

Testimony of
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Private Property and Nuclear Safety

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Chairman Voinovich, Ranking Member Lieberman and distinguished members of the subcommittee, I am Joe Colvin, president and chief executive officer of the Nuclear Energy Institute, the Washington, D.C., policy organization for the nuclear industry. I am pleased to testify regarding the performance of the commercial nuclear industry and the industry's safety regulator, the Nuclear Regulatory Commission.

The Nuclear Energy Institute (NEI) coordinates industry policy on various issues affecting the nuclear energy industry, including federal regulations that help ensure the safety of the 103 commercial nuclear power plants operating in 31 states. NEI represents 275 companies, including every U.S. utility licensed to operate a commercial nuclear reactor, their suppliers, fuel fabrication facilities, architectural and engineering firms, labor unions and law firms, radiopharmaceutical companies, research laboratories, universities and international nuclear organizations.

First, I will provide an overview of the industry's recent performance. Then I will discuss several topics related to the regulatory oversight, including:

- the new reactor oversight process
- the need for continued regulatory change
- federal radiation protection policy
- renewal of the Price-Anderson Act
- revisions needed in the Atomic Energy Act

I. Nuclear Power Plants Operating at Record Levels of Safety and Efficiency

The industry's performance continues to be outstanding by any measure. After a decade of steady improvement, U.S. nuclear power plants achieved record safety and reliability levels in 2000. The industry set another production record, generating 754 billion kilowatt-hours—3.5 percent more than in 1999. The average capacity factor for reactors nationwide in 2000 was nearly 90 percent. A 1,000-megawatt reactor, operating at 90 percent capacity factor, could provide electricity for 584,000 people, if all their uses of electricity are considered (including residential, commercial, industrial and public sector). That number is roughly equivalent to the population of Boston, Seattle or Austin, Tex.

The commercial nuclear industry in the United States is a dynamic, growing sector that has played a key role in the economic growth of our nation. The increased electricity generation from nuclear power plants in the 1990s was equivalent to adding 23 new 1,000-megawatt plants to our nation's electrical grid. This output satisfied 22 percent of the increase in U.S. electricity demand that occurred in that decade.

The U.S. Energy Information Administration—in a March report titled *Nuclear Generation: Another Year, Another Record*—said “the increase in nuclear generation over the past two years would have been enough to meet the power needs of all residential consumers in California in 1999.”

The growth in nuclear electricity production is primarily the result of two factors. The first is that nuclear plants are operating more efficiently. Refueling times have decreased and once common unscheduled shutdowns are rare. The second factor is that many nuclear plants have undergone equipment uprates, allowing them to produce more electricity than was initially planned.

There has not been any nuclear plant event that has jeopardized public health and safety due to the release of radiation in the United States. Safety at our nation’s nuclear power plants remains at record high levels. In 2000, the median number of unplanned reactor shutdowns industrywide was zero for the third straight year, and 59 percent of U.S. reactors had no automatic shutdowns. In addition, the number of significant events at U.S. nuclear power plants declined to an average of 0.03 in 2000, compared to 0.44 in 1990. Significant events include a degradation of important safety equipment, a reactor shutdown with complications, or operation of the plant outside technical specifications.

Nuclear power plants are the low-cost leaders in competitive electricity markets. Production costs at nuclear power plants (1.83 cents per kilowatt-hour) in 1999 were the lowest for any expandable large electricity source, including coal (2.07 cents) and natural gas (3.52 cents).

The recent energy shortfalls in some regions of the country have resulted in a growing recognition that new nuclear power plants will soon be needed to meet increased demand and to help protect our nation’s air quality. In the January 11 edition of *USA Today*, Massachusetts Institute of Technology economics professor Lester Thurow said:

Americans are not going to go without electricity, and they aren’t going to quit driving.... In the case of electricity, we already have a technical solution at hand. It is called nuclear power.

The industry has been evaluating the business conditions necessary to build new nuclear plants in the near future. An industry task force is producing a business plan to chart a course for potential reactor orders within the next three to five years.

Today’s energy shortfalls are increasing public support for building new nuclear power plants, according to public opinion surveys conducted in January and March.

