRC maintains a staffed, 24-hour Operations Center that coordinates incident response with Federal, State, Tribal, and local agencies.

### Training and Professional Development:

Technical Training Center, Chattanooga, TN	423-855-6500
Professional Development Center, Rockville, MD	301-287-0556

### Resident Sites:

At least two NRC resident inspectors, who report to the appropriate regional office, are located at each nuclear power plant site.

## NRC Fiscal Year 2018 Budget

- Total authority: \$937 million (\$922 million enacted budget with \$15 million carryover authority)
- Total authorized staff: 3,186 full-time equivalents
- Estimated fees to be recovered: \$790.3 million
- Separate appropriation for the Office of the Inspector General: \$12.9 million
- Total research budget: \$42 million
  - Reactor Program: \$30 million
  - New/Advanced Reactor Licensing: \$11 million
  - Materials and Waste: \$1 million

## What Does the NRC Do?

- Regulation and guidance—rulemaking
- Licensing, decommissioning, and certification
- Oversight and enforcement
- Emergency preparedness and response
- Policymaking
- Research
- Incident response

## NRC Governing Legislation

The NRC was established by the Energy Reorganization Act of 1974. The most significant laws that govern the regulatory process of the agency are in Appendix W to this Information Digest. The NRC's regulations are found in Title 10, "Energy," of the Code of Federal Regulations (10 CFR). The text of many laws may be found in NUREG-0980, "Nuclear Regulatory Legislation."

## NRC by the Numbers

### U.S. Electricity Generated by Commercial Nuclear Power

NRC-licensed nuclear reactors generate about 20 percent of U.S. gross electricity, or about 805 billion kilowatt-hours.

### Nuclear Reactors

- 99 commercial nuclear power plants operating in 30 States at 59 sites
  - 65 pressurized-water reactors and 34 boiling-water reactors
- Four reactor fuel vendors
- 23 parent operating companies
- About 80 different designs
- About 6,550 total inspection hours at each operating reactor site in 2017
- Licensees expected to shut down or not seek license renewal include:
  - Oyster Creek (Exelon) plans to shut down in October 2018.
  - Pilgrim Nuclear Power Station (Entergy) will close by end of May 2019.
  - Three Mile Island Unit 1 (Exelon) plans to shut down in September 2019.
  - Davis Besse (FirstEnergy) plans to shut down in May 2020.
  - Perry (FirstEnergy) plans to shut down in May 2021.
  - Indian Point Nuclear Generating Station, Units 2 and 3 (Entergy), will close in 2020 and 2021, respectively.
  - Beaver Valley, Units 1 and 2 (FirstEnergy), will close in May and October 2021, respectively.
  - Palisades Nuclear Plant (Entergy) will close by May 2022.
  - Diablo Canyon, Units 1 and 2 (Pacific Gas & Electric) intends to close by August 2025.

### Reactor License Renewal

Commercial power reactor operating licenses are valid for 40 years and may be renewed for additional 20-year terms.

- 13 reactors operate under their original license.
- 89 reactors were issued renewal licenses, including 3 reactors permanently shut down.
- Four sites have license renewal applications in review.
- Three sites have submitted letters of intent to request initial license renewal.
- On February 9, 2018, the license renewal application for Diablo Canyon Units 1 and 2 was withdrawn.

### Subsequent License Renewal

This type of licensing would allow plants to operate from 60 to 80 years.

- One site has a subsequent license renewal application in review.
- Three sites have submitted letters of intent to request subsequent license renewal.

### Early Site Permits for New Reactors

- Five early site permits (ESPs) were issued and one application docketed:
  - System Energy Resources, Inc., for the Grand Gulf site in Mississippi
  - Exelon Generation Company, LLC, for the Clinton site in Illinois
  - Dominion Nuclear North Anna, LLC, for the North Anna site in Virginia
  - Southern Nuclear Operating Company, for the Vogtle site in Georgia
  - PSEG Power, LLC, and PSEG Nuclear, LLC, for a site in New Jersey
  - The NRC is reviewing one ESP application from the Tennessee Valley Authority (TVA) for two or more small modular reactor (SMR) modules at the Clinch River Nuclear Site in Roane County, TN.

## **Combined License—Construction and Operating for New Reactors**

- Since June 2007, the NRC has received and docketed 18 combined license (COL) applications for 28 new, large light-water reactors.
- The NRC suspended or canceled 10 COL application reviews at the request of the applicants (Bell Bend, PA; Bellefonte, AL; Callaway, MO; Calvert Cliffs, MD; Comanche Peak, TX; Grand Gulf, MS; Nine Mile Point, NY; River Bend, LA; Shearon Harris, NC; and Victoria County Station, TX).
- As of July 1, 2018, the NRC has issued COLs for 14 reactors at Fermi, MI; North Anna, VA; South Texas Project, TX; Turkey Point, FL; V.C. Summer, SC; and Vogtle, GA. On July 31, 2017, South Carolina Electric & Gas (SCE&G) announced plans to cease construction on V.C. Summer nuclear power plant, Units 2 and 3, and requested the NRC withdraw the COLs by letter dated December 27, 2017. By letter dated January 25, 2018, Duke Energy requested termination of the COLs Levy County Units 1 and 2, in Florida. The NRC approved the termination on April 26, 2018. In June 2018, Nuclear Innovation North America submitted a letter requesting that the COLs for South Texas Project, Units 3 and 4, be withdrawn.

