Electric Industry Restructuring After California—Making the Wholesale Markets Work More Efficiently

The well-publicized problems facing electricity consumers in the State of California 1 predictably have caused some to question whether electric industry restructuring legislation is "ripe" for Congressional consideration. To us, this question misses the mark. The question should not be whether Congress should deal with this issue, but rather what type of legislation is needed to help ensure the efficient functioning of wholesale electric markets that clearly are not working as well as they should.

To a large extent, the problems facing the State of California are unique to that state:

- No major new generation facilities have been built in California in more than a decade, and in the meantime, demand has soared;
- Inadequate natural gas transportation capacity into the state, coupled with increasing reliance on natural gas for power generation, has helped drive up natural gas prices to the highest levels in the country, thus further increasing the price of electricity;
- Environmental and facility siting restrictions that are the toughest in the nation makes it difficult to build new generation or even operate existing facilities for the entire year;
- Abnormally dry weather has reduced the amount of available hydropower generation by nearly 40% this winter;
- A critical shortage of transmission capacity in some regions of the State makes it difficult to efficiently transmit power to where it is needed;
- An almost total reliance on volatile day-ahead and hour-ahead electricity markets by prohibiting effective hedging and long-term contracting by incumbent utilities has driven up prices.

While most of these factors lie within the authority of state officials to address, some clearly relate to the wholesale electricity market, where the FERC has jurisdiction. In its recent

1 The shortage of generation in the State of California has had a ripple effect through out the entire interconnected West, where wholesale prices have been driven upward.
order addressing the California situation, the FERC has sought to address those issues within its jurisdiction that directly impact the wholesale market, including the encouragement of long-term contracting and hedging as a means of mitigating volatile short-term prices. While there is sharp disagreement over whether the actions of FERC are sufficient to address California's problems, there should be no disagreement that wholesale markets throughout the country are not functioning as efficiently as they should. Moreover, the situation in California has made it abundantly clear that we should be seeking to encourage, not discourage, the building of new generation and transmission facilities that are needed to meet the demands of a growing economy.

We believe that Congress can help make wholesale markets work more efficiently, while deferring to the states on the question of retail markets, including whether to restructure the electric industry in their respective states. We believe that the following would help wholesale markets function better, would encourage the building of new generation and transmission facilities, enhance system reliability and would provide the regulatory certainty necessary for investment in this critical industry:

**Improving Efficiency of Wholesale Markets**

- Eliminate artificial federal barriers to increased supply and greater competition by repealing PUHCA and prospectively repealing PURPA.
- Expand the size of regional markets by extending FERC's open, non-discriminatory access requirements to the transmission facilities of currently non-jurisdictional facilities.
- Encourage the establishment of regional transmission organizations ("RTOs") by providing clear legislative guidance and incentives.
- Eliminate tax disincentives that effectively prohibit municipal and cooperative transmission systems from joining RTOs and make it prohibitively expensive for IOUs to spin-off transmission assets into a separate company.
- Clarify current federal/state jurisdictional ambiguity.

**Encouraging New Generation**

- Expedite the interconnection of new generation through the adoption of uniform interconnection procedures at the wholesale transmission level.

**Encouraging the Building of New Transmission Capacity**

- Require the FERC to provide adequate returns and incentives for building and operating new transmission capacity.

2

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DOE002-0185

Obtained and made public by the Natural Resources Defense Council, March/April 2002
• Provide a federal right of eminent domain where a state has been unable or unwilling to provide a needed right of way for necessary transmission facilities within a reasonable period of time.

**Improving Reliability of the Bulk Power System**

• Enact legislation establishing a regulatory framework to ensure reliability of the bulk power system.

**Conclusion**

There is much that Congress can do to help electricity markets function better, without dictating to the states the structure of the retail markets within their borders. The longer it takes for Congress to address these issues, the more prevalent and intractable the problems with our wholesale electricity markets will become.

January 16, 2001
## NEI Position Papers 2001

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Energy Policy Legislation

Description: Electricity demand is growing significantly faster than expected, and construction of new electric generating capacity is not keeping pace with demand. As a result, electricity markets are becoming increasingly volatile. In addition, diversity of fuel sources is one of the greatest strengths of the U.S. electric supply system, but virtually all new power plants being built today are fueled with natural gas. These plants are extremely sensitive to fluctuations in natural gas prices, and natural gas prices have more than doubled over the last 12 months.

New power plants—using a variety of fuel sources—will help maintain diversity of fuel supply, enhance energy security, meet growing electricity demand, protect electricity consumers against volatility in the electricity and natural gas markets. New nuclear and renewable energy plants are particularly important to our energy supply mix and they avoid the emission of carbon dioxide, sulfur dioxide, nitrogen oxides, particulates and other pollutants associated with combustion of fossil fuels to produce electricity. Nuclear power, however, is the only expandable energy source that can provide large-scale power to cities and other urban areas while avoiding emissions.

Status: Despite nuclear energy’s strategic value in a balanced supply portfolio, new nuclear power plants may not be built in the short-term because of the financial risk associated with building any large capital-intensive projects (power plants, transmission lines, natural gas pipelines) in a competitive business environment. The industry is now examining the marketplace issues that would lead to the beginning of new plant construction in the next three to five years.

Key Issues/Decisions: Because of the financial risk and the uncertainties associated with the electricity business, which is transitioning from regulation to deregulation, construction of new nuclear generating capacity will require these financial and policy initiatives:

- Accelerated depreciation for new electric generating facilities, including new nuclear power plants. Federal tax laws must be changed to permit depreciation over 7 years instead of the 15-20 years currently required by the tax laws.
- Investment credit during first 10 years of operation for all new nuclear power plants for which a license application is filed with the Nuclear Regulatory Commission after Jan. 1, 2005, and before Dec. 31, 2015. The amount of credit will be commensurate with the value of the tons of carbon emissions and other air pollutants avoided by construction of the nuclear power plant.
- Increase the Department of Energy’s nuclear energy research and development programs, consistent with the recommendations of the President’s Council of Science and Technology Advisers (PCAST) and the Department of Energy’s Nuclear Energy Research Advisory Committee (NERAC). In its June 2000 report, NERAC recommended increasing DOE’s nuclear energy R&D funding to approximately $250 million per year by 2005. In comparison to other electricity generating sources, nuclear energy is unequivocally the most economical federal research and development investment. In 1997, the federal government spent five cents on nuclear energy R&D for every kilowatt-hour of electricity generated at nuclear power plants. By comparison, the cost of natural gas R&D per kilowatt-hour, was 41
cents; for solar photovoltaics, $17,006; and for wind energy $4,769. The increased funding should support a more aggressive program to develop innovative techniques to reduce the capital costs of new nuclear power plants; development of potentially attractive alternative design concepts, including smaller, modular reactor concepts; and support for the Nuclear Regulatory Commission's ongoing program to replace its existing, highly prescriptive regulations with a risk-informed, safety-focused regulatory regime.

- Amend the Internal Revenue Code to allow new nuclear power plants, built as merchant power plants by unregulated generating companies, to treat annual payments into a decommissioning trust fund as a deductible expense and not as taxable income.
- Require an assessment by the Nuclear Regulatory Commission of whether it needs additional statutory authority and adequate resources to ensure new nuclear power plants will be sited and licensed in an efficient, businesslike manner, and permitted to start operations when construction is completed according to the design requirements, without unnecessary delays that would place private investment at risk.

Options:
- Incorporate a limited portfolio of incentives as described above in comprehensive energy policy legislation to ensure that nuclear energy maintains its position in the nation's electricity supply portfolio.
- Do nothing to encourage construction of new nuclear power plants, and expose the U.S. economy and American consumers to increasing electricity prices, increasing volatility in electricity prices, increasing volatility and dependency on foreign energy supply, and increasing vulnerability to supply/price disruptions in the fossil fuel markets.

Timing/Milestones: Any proposal to encourage construction of new nuclear power plants will occasion significant policy debate. The sooner that debate is joined and the issue(s) resolved, the quicker the private sector can proceed with business planning for, and development of, the next generation of nuclear power plants.
Used Nuclear Fuel Management
Including Yucca Mountain Decision-making

Description: Effective stewardship of used nuclear fuel and other high level radioactive waste for federal government defense programs is essential to the national interest. Non-proliferation concerns also dictate effective management of these materials. The Nuclear Waste Policy Act (NWPA) of 1982 codified the federal government’s long-standing obligation to dispose of this material and defined a process for accomplishing this objective. The law intended for DOE to establish a permanent disposal site and begin receiving used nuclear fuel by January 1998. This deadline was not met. Since 1987, efforts to find a disposal site have focused on the scientific study of a desert location at Yucca Mountain, Nev.

Status: DOE is nearly three years in arrears on its statutory deadline for moving used nuclear fuel from power plant sites and other locations. Government default of this obligation exposes U.S. taxpayers to a potential liability more than $60 billion. Although there is still no approved disposal site, the scientific work at Yucca Mountain has progressed significantly. This $6 billion, 13-year effort to determine the suitability of Yucca Mountain has reached a point where a presidential decision can be made within the next year on whether to move forward with the licensing of a facility at that site. There is no reason to under fund this program given that electricity consumers have committed more than $17 billion (including interest) to the Nuclear Waste Fund for this purpose, while only $6 billion has been spent. DOE has developed an extensive scientific safety case that evaluates the ability of the site to protect public health and safety for thousands of years into the future. The state of Nevada and anti-nuclear groups have expressed considerable opposition to this site.

Key Issues/Decisions:

- The NWPA requires the President to approve the selection of a disposal site before the DOE can enter into a three-step NRC safety licensing process to seek approval to construct, operate and eventually close the facility. DOE has committed to making a recommendation on the Yucca Mountain site to the President in 2001. In accordance with the law, the President’s decision is subject to challenge by Nevada. A simple majority vote of both houses of Congress would be required to override any such challenge by the state.

- Several lawsuits for breach of this federal obligation have been filed by the operators of nuclear power plants and state governors, attorneys general and public utility commissions. The courts have repeatedly affirmed the government’s obligation and determined that DOE has breached contracts with nuclear plant operators. Litigation will now determine the amount of damages to the utilities.

- The law also requires the EPA to establish a radiation standard as a prerequisite to site selection and NRC licensing. EPA’s proposals to date have received widespread criticism from the National Academy of Science, Health Physics Society, DOE and NRC. Alternate, science-based proposals have been made as part of EPA’s rulemaking on the Yucca Mountain standard and are broadly supported. Related NRC and DOE rulemakings are on hold pending resolution of the EPA’s controversial Yucca Mountain radiation standard.

- Each year, the Treasury collects about $700 million in fees from electricity consumers and about $200 million from defense programs, but congressional appropriations for the Yucca Mountain program typically are at a level less than half of these receipts. At least $500
million in appropriations will be needed for FY02 to make up delays resulting from funding shortfalls in past years. Significantly higher amounts will be required in later years if the facility is approved and licensed for construction. There also is a sizable balance of defense payments owed to this project.

- Nuclear plant operators have responded to DOE's default by expanding storage capacity at power plant locations. This option is costly and, in some instances, limited. In addition, a consortium of power plant operators, in partnership with the Goshute Indians, has launched a private initiative, known as Private Fuel Storage, to provide temporary storage at Skull Valley, Utah. While important for private storage of used fuel prior to federal removal, PFS is not a substitute for federal action to build and operate a repository.

Options:
- Approve the Yucca Mountain site based on DOE's scientific results. Although this option but would face opposition from Nevada and anti-nuclear groups, a high likelihood of success could be achieved because of the scientific integrity of the study. A final EPA standard for the repository is needed before this can occur.
- Reject the Yucca Mountain site. This would leave the government without a permanent disposal facility and put the federal government and taxpayers at risk for a multi-billion dollar liability. DOE would have to quickly develop other options to address the liability and national energy security risk.
- Defer the decision. Deferring the decision could have an impact on future election cycles. It also could result in additional lawsuits against DOE and billions of dollars being spent on the scientific effort with no resolution of the underlying issues or mitigation of the associated risks.

Timing Milestones:
- Final EPA rule and subsequent NRC rules are needed in summer 2001 to maintain the Yucca Mountain decision-making schedule.
- DOE's scientific recommendation on Yucca Mountain is expected in fall 2001, with a presidential decision late in 2001.
- The current repository schedule could lead to used nuclear fuel disposal beginning in 2010 at the earliest.
- A NRC licensing decision is expected on the Private Fuel Storage initiative in 2001. If approved, the facility could begin operating in 2003.
Tax Treatment of Nuclear Decommissioning

Description: Nuclear power plant owners must accumulate $400 million - 500 million per plant over the plants’ 40-year operating period for decommissioning. The Internal Revenue Code and Internal Revenue Service regulations treat annual contributions to decommissioning funds as a deductible expense—as long as the plant is owned by a regulated electric utility subject to cost-of-service regulation. Because of restructuring, generating companies are not subject to cost-of-service regulation and cannot treat contributions to decommissioning trust funds as a deductible expense. In addition, because of state restructuring, many companies are divesting their electricity generation assets, including nuclear power plants. When nuclear power plants are sold, the buyer assumes the seller’s obligation to decommission the nuclear plant and, in return, must receive the decommissioning funds already collected by the seller. For these transactions to occur, it is essential that the decommissioning trust funds can be transferred from seller to buyer on a tax-neutral basis. The tax code must be updated to allow these transfers and other transactions created by new state and federal policies. Under current tax law, many of these transfers and transactions would be taxable or trigger some form of tax liability. Unless the tax code is updated to reflect the new business environment, decommissioning trust funds will not be treated equitably and in the manner intended by Congress when it amended the tax laws governing decommissioning in 1984.

Status: This proposal to update tax treatment of nuclear decommissioning funds enjoys strong, bipartisan support. In June 1999, a comprehensive update to the tax laws governing nuclear decommissioning (the Nuclear Decommissioning Funds Clarification Act of 1999) was introduced in the House by Reps. Jerry Weller (R-Ill.) and Ben Cardin (D-Md.), and a bipartisan group of eight other members of the House Ways & Means Committee, and in the Senate Finance Committee by Sens. Frank Murkowski (R-AK) and John Breaux (D-LA). (Act basic provisions in Enclosure). Elements of this legislative proposal were incorporated in the omnibus, $792-billion tax bill passed by the Congress in 1999, and vetoed by President Clinton in September of that year. President Clinton included elements of this proposal in his Fiscal Year 2000 budget and in his comprehensive electricity restructuring legislation. President-elect Bush expressed support for this change to the tax law in his energy policy statement during the campaign.

Key Issues/Decisions: Updating the tax laws to allow electric power companies to reposition their nuclear generating assets in response to state and/or federal restructuring mandates is a high priority (1) to ensure the continued viability of existing nuclear power plants, (2) to ensure that nuclear power plants are not placed at a competitive disadvantage during electric industry restructuring, and (3) to ensure that monies already collected for decommissioning are not depleted unnecessarily by tax liabilities.

Options:
- Incorporate these necessary and appropriate changes to update the tax code into any comprehensive electricity restructuring legislation.
- Incorporate these necessary and appropriate changes to update the tax code into any omnibus tax legislation.
• Incorporate these necessary and appropriate changes to update the tax code into any comprehensive energy policy legislation.
• Do nothing, thus forcing companies to continue the time-consuming and costly process of seeking limited relief from the Internal Revenue Service through Private Letter Rulings.
The Nuclear Decommissioning Funds Clarification Act (H.R. 2038, S. 1308)

Basic Provisions

▶ Eliminate the cost-of-service requirement

Current law treats annual contributions to decommissioning funds as a deductible expense as long as the utility is subject to cost-of-service regulation. As competition develops, prices for electricity are set by the market rather than through cost-of-service regulation. As a result, electric utilities that are not subject to cost-of-service regulation cannot treat contributions to decommissioning trust funds as a deductible expense. Unless the tax code is updated to reflect the new business climate, contributions to decommissioning trust funds will not be treated in the manner intended by the tax code.

▶ Provide an exception to the level funding requirement (1) if regulators allow higher decommissioning charges, or (2) if accelerated funding is required in connection with the transfer of a nuclear power plant.

Under current rules, the amount of money a nuclear plant owner can contribute to a decommissioning trust fund is based on the projected decommissioning costs yet to be collected and the remaining plant operating period. This legislation allows two limited exceptions to this “level funding” requirement:

1. Under many state restructuring laws, nuclear plant owners are required to accelerate funding of their decommissioning costs over a shorter period of time than the remaining plant life. In such cases, the legislation would allow companies a deduction for those contributions.

2. In cases where nuclear plants are purchased, buyers typically require current plant owners to fully fund the projected cost of decommissioning as part of the transaction, in order to satisfy Nuclear Regulatory Commission requirements for funding assurance. These additional contributions to the fund violate the level funding limitation. The change proposed would allow continued deductibility for this additional funding.

▶ Allow taxpayers to utilize a Qualified Fund to accumulate all monies needed for decommissioning irrespective of the age of the plant.

The tax code treats funds collected before 1984 and after 1984 differently. Before the law was changed in 1984, money collected for decommissioning was taxed as income, deposited in “non-qualified funds,” and earnings were taxed at the corporate capital gains rate. In 1984, Congress changed the law to allow companies to deduct amounts set aside in “qualified funds.” In 1992, Congress lowered the tax rate on fund earnings. This legislation would simply eliminate the arbitrary distinction between non-qualified and qualified funds.

▶ Discontinue the requirement that taxpayers obtain a ruling from the Internal Revenue Service before making contributions to a Qualified Fund.

Under current law, companies are required to obtain pre-approval from the IRS before making a contribution to a Qualified Fund. This is the only circumstance in which IRS requires prior approval for a deduction. Since every nuclear power plant owner is
required to undergo an annual audit by the IRS, this requirement is duplicative, burdensome and unnecessary.

- Define "nuclear decommissioning costs" and acknowledge that all such costs are currently deductible when paid or incurred.
  
  *This technical change provides nuclear plant owners with additional certainty about which decommissioning costs are considered deductible.*
Nuclear Energy Research and Development Programs

Description: Nuclear energy research and development remains a national priority at the Department of Energy. Nuclear power plants produce 20 percent of U.S. electricity and emit no air pollutants. Nuclear energy provides the most easily expandable means of providing new sources of electricity and reducing the concentration of air pollutants. New research, development and deployment of advanced nuclear power plants are vital for U.S. energy and environmental policy. Nuclear technology also is used in medicine, including one-third of all diagnostic and treatment procedures, as well as other industrial and agricultural uses.

Nuclear energy will continue to provide a unique and secure domestic source of electricity supply well through mid-century. Important to the continuation of U.S. leadership in nuclear energy is the DOE support provided to our nation’s universities to sustain our expertise and research facilities. Continued support of nuclear research and development programs is essential to continue advances in nuclear medicine and other nuclear technologies beneficial to society, to guard against the impact of foreign supply disruptions to our energy security and to encourage growth of America’s largest source of emission-free electricity. To capitalize on the many benefits of nuclear technologies, research and development of these technologies must be a priority.

In comparison to other electricity generating sources, nuclear energy is unequivocally the most economical research and development investment. In 1997, the federal government spent five cents on nuclear energy R&D for every kilowatt-hour of electricity generated at nuclear power plants. By comparison, the cost of natural gas R&D per kilowatt-hour, was 41 cents; for solar photovoltaics, $17,006; and for wind energy $4,769.

Status: The House and Senate both supported increasing funding for nuclear energy programs in FY2001.

Key Issues/Decisions: Based on the recommendations of the 1997 and 1997 President’s Committee of Advisors on Science and Technology (PCAST) reports, the following is a list of R&D programs suggested funding for FY2002:

- Nuclear Energy Plant Optimization—$15 million for activities helping to optimize current operating reactors. This program is cost shared with the Electric Power Research Institute.

- Nuclear Energy Research Initiative—$50 million for advanced research in nuclear science, technology and engineering and $20 million for international cooperation on joint systems development. This grant program is competitive and peer-reviewed.

- Nuclear Energy Technologies—$10 million for continuing activities associated with Generation IV reactor plan, and deployment of advanced light-water
reactors, smaller modular reactors, and gas reactor technology in the United States.

- University Support and Scholarships—$25 million for activities associated with improving critical research reactors at the nation's universities, providing fuel and support scholarships for students at the graduate and undergraduate levels.


- Low-Dose Radiation Research—$25 million for a program will produce an enhanced understanding of low-dose radiation effects to assure that public and private resources are applied in a manner that protects public health and safety without imposing unacceptable risks or unreasonable costs on society.

- Nuclear Nonproliferation—$350 million including $30 million for a fabrication facility for the disposition of excess weapons grade nuclear materials through the use of mixed-oxide fuel in commercial reactors in the United States and Russia.

- AAA—The Committee recommendation includes $75 million to continue the assessment of accelerator transmutation technology. This technology may be able to significantly reduce the radioactivity and radiotoxicity of certain isotopes. Funding also would be used for development of an accelerator-based tritium source and additional research on electricity production.

- International Nuclear Safety Program & Nuclear Energy Agency—$35 million for international nuclear safety programs at DOE and NRC. These are programs aimed at the safe commercial use of nuclear technology around the world.

Options:

- Fund these R&D programs at the suggested levels. Move toward the PCAST funding levels recommended in the 1997 and 1999 reports.

- No change in current year funding. This would lead to a possible decline of the nation's nuclear technology leadership in the commercial sector and at the nation's research facilities, and prevent new discoveries in medicine.

- Reduce funding for nuclear energy R&D despite the fact that it is the most cost-effective program in terms of return on investment for U.S. energy supply.

Timing/Milestones: The DOE's budget process and congressional appropriations usually are completed in October.
POWERFUL PARTNERSHIPS:
THE FEDERAL ROLE IN INTERNATIONAL COOPERATION ON ENERGY INNOVATION

A REPORT FROM THE
PRESIDENT'S COMMITTEE OF ADVISORS ON SCIENCE AND TECHNOLOGY
PANEL ON INTERNATIONAL COOPERATION IN ENERGY RESEARCH, DEVELOPMENT, DEMONSTRATION, AND DEPLOYMENT
JUNE 1999
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<td>- Develop integrated renewable/hybrid systems for rural areas</td>
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<td>- Accelerate deployment of grid-connected intermittent/hybrid systems</td>
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<td>- Assess renewable energy resources by region</td>
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<td>- (RD² on solar thermal electric; support strong domestic RD² efforts)⁷</td>
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<td>- Expand/strengthen international studies of spent fuel/high-level waste</td>
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<td>- Pursue new international agreement on fusion R&amp;D</td>
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<td>- (Improve safety and security of nuclear facilities worldwide)⁴</td>
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**USE OF MANAGEMENT RECOMMENDATIONS**

| Agency Management | Establish NSTC working group (WG) on Strategic Energy Cooperation | 6-13 | | |
| | - NSTC WG would have interagency secretariat/external Advisory Board | | | |
| | - WG would assess the IERD³ portfolio, guide/coordinate agency programs | | | |
| | - WG would strengthen agency internal/external review capabilities | | | |
| | - Agencies to use competitive solicitations to identify best approaches | 6-14 | | |
| | - Agencies identify accountable management chains with authority/budgets | | | |
| | - Strengthen agency international capabilities by training/demilting staff | | | |
| | - Establish Strategic Energy Cooperation Fund | | | |

Total: $250 M $500 M

* Initiatives in parentheses are described in the chapters but not in the Executive Summary; budget totals include these initiatives.
REPORT TO THE PRESIDENT ON

FEDERAL ENERGY RESEARCH AND DEVELOPMENT
FOR THE
CHALLENGES OF THE TWENTY-FIRST CENTURY

PRESIDENT'S COMMITTEE OF ADVISORS ON SCIENCE AND TECHNOLOGY
PANEL ON ENERGY RESEARCH AND DEVELOPMENT

NOVEMBER 1997

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DOE002-0200

Obtained and made public by the Natural Resources Defense Council, March/April 2002
Summary of Funding Recommendations

Table 5.1: Resource Allocation for Research and Development

Table 5.2: Resource Allocation for R&D

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| Total Energy          | 0       | 0       | 0       | 0       | 0       |

| Total                | 0       | 0       | 0       | 0       | 0       |

* The estimates represent the average cost of research and development. The estimates are based on the best available data and should be regarded as preliminary. Additional costs may be incurred for additional studies, and additional cost offsets may be realized as the program matures.*

POLICY ISSUES

There are several policy issues that will determine the future of nuclear energy in the United States. These issues include the global climate change, the nuclear waste management, the nuclear fuel cycle, and the non-proliferation of nuclear weapons. The United States must develop a comprehensive strategy to address these issues and ensure the safe and secure use of nuclear energy.
Nuclear Liability Insurance

Description: The Price-Anderson Act authority that provides immediate and substantial compensation to the public in the event of a nuclear incident at a commercial nuclear power plant or a Department of Energy (DOE) facility expires on August 1, 2002. Coverage under the Price-Anderson Act for commercial nuclear plants incurs no cost to the federal government or taxpayers.

This act was first passed in 1957, providing $560 million in coverage for each incident. It will be considered in the 107th Congress for its fourth renewal to provide over $9.5 billion in coverage. The act provides coverage for precautionary evacuations and emergency out-of-pocket expenses; reduces the delays often inherent in tort cases; and consolidates all cases in a single federal court. Each nuclear power plant purchases all the insurance available ($200 million per plant site) from private insurers for immediate response to an incident. An additional $9.3 billion of insurance would be paid by the commercial nuclear power industry via retrospective assessments (presently up to $88 million for each of the nation’s 106 covered reactors). DOE provides equivalent coverage ($9.5 billion) for its nuclear activities. In the unlikely event that more funds would be required, Congress has indicated in the Act that it will take whatever action is determined to be necessary to provide full and prompt compensation to the public for all public liability claims.

Status: Reports to Congress required by current law by the Nuclear Regulatory Commission (1998) and the DOE (1999) recognize that the Act has worked as it was designed and strongly recommend that it be renewed without substantial change. Bipartisan legislation was introduced in the Senate in the 106th Congress for the simple renewal recommended in the NRC and DOE reports. The nuclear industry supports such a legislative approach for consideration by the new administration and the 107th Congress.

Key Issues: Coverage for new or extended DOE contracts or for new commercial facilities will not be provided without renewal. DOE would be denied qualified contractor expertise to perform its national defense and facilities cleanup missions without renewal. During the past renewal all of the issues put forth by the opponents of the legislation were addressed (the attached Frequently Asked Questions regarding the Price-Anderson Act provides background on all of these issues).

Options:
- Permanent authorization of the provisions of the bill is an option that Congress should consider.
- Simple renewal based on the reports from NRC and DOE could assure early enactment.
- Doing nothing will put nuclear-related defense and DOE non-defense programs in jeopardy.

Timing: Action early in the first session of the 107th Congress is important. The last renewal effort incurred a break in authorization that caused difficulty for DOE programs.
RENEWAL OF PRICE-ANDERSON ACT
Frequently Asked Questions

The Price-Anderson Act—signed into law in 1957 as an amendment to the Atomic Energy Act of 1954—provides for payment of public liability claims in the event of a nuclear incident. Since its inception, the act has been extended three times, twice for successive 10-year periods and once in 1988 for 15 years. Unless Congress renews the Price-Anderson Act, it will expire on August 1, 2002.

What are the key features of the Price-Anderson Act?

The Price Anderson Act:
- Assures the availability of billions of dollars to compensate members of the public who suffer a loss as the result of a nuclear incident;
- Establishes a simplified claim process for the public to expedite recovery for losses;
- Provides for immediate emergency reimbursement for costs associated with any evacuation that may be ordered; and
- Establishes liability limits for each nuclear incident involving commercial nuclear energy and government use of nuclear materials, and provides a guarantee that the federal government will review the need for compensation beyond that provided.

How does Price-Anderson work?

- It provides more than $9.5 billion of coverage through two layers of protection. For the primary layer, the act requires nuclear power plant operators to buy all the nuclear liability insurance that is available or provide an equal amount of financial protection. That insurance is currently $200 million. For the second layer, the power plant operators are assessed up to $88 million for each incident that exceeds the primary layer (at a rate not to exceed $10 million per year per reactor). In addition, Congress may establish additional assessments if the first two layers of coverage are not adequate to cover claims.
- The act provides the same level of liability for DOE facilities as for the commercial sector.
- Research and/or small power reactors are required to self-insure or insure at least the first $250,000 of any nuclear incident. The federal government also provides up to $500 million of indemnity. At present, there are no small power reactors in operation that qualify for this coverage.

Does Price-Anderson only cover incidents at nuclear reactors and government facilities?

- No. The Price-Anderson Act also provides coverage for transportation of radioactive materials. Transportation of radioactive materials in the United States has an exemplary safety record. For example, no container has leaked or cracked in any way during the nearly 3,000 shipments of used nuclear fuel since 1964.
If an incident occurred today, how much money would be available to compensate the public for damages?

- More than $9.5 billion dollars is available to pay public liability claims through insurance ($200 million) and assessments ($9.3 billion). Assessments are adjusted for inflation in five-year increments. In addition, Congress could request additional assessments, if necessary.
- For DOE facilities, coverage totals $9.5 billion. Similarly, Congress could provide additional funding, if it determines that the current amount is not adequate.

How does the public benefit from Price-Anderson?

- Price-Anderson coverage assures the availability of substantial funds to provide prompt compensation to any member of the public who is harmed.
- The law eliminates the delay that plaintiffs in ordinary tort cases must incur before they can recover for injuries or other damages.
- In the case of a serious nuclear incident (an "extraordinary nuclear occurrence" in the terms of the Price-Anderson Act), the defendants are required to waive certain defenses to which they would otherwise be entitled in the absence of the Price-Anderson Act.
- Without Price-Anderson, compensation to members of the public would be delayed because of delays in determining the appropriate court in which to hear the case. Price-Anderson provides for all cases from a single incident to be heard in a single federal court.

How well did Price-Anderson coverage work at Three-Mile Island?

- The Price-Anderson Act covers residents near the Three Mile Island plant and any other individuals who filed claims after the 1979 accident.
- Within 24 hours of the state's precautionary evacuation for residents near the Three Mile Island plant, a claims office in nearby Harrisburg was opened to disburse emergency assistance payments.
- Payments totaling $1.2 million for travel, temporary lodging and other needs were made to 3,170 families, and $92,400 was paid to 636 persons for lost wages.
- A $20 million economic injury fund and a $5 million public health fund also were established.
- In total, over $70 million has been paid under Price-Anderson for the Three-Mile Island accident.

If an incident were to result in damages that exceed the current limit of $9.5 billion, wouldn't the limit on liability prevent some members of the public from fully recovering for their damages?

- The cap on liability does not limit full recovery by the public. The explicit language of the Price-Anderson Act requires Congress to consider further compensation for members of the public filing claims if industry and federal government liability is exceeded.

Isn't it true that, except for Price-Anderson coverage, a member of the public would be able to fully recover for damages?

- Not necessarily. Unlimited liability does not guarantee full recovery. It simply means recovery up to the level of resources a company might have available to pay any claims.
Is Price-Anderson a subsidy to the nuclear industry?

- The federal government does not use taxpayer funds to pay claims in the event of a nuclear incident, so there is no "subsidy" to the industry.
- In 43 years of Price-Anderson protection, nuclear insurance pools—not the federal government—have paid a total of $161 million for claims.
- The Price-Anderson Act ensures that full compensation will be available in the event of a nuclear incident. In the absence of the law, members of the public filing claims would need to overcome substantial obstacles to recovery posed by ordinary tort law, and the nuclear industry would not have predictable levels of liability.

Isn't Price-Anderson type coverage unique to the nuclear industry?

- The federal government provides insurance mechanisms for losses associated with agricultural disasters, floods, banks, savings and loan company failures, home mortgages, Social Security, Medicare, crime and maritime accidents.
- Under current law, a limitation on liability exists for oil spills, bankruptcy, worker's compensation maximum payments, and medical malpractice.

The Price-Anderson Act expires on August 1, 2002. Should Congress extend it?

- Yes. Price-Anderson coverage provides a system for more comprehensive coverage for the public than any other kind of coverage in the event of a nuclear incident. If the coverage were not extended, federal nuclear facilities would not be able to hire private contractors to operate them, or to continue important environmental restoration work at federal weapons facilities. Commercial nuclear power plants provide one-fifth of all U.S. electricity. However, without Price-Anderson coverage, no new emission-free nuclear power plants would be built to meet growing electricity demand while protecting the nation's air quality.

Do the Department of Energy and the Nuclear Regulatory Commission support extension of the Price-Anderson Act?

- DOE and the NRC submitted separate reports to Congress supporting the renewal of the Price-Anderson Act. Both agencies made minor recommendations to improve the Act. The industry supports these recommendations, except for the NRC's suggestion that the annual assessments be increased from $10 million to $20 million.

If Congress does not decide to extend Price-Anderson, why not just leave the public protection provisions in place?

- The only part of Price-Anderson that expires on August 1, 2002, is the authority of the Nuclear Regulatory Commission and the Department of Energy to enter into new indemnity agreements after that date. Existing indemnity agreements would continue in full force and effect.
- Without renewal, new nuclear power plants could not be covered, nor could new DOE contracts have the indemnity provision.
- Without renewal, DOE's program for operating existing nuclear facilities and cleaning up closed nuclear facilities would be severely hampered.
Are homeowners precluded from buying nuclear insurance protection?

- There is nothing in the Price-Anderson Act that requires a nuclear exclusion clause in homeowners policies. However, the same insurance companies that provide homeowners policies also provide the nuclear industry with the insurance required under the Price-Anderson Act. Because the nuclear industry, by law, is required to purchase this policy, there is no need for homeowners to buy this coverage as part of their insurance. Similarly, under the Price-Anderson Act, the federal government provides this protection for DOE facilities, so there is no need—or benefit—for a homeowner to buy duplicate coverage.

Why are the costs of investigating and defending claims included in the Price-Anderson limit on liability?

- The inclusion of these costs within the policy limit (which has been a central tenant of Price-Anderson since 1957) provides the certainty that insurers need to obtain the largest amount of financial protection available to protect the public.
- If claims costs were not included in Price-Anderson, the limit on liability would be illusory.

Should the primary layer of insurance be increased?

- Price-Anderson requires that nuclear plant operators buy the maximum amount of liability insurance commercially available—currently $200 million per plant site. Any increase in the primary layer above this amount depends entirely on the availability of insurance capacity in the private marketplace. With a renewed version of Price-Anderson, very similar to the current one, private insurers expect that the primary layer could be increased above $200 million.

Shouldn’t contractors that operate DOE facilities be accountable for their actions?

- DOE contractors are legally accountable for operations at federal facilities. They also have many incentives to operate nuclear facilities safely. Poor contractor performance could lead to debarment from future DOE contracts, fee reductions, nonrenewal or termination of their contract(s), which could be damaging to the contractors’ reputations.

Should DOE be able to recover any amounts paid if the contractor’s behavior has involved “gross negligence” or “willful misconduct?”

- After a thorough examination of this issue when it renewed the Price-Anderson Act in 1988, Congress did not provide exclusion for damages in such cases. It is virtually impossible to distinguish among levels of negligence in today's tort law; so more litigation would weaken Price-Anderson’s “omnibus” feature.

Does DOE have other authority to provide indemnification for its contractors?

- Public Law 85-804 could be used to cover some defense-related activities, but would not provide as much protection to the public as Price-Anderson. For example, it does not cover precautionary evacuations, or provide for single federal court jurisdiction, automatic coverage for subcontractors or transporters, advance emergency payments, or mandatory waivers of tort defenses in the event of a large accident (an “extraordinary nuclear occurrence”).

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Should DOE contractors be required to purchase their own nuclear liability insurance?

- DOE has the option of requiring its contractors to buy nuclear liability insurance, but has chosen not to exercise that option because the cost would be passed through to the government. It is cheaper for the government to continue to self-insure. Also, it is not clear that the commercial insurance market would provide liability coverage to private contractors working at government facilities because of the unique nature of the facilities.
Nuclear Waste Fund (NWF)
Budget Structure

Description: The Nuclear Waste Fund (NWF) was established in the Nuclear Waste Policy Act of 1982 as the funding mechanism for the Department of Energy's nuclear waste disposal program. The NWF is unique in that it is financed through contracts between electric utilities and DOE that establishes a fee of one-tenth of a cent per kilowatt-hour on electricity produced at all nuclear power plants after April 7, 1983, and an equivalent one-time fee for used nuclear fuel produced prior to that time. This fee amounts to a tax on consumers of electricity from nuclear power plants.

The fee was established to provide adequate funding—on a life cycle cost basis—to pay for long-term stewardship of used nuclear fuel by the federal government. It was intended that the fee would result in more revenue than that needed to defray program costs in the early years of the DOE program. However, this balance will be needed in future years to cover program costs as nuclear plants are closed and are no longer paying fees. The NWF was originally established as an off-budget account, i.e., revenues and expenditures from the fund were excluded from the budget totals of the U.S. Government. However, during the late 1980s and early 1990s, the fund was subject to traditional federal budget controls, including appropriations caps and pay-as-you-go (PAYGO) rules.

Status: The NWF has a balance of more than $11 billion, and that balance is growing at a rate of about $1 billion annually. The lack of an effective mechanism to reconcile NWF fee revenues with annual spending requirements has resulted in treating the nuclear waste fees as a general revenue tax, rather than a contractually based user fee, for federal budget purposes. The balance may reach $15 billion by 2005. These projections, in turn, inflate the government-wide surplus estimates. At the same time, the current budget baseline projections make no provision for future spending increases needed for building a permanent repository. State governors, attorneys general and public utility commissions support changes in treatment of the fee so that the balance of the fund can be used for the nuclear waste management program when needed.

Key Issues/Decisions: The budget for the NWF should be restructured to enable adequate financing for the program to move forward. The NWF has three unique characteristics that justify modifications of the budgetary treatment:

- The purpose of the fund is to finance the provision of services for the disposal of used nuclear fuel and high-level nuclear waste from federal defense programs, and the beneficiaries of that service (e.g., electricity consumers) are required to pay the full cost of that service;
• The program is entirely financed through a separate fee that was established by statute for this sole purpose. The fee has no other reason for existence other than to fund the program; and
• The government's obligation to implement the program for the disposal of nuclear waste is based not only in statutory requirements but also in contractual agreements between the DOE and individual electric utilities.

Options:
• Restructure the NWF as a separate revolving fund, subject to Executive Branch and Congressional controls, but outside the spending caps applicable to annual domestic discretionary appropriations. The revolving fund re-establishes the business character of the program and provides a predictable and stable source of funding to meet future program requirements, without adverse impact to other domestic appropriations.

• Require that annual spending levels be set at least equal to annual receipts, similar to the budgetary treatment of the Airport/Airway Trust Fund. This would provide adequate funding over the next several years to move forward with the permanent repository project (once the site determination process is completed), but may still fall short of longer term funding requirements, which will require access to the prior fund balance.
• No change. The funding projections are insufficient for the timely development of a permanent repository under the current schedule. Establishing a new set of budget caps will not provide the necessary allowance for funding growth. This leaves the program vulnerable to trade-offs between funding related delays or cuts in other domestic discretionary programs.

Timing/Milestones: Decisions on the FY2002 budget will be required in early February 2001. Funding increases to support Yucca Mountain licensing and program implementation (assuming a favorable outcome of the site determination process) will be needed beginning in FY2002.