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CONGRESSIONAL TESTIMONY

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Of the
Oversight and Government Reform Committee

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"Nuclear Power Federal Loan Guarantees: The Next Multi-Billion Dollar Bailout?"

Chairman Kucinich, Ranking Member Jordan, and Members of the Subcommittee: My name is Jack Spencer. I am the Research Fellow for Nuclear Energy Policy at The Heritage Foundation. The views I express in this testimony are my own, and should not be construed as representing any official position of The Heritage Foundation.

Thank you for inviting me to testify before the Domestic Policy Subcommittee of the Oversight and Government Reform Committee.

As we sit here today there are approximately 440 commercial nuclear reactors operating around the world. One hundred and four of them are operating in this country alone. With the exception of a few highly publicized and, I might add, mostly misunderstood, accidents, these reactors have operated safely, cleanly, and to the benefit of society for most of their lifetimes.

This is not to suggest that no problems have ever arisen. It is merely to acknowledge the good track record of nuclear power.

And it is this track record that essentially brings us here today to discuss the economic advisability of increasing the availability of loan guarantees for the construction of new nuclear power plants.

President Obama's 2011 budget requests an additional $36 billion in loan guarantee authority to nuclear energy projects. When added to the $18.5 billion previously authorized under the Energy Policy Act of 2005, the American taxpayer will now be subsidizing $54.5 billion in loans to the nuclear industry (if the budget is approved).

Limited loan guarantees can help overcome some near-term financing obstacles, but they are subsidies. If not used prudently, they will only act to prop up non-competitive industries. Furthermore, if they are not accompanied by policy reforms, they would simply magnify the uncertainty, and thus the risk to

taxpayers, caused by the underlying policies that make private financing difficult to attain in the first place.

Tolerable to a Degree

The clean energy loan guarantee program, under which the nuclear program resides, was created in 2005 to help move new clean energy sources toward market viability. A limited loan guarantee program that allowed industry and government to share risk while working through some remaining issues (such as waste disposal and unpredictable regulation) is appropriate.

Expansive loan guarantee programs, however, are fraught with problems. At a minimum, they create taxpayer liabilities, give recipients preferential treatment, and distort capital markets. Further, depending on how they are structured, they can remove incentives to decrease costs, stifle innovation, suppress private-sector financing solutions, perpetuate regulatory inefficiency, and encourage government dependence.

President Obama's expansion would transform the limited program into a much broader one that threatens to institutionalize the inefficiencies that subsidies create. Most basically, the program diminishes the incentive to reform problematic regulations and policies, such as the prolonged and unpredictable permitting process, because the loan guarantee protects investors against the risk posed by those policies. Instead of providing a near-term transition from an unstable past to a viable future during which policy reforms would take place, the expanded loan guarantee program would simply perpetuate the systemic inefficiencies and risk that gave rise to the need for the subsidy in the first place.

Market Distortion

The program, under which the government guarantees bank loans for power projects, was originally sold as a way to help move new, clean energy sources

toward market viability. Regarding nuclear power, given the past role of organized political opposition and overzealous regulators in making the industry uncompetitive, some limited, near-term help to reduce government-imposed risk was appropriate. In support of including nuclear energy as part of the program, former Secretary of Energy Spencer Abraham argued, "I am not calling for massive ongoing subsidies to the nuclear industry, [but] I do believe some federal financial participation is in order to help defray a percentage of the high, first-time costs associated with new generation construction." The same was argued for other energy sources as well.

But as America edges toward a massive expansion of the loan guarantee program, not all of which will go to nuclear, this starts looking very much like an ongoing subsidy.

And it is a subsidy that does not need to be extended. Consider an exchange between Senator Richard Burr (R-NC) and Secretary of Energy Steven Chu during the Secretary's confirmation hearing. Senator Burr suggested that the existing loan guarantee program was so poorly run that utilities were being forced to build reactors without the loan guarantees.

Emblematic of the subsidy-first mentality of modern U.S. energy policy, the conclusion was not that this demonstrates the market viability of nuclear power but that the subsidy program should be more workable. They were inviting government dependence.

And that is the problem with loan guarantees: They distort normal market forces and encourage government dependence.

How Loan Guarantees Distort the Market

One problem with the larger national economic debate is that we too often act as if money—or, more accurately in this example, savings or capital—grows on

trees. It comes from real people who have saved and invested and exists in finite amounts. By subsidizing a portion of the actual cost of a project through a loan guarantee, the government is actually distorting the allocation of resources by directing capital away from a more competitive project.

This signals to industry (be it nuclear, wind, clean coal, natural gas, or anything else) that it does not have to be competitive. It reduces incentives to manage risk and be independent, innovative, and efficient. Loan guarantees also distort the risk of failure businesses traditionally take into account when financing a project. The end result will be a new nuclear, wind, or solar industry that is built for the short run and not sustainable.

While a loan guarantee may be good for the near-term interests of the individual guarantee recipient, it is not good for consumers, taxpayers, or long-term competitiveness.

Loan Guarantees specifically distort the market because:

They remove incentives to decrease costs. The loan guarantee discounts the cost to build a project, and this artificial price reduction allows the recipient's project to be market viable at a point where it otherwise would not be. The consumer will eventually have to pay for this artificial reduction either through higher prices once the subsidy is removed or by being denied access to the less expensive technology that the guarantee recipient displaced. Eventually, these inefficiencies will result in higher electricity prices for consumers.

They stifle competition and innovation both between sectors and within sectors. The loan guarantee artificially reduces the cost of capital, which allows a recipient to offer its product at below actual cost. This removes the incentive to look for less expensive or more competitive options. If a product is not competitive in a free market, then it should be allowed to adjust or fail.

Part of the success of nuclear energy will depend on competition within the industry. While a utility might not be able to afford a single large reactor without subsidies, it might be able to afford multiple smaller rectors or a reactor based on some other technology. This would create competition, and the subsidized technologies would have to either reduce costs or lose market share. This competitive environment, with other energy sources and within the nuclear sector, would force the entire industry to become more efficient, innovative, and cost-effective.

They perpetuate the regulatory status quo. Nuclear energy could transform how the nation produces energy. But one of the big problems with the success of nuclear power in the United States is not that it lacks subsidies but that the regulatory environment for nuclear power does not promote growth, innovation, or competition.

Assuming the permitting process works perfectly, it takes the Nuclear Regulatory Commission four years to permit a new reactor. That is too long. Furthermore, the commission is prepared to permit only one type of reactor, essentially limiting competition to a handful of companies and one technology.

Another regulatory obstacle is the nation's dysfunctional nuclear waste management strategy. The federal government has taken responsibility of nuclear waste (or used fuel) management, allowing nuclear power producers to largely ignore waste production—a critical element of the nuclear fuel cycle—when developing their business models. Because each nuclear technology produces a unique waste stream that has its own characteristics, some reactor types would be more attractive than others depending on how the waste was being managed. But so long as nuclear operators do not have to consider waste management, reactors with attractive waste characteristics can be ignored.

Furthermore, developing a sound approach to waste management would substantially reduce investor risk, which would be reflected in lower financing

costs. Guaranteeing the loans reduces near-term pressure to fix this ongoing problem.

They suppress private-sector financing solutions. Companies invest in major projects with substantial risk all the time and do so without government loan guarantees. If they believe that the potential reward justifies the risk, they figure out a way to secure financing. This might include forming a consortium with other firms to share risk or developing an industry insurance scheme of some sort. Numerous companies exist in the private sector to insure large projects. Finding a way to develop an investment is at the heart of capitalism. But loan guarantees distort this process and remove the incentive to come up with better long-term solutions.

If Loan Guarantees Are Expanded, They Must Be Coupled with Reform and Conditions

The United States energy consumer and taxpayer would be best served by the federal government simply resolving outstanding regulatory issues. This would increase investor confidence and reduce the need for expanded loan guarantees. However, if Congress moves forward with a loan guarantee expansion, accompanying the guarantees with the following conditions would help reduce their market distorting effects, protect the taxpayer, and ensure a strong, market viable nuclear industry.

End Further Loan Guarantees. Transforming a limited program into a permanent subsidy virtually guarantees that the negative potential impacts of loan guarantees will come to pass.

Expanding the program by $36 billion already diminishes near-term support for reform efforts. Stopping the program at $54.5 in total loan guarantees would at least limit the damage and provide a deadline whereby industry and government must have resolved their outlying issues.

Ensure That Recipients Pay the Full Cost of the Subsidy. As the program stands, loan recipients are responsible for paying the subsidy costs—a determination of the long-term liability to the federal government of the loan guarantee. The cost, which is calculated based on the risk of default and taxpayer losses as a result of default, is required to be paid either by an appropriation to the Department of Energy or by way of payment from the guarantee recipient.

The President's budget did not request funds to pay for the subsidy cost, however, legislation introduced over the past year has.[1] This legislation was the result of controversy over what the actual subsidy costs should be. Many nuclear advocates argued that it should cost 1-2 percent of the project, whereas nuclear critics argued that it should be closer to 50 percent. Accurately assessing the risk will ensure that the market integrity of nuclear power is sustained and reflect the true risk associated with nuclear power.

Given that problematic public policy has caused much of the risk associated with new nuclear plants, a true financial assessment should provide a market incentive to reform the policies that give rise to the risk to begin with. This will occur, however, only if the true cost of the subsidy is assessed and if guarantee recipients are responsible for paying that cost.

Make Recipients Privately Refinance within Five Years of Project Completion. The most compelling argument for loan guarantees is that political and regulatory unpredictability have made competitive private financing difficult to secure. Since government is a primary source of this unpredictability, it is only fair that government offset the costs associated with high risk.

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[1] Although the President's budget did not request funding to cover the subsidy costs for nuclear loan guarantees, it did request $500 million to cover the subsidy costs for renewable projects. This funding should be eliminated. The Clean Energy Act of 2009, introduced by Senators Lamar Alexander (R-TN) and James Webb (D-VA), authorized $10 billion to fund the subsidy cost of the $100 billion nuclear loan guarantee program offered in that legislation.

But once the project is complete, that risk should be eliminated. Thus, rather than a long-term financing option, the loan guarantee program should be viewed as a bridge program that helps to protect investors against project failure during its most vulnerable stage: licensing and construction. Upon completion, loan recipients should privatize liability by privately refinancing without support of additional taxpayer backing.

Limit Guarantees to No More Than Two Plants of Any Reactor Design. Establishing regulatory integrity should substantially reduce the risk associated with bringing innovative technologies to market, thus removing the need for a loan guarantee. Completing the permitting process for two plants that share a single reactor design should be sufficient to establish that integrity.

Therefore, Congress should limit loan guarantees to no more than two plants of any reactor design. This will also ensure that no one reactor design monopolizes the program and that federal regulators diversify their regulatory experience.

Limit to Two-Thirds ($36 Billion) of the Loan Guarantee Program That Can Support a Single Technology. Because regulatory support is a necessary prerequisite to reactor use and the regulatory environment favors large, light water reactors (LWRs), nuclear investors tend toward this technology as it poses the least regulatory risk. Ensuring that the subsidy is not consumed by a single reactor type should help to break the regulatory monopoly currently held by LWRs by lowering the relative risk of emerging commercial nuclear technologies.

As the Nuclear Regulatory Commission (NRC) builds regulatory expertise to meet this demand, it will be breaking down one of the primary barriers that small and modular reactors currently face: a lack of regulatory support.

If Not Subsidies, Then What?

Instead of developing a subsidy package that merely perpetuates uneconomical and obsolete policies and practices, the time is ripe to engage in a major overhaul of how the U.S. government interacts with the nuclear industry. All of the major policies, regulations, and legislation that govern America's nuclear industry are from a different time and place. They were either put in place to achieve some national objective that is no longer relevant or to govern an industry whose future was very different from today's.

The fact is that the modern nuclear industry and the regulation that governs it grew out of a set of national security requirements. To achieve those critical national objectives, there was a legitimate need for close private/public partnerships, and the original Atomic Energy Act of 1954 reflected that by establishing a government entity, the Atomic Energy Commission, that oversaw the development of military and civilian uses of nuclear power and the regulation of those uses.

Over time, the industry evolved and so did the regulations that govern it. The Atomic Energy Act went through a major overhaul in 1974 with the Energy Reorganization Act, which established the Nuclear Regulatory Commission and the Department of Energy. This placed the promotion of nuclear energy in the Department of Energy and the regulation of those activities with the NRC.

The next major reorganization came under the 1982 Nuclear Waste Policy Act, which placed the responsibility for nuclear waste disposal with the federal government while the cost of those activities would be paid by industry.

And finally was the Energy Policy Act of 1992, which attempted to streamline the burdensome and inefficient two-step permitting process. The Act created a one step process by which the applicant could receive both a construction and operating license.

With each of these steps, we see a movement to disconnect commercial nuclear activities from government. The result of this evolution is the nuclear industry we have today. It is an industry that knows how to operate in the free market and has done so very successfully. America's 104 reactors exist largely without subsidy and have become some of the most efficient and safest energy-producing machines ever built and operated. America has a growing private fuel enrichment industry. The private sector is investing in nuclear infrastructure and education.

However, the work to fully commercialize and realize the full potential of nuclear power is not finished. Though one foot is firmly planted in the free market, one foot remains shackled by the federal government. Whether through the promise of subsidies, regulatory obsolescence, unworkable waste management policies, or anti-competitive behavior in the DOE, current policies are not working. That is because the industry has evolved and ready to take the final step towards full commercialization.

That is why the time has come to take a hard look at nuclear energy in the United States and develop a new governing set of regulations and policies that recognize the present state of nuclear energy in the U.S. and its potential.

Such reorganization should achieve the following:

Reform the Arduous Permitting Process for New Nuclear Power Plants. Congress should institute a fast-track program for granting construction/operation permits for certain new plants. To qualify, a new plant would have to have a NRC-certified design, be located on a site that already has a plant, and be operated by an experienced nuclear operator.

Prepare the NRC to Regulate Multiple Technologies. The NRC is built to regulate large light water reactors. It simply does not have the regulatory expertise to efficiently regulate other technologies, and building that expertise takes time.

Helping the NRC to develop that expertise now would help bring new technologies into the marketplace more smoothly.

Modernize Nuclear Waste Management. Congress should authorize nuclear waste producers to finance and manage their own spent nuclear fuel however they see fit so long as public health and safety is protected. This must include repealing the fee paid to the federal government for waste disposition activities. Fees already paid to the federal government should either go toward financing geologic storage or be returned to the ratepayers.

Support the NRC's Authority to Determine the Safety of Yucca Mountain. The NRC should be allowed to review the Department of Energy's permit application for the Yucca Mountain repository and determine if it can be constructed and operated safely. If it is deemed safe, Congress should allow the nuclear power industry to negotiate the eventual opening of the repository with the people of Nevada. If the Administration wants to oppose Yucca Mountain, it should not evade congressional authority, enacted statute, or the established regulatory process. To terminate the Yucca project legitimately, the Administration should seek to overturn current policy through legislative initiative.

Conclusion

In conclusion, a true nuclear renaissance cannot be micromanaged from Washington. While subsidies and government support programs may have been part of the emergence of America's nuclear energy industry, it was also this dependence that helped to bring it down.

But the industry did not die. Indeed, just the opposite happened. As government support waned, America's private sector took its existing reactors and made them some of the safest and most efficient energy-producing machines in the world. America's nuclear operators know that nuclear energy is a safe, affordable, and clean source of power, and that is why they invest in it. And if Washington would

put the right free-market policies in place, the stage would be set for not just a handful of new reactors but a sustainable nuclear resurgence.

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