

## Highlights of Nuclear Energy Provisions in Energy Policy Act of 2005

August 2005

### Key Facts

■ Congress recently passed the Energy Policy Act of 2005 (H.R. 6), which incorporates a wide range of measures that support today's operating nuclear plants and provides important incentives for building new nuclear plants.

■ H.R. 6 includes several incentives to encourage construction of new nuclear plants, including production tax credits, loan guarantees and risk protection for companies pursuing the first new reactors.

■ The bill also includes an extension of the Price-Anderson Act, an insurance framework for protecting the public in the case of a nuclear incident.

■ The legislation authorizes funding for nuclear energy research and development, as well as funding to build an advanced hydrogen cogeneration reactor in Idaho. The bill also creates an assistant secretary for nuclear issues at the Department of Energy.

Provided below are summaries of the key nuclear energy provisions in H.R. 6.

### Price-Anderson Act Renewal

The bill extends the Price-Anderson Act for 20 years. The act provides the framework for immediate, no-fault insurance coverage for the public in the event of a nuclear reactor accident.

The Price-Anderson Act requires that nuclear plant operators purchase all of the private insurance available to them—currently \$300 million—to serve as a primary level of coverage. If this amount is not sufficient to cover claims arising from an accident, companies are obligated to contribute to a fund that provides a secondary level of coverage.

The energy legislation:

- raises the maximum required fee at the secondary level from \$63 million to \$95.8 million per reactor, for a total of more than \$10 billion in total coverage
- raises the annual secondary level payout from \$10 million to \$15 million per reactor and adjusts the payout for inflation in the future.

The industry has been seeking renewal of the Price-Anderson Act since it expired in 2003. This extension is the longest Congress has ever granted. This is the fifth time Congress has reauthorized the act since the law was first passed in 1957.

However, the bill excluded a proposed subrogation measure that would have greatly increased potential liabilities to contractors at federal nuclear sites.

### Loan Guarantees for New Nuclear Plants

The bill authorizes the energy secretary to provide loan guarantees to support the development of innovative energy technologies “that avoid, reduce or sequester air pollutants or anthropogenic emissions of greenhouse gases.”

These technologies include nuclear energy facilities, renewable energy, coal gasification and hydrogen fuel-cell technology. The loan guarantee can be up to 80 percent of the project cost. The secretary sets the rate, and full payment must be made within 30 years or 90 percent of the project's life.

The legislation creates a self-financing Energy Loan Guarantee Fund that minimizes the



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potential costs to the federal government. The legislation provides two alternatives to finance the cost of a loan guarantee:

- The project developer can pay the cost of the loan guarantee into the fund.
- The secretary of energy can request an appropriation for that amount, and the project developer pays back that amount over time.

The cost of a loan guarantee is a small percentage of the face value of the amount being guaranteed, much like the loan origination fee charged by a bank when it provides a home mortgage.

## Production Tax Credits For New Plants

The legislation provides a production tax credit of 1.8 cents per kilowatt-hour for 6,000 megawatts (MW) of capacity from new nuclear power plants for the first eight years of operation.

A qualifying advanced nuclear facility is a nuclear facility for which a company (or companies) has received an allocation of megawatt capacity and which is placed in service before 2021.

The 6,000 MW of capacity eligible for the credit is allocated by the secretary of the treasury (in consultation with the secretary of energy). If more than 6,000 MW of new nuclear generating capacity is operating in any given year and is

eligible for the production tax credit, the treasury secretary will presumably apportion the 6,000-MW allocation on a pro rata basis among the nuclear plants in operation. (The legislation requires the secretary to issue regulations within six months of enactment to implement this section.)

The aggregate amount of credit that a taxpayer may claim in any year during the eight-year period is subject to two limitations, based on allocated capacity and an annual limitation.

The company may claim credit only for production of electricity equal to the ratio of the allocated capacity that the taxpayer receives from the secretary to the rated nameplate capacity of the company's facility. For example, if the company receives an allocation of 750 MW of capacity from the 6,000 MW, and the company's facility has a rated nameplate capacity of 1,000 MW, then the company may claim three-quarters of the allowable credit, or 1.35 cents per kilowatt-hour, for each kilowatt-hour of electricity produced at the facility (subject to the annual limitation described below).

A company operating a qualified facility may claim no more than \$125 million in tax credits per 1,000 MW of allocated capacity in any one year of the eight-year credit period. If the company operates a 1,350-MW plant and has received an allocation for 1,350 MW of

capacity eligible for the credit, the company's annual limitation on credits that may be claimed is equal to 1.35 times \$125 million, or \$168.75 million.

If the company operates a facility with a nameplate rated capacity of 1,000 MW but has received an allocation from the secretary for 750 MW of credit-eligible capacity, then the two limitations apply such that the company may claim a credit equal to 1.35 cents per kilowatt-hour of electricity produced (as described above), subject to an annual credit limitation of \$93.75 million in credits (three-quarters of \$125 million).

The production tax credit places nuclear energy on equal footing with other sources of emission-free power, including wind and closed-loop biomass. These other sources have received a production tax credit since 1992.

## 'Standby Support' for New Reactor Delays

The bill offers new plant investment protection in the form of "standby support" to offset the financial impact of delays beyond industry's control that may occur during construction and during the initial phases of plant startup for the first six new reactors. The bill provides for 100 percent coverage of the cost of delays for the first two new plants, up to \$500 million each, and 50 percent of the cost of delays, up to \$250 million each, for plants three through six.

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The standby support covers delays caused by the Nuclear Regulatory Commission's failure to comply with schedules for "inspections, tests, analyses and acceptance criteria," as well as delays caused by litigation. Costs covered under this provision include any principal or interest on any debt associated with the project. It would also cover any losses experienced by companies if they must buy power on the open market to meet contractual electricity supply obligations that would have been met by the new nuclear plant subject to the delay.

## Nuclear Security

The bill includes the following security measures:

- a requirement that the NRC issue a rulemaking on its "design basis threat," the range of threats against which nuclear plant security must defend
- periodic "force-on-force" drills by the NRC to help refine the ability to protect the plant from intruders, for nuclear power plants and fuel cycle facilities that handle highly enriched uranium
- a requirement that the NRC assign an employee as a federal security coordinator in each region.

The measures adopted reflect the evolution of security proposals introduced since the terrorist attacks of Sept. 11, 2001.

## Nuclear R&D, Hydrogen Projects

The bill authorizes \$2.95 billion for nuclear research and development and hydrogen projects. Included is \$1.6 billion for general nuclear energy research and development, which supports the Energy Department's Nuclear Power 2010 program; the Generation IV reactor initiative; the advanced fuel cycle initiative to evaluate recycling and transmutation technologies; and university science and engineering.

The Nuclear Power 2010 program incorporates government/industry cost-sharing efforts related to new nuclear plants, such as testing of the combined construction and operating license (COL) process.

House-Senate conferees agreed to replace the Nuclear Energy Plant Optimization Program with the Nuclear Energy System Support Program.

Also included is authorization of \$1.25 billion for the construction of an advanced nuclear cogeneration reactor (Generation IV) to produce electricity and hydrogen at the Idaho National Laboratory.

The bill authorizes another \$100 million to demonstrate hydrogen production at two existing nuclear plants.

## Assistant Secretary for Nuclear Energy

The bill establishes an assistant secretary position to head the

Department of Energy's Office of Nuclear Energy.

The industry has been working to restore this position within the Energy Department since 2000 in an effort to raise the visibility of and emphasis on nuclear energy programs.

## Decommissioning Tax

The legislation updates the tax treatment of nuclear decommissioning funds to reflect the fact that many nuclear plants now operate in a competitive, unregulated market. Current tax law is based on a regulated, cost-of-service business model. The provision is valued at \$1.3 billion. The legislation:

- Repeals the "cost-of-service" limitation in Section 468A of the Internal Revenue Code. Under this section, only companies that collect decommissioning funds subject to cost-of-service regulation can establish qualified decommissioning funds and make deductible contributions to those funds. The new law will allow all companies (regulated and unregulated) to establish qualified decommissioning trust funds and make deductible contributions to those funds.
- Allows companies to transfer monies in nonqualified decommissioning funds in-to their qualified funds. Companies will be able to claim a deduction for the monies transferred over the remaining life of the nuclear

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plant, and will pay a lower tax rate on earnings in the qualified funds. Nonqualified funds contain monies collected to satisfy pre-1984 decommissioning obligations and monies used to ensure the adequacy of decommissioning funds as part of a nuclear plant transaction.

The industry has sought modified treatment of these funds since restructuring of the electric power industry started in the late 1990s. Eliminating the cost-of-service limitation is a significant benefit for merchant companies planning to build new nuclear plants.

### **Personnel and Training**

The legislation exempts the nuclear energy industry from implementing Department of Labor training guidelines. The industry has already developed its own guidelines in accordance with NRC requirements.

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