

# Integrated Regulatory Review Service Mission to the United States

## MODULE 1: RESPONSIBILITIES AND FUNCTIONS OF THE GOVERNMENT

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### Overview

This module presents an overview of the governmental framework. Particular descriptions of the framework for regulation of nuclear power plants will be given as responses to specific requirements.

Major statutes establish the regulatory framework for the safety of facilities and sources, radiation protection, safe transport of radioactive material, the safe management of waste, decommissioning, emergency planning, and financial indemnification arrangements for third parties in the event of a major accident. The Atomic Energy Act of 1954 establishes the regulatory apparatus and the basic licensing requirements, covering essentially all areas having to do with public health and safety and the environment, including facility safety, radiation protection, waste management, transportation, and financial indemnification arrangements for third parties (the latter covered by the Price-Anderson Act, which is part of the Atomic Energy Act of 1954). Reorganization Plan No. 3 of 1970 reassigns responsibility for environmental standards to the then newly established U.S. Environmental Protection Agency (EPA). The Energy Reorganization Act of 1974 establishes the U.S. Nuclear Regulatory Commission (NRC) and reassigns the chief safety regulatory responsibility to the NRC. The Nuclear Waste Policy Act of 1982 establishes a program to develop a national high-level waste repository, and the Act assigns regulatory responsibilities in this area to both the NRC and the EPA. The Low-Level Radioactive Waste Policy Amendments Act of 1985 aims at the development of low-level waste facilities. The Hazardous Materials Transportation Uniform Safety Act of 1990 assigns basic regulatory authority over the transportation of hazardous radioactive material to the U.S. Department of Transportation. Presidential Executive Order 12148, "Federal Emergency Management," dated July 20, 1979, assigns to the Federal Emergency Management Agency responsibility for establishing Federal policy on emergency response, including response to accidents at civilian nuclear facilities.

Under the authorities granted in these statutes, the regulatory bodies have issued a wide range of rules that set more specific standards than those contained in the fundamental statutes. These rules have been applied in adjudicatory decisions and in guidance documents that help fix interpretations of key terms and requirements in the statutes and the regulations. Also, where the regulatory bodies share responsibilities, as, for example, the NRC and EPA do for decommissioning, the agencies have entered into memoranda of understanding that help ensure that there are neither gaps nor duplication in regulation.

In outline, the requirements addressed in Module 1 and discussed in the Summary aim at having a well-founded, stable, and independent regulator. Stated in brief, they pose the following basic questions.

- Does the agency have adequate authority for the essential functions of a regulator—standard setting, licensing, and enforcement?
- Does legislation establish an adequate and reasonably clear standard of safety? Is the standard flexible enough to permit more or less regulation according to the degree of risk

posed by the regulated activity? Is the standard flexible enough to permit incorporation of international consensus standards?

- Does the regulatory program address the necessary range of activities, especially important transitions, such as initial licensing, renewal, decommissioning, license transfer, retrofitting, and waste management? Does the program make the regulated parties ultimately responsible for safety?
- Is the regulator sufficiently independent? Is the regulator free of any responsibilities that conflict with its safety mission, for example, responsibility for promoting nuclear power? Can other authorities second-guess the regulator's technical judgments? At the same time, are other governmental bodies and the public given sufficient opportunity to participate in the regulator's decision-making?
- Is the regulator provided with the necessary resources—money, well-trained staff, and access to independent research and expertise?
- Are the regulator's foundations reasonably stable (that is, not subject to frequent fundamental change)?
- Is there provision for compensating losses in the event of a major nuclear accident?

In the case of the NRC's regulation of operating nuclear power reactors, the answer to all of these questions is yes.

### **National Policy and Strategy**

*The government shall establish a national policy and strategy for safety, the implementation of which shall be subject to a graded approach in accordance with national circumstances and with the radiation risks associated with facilities and activities, to achieve the fundamental safety objective and to apply the fundamental safety principles established in the Safety Fundamentals.*  
(GS-R-1, Requirement 1)

As discussed in more detail in the responses to other requirements, U.S. national policy and strategy are expressed principally in the Atomic Energy Act of 1954 (AEA) and the Energy Reorganization Act of 1974 (ERA). The AEA established the basic policy aims (safe civilian use of radioactive materials) and the basic strategy (licensing and continuing regulation of the use of materials, from mining through use to disposal). The ERA established the NRC. These statutes, and the rules and policies issued under them by the NRC, entail the factors mentioned in the commentary on Requirement 1: broad authority to regulate health and safety (see Section 161 of the AEA), with due attention to the management of safety; a commitment to consistency with international norms; adequate resources acquired through the usual budget process; and provision for research (see, for example, Section 205 of the ERA). GS-R-1 emphasizes "a graded approach to safety," and U.S. statutes authorize such an approach. The NRC's Reactor Oversight Process is just such an approach. It closely focuses on those plant activities having the greatest impact on safety and overall risk and on the relatively few plants that evidence performance problems.

## **Establishment of a Framework for Safety**

*The government shall establish and maintain an appropriate governmental, legal and regulatory framework for safety within which responsibilities are clearly allocated. (GS-R-1, Requirement 2)*

The commentary on Requirement 2 discusses many factors that the regulatory framework should address. The paragraphs below summarize how the U.S. framework addresses these factors.

U.S. legislation describes the safety objectives in general terms. For example, Section 161.b. of the AEA authorizes the Commission to issue such orders and regulations as the Commission “may deem necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or property....” Environmental legislation, which is implemented by the EPA, is similarly general. The AEA clearly assigns to the NRC the responsibility for regulating nuclear safety at nuclear power plants. Other statutes assign to EPA some responsibilities for setting environmental standards for nuclear power plants and assign to the Occupational Safety and Health Administration responsibility for setting industrial safety standards at such plants. It is rare for U.S. legislation to set specific environmental or health and safety standards; regulations issued by the regulator provide more detail about these processes than legislation could possibly do. However, under the Congressional Review Act, 5 U.S.C. 801–808, all rules, including health and safety rules, are sent to Congress for review. Congress has never overturned an NRC rule.

Part of the NRC’s responsibility under the AEA is for “the common defense and security.” The NRC’s responsibility includes regulating to ensure the protection of information, materials, and facilities. See, for example, Section 147 of the AEA, and Title 10 of the *Code of Federal Regulations* (10 CFR) Part 73, “Physical Protection of Plants and Materials,” and 10 CFR Part 74, “Material Control and Accounting of Special Nuclear Material.”

Chapters 6, 7, 8, and 10 of the AEA specify the facilities, activities, and materials that are included in, and those that are excluded from, the scope of requirements. The ERA, which established the NRC, contains further inclusions and exclusions (see Section 202 of the ERA). The NRC does not regulate military facilities.

Chapter 16 of the AEA, the Administrative Procedure Act, and the National Environmental Policy Act (NEPA) set out the regulatory processes. More detailed regulations in 10 CFR, especially Part 2 (“Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders”), Part 50 (“Domestic Licensing of Production and Utilization Facilities”), and Part 51, (“Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions”), implement these statutory provisions. Generally speaking, the authorizations and processes take account of the magnitude and nature of the hazards, and the legislation gives the agency sufficient authority to tailor its processes to the risks. For example, “general” licenses are issued by rule for certain activities posing only low hazards, but nuclear power plant licenses are detailed and plant specific and issued only after indepth and lengthy review, both by the staff and the statutory Advisory Committee on Reactor Safeguards.

Section 182 of the AEA establishes the basic rationale for authorizing a given plant. That section requires that operation of the plant be in accord with the common defense and security

and provide adequate protection to the health and safety of the public. Chapters 10 and 16 of the AEA describe in general terms the decision-making process. Those chapters provide for licensing reviews and hearings. NRC regulations, especially in 10 CFR Part 2 and 10 CFR Part 50, describe these processes in greater detail. Some of these regulations are discussed below.

The Commission's regulations in 10 CFR Part 2 set forth rules for participation in NRC formal licensing hearings conducted by NRC administrative judges who have backgrounds in law, science, and engineering. Statute also provides for consultation or other types of participation by governmental organizations. For example, NEPA requires consultation among Federal agencies involved in actions affecting the environment. The NRC provides for public notice and comment not only in rulemakings but also in the development of significant guidance documents. The opportunities the agency provides for public involvement under NEPA exceed those the Act requires, and the agency's consultation with other Federal and State agencies during the NEPA process is extensive. The NRC continues to work to ensure that its processes are open to public involvement and contribute to safety without unnecessary and unproductive procedural complications.

Section 184 of the AEA states that no license may be transferred unless the Commission gives its consent in writing. Regulations specify the requirements that transferor and transferee must meet. (See especially 10 CFR 50.80, "Transfer of Licenses.")

The NRC has the legal authority to require facility operators to provide any necessary information needed to ensure safe facility operation, including information from suppliers, even if this information is proprietary. The NRC regulatory process protects proprietary information from public release. Also, under the conditions of a license issued by the NRC, a facility is legally required to submit information to enable the Commission to determine whether the license should be modified, suspended, or revoked. For reactor facilities, 10 CFR 50.54(f) states this requirement. Finally, under 10 CFR 2.202 and 10 CFR 2.204, the Commission can issue a demand for information, and if necessary, an order, to require that information be provided.

Under Section 189 of the AEA, licensees may ask the agency for a hearing on an enforcement action or denial of license. Interested parties with standing to sue can seek Federal court review of any final NRC action. The procedure for seeking court review has little potential to compromise safety, in part because the review occurs in Federal appellate court, and the appellate courts focus on questions of law, not fact. The agency is thus the basic Federal fact-finding body in matters of nuclear power safety. Generally speaking, the appellate courts review the agency's actions to determine only if they are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."

Emergency planning is the subject of statute—which gives the NRC's Chairman special authority during an emergency—and regulation, especially 10 CFR 50.47, "Emergency Plans." The NRC works closely with States, licensees, and the Federal Emergency Management Agency to ensure that emergency plans are well developed and well rehearsed. The plans must meet Federal standards but are essentially implemented by the States.

Section 161.a. of the AEA authorizes generally the establishment of independent advisory bodies. Section 29 of the Act establishes a permanent advisory committee to the Commission, the Advisory Committee on Reactor Safeguards. Additional advisory committees may be and have been established. These committees do not relieve the NRC of its regulatory responsibility. Section 9(b) of the Federal Advisory Committee Act states, "Determinations of

action to be taken...with respect to matters upon which an advisory committee...makes recommendations shall be made solely by...an officer of the Federal Government.”

The ERA, which established the NRC, also established an Office of Nuclear Regulatory Research within the NRC, with appropriate authorities in research and development. The Act allows the Commission to engage in or contract for research and obliges other Federal agencies to provide such research services as they may reasonably be able to offer. (See Section 205 of the Act, 42 U.S.C. 5845.)

Subsections 161.b. and 161.p. of the AEA provide authority for the NRC regulations at 10 CFR 50.75 (“Reporting and Recordkeeping for Decommissioning Planning”), 10 CFR 50.82 (“Termination of License”), and 10 CFR 50.83 (“Release of Part of a Power Reactor Facility or Site for Unrestricted Use”), which establish requirements to ensure proper decontamination and decommissioning, including the funding to pay for them.

Section 103.c. of the AEA requires that each license for a nuclear power plant be for a specified period. The general authorities in Section 161, Subsections b., i., and o., authorize the Commission to issue rules and orders governing the decommissioning of sites and the termination of licenses. Section 161.x. also authorizes the Commission to require that licensees accumulate adequate funding for decommissioning. Section 186 of the AEA establishes some procedures for the revocation of licenses. Section 189 of the same Act contains procedural requirements for suspension and revocation of licenses. Under the authority of all these provisions, the Commission has issued rules and regulations that describe the procedures in more detail.

Section 222 of the AEA establishes criminal penalties, including fines and imprisonment, for violations of specified sections of the Act, and Section 223 establishes somewhat lesser criminal penalties for willful violations of other sections of the Act. Section 234 establishes civil monetary penalties for violations of licensing requirements, violations of specified sections of the act, or any regulation or license issued under them.

Many of the AEA and NRC regulations are devoted to regulating the export and import of materials and facilities. (See Chapter 11 of the Act and 10 CFR Part 110, “Export and Import of Nuclear Equipment and Material.”) The NRC works closely with other agencies in the executive branch to ensure implementation of these provisions.

This pervasive regulatory framework excludes other governmental authorities from replacing the NRC’s technical nuclear safety judgments with their own, but at the same time, the framework sets fundamental terms for the participation of those authorities and the public in NRC decision-making. It remains true, however, that many governmental entities have non-nuclear authority of their own that can affect nuclear power plants. For example, States do economic planning; the EPA establishes generally applicable environmental standards; the U.S. Department of Transportation regulates the transport of hazardous materials, including radioactive materials; and U.S. Federal appellate courts can overturn NRC actions if they are not consistent with law. Nonetheless, seldom do two regulators have different standards that aim to regulate the same activity for the very same reasons. Such cases are generally avoided by statute or, in some cases, by memoranda of understanding among the affected agencies.

## **Establishment of a Regulatory Body**

*The government, through the legal system, shall establish and maintain a regulatory body, and shall confer on it the legal authority and provide it with the competence and the resources necessary to fulfill its statutory obligation for the regulatory control of facilities and activities. (GS-R-1, Requirement 3)*

The NRC has adequate authority and power, staffing, and financial resources to discharge its assigned responsibilities. In particular, the agency is given the legal power to discharge the responsibilities assigned to it by law, as several of the responses to other requirements confirm.

Specifically, the agency has the resources—both money and staffing—to exercise appropriate oversight to ensure the safe operation of existing nuclear power plants. By law, the NRC must recover most of its budget through fees billed to licensees. The NRC's funding is ultimately determined in the same way that the funding of other units of the Federal Government is determined: by annual legislation that originates in the House of Representatives and is approved by the Senate and signed by the President. (See Article 1, Section 7, of the U.S. Constitution.) Thus, the NRC, like other units of Government, cannot increase its funding at will, but must instead make the case to Congress for adequate funding. The agency's funding has always been adequate to perform its fundamental safety mission.

## **Independence of the Regulatory Body**

*The government shall ensure that the regulatory body is effectively independent in its safety related decision making and that it has functional separation from entities having responsibilities or interests that could unduly influence its decision making. (GS-R-1, Requirement 4)*

The most important means by which the NRC maintains its effective independence from organizations and bodies charged with the promotion of nuclear technologies is the legislation that established the NRC, the Energy Reorganization Act of 1974. That Act assigns regulatory responsibility to the NRC and promotional responsibility to what has since become the U.S. Department of Energy (DOE); moreover, the legislation ensures that DOE does not review the NRC's safety judgments. The five Commissioners who lead the NRC have considerable independence within the executive branch, because they serve fixed terms, not at the pleasure of the President. Moreover, no more than three Commissioners can be from a single political party. Thus the Commission's regulatory decisions cannot ordinarily be directed by the President. (By law, however, the U.S. Office of Management and Budget reviews the proposed NRC budget.) Likewise, Congress cannot override the Commission's decisions except by duly enacted legislation. Congress, Courts, other Federal Agencies, and State governmental entities generally defer to the Commission's safety judgments and regulations.

Beyond this basic separation from promotion and partisan politics, the NRC has several means for maintaining its effective independence from DOE and other bodies that promote nuclear technology, such as industry groups. For example, Section 201 of the ERA requires that NRC Commissioners have no employment other than serving as a member of the Commission; under Title 5 of the *Code of Federal Regulations*, Section 5801.102, "Prohibited Securities," NRC employees may not invest in nuclear power utilities or vendors; and Section 170A of the AEA requires that the agency's contractors show that they do not have conflicts of interest. Other laws—for example, the Administrative Procedure Act, the Government in the Sunshine Act, and the Freedom of Information Act—and various Commission policies and practices ensure that the

Commission's business is conducted in public view and with appropriate consideration of the views of all interested parties. The agency also has policies that govern more informal contacts between NRC personnel and licensee personnel. As noted in the above response to Requirement 2, the NRC also has the authority to demand the necessary information from licensees. Last, the Commission is advised by various bodies that are constructed so as to provide independent advice.

### **Prime Responsibility for Safety**

*The government shall expressly assign the prime responsibility for safety to the person or organization responsible for a facility or an activity, and shall confer on the regulatory body the authority to require such persons or organizations to comply with stipulated regulatory requirements, as well as to demonstrate such compliance. (GS-R-1, Requirement 5)*

In the U.S. regulatory framework, the primary responsibility for safe design and operation is clearly assigned to the operator. This assignment is achieved principally through licensing and continuing regulatory oversight, the latter including enforcement throughout all stages in the lifetime of a facility. No license is granted unless the applicant can show that it will comply with the relevant statutes and the NRC's rules and orders that implement those statutes and that constitute the body of standards the agency believes are necessary and useful for ensuring public health and safety and the common defense and security. Also, under the statutory provisions for liability payments in the event of a major nuclear accident, the industry bears the liability.

### **Compliance with Regulations and Responsibility for Safety**

*The government shall stipulate that compliance with regulations and requirements established or adopted by the regulatory body does not relieve the person or organization responsible for a facility or an activity of its prime responsibility for safety. (GS-R-1, Requirement 6)*

In the U.S. regulatory framework, the fact of regulation does not mean that the regulator bears prime responsibility for safety. As stated in the above response to Requirement 5, authorized parties have that responsibility. That responsibility also extends to the authorized party's employees, contractors, and others, against whom the agency has authority to take enforcement action. Even so, authorized parties are also responsible for verifying that products and services supplied to them by employees and contractors in fact comply with applicable law.

### **Coordination of Different Authorities with Responsibilities for Safety within the Regulatory Framework**

*Where several authorities have responsibilities for safety within the regulatory framework for safety, the government shall make provision for the effective coordination of their regulatory functions, to avoid any omissions or undue duplication and to avoid conflicting requirements being placed on authorized parties. (GS-R-1, Requirement 7)*

Applicants for nuclear power plant licenses must obtain authorizations from a number of Federal, State, and local governmental bodies, and those bodies exercise continuing regulatory control over operating plants. For example, EPA issues permits that limit the amounts of

effluents that can be released from a plant; the Federal Emergency Management Agency approves emergency plans; the U.S. Department of Transportation regulates transportation routes; State public utility commissions regulate certain aspects of the economics of power plants, States have a role in the siting and use of low-level waste disposal facilities; and local governments impose land use restrictions. Nonetheless, legislation ensures that other authorizations do not challenge the NRC's nuclear safety judgments about nuclear power plants because legislation assigns to the NRC alone the authority to regulate the design and operation of these facilities. However, an authorization issued by the NRC does not necessarily mean that a plant will be built and operated. Such an authorization is a necessary but not sufficient condition of construction and operation. The NRC's authorization does not render ineffective other authorizations based on considerations other than safety.

The NRC deals in several ways with such dispersal of authority among several agencies. For example, where authorities overlap, the NRC has entered into memoranda of understanding that aim at avoiding dual regulation; when another Federal authority is drafting rules that might impinge on nuclear safety practices at nuclear power plants, the NRC consults with the other agency during the rulemaking to ensure that the final rule will not have a negative impact on safety (e.g., NRC-EPA consultation in EPA's rulemaking on water intake structures); and the NRC works with States to help ensure, among other things, that overlaps and gaps between Federal and State authorities are avoided (for example, the NRC's policy statement on State participation in inspections at nuclear power plants). The courts and Congress also from time to time help minimize potential conflicts among authorizing agencies by drawing reasonably clear jurisdictional lines. For example, the Supreme Court has ruled that emissions from nuclear power plants to surface waters are to be regulated solely by the NRC, under the Atomic Energy Act, and not by the EPA under the Clean Water Act.

### **Provision for Decommissioning of Facilities and the Management of Radioactive Waste and Spent Fuel**

*The government shall make provision for the safe decommissioning of facilities, the safe management and disposal of radioactive waste arising from facilities and activities, and the safe management of spent fuel. (GS-R-1, Requirement 10)*

The AEA, as amended, broadly authorizes the Commission to establish regulations that provide adequate protection for public health and safety in the utilization of radioactive material, including in the storage and handling of radioactive waste. Under the authority of AEA Sections 161.b., 161.p., and 182.a., the NRC has established regulatory requirements governing the decommissioning, including decommissioning funding, of power reactors. The Commission established regulations at 10 CFR 50.75 and at 10 CFR 50.82 that specify requirements ensuring the availability of adequate funding for decommissioning and adequate planning of decommissioning activities, respectively. The NRC issued Regulatory Guide (RG) 1.159, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors," to describe methods acceptable to the NRC staff for determining the amount of funding necessary for decommissioning and for providing financial assurance. Also, the NRC issued RG 1.184, "Decommissioning of Nuclear Power Reactors," to present methods acceptable to the NRC staff for implementing the initial activities and major phases of the decommissioning process. The agency also regulates spent nuclear fuel storage and related greater-than-Class-C radioactive waste from nuclear reactors that is stored in an independent spent fuel storage installation licensed under 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste."



Principally two statutes govern the disposal of waste: the Nuclear Waste Policy Act, which assigns to DOE the responsibility for siting, building, and operating a high-level waste disposal facility, and the Low-Level Radioactive Waste Policy Amendments Act of 1985, which gives the States a prominent role in the siting and operation of facilities for the disposal of low-level waste.

### **Competence for Safety**

*The government shall make provision for building and maintaining the competence of all parties having responsibilities in relation to the safety of facilities and activities. (GS-R-1, Requirement 11)*

To help ensure that sufficient persons are trained in a critical skill related to the regulatory mission of the Commission, the NRC has an extensive program of grants to persons and institutions. The agency also regulates the training of nuclear power plant personnel. (See 10 CFR 50.120, "Training and Qualification of Nuclear Power Plant Personnel.") The agency also licenses the persons who operate the plants. (See 10 CFR Part 55, "Operator's Licenses").

The agency has several ways to ensure that it has the technological infrastructure to support the licensing and inspection programs for operating reactors. Staff development processes include training and qualification. The agency maintains a state-of-the-art Technical Training Center in Chattanooga, TN. When staff resources are insufficient or require augmentation in specific technical areas, the agency has processes for hiring expert consultants or contracting for technical services from commercial or government entities. Several NRC management directives, including 10.77, "Employee Training and Development," provide the objectives of the agency staff development programs. Inspection Manual Chapter 1245, "Qualification Program for Operating Reactor Programs" and NRR Office Instruction ADM-504, "Qualification Program," present specific guidance for operating reactor inspection and licensing staff qualification. Measures are in place to acquire the services of consultants to conduct research, support inspections, or to perform other licensing activities as needed to enhance regulatory efficiency and effectiveness. Section 170A of the Atomic Energy Act of 1954, as amended, requires that the NRC take measures to ensure that private consultants are capable of providing impartial, technically sound, and objective support and advice.

The NRC maintains a large staff of independent technical experts in areas relevant to its safety mission. The NRC maintains this high level of expertise by providing training opportunities; by participating actively and routinely with technical experts outside of the agency, both domestically and internationally; and by carefully recruiting new staff with educational and experience backgrounds that match the agency's technical needs. For example, NRC staff frequently participates in international cooperative programs sponsored by the International Atomic Energy Agency and the Nuclear Energy Agency.

The NRC routinely issues contracts for research projects and to gain access to independent technical expertise. The NRC's major source of this expertise is the U.S. National Laboratory system, which includes numerous separate research facilities, located throughout the United States, with extensive and varied technical capabilities. However, the NRC also contracts with other Federal agencies, universities, and commercial businesses to carry out research projects and to obtain technical expertise. The NRC can also ensure independent expertise by establishing its own research and development center, as it did in 1987 when the agency established the Center for Nuclear Waste Regulatory Analyses to help resolve issues related to a geologic repository for high-level waste. The NRC has the ability to set up and fund

independent advisory bodies to provide expert opinion and advice. As noted in an earlier response, the Advisory Committee on Reactor Safeguards, established by law, provides independent opinion and advice to the Commission.

### **Provision for Technical Services**

*The government shall make provision where necessary for technical services in relation to safety, such as services for personal dosimetry, environmental monitoring and the calibration of equipment. (GS-R-1, Requirement 13)*

In the U.S. regulatory framework, licensees are required to perform the three functions the Requirement mentions, though the NRC does provide its employees with personal dosimetry for visiting nuclear power plants.

But more generally, the NRC has the technical experts capable of reviewing and assessing the licensees' requests without compromising the public health and safety. As noted above, if necessary, the NRC can contract with commercial firms and other Federal agencies (e.g., Department of Energy, National Laboratories) to acquire technical assistance services. These services may be required in specific technical or functional areas where the need for required expertise cannot be met with the resources readily available within the Agency. These contractors/consultants provide review, findings, and recommendations for consideration by NRC staff in the regulatory decision-making process. For all work on applications, including work supported by contractors, the final decision on acceptability is an inherently governmental function and must be performed by NRC staff. The NRC's objective is to employ the expertise and experience of consultants in an effective and efficient manner to achieve the agency's mission.

### **Assessment Summary**

The basic regulatory apparatus is established in the AEA, which gives the NRC full regulatory authority for licensing, standard setting, and enforcement. The Act sets the basic standard—"adequate protection" or, equivalently, "no undue risk"—a standard that has proved flexible enough to permit risk-informed regulation, especially in the Reactor Oversight Process, and flexible enough to permit the incorporation of more detailed consensus standards both domestic and foreign. Within this framework, the agency has addressed the full range of regulatory issues, including license transfer, retrofitting, decommissioning, and waste management. The AEA also establishes an advisory committee of independent, external experts and gives the agency ample authority to seek other sources of independent research and expertise, especially in the U.S. National Laboratories.

This pervasive regulatory apparatus excludes other governmental authorities from replacing the NRC's technical nuclear safety judgments with their own, at the same time that it sets fundamental terms for the participation of those authorities and the public in NRC decisionmaking. However, many governmental entities have non-nuclear authority of their own that can affect nuclear power plants. Nonetheless, seldom do two regulators have different standards that aim to regulate the same activity for the very same reasons. Such cases are generally avoided by statute, or in some cases, by memoranda of understanding among the affected agencies.

The ERA transferred the regulatory functions described above to the NRC, which was at that time a new agency. The NRC has not been assigned any function that would conflict with its safety mission. In particular, the NRC has no responsibility for promoting nuclear power.

The same legislative budget process that affects most other Federal agencies provides the resources in money and persons for the NRC. At the end of this lengthy process, the NRC has generally, but not always, received the budget it requested. However, even when the budget has fallen short of the agency's request, the resources have always been adequate to support the fundamental regulatory framework described here.

The Price-Anderson Act, which is part of the AEA, imposes liability on the industry in the event of a major accident. This imposition is one of the many ways in which the ultimate responsibility for safety falls squarely on the industry.

The AEA and the ERA together have supplied the fundamental framework for the regulation of nuclear power plants. In its main outlines (discussed in this summary), this framework has remained stable for over 35 years and is not likely to change fundamentally in the foreseeable future.