The national survey of 1,000 adults found those in favor of “definitely building more nuclear energy plants in the future” increased from 42 percent in October 1999 to 66 percent in March. The increase was largest in the West, where those in favor increased from 33 percent in October 1999 to 62 percent. (*Bisconti Research Inc., margin of error ± 3 percentage points.*)

Federal and state legislators and local government officials, as well as the national news media, also are reexamining nuclear energy, and supporting a vital role for the rejuvenated industry.

II. Nuclear Generation Essential to Protecting U.S. Air Quality

For decades, nuclear energy has played a vital—though largely unrecognized—role in protecting our air quality. Between 1973 and 1999, nuclear plants avoided the emission of 32 million tons of nitrogen oxide, 62 million tons of sulfur dioxide and 2.6 billion tons of carbon.

A few examples will help put these numbers in perspective. Operating a 1,000-megawatt power plant for one hour produces one million kilowatt-hours of electricity.

- If the facility is a coal-fired plant, it also produces 265 tons of carbon.
- If it is an oil-fired plant, it produces 220 tons of carbon.
- If it is a gas-fired plant, it produces 150 tons of carbon.
- But if it is a nuclear plant, it produces no carbon whatsoever.

Electric generating facilities have faced significant emission reduction requirements, especially because large, stationary sources of emissions are easier to regulate than small or mobile sources. But electric generating facilities that prevent air pollution to begin with—such as nuclear power plants—also have played a major role. An example from the transportation sector will help illustrate the contribution of avoided emissions due to using nuclear energy in place of fossil-fired generation. If the United States were to replace all its nuclear plants with pollution-emitting generation, our nation would have to take 135 million passenger cars off the road to keep carbon emissions from increasing. Fortunately, our nation does not have to make such a choice.

Consider the importance of nuclear energy in three Eastern states:

- In New Jersey, nuclear power plants accounted for 51 percent of total electricity generation in 1999. They also avoided substantial emissions: 80,000 tons of nitrogen oxide, 160,000 tons of sulfur dioxide and nearly 7 million tons of carbon.

- Nuclear energy generated 47 percent of the electricity in Connecticut—avoiding the emission of 30,000 tons of nitrogen oxide, 70,000 tons of sulfur dioxide and nearly 3 million tons of carbon.
- Nuclear energy generated 26 percent of the electricity in New York, avoiding the emission of 110,000 tons of nitrogen oxide, 200,000 tons of sulfur dioxide and 8.5 million tons of carbon.

For all three states, nitrogen oxide emissions are capped under the Environmental Protection Agency's ozone transport regulations. If Connecticut replaced its nuclear-generated electricity with power from emitting generation, the state's other generating sources would be under even more pressure to reduce emissions.

New York, New Jersey and 19 other states face the same issue to varying degrees. These states simply cannot meet the broad spectrum of clean air requirements unless they use nuclear energy for a substantial proportion of their electricity generation.

Nuclear energy is the only expandable large-scale source of electricity that is emission-free. Reports last year from the Energy Department's Energy Information Administration made a direct connection between increased production from nuclear plants and the fact that greenhouse gases and other emissions increased less than they otherwise would have. Similarly, the Nuclear Energy Agency of the Organization for Economic Co-operation and Development considers nuclear energy to be "consistent with the objectives of sustainable development."

The nuclear energy industry is a leader in protecting the environment—managing all its waste and byproducts, with no uncontrolled discharges of this material. Used fuel is stored on-site, either in steel-lined pools or in specially designed steel-and-concrete containers. Byproducts that have low levels of radioactivity are packaged and sent to licensed disposal facilities designed to handle such waste.

In addition to helping to preserve our nation's air quality, the nuclear energy industry is a leader in protecting wildlife habitat, including the endangered American crocodile, manatee, eagles, osprey and other animals. Plant owners continually monitor and work to mitigate the impact of power plant operations on wildlife. For example, water intake structures have rolling screens to minimize the numbers of fish that are drawn into the plant cooling water system. On-site hatcheries replace the few fish that are drawn in. The waterways and grounds around nuclear plants are sanctuaries for many species of endangered wildlife.

In short, nuclear energy offers high levels of safety, reliability, price stability and careful stewardship of the environment. All of this is included in the cost of

electricity from nuclear energy—and even so, these plants are competitive with other sources of electricity.

III. NRC Reactor Oversight Process More Efficient, More Transparent to the Public

Outstanding nuclear power plant safety and performance helped set the stage for important changes in the regulatory arena. Last April, the NRC began implementing a new reactor oversight process that builds on decades of safe nuclear plant operating experience, both within the agency and the industry. The agency engaged many stakeholders, including the Union of Concerned Scientists and Public Citizen, in developing the new approach. The industry believes that the new reactor oversight process is more effective and efficient than the previous oversight process because of its sharper focus on those areas of the plant most important to safety. It also is a major step forward in making a complex, technical process more transparent to the public.

The baseline program concentrates on plant activities and systems with the greatest potential impact on public safety and overall risk. This safety-focused approach is linked to the NRC's three oversight areas—inspection, assessment and enforcement.

The level of agency resources to be applied in oversight depends on how a plant performs as measured by the performance indicators and inspection findings. Performance in each indicator is measured quarterly and falls into one of four color-coded bands:

- **Green:** Performance is within an expected range in which safety cornerstone objectives are being met.
- **White:** Performance is outside an expected range of nominal utility performance, but related cornerstone objectives are still being met.
- **Yellow:** Related cornerstone objectives are being met, but with a minimal reduction in safety margin.
- **Red:** There has been a significant reduction in safety margin in the area measured by that performance indicator.

For a program involving change of this magnitude, the initial implementation has gone well. The process has succeeded in identifying performance differences among plants from the critically important perspective of safety. The fourth-quarter 2000 performance indicator data and inspection findings showed that the vast majority of nuclear power plants are performing at very high safety levels. Based on the

performance indicator data and inspection findings for the first nine months¹ of the program, the NRC concluded that:

- 73 reactors had all green indicators—the best of four NRC performance levels—and need the baseline level of inspection;
- 22 reactors received supplementary inspections because they received a single white indicator or inspection finding; performance in the area measured by that indicator is outside the expected range, but safety objectives are being met; and
- 6 reactors are receiving more in-depth inspections because of possible weaknesses in more than one performance area. Nonetheless, these plants are being operated safely.

The results of the performance assessments are consistent with nuclear plant performance of the past several years. The new process makes it much easier for plant operators and the public to see how nuclear plants are performing and to identify any areas in need of increased attention. On the NRC's Web site, the public can find the underlying technical details in a given performance area. Greater public awareness of how nuclear power plants are regulated was one of the major goals of the new oversight process, and the NRC should be commended for its achievement.

The NRC commissioners and staff have shown a strong commitment to modernizing the agency's regulatory approach. The industry believes that the NRC's new approach will continue to improve safety performance by focusing industry and NRC resources on those issues that have the greatest safety importance. Given this success, the industry encourages the NRC to develop a safety-focused oversight process for non-reactor facilities based on similar principles.

IV. Need for Continued Regulatory Change

Changes to NRC Regulations

The new oversight process is an enormous improvement over the agency's former approach to evaluating nuclear plant safety. It is objective, safety-focused and much more transparent to industry and the public. But it is only a first step in needed regulatory reform.

¹ Two reactors at the D.C. Cook nuclear power station are excluded because they have not accumulated enough data under the new process to be representative of their performance.

Interestingly, the NRC did not have to change any regulations to implement its new reactor oversight process. However, regulatory reforms must be codified. The next step is to revise the regulations to incorporate risk insights and performance-based approaches consistent with those used in the reactor oversight process.

In creating the new reactor oversight process, the NRC recognized that not all of its regulations have equal importance—that some regulations add little or no safety benefit.

The NRC is revising its regulations to make them more safety-focused, but progress has been slow. A central component of this effort involves deciding how to treat equipment that previously was categorized as “safety-related,” but which has been proven to have little or no safety significance.

The industry started designing and building nuclear power plants 40 years ago, without operating experience or the sophisticated analytical tools we have today. There was at that time some uncertainty associated with commercial nuclear power plants. Given the limited nuclear plant operating experience at that time, the industry and federal regulators correctly made conservative decisions based on worst-case scenarios. A very large number of systems and equipment were assumed to have high safety significance.

Today, we combine more than 2,500 reactor-years of operating experience with sophisticated computer models for probabilistic safety assessments. The result is a much higher degree of certainty about how nuclear plant systems behave and interact under a wide range of conditions. Recent safety studies have demonstrated that fewer plant systems and equipment have high safety significance.

The NRC and the industry agree on which equipment has high safety significance and on how to treat it. We also agree on equipment that is non-safety-related.

But there is disagreement about how to deal with equipment and systems categorized since the early years of the industry as safety-related, but which have been proven to have low safety significance. The industry believes that commercial industrial standards, not more stringent nuclear safety standards, should be applied to such equipment. Commercial industrial standards are widely used in the nuclear industry, as well as other industries with similar or higher potential impact on public health and safety.

The cost savings for replacement parts at reactors—and for initial construction for new reactors—is substantial. For example, an industrial-grade 10-horse-

power electric motor could be purchased for \$350. The same motor, purchased as a safety-related item, would cost 57 times that amount: \$20,000. The two pumps perform the same function; but the cost difference is huge.

Similarly, an industrial-grade electrical circuit card could be purchased for \$1,160. The same circuit card, under nuclear standards, would cost \$5,700—five times as much as the industrial-grade item. Either component could perform the function for which it is intended.

The main difference in cost is the extent of the process used to verify the component's performance capability. Commercial industrial standards are entirely satisfactory for many applications with low safety-significance in nuclear power plants. In fact, they already are widely used in these facilities. Their use could be expanded substantially, and it simply makes sense to do so.

New Nuclear Power Plant Licensing

New nuclear power plants will be needed to meet both electricity demand and our nation's air quality goals. When the NRC began efforts to modernize its regulations, the industry believed that the new risk-informed regulations would provide the framework for licensing new nuclear power plants. However, a separate rulemaking will be needed for two reasons:

- It is the most straightforward approach. Changes to existing regulations must take into account the outdated assumptions embedded in the regulations and the plants designed and built to meet them.
- The NRC's work on modernizing current regulations is moving too slowly to be completed in time to license new nuclear power plants in a more safety-focused manner.

The scientific and technical skills needed to license new nuclear power plants differ from those needed for oversight of today's nuclear plants—which has been the NRC's principal activity for the past 15 years—or in license renewal. To review applications for new licenses, the agency will need geologists, hydrologists, and other scientists. Current NRC staff may not have the appropriate expertise for this new function. To prepare for new nuclear power plant construction and operating license applications, the NRC should examine its staffing and determine how to fill any gaps in its expertise. Similarly, the industry, university, federal agencies and national laboratories must ensure that we have the expertise and qualified staff for the development and staffing of future nuclear technologies. The industry supports a multi-stakeholder effort to attract and retain top caliber nuclear talent and encourages Congress to continue funding university programs in nuclear

technologies. Congress also should support the essential role of nuclear energy in the development of national energy policy as well as legislation introduced this year to support the development of expertise for the future.

NRC Budget and Staffing

As an independent agency, the NRC was not required to develop a five-year, strategic plan—but to its credit, the agency took the initiative to do so. In the industry's view, the current plan is fundamentally sound. However, we believe that the plan can be improved further and used to more directly tie the NRC's strategic goals to its day-to-day operations. A robust five-year plan—one that is used to identify goals and allocate resources—will enhance the agency's effectiveness.

The NRC is facing increased demands on its staff because of license renewal applications, the development of risk-informed regulations and the development of regulations to license new plants. Although these activities will require substantial resources, the industry believes the NRC's current budget and staffing levels can adequately support these initiatives if the agency allocates resources on a priority basis.

The NRC's capability to evaluate nuclear plant systems, structures and components on a safety-focused basis has demonstrated that the scope of safety-significant activities is substantially smaller than previously thought. These insights identify clear opportunities for the NRC to realign its current resources to face new challenges without expanding the size of its staff.

The new reactor oversight process demonstrates that nuclear power plants are performing safely. The few plants that warrant additional regulatory attention are clearly identified. The level of NRC resources dedicated to plant inspections should be adjusted to reflect the priorities identified by the new oversight process. In addition, the regional deployment of these resources may be no longer appropriate.

The nuclear energy industry is well established, and nuclear assets are being transferred during a transition to electric utility restructuring. This has resulted in nuclear plants being operated by a smaller number of experienced nuclear operating companies, which operate in multiple regions. We see regional differences in how inspections are conducted under the new oversight program. These differences send mixed signals to the management of these companies and indicate that the regional structure may perpetuate cultural resistance to the commission's efforts to modernize its regulatory process.

The successful implementation of the revised reactor oversight process and the natural consolidation of the nuclear industry provide an opportunity for the

commission to re-allocate existing resources to meet the combined challenge of safety-focusing reactor regulations and preparing to license new reactor designs.

In short, the NRC should be asked to demonstrate that it is using its existing staff optimally on matters central to the agency's statutory mandate—protection of public health and safety—before asking for additional resources to support new activities.

General Accounting Office Report

The industry's record performance has coincided with several major regulatory initiatives: the transition to safety-focused regulation, implementation of the new reactor oversight process and successful license renewal proceedings.

A recent General Accounting Office (GAO) report—*Major Management Challenges and Performance Risks: Nuclear Regulatory Commission*—noted that the NRC faces challenges of changing its culture to fully support the safety-focused regulatory concepts reflected in the NRC's new reactor oversight process. However, GAO expressed concern about the NRC's ability to continue to ensure safe operation of nuclear facilities while it is pursuing major change initiatives.

Although that concern is not unreasonable, the record plainly shows that regulatory reform efforts have had no adverse impact on industry safety. In fact, the new oversight process has improved safety by more clearly identifying what is important to safety—and just as important, what is not.

V. Federal Radiation Protection Policy Must Be Based on Sound Science

As the industry works to increase energy production, it is committed to maintaining the highest priority on safety. Achieving this goal depends in large part on the federal government's setting a uniform radiation protection policy. The policy should be based on the best available science and should be applied equitably and consistently by every federal agency across all programs. Duplicative and conflicting regulation by different agencies, using different criteria, must be eliminated.

In this area, federal radiation protection policy falls short. In fact, a recent report from the General Accounting Office—*Radiation Standards: Scientific Basis Inconclusive, and the EPA and NRC Disagreement Continues*—concluded that U.S. radiation protection standards “lack a conclusively verified scientific basis,” involve “differing exposure limits” due to policy disagreements between federal agencies, and “raise questions of inefficient, conflicting dual regulation.” A troubling

conclusion of the GAO report is that the costs related to complying with such standards "will be immense, likely in the hundreds of billions of dollars" of private and public funds.

Two examples of this situation that directly affect consumers include federal standards for the decommissioning of NRC-licensed facilities and for the proposed used nuclear fuel repository at Yucca Mountain, Nevada. In both cases, the EPA and the NRC have statutory authority to set radiation standards. The two agencies have taken fundamentally different regulatory approaches, and the standards they have set differ accordingly. The NRC has based its standards on sound, scientific principles, whereas the EPA has stated that its groundwater policy is based "on policy, not science."² This difference has complicated development of the Yucca Mountain repository, as well as facility decommissioning projects by NRC licensees.

This situation creates significant uncertainties in projecting costs and schedules. These uncertainties adversely affect a wide range of decisions, including:

- federal budgeting and site suitability for Yucca Mountain
- mergers and acquisitions within the electric industry
- deregulation of the electricity industry
- expansion of nuclear energy through license renewal for today's plants and the licensing and building of new plants.

Moreover, these negative impacts occur without any demonstrated positive benefit to public health and safety.

Federal radiation protection policy must provide a foundation to protect public health and safety, make the best use of public funding and resources, and help build public trust and confidence in federal decisions. Today's conflicting radiation standards and duplicative regulation work against those principles.

This situation has persisted for years, without any substantial progress made toward resolution. For example, Senator John Glenn, as chairman of the Senate Committee on Governmental Affairs, asked the GAO to report on this issue in 1994. The GAO issued a report in September—*Nuclear Health and Safety: Consensus on Acceptable Radiation Risk to the Public is Lacking* (GAO/RCED-94-190). Senator Pete Domenici requested a follow-up report in 2000. That report—*Radiation Standards: Inconclusive, and EPA and NRC Disagreement Continues* (GAO-00-152)—reflected a situation essentially unchanged. In six years, there had been virtually no progress in resolving the issue.

² This response can be found in written answers dated September 18, 2000, to questions submitted to the EPA by Rep. Joe Barton, chairman of the Subcommittee on Energy and Power of the Committee on Commerce.

Congress should resolve the policy issues that the agencies have not resolved on their own. We encourage this committee to provide appropriate, continued oversight to ensure that consistent radiation policy is established through legislation.

VI. Price-Anderson Act Must Be Renewed

The U.S. public has more than \$9.5 billion of insurance protection if an accident were to occur at a commercial nuclear facility. This entire sum would be paid by the nuclear industry. The framework for this insurance coverage was established in 1957 by the Price-Anderson Act, which expires on August 1, 2002. It is a proven system that Congress should reauthorize. The act requires each nuclear facility to have that insurance coverage to satisfy its statutory obligations. Neither taxpayers nor the government pay a cent for this coverage.

Like all the costs of electricity from nuclear power plants, the costs of Price-Anderson are internalized. That means the nuclear industry bears the cost of insurance, unlike the corresponding costs of some major power alternatives.

Risks from dam failure and resultant flooding, for example, are borne directly by the public. The 1977 failure of the Teton Dam in Idaho caused \$500 million in property damage. The only compensation for this event was about \$200 million made available through low-cost government loans.

The Price-Anderson Act requires two levels of financial protection. The primary level provides liability insurance coverage of \$200 million—insurance that is purchased by the utilities.³ If this amount is not sufficient to cover claims arising from an accident, a secondary level applies. For the second level, electric companies that own nuclear power plants must pay a retroactive premium equal to their proportionate share of the excess loss. That amount is \$10 million per year, up to a maximum of \$88.1 million per reactor. Currently, 106 nuclear reactors participate in the secondary financial protection program—103 operating reactors and three closed reactors that still handle used nuclear fuel.

Congress must renew the act this year to ensure that Price-Anderson coverage will be available to companies that are considering building new nuclear power plants. Renewal also is vital to Energy Department contractors, which are indemnified under the Price-Anderson Act. Nuclear power plants are grandfathered under the act; DOE contractors are not. The continued operation—and, where necessary, the

³ Each utility/company purchases \$200 million of primary insurance *per site* through American Nuclear Insurers. The total insurance available—\$9.5 billion—includes the primary and secondary insurance available for an accident at one site.

cleanup—of federal sites depends on timely renewal of the Price-Anderson Act's provisions.

Both the Nuclear Regulatory Commission and the Energy Department have recommended that Congress renew the act. The industry generally supports the NRC positions on the issue, but differs from the agency in three important areas:

- Permanent renewal is preferable to a 10-year renewal. Like any law, Congress can reconsider this issue if circumstances change.
- The retrospective premium should remain at \$10 million. The NRC recommends that Congress consider increasing it to \$20 million per reactor from \$10 million per reactor. The NRC recommendation was based, in part, on the assumption that up to 25 current plants would be retired without relicensing and that the total insurance coverage would decrease as a result. It now appears that the vast majority of nuclear plants will pursue license renewal.
- The level of primary insurance coverage should remain at \$200 million. The NRC recommends that consideration be given to increasing the primary coverage of insurance to \$300 million, but there is no justification for increasing this insurance coverage.

The industry appreciates this committee's efforts to begin consideration of this issue in the 106th Congress, with Senator Inhofe's introduction of S. 2292, the Price-Anderson Amendments Act of 2000.

VII. Changes Needed to Atomic Energy Act

The industry believes several changes are needed to the Atomic Energy Act to facilitate reform of the NRC and its regulatory processes to ensure the effective and efficient regulation of NRC licensees. Other changes are needed to remove unnecessary impediments that would inhibit the ability of nuclear power plant operators to make the transition from a cost-of-service market to a competitive market. The nuclear industry recommends the following changes:

- Congress should remove the requirement that the NRC conduct antitrust reviews. Other federal agencies conduct such reviews—notably the Securities and Exchange Commission, the Federal Trade Commission and the Federal Energy Regulatory Commission. An additional review by the NRC is unnecessary.
- Congress should remove the restriction on foreign ownership of commercial

nuclear facilities. NEI supports NRC-proposed changes to Sections 103d and 104d to clarify that no restrictions should be placed on the ownership of a production or utilization facility, except that no license should be issued if such issuance would be inimical to the common defense and security or public health and safety.

