



Nuclear Loan Guarantees: Another Taxpayer Bailout?

Nuclear power advocates are claiming that a new generation of reactors will produce relatively cheap electricity while solving the threat posed by global climate change. Companies are proposing to build 30 new reactors in the United States, and some have called for building up to 300 new plants by mid-century. Congress responded by authorizing massive loan guarantees specifically for the nuclear industry (\$18.5 billion to date) through the Title 17 program for “energy technology innovation.” The industry is now asking for a lot more in guarantees through the proposed Clean Energy Deployment Administration (CEDA) and the Clean Energy Investment Fund. Absent limits on the size of these loan guarantees, at an average cost of \$9 billion per reactor, taxpayers may ultimately be on the hook for a “nuclear renaissance” they can ill afford.

A Managerial Disaster

Originally conceived as producing electricity that would be “too cheap to meter,” the federal government created financial incentives to jump-start the nuclear industry and limited companies’ liability in case of a nuclear accident. But as construction costs skyrocketed, the electric utilities abandoned some 100 plants—half of all those ordered—during construction. Those that were completed led to large increases in electricity rates. The result was what a *Forbes* cover story in 1985 called “the largest managerial disaster in business history, a disaster on a monumental scale.” As a result:

- Taxpayers and ratepayers paid an estimated \$40 billion in costs for abandoned nuclear plants.
- Ratepayers paid over \$200 billion (in today’s dollars) in cost overruns for completed nuclear plants.
- Ratepayers were required to pay an estimated \$40 billion in “stranded costs” to utilities as a result of restructuring intended to introduce competition in the industry.

Cost Estimates Have Risen Dramatically

Because of this dismal record, Wall Street and the financial community have been unwilling to invest in new nuclear plants for three decades. And just as the industry is calling for massive new investments, estimated construction costs for the new generation of nuclear power plants have skyrocketed. In 2002, the industry and the Department of Energy (DOE) projected costs of new nuclear reactors at \$1,200 to \$1,500 per kilowatt, suggesting total costs of \$2 billion to \$3 billion per nuclear reactor. By the end of 2008, the DOE had received federal loan guarantee applications for 21 proposed reactors with a total estimated cost of \$188 billion, or an average of \$9 billion per reactor. Industry analysts and rating agencies have warned that these projected costs are highly uncertain and could rise significantly again.

The nuclear industry has an extremely poor track record on cost overruns. The actual costs of 75 of the first generation of U.S. nuclear power plants exceeded initial estimates by more than 200 percent—more than triple their projected costs.

Cost Overruns for U.S. Nuclear Power Plants

CONSTRUCTION STARTS		AVERAGE OVERNIGHT COSTS ^a		
YEAR INITIATED	NUMBER OF PLANTS ^b	UTILITIES’ PROJECTIONS (THOUSANDS OF DOLLARS PER MW)	ACTUAL (THOUSANDS OF DOLLARS PER MW)	OVERRUN (PERCENT)
1966-1967	11	612	1,279	109
1968-1969	26	741	2,180	194
1970-1971	12	829	2,889	248
1972-1973	7	1,220	3,882	218
1974-1975	14	1,263	4,817	281
1976-1977	5	1,630	4,377	169
OVERALL AVERAGE	13	938	2,959	207

Source: Schlissel, D., M. Mullett, and R. Alvarez. 2009. *Nuclear loan guarantees: Another taxpayer bailout ahead?* Cambridge, MA: Union of Concerned Scientists. Online at http://www.ucsusa.org/nuclear_power/nuclear_power_and_global_warming/nuclear-loan-guarantees.html.



The nuclear industry's history of skyrocketing costs and construction overruns has already resulted in expensive bailouts by taxpayers and captive ratepayers. By shifting the risks of building new nuclear power plants from companies to taxpayers, new loan guarantees could lead to yet another vastly expensive bailout of the industry.

A Clean Energy Investment Fund Should Support Clean, Green, and Cost-effective Technologies

The Clean Energy Investment Fund is a taxpayer-sponsored mechanism for promoting innovative clean energy technologies that can increase our country's energy independence and reduce our contribution to climate change. The CEDA should therefore ensure the promotion of a diverse range of technology solutions and give funding priority to those with the lowest cost per ton of heat-trapping emissions avoided.

Most importantly, the size of loan guarantees for a single project or technology should be limited to ensure that no single industry can dominate the program. This will also prevent a few large, expensive projects from moving forward at the expense of smaller and more diverse clean energy projects that could meet the program's goals at a lower cost. Finally, in order to protect the interests of the taxpayer and insure the fund's solvency, a technology's "time-to-market" must be taken into account so that expensive options with long lead times do not tie up funds that could be used to bring cleaner and more efficient technologies to market sooner.

ⁱ Government Accountability Office. 2008. Washington, DC. *New loan guarantee program should complete activities necessary for effective and accountable program management.*

ⁱⁱ Schlissel, D., M. Mullett, and R. Alvarez. 2009. *Nuclear loan guarantees: Another taxpayer bailout ahead?* Cambridge, MA: Union of Concerned Scientists.

Taxpayers Should Not Bear the Risk of a Nuclear Resurgence

The rapidly escalating and highly uncertain costs of new nuclear plants—along with the stated unwillingness of Wall Street to finance them—has sent the industry back to the federal government for loan guarantees and other forms of financial assistance. The Energy Policy Act of 2005 authorized the DOE to provide federal guarantees for energy projects including nuclear plants employing new reactor designs, and \$18.5 billion has been allocated for new nuclear plants. The industry is now asking Congress to substantially expand that amount through the creation of the CEDA, which can freely draw from a Clean Energy Investment Fund to finance the construction of new nuclear power plants beyond the limits authorized under the existing DOE Loan Guarantee Program.

Federal loan guarantees do not reduce the risks associated with new nuclear power plants; they merely transfer those risks from the companies building the plants to taxpayers. The level of risk will depend on how many plants are built, the percentage of costs the government guarantees, and how many companies default on their loans. The Government Accountability Office estimates that the average risk of default for DOE loan guarantees is about 50 percent.ⁱ Based on various proposed scenarios for new nuclear plant construction, the potential risk exposure to taxpayers could range from \$360 billion to \$1.6 trillion.ⁱⁱ

More information is available online at www.ucsusa.org

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