## **Reactor Design Certification**

- Five reactor design certifications (DCs) have been issued:
  - General Electric-Hitachi Nuclear Energy's ABWR (Advanced Boiling-Water Reactor)
  - Westinghouse Electric Company's System 80+
  - Westinghouse Electric Company's AP600
  - Westinghouse Electric Company's AP1000
  - General Electric-Hitachi Nuclear Energy's ESBWR (Economic Simplified Boiling-Water Reactor)
- Three DC applications are under review for the APR1400, US-APWR (Advanced Pressurized-Water Reactor) designs, and NuScale designs.
- One DC application for US-EPR (Evolutionary Pressurized-Water Reactor) is suspended at the request of the applicant.
- One DC renewal application is under review for the ABWR design.

## **Nuclear Research and Test Reactors**

- 31 licensed research and test reactors operate in 21 States.

## **Nuclear Materials**

### **Materials Licensing**

- The NRC and the Agreement States have approximately 19,300 licensees for medical, academic, industrial, and general users of nuclear materials.
  - The NRC regulates approximately 2,800 licenses.
  - 37 Agreement States regulate approximately 16,500 licenses.
- Wyoming has submitted a final application and Vermont has submitted a draft application to become Agreement States.
- The NRC issues approximately 1,600 new licenses, renewals, or amendments for existing materials licenses annually. The NRC conducts approximately 900 health, safety, and security inspections of materials licensees each year.

### **Nuclear Fuel Cycle**

- 11 uranium recovery sites are licensed by the NRC:
  - 10 in situ recovery sites
  - One conventional mill in standby status with the potential to restart in the future
- 11 fuel cycle facilities are licensed by the NRC:
  - One uranium hexafluoride conversion facility ("ready-idle" status)
  - Five uranium fuel fabrication facilities
  - Two gas centrifuge uranium enrichment facilities (one operating and one construction pending)
  - One mixed-oxide fuel fabrication facility (under construction and review)
  - One uranium enrichment laser separation facility (construction decision pending)
  - One depleted uranium deconversion facility (construction decision pending)
- The NRC issues about 60 fuel cycle facility licensing actions per year, including amendments; renewals; new licenses; and safety, environmental, and safeguards reviews.

## National Source Tracking System

The National Source Tracking System, also known as NSTS, tracks more than 76,000 sources held by about 1,400 NRC and Agreement State licensees. Of those sources, about 52 percent are Category 1 sources and 48 percent are Category 2. The majority are cobalt-60, the most widely used isotope in large sources.

## Domestic Safeguards

The NRC and the U.S. Department of Energy use the Nuclear Materials Management and Safeguards System (NMMSS) to track transfers and inventories of source and special nuclear material. Licensees that import and export source material, and licensees that possess foreign-obligated source material, must report transfers and inventories to NMMSS. More than 300 licensees report to the NMMSS database. These licensees verify their inventories on an annual basis through a process of reconciliation that checks their reported transactions against their previous year's ending inventory.

## Radioactive Waste

### *Low-Level Radioactive Waste*

- 10 regional compacts
- Four licensed disposal facilities

### *High-Level Radioactive Waste Management*

#### **Spent Nuclear Fuel Storage**

- 79 licenses for independent spent fuel storage installations in 34 States:
  - 15 site-specific licenses
  - 64 general licenses

### **Transportation—Principal Licensing and Inspection Activities**

- 1,000 safety inspections of fuel, reactor, and materials licensees are conducted annually.
- 50–70 new, renewed, or amended container-design applications for the transport of nuclear materials are reviewed annually.
- 150 license applications for the import and export of nuclear materials from the United States are reviewed annually.
- More than 3 million packages of radioactive materials are shipped each year in the United States by road, rail, air, or water. This represents less than 1 percent of the Nation's yearly hazardous material shipments.

### **Decommissioning**

Approximately 100 materials licenses are terminated each year. The NRC's decommissioning program focuses on the termination of licenses that are not routine and that require complex activities.

- 20 nuclear power reactors in various stages of decommissioning (DECON or SAFSTOR)
- Four research and test reactors permanently shut down and in various stages of decommissioning
- 13 complex materials sites in various stages of decommissioning
- Two fuel cycle facilities (one partial decommissioning)
- 11 NRC-licensed uranium recovery facilities in various stages of decommissioning

## Security and Emergency Preparedness

- Every 2 years, each operating nuclear power plant performs a full-scale emergency preparedness exercise inspected by the NRC and evaluated by the Federal Emergency Management Agency (FEMA).
- Plants conduct additional emergency drills between full-scale exercises to maintain their preparedness and proficiency in responding to emergencies.
- Every 3 years, each nuclear plant undergoes a force-on-force security inspection. These inspections include mock combat drills. The NRC spends about 16,000 hours a year scrutinizing security at nuclear power plants, including 8,000 hours of force-on-force inspections.