- Congress should clarify that the NRC has the discretion to determine the most appropriate form of hearing to hold in each circumstance and that the agency is not required to hold adjudicatory hearings for licensing proceedings unless it determines that such a proceeding is necessary.
- Congress should clarify that in the case of a combined construction and operating license for a nuclear power plant, the start of the operating license term is keyed to when operation begins, rather than when the license is initially issued.
- Congress should authorize the NRC to recover costs from other federal agencies for services it provides to those agencies.
- Congress should clarify that federal law preempts state insurance laws and constitutional provisions that would restrict insurers that satisfy NRC requirements from providing insurance to nuclear facilities.
- Congress should give the NRC the legislative authority to allow the seller of a nuclear power plant to retain a decommissioning fund even though the seller may no longer be an NRC licensee.
- The NRC has made considerable progress toward modernizing its regulatory efforts. NEI supports the elimination of Sections 203, 204, and 205 of the Atomic Energy Act. The commission should be given the discretion to organize and manage the NRC in the manner it deems most appropriate.
- Congress should give the NRC legislative authority over accelerator-produced radioactive materials. Currently, there is no federal guidance for these materials.
- Congress should give the NRC legislative authority over technically enhanced naturally occurring radioactive material. Currently, federal guidance is limited to naturally occurring radioactive material, which is not scientifically consistent when the material is concentrated.

Many of the above proposals were included in S. 1627 as passed by the Senate in the 106th Session of Congress. NEI thanks this subcommittee and the full Environment and Public Works Committee for its work on these issues.

NEI has reviewed the legislative proposals that the NRC forwarded to Congress in a letter dated February 28, 2001. The nuclear industry commends the NRC for those initiatives and urges this subcommittee to support such legislation.

Summary of Key Points

- Initial implementation of the NRC's new reactor oversight process has gone smoothly. This process must continue, and the underlying principles must be expanded to the remainder of the NRC's regulatory process. I urge the committee to support safety-focused regulatory processes. In addition, the committee should examine how these changes, as well as the increased needs for possible new plant licensing, will impact NRC staffing levels.
- The next step in regulatory reform is to revise the regulations to incorporate risk insights and performance-based approaches consistent with those used in the reactor oversight process. This committee should continue its careful oversight of the NRC and request regular reports from the agency detailing the progress it is making on codifying the new regulatory process.
- The federal government must establish science-based, uniform standards for radiation protection, under the oversight of a single federal agency. It is clear that legislation will be needed, and the industry asks this committee to ensure that this action is taken.
- The Price-Anderson Act must be renewed this year. The act provides the legal framework for nuclear facility insurance coverage, which—for commercial facilities—is funded by the industry. The Price-Anderson Act is a necessary element in assuring the public that the industry is prepared for contingencies.
- Many changes have taken place since the last major revision to the Atomic Energy Act, the fundamental legislation that established our nation's nuclear programs. Several revisions are needed to remove unnecessary impediments for nuclear power plants as they transition to a competitive marketplace. The industry urges the committee to support legislative action to amend the act.

Conclusion

Nuclear energy is the only large source of electricity that is both emission free and readily expandable. Its safety record, reliability, cost effectiveness and price stability make nuclear energy a vital fuel for the future. That is clear from the current U.S. energy situation, which is marked by thinning capacity margins and volatile prices for fossil fuels.

In the future, as electricity demand continues to rise, nuclear energy will be even more important to American consumers—and to our nation's economy as a whole. Our nation's nuclear power industry has proven over the past two decades that nuclear energy is a reliable, efficient, and safe source of electricity for our nation's economic growth. I urge the members of this committee to support the role of nuclear energy in the U.S. energy mix.

Thank you for giving me this opportunity to share the industry's perspective on oversight of nuclear facilities and several related matters.