



December 21, 2005

Mr. Kenneth Wade
Office of Energy
U.S. Department of Energy
Forrestall Building
1000 Independence Avenue, SW
Washington, DC 20585
Sent via e-mail

Dear Mr. Wade:

I am submitting this letter pursuant to your notice in 70 FR 226 requesting comments on Standby Support for Certain Advanced Nuclear Reactors as authorized under the Energy Policy Act of 2005. I have studied government subsidies to energy for more than 15 years, including their scope, magnitude, and the distortions they create in energy markets. This work has included a detailed review of the range of federal subsidies to nuclear power, evaluating the degree to which new and existing federal subsidization of nuclear power will shift most of the capital risk from investors onto taxpayers.

The first obvious point to make is that federally-provided plant delay insurance will generate yet another multi-billion dollar subsidy to the nuclear industry, shifting market and construction risks most appropriately borne by the private sector onto the public. The shifting of basic risks of nuclear power away from investors has been endemic in the nuclear industry since its inception, has cost the federal taxpayer scores of billions of dollars, and has unfairly disadvantaged competing energy resources.

This core issue with delay insurance aside, many of the proposals for how to structure this program create a number of substantial risks for both the federal government and competing energy resources. Careful construction of the delay insurance program can go a long way to minimizing these risks. The remainder of my comments focus on these potential risks and outlines some options DOE can pursue to minimize them.

I. Structural Concerns With Delay Insurance

Delay insurance creates a number of structural problems with proper management of federal financial risks, and with conflicting incentives for federal agencies. These include a potential conflict between the federal role as overseer of nuclear plant safety and a new role of licensing expeditor; high potential for corruption in the allocation of delay insurance rights; high litigation exposure over the allocation of delay insurance

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rights; and measurement problems regarding what losses would be covered under the contract. These issues are discussed in turn.

A. Financial Exposure for Delays Conflicts with Safety Oversight Role

The traditional federal role in nuclear reactor construction and oversight has been to ensure that plant design and operation are safe. There have sometimes been concerns about whether agencies such as the Nuclear Regulatory Commission (NRC) were overly influenced by its industry clients. In terms of financing, however, the NRC has not historically been at financial risk for carrying out its oversight duties. This was true even if the result of that oversight role was to slow construction or operation of the privately-owned plants.

Under the delay insurance program, the safety regulators will now clearly know that their actions can have immediate and very large financial costs (billions of dollars) to taxpayers. This creates an additional layer of complexity to their job, and generates a high likelihood that they will be subjected to inter-bureaucracy pressuring to ensure their actions do not result in delayed plant openings. Ensuring that this pressure does not result in bypassing appropriate safety review and information gathering will be quite difficult.

NRC Commissioner Greg Jaczko stated at a Nuclear Policy Research Institute Conference in last month that it would be quite challenging for the NRC to add the number of qualified staff it needed to deal with new plant licensing. He further noted that the Commission would be competing with the industry for the same type of employee, pulling from a limited pool of qualified candidates. The obvious implication of insufficient staffing is either that new plants are delayed or that applications are reviewed more rapidly and with less rigor than appropriate in order to avoid opening delays. Neither outcome is acceptable. With the first, there would be a large financial cost to the taxpayer due to the delay insurance. With the second, there would be insufficient review and oversight of new nuclear plants, creating a large potential safety cost to populations surrounding the plants.

It is imperative that NRC and DOE issue a detailed, properly vetted, and publicly available memorandum of understanding on how they will manage this critical conflict. The memo must demonstrate the manner in which they will ensure the safety-oversight role of the federal government for nuclear reactors is not compromised by the pressures for rapid licensing and operation set up by the multi-billion dollar financial exposure under the delay insurance program.

B. High Corruption Risk in Allocation of Delay Insurance Rights

The delay insurance program has a number of characteristics that make it prone to corruption. These include the large subsidy size and small number of subsidy recipients; