

EXECUTIVE SUMMARY

NRC Mission:

License and regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.

Nuclear materials are used in a variety of applications in the American economy. The best known use is in the production of electricity. Nuclear power produced over 20 percent of the electrical needs of the Nation in 2007. In addition, nuclear materials are used in a wide range of both industrial and medical applications. For example, about one-third of all patients admitted to American hospitals are diagnosed or treated using radioisotopes. In fact, most major hospitals have departments dedicated entirely to radiation medicine.

Because of the potential hazards involved in using radioactive materials, the nuclear industry is strictly regulated. From nuclear fuel facilities, which produce the radioactive fuel used in nuclear power plants, to the 104 nuclear reactors and other users of nuclear materials, and through the safe transportation, storage, and disposal of nuclear waste materials throughout the United States, the agency's regulatory programs ensure that radioactive materials are used safely and securely. Under the U.S. Nuclear Regulatory Commission's (NRC's) Agreement State program, 34 states have assumed regulatory responsibilities for overseeing the activities of industrial, medical, and certain smaller users of nuclear materials in their states. The agency works closely with these states to ensure that public health and safety are maintained. The NRC has a defined set of regulatory practices, knowledge, and expertise specific to each type of facility or activity that it regulates to address public health and safety and security issues.

Overview of the NRC Performance Budget

This fiscal year (FY) 2009 budget request reflects an increase in the agency's regulatory activities, driven primarily by an anticipated interest in constructing new nuclear power facilities, oversight of existing reactors, and materials and waste licensing. The agency expects to review 21 uranium recovery applications, which produce the raw materials for nuclear fuel, to receive two applications for new facilities that will enrich uranium to produce the nuclear fuel used in reactors, and to receive an application from the Department of Energy (DOE) to construct and operate a geologic repository at Yucca Mountain in Nevada. During FY 2008, the agency expects to initiate the review of 14 Combined Operating Licenses (COL) applications. During FY 2009, acceptance reviews are anticipated to be performed on seven additional COLs. Commencement of the reviews of these seven COL applications will occur within an 8-month timeframe following the acceptance of the applications. It is the agency's responsibility to review the applications in a timely manner so that our licensees will be able to build and operate facilities that produce electricity needed for our Nation's economic growth. To fund these license application reviews, as well as the many other activities necessary to meet the agency's mission, the agency requests \$1.02 billion for FY 2009.

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Financing the NRC's Budget

The NRC is primarily financed through user fees paid by the agency's applicants and licensees. By statute, the NRC recovers approximately 90 percent of its budget through user fees. This 90 percent fee recovery requirement applies to the NRC's total budget less appropriations from the Nuclear Waste Fund, appropriations to implement Section 3116 of the Ronald W. Reagan National Defense Authorization Act (NDAA), and to conduct generic homeland security activities. As a result, the NRC's FY 2009 budget request will be financed with \$855.5 million from user fees, \$124.2 million from the General Fund, and \$37.3 million from the Nuclear Waste Fund, as shown in the table below.

NRC FINANCING (Dollars in Millions)			
	FY 2007	FY 2008	FY 2009
Budget Authority	\$824.9	\$926.1	\$1,017.0
Offsetting Fees	669.3	779.1	855.5
Net Appropriated			
Nuclear Waste Fund	45.8	29.0	37.3
General Fund (Off Fee Base)	109.8	118.0	124.2
Total Net Appropriated¹	\$155.6	\$147.0	\$161.5

¹ Numbers may not add due to rounding.

Budget Highlights

The agency's total proposed budget is \$1.02 billion for FY 2009, which is an increase of \$90.9 million over the FY 2008 enacted level. Significant changes include:

- **New Nuclear Facilities:** An increase of approximately \$10.6 million supports regulatory and other support activities in the areas of new reactors, fuel facilities, and uranium recovery facilities.

Of the total increase in this area, \$3.1 million is for the New Reactors sub-program. These resources primarily support the development and implementation of the Construction and Vendor Inspection program and the reactivation of licensing and construction oversight for Watts Bar Unit 2.

Of the remaining increase for nuclear resurgence activities, \$2.7 million supports the review of two new fuel (uranium enrichment) facility applications, and \$4.8 million is for the safety and environmental reviews of new uranium recovery applications, restarts, and expansions of existing facilities.

- **Oversight of Existing Reactors:** Regulatory oversight of existing reactors accounts for \$42.9 million of the NRC's total FY 2009 budget increase. The vast majority of this increase occurs in the following reactor sub-programs: Reactor Licensing Tasks (\$12.0 million), Reactor Oversight (\$16.1 million), and Reactor License Renewal (\$10.9 million).

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Reactor Licensing Tasks: Resource increases support the review of extended power uprate applications, the expected licensing activities associated with the transition of reactor sites to the National Fire Protection Association (NFPA) Standard 805, regulatory guides on fire protection and probabilistic risk assessment, replacement of the reactor program system, fire safety research, and forward-looking research focused on the high-priority activities in the Integrated Research Plan.

Reactor Oversight: Resource increases primarily support the Reactor Inspections activity, enforcement-related activities to include safety culture and safety conscious work environment initiatives, the review of licensees' plans required by the new Part 73, license renewal inspections, and enhancement of the security inspection program.

Reactor License Renewal: Resource increases primarily support the review of five new license renewal applications for six units at five sites based on the industry schedule. In addition, resources increase to support the revision of the Generic Environmental Impact Statement, including the associated guidance documents, and the update of other license renewal guidance documents and the Generic Aging Lessons Learned report.

- **High-Level Waste:** Resources increase for High-Level Waste (HLW) activities by \$8.3 million in the FY 2009 budget request. The budget assumes that the Department of Energy will submit its license application for the geologic repository at Yucca Mountain in June 2008. The HLW sub-program funds will support the review of that license application. The agency will strive to meet the substantial challenge in completing the safety review and construction authorization decision within the three to four year time period set forth in the Nuclear Waste Policy Act.
- **Other Existing Materials and Waste Facilities:** Resources increase for these activities by \$28.8 million in the FY 2009 budget request. Of the increase, \$15.4 million (majority of the resources are in the Nuclear Materials Users sub-program) supports the NRC's response to a Government Accountability Office (GAO) materials licensing investigation, which includes enhanced regulatory oversight in this area, the implementation of a Web-based licensing system, and complete initial deployment of a national registry of radioactive sources to improve the controls on risk-radioactive materials through the National Source Tracking System (NSTS). Resources also increase to provide additional support to Agreement States.
- **Other:** Resources increase by \$0.3 million for the Office of the Inspector General (OIG) to acquire contract services to conduct statutorily mandated audits and to provide for increased personnel costs of existing staff.

The above increases include Federal pay raises and other nondiscretionary compensation and benefits increases for existing full-time equivalent (FTE) and 121 additional FTE, upgrades to equipment and

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software, and the continuation of information security improvements. The NRC will continue to strive to most efficiently utilize its budgeted FTE and contract dollars to achieve the agency's strategic goals and outcomes. The NRC will continue development and implementation of its approved human capital plan to continually adjust the allocation of employees and staffing assignments to meet workload requirements.

NRC Goals

The NRC has revised its strategic plan and has reorganized and simplified its strategic goal structure to focus on outcomes. The Strategic Plan for FY 2008 - FY 2013 contains two strategic goals and strategic outcomes for each goal:

- (1) Safety – Ensure adequate protection of public health and safety and the environment.
 - Prevent the occurrence of any nuclear accidents.
 - Prevent the occurrence of any inadvertent criticality events.
 - Prevent the occurrence of any acute radiation exposure resulting in fatalities.
 - Prevent the occurrence of any releases of radioactive materials that result in significant radiation exposures.
 - Prevent the occurrence of any releases of radioactive materials that cause significant adverse environmental impacts.
- (2) Security – Ensure adequate protection in the secure use and management of radioactive materials.
 - Prevent any instances where licensed radioactive materials are used domestically in a manner hostile to the security of the United States.

The agency's focus on safety and security ensures protection of the public and the environment. The resources requested in this budget will fund the activities necessary to achieve the NRC's two strategic goals. The agency's activities are carried out under two programs: the Nuclear Reactor Safety Program and the Nuclear Materials and Waste Safety Program. The activities that the agency undertakes under these two programs contribute directly to the achievement of the agency's mission, goals, and strategic outcomes. Output measures, which describe the level of activity that will be provided, are included in this budget for selected program activities. The Commission continually reassesses these output measures based on program performance and requirements, striving to ensure targets are appropriately challenging.

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Summary by Major Program

SUMMARY OF BUDGET AUTHORITY BY MAJOR PROGRAMS (Dollars in Millions)								
Summary	FY 2007		FY 2008 Enacted		FY 2009 Request		Change from FY 2008	
	\$M	FTE	\$M	FTE	\$M	FTE	\$M	FTE
Budget Authority by Major Programs								
Nuclear Reactor Safety	\$617.3	2,543	\$740.6	2,886	\$786.6	2,937	\$46.0	51
Nuclear Materials and Waste Safety	153.4	710	147.7	665	184.0	748	36.3	83
Subtotal	\$770.7	3,253	\$888.3	3,551	\$970.7	3,685	\$82.3	134
High-Level Waste Repository	45.8	132	29.0	105	37.3	98	8.3	(7)
Subtotal	\$816.5	3,385	\$917.3	3,656	\$1,008.0	3,782	\$90.6	126
Inspector General	8.4	49	8.7	51	9.0	51	0.3	-
Total	\$824.9	3,434	\$926.1	3,707	\$1,017.0	3,833	\$90.9	126
Reimbursable FTE		20		20		15		(5)
Total¹	\$824.9	3,454	\$926.1	3,727	\$1,017.0	3,848	\$90.9	121

¹ Numbers may not add due to rounding.

Nuclear Reactor Safety Program

The FY 2009 budget request provides \$786.6 million for the Nuclear Reactor Safety Program. This includes \$549.1 million to ensure the safe and secure operation of, and effective emergency preparedness for, the Nation's 104 nuclear power reactors and \$237.5 million to keep pace with the industry's applications to license new nuclear power reactors.

New Reactors: The NRC requests \$237.5 million for activities associated with reviewing applications to build nuclear power reactors in FY 2008 and FY 2009. The budget request provides resources to support activities that help ensure the safe and secure operation of the new generation of nuclear reactors in a timely manner:

- The NRC will continue the license review and inspection activities for the Watts Bar Unit 2 initiated in FY 2008.
- The NRC will continue the review of the 14 Combined Operating Licenses (COLs) that the agency anticipates will be received in 2008 and seven additional acceptance reviews are anticipated to be performed in FY 2009. The NRC expects to initiate review of these seven applications within an 8-month timeframe following the applications acceptance. The NRC will use its Design Centered Review Approach to review the expected applications. The NRC will continue the review of three design certification applications for the ESBWR, EPR and US APWR. It will complete the design certification of the AP1000 amendment and complete design certification aircraft impact assessments of five reactor designs. The NRC will also complete the Vogtle early site permit review.

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- The NRC will further develop and implement the Construction and Vendor Inspection program. This program will provide assurance that plant components are manufactured as required, plants are built as licensed, and that licensee operational programs are in place to support the safe startup and operation of new nuclear facilities.
- The NRC will also undertake technical development activities that support the timely review of new light water and non-light water reactor designs.

Reactor Licensing Tasks: The NRC's FY 2009 budget provides \$225.5 million for reactor licensing activities associated with overseeing the existing licenses of 104 nuclear power reactors and 33 research and test reactors. The budget request provides resources to conduct the following activities, which help ensure the safe and secure operation of reactors:

- Undertake research in the areas of materials performance, reactor fuel codes, fire safety, and electrical engineering, as well as assessment methods for reviewing current and future applications involving digital instrumentation and control.
- Complete 1,150 licensing actions to amend existing licenses, including approximately five power uprates, 17 anticipated reviews of licensees' implementation of the provisions of NFPA Standard 805 that will resolve several long-standing fire design issues at nuclear plants, and 600 other licensing tasks to address issues that do not require a license amendment.
- Screen and evaluate approximately 3,000 reports on events at power reactors.
- Support regulatory licensing process improvements and regulatory policy and guidance development.
- Review license applications for adequate safeguards and security protections, conduct threat assessments, revise security inspection procedures, and coordinate security and emergency preparedness activities with other Government agencies.

Reactor License Renewal: The NRC's budget includes \$33.3 million to continue its program to renew the licenses of existing nuclear reactors up to an additional 20 years beyond the original expiration date following the necessary safety reviews. The Commission expects the receipt of four new license renewal applications in FY 2008, and five new license renewal applications in FY 2009. The budget request will also provide resources to improve the rulemaking and guidance documents associated with the review of license renewal applications.

International Activities: The NRC's FY 2009 budget includes \$11.3 million for international activities to support agency participation in a wide range of mutually beneficial programs. The budget request will provide the resources necessary to participate in activities to enhance domestic

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and global nuclear safety, security, and safeguards through bilateral interactions and through participation in activities of multilateral organizations, such as the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA). In addition, the budget request will provide resources to maintain 43 arrangements with regulatory authorities of other countries and to negotiate/renew 3-6 bilateral exchange arrangements between the agency and appropriate foreign counterparts.

Reactor Oversight: The NRC's FY 2009 budget includes \$255.4 million to support reactor inspection and performance assessment activities at 104 commercial and 33 test and research reactors licensed to operate. The NRC will continue to strengthen reactor oversight activities to provide early identification and management of potential safety issues. The budget request also provides resources to support the following:

- Support performance-based evaluations of licensee security programs and assess the effectiveness of these security programs. Review security improvement actions taken by power reactor licensees through inspections and oversight to confirm the adequacy of nuclear reactor security in the current threat environment.
- Support baseline inspections; plant-specific, supplemental, and reactive inspections; and generic issue inspections to address areas of emerging concern or areas requiring increased emphasis because of recurring problems.
- Investigate allegations of wrongdoing and undertake enforcement actions when necessary.
- Collect and analyze reactor performance data to identify industry trends, support significance determination process, and evaluate cross-cutting issues in the areas of human performance and safety culture.

Incident Response: The NRC's FY 2009 budget includes \$23.6 million to enhance and support reactor emergency preparedness, incident response, and security to ensure proper response and readiness in the current threat environment and resolution of policy and program issues. The budget request provides resources to support the following:

- Develop a plan to handle operations in the event of a pandemic flu.
- Conduct security-based emergency preparedness exercises.
- Operate communication systems that comply with requirements for continuity contained in National Communications System Directive 3-10.
- Operate systems that support the agency's incident response capabilities. These systems, such as the Operations Center Information Management System, are the primary

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communication infrastructure that supports the NRC response to radiological, nuclear materials, and national security events.

- Maintain incident response readiness and communicate and partner with other Federal, State and local agencies.

Nuclear Materials and Waste Safety Program

The FY 2009 budget request provides \$221.3 million for the Nuclear Materials and Waste Safety Program. This includes \$184 million to ensure the safe and secure storage, transport, and use of nuclear materials and operation of nuclear fuel facilities and \$37.3 million to support the Commission's statutory responsibilities regarding the DOE's license application for a HLW repository.

Fuel Facilities: The budget includes \$48.5 million to license and inspect all commercial nuclear fuel facilities involved in enriching, processing, and fabricating uranium ore into reactor fuel. The 20 regulated facilities include seven major and nine minor fuel fabrication facilities, two gaseous diffusion enrichment facilities, and two gas centrifuge enrichment facilities. The budget provides resources to conduct the following regulatory and other activities:

- Review two new uranium enrichment facility applications (GE Hitachi and AREVA) expected to be received in FY 2008.
- Review the license application and undertake inspection activities for a mixed-oxide fuel fabrication facility, and conduct adjudicatory hearings on enrichment facilities and the mixed-oxide fuel fabrication facility in FY 2009.
- Enhance the regulatory framework and related licensing and oversight efforts to ensure adequate security of nuclear and radioactive material.
- Conduct homeland security reviews and baseline security inspections at Category I facilities, develop international safeguards policy, and implement IAEA safeguards.

Nuclear Materials Users: The agency requests \$74.3 million to provide for licensing, inspection, event evaluation, research, incident and allegation response, and rulemaking activities to maintain the regulatory infrastructure needed to regulate nuclear materials. The budget request provides resources that support the following activities:

- Respond to a GAO materials licensing investigation.
- Conduct 20-25 materials and waste rulemakings per year.

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- License and undertake additional inspections for the agency's new regulatory responsibilities for naturally-occurring or accelerator-produced radioactive material licenses and reciprocity inspections.
- Conduct activities with Agreement States and other state and local officials. Increase resources for Agreement State staff training.
- Implement a Web-based Licensing system.
- Complete initial deployment of a national registry (i.e., the National Source Tracking System) of radioactive sources of concern to improve controls on risk-significant radioactive materials to prevent their malevolent use.

Decommissioning and Low-Level Waste: The agency requests \$35.3 million to perform oversight of existing facilities and conduct technical and environmental reviews for uranium recovery licensing activities. The budget request provides resources to conduct the following activities:

- Conduct oversight of the decommissioning of power reactors, research and test reactors, and complex materials sites and perform related performance assessments and environmental reviews.
- Initiate safety and environmental reviews for 21 uranium recovery new applications, restarts, and expansions of existing facilities.
- Conduct oversight of approximately 65 complex materials, power reactor, research and test reactor, and inactive uranium recovery facilities undergoing decommissioning, including license termination of two sites, and associated performance assessment and environmental reviews.
- Provide oversight of certain DOE waste determination activities and plans consistent with the NRC's responsibilities in the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005.

Spent Fuel Storage and Transportation: The agency requests \$25.9 million to license, certify, and inspect the interim storage of spent fuel from commercial nuclear reactors and the domestic and international transportation of radioactive materials to ensure safety and to meet industry needs. The budget request provides resources to support the following activities:

- Review applications for independent spent fuel storage installations at commercial nuclear power plants, spent fuel storage casks, transportation packages, dual purpose (storage and transport) casks, and route approvals.

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- Review 60 - 70 transportation package applications each year, 20 - 25 spent fuel storage cask designs and storage facility licenses, and 25 quality assurance program reviews for package design, use, and maintenance each year. The purpose of these reviews is to confirm that applicant-proposed designs are consistent with regulatory requirements.
- Review security procedures at independent spent fuel storage installations and procedures for the transportation of radioactive material.
- Implement a baseline inspection program for physical protection to enhance security for spent fuel storage facilities and transportation activities.

High-Level Waste Repository: The agency requests \$37.3 million to support NRC statutory responsibilities regarding the potential DOE application for a HLW repository. The FY 2009 budget assumes the receipt of a license application in June 2008. The budget provides resources to support the following activities:

- Determine whether to adopt DOE's final environmental impact statement (FEIS) and docket the application.
- Maintain the adjudicatory Digital Data Management System and Licensing Support Network.
- Review of Transportation Aging (storage) and Disposal (TAD) canister design applications initiated in fall 2008.
- Analyze full and quarter-scale transportation cask drop tests through an international cooperative agreement with the German Federal Institute for Materials and Research and other international counterparts.

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Budget Authority by Appropriation

The following table provides the NRC budget authority by appropriation:

TOTAL NRC BUDGET AUTHORITY BY APPROPRIATION (Dollars in Millions)				
NRC Appropriation	FY 2007	FY 2008	FY 2009	
			Request	Change from FY 2008
Salaries and Expenses (S&E)				
Budget Authority	\$816.5	\$917.3	\$1,008.0	\$90.7
Offsetting Fees	661.7	771.2	847.4	76.2
Net Appropriated S&E	154.8	146.1	160.6	14.5
Office of the Inspector General (OIG)				
Budget Authority	\$8.4	\$8.7	\$9.0	\$0.3
Offsetting Fees	7.6	7.9	8.1	0.2
Net Appropriated—OIG	0.8	0.9	0.9	-
Total NRC				
Budget Authority	\$824.9	\$926.1	\$1,017.0	\$90.9
Offsetting Fees	669.3	779.1	855.5	76.4
Total Net Appropriated¹	\$155.6	\$147.0	\$161.5	\$14.5

¹Numbers may not add due to rounding.

The proposed FY 2009 budget reflects \$855.5 million from fees assessed to NRC licensees, resulting in a net appropriation of \$161.5 million. This is an increase of approximately \$14.5 million in net appropriations above the 2008 enacted level. In accordance with the requirements defined in Section 22.6(a) of Office of Management and Budget Circular A-11, the NRC is providing the full cost of its programs. The full cost includes an allocation of the agency's infrastructure and support costs to specific programs.

Budget Presentation

A discussion of the highlights of major FY 2009 activities for each of the NRC programs follows this executive summary. Chapters 3 and 4 of this report provide additional details, including output measures and FY 2007 accomplishments, for each of the two major programs. Chapter 5 describes the NRC performance measures. Chapter 6 summarizes the budget for the Office of the Inspector General. Homeland security resources and descriptions of activities are included within the programs they support. Appendix III explains the agency's infrastructure and support activities and the allocation of those resources to programs. Appendix VI provides the reimbursable business-like FTE, and Appendix VII presents the discontinued performance and output measures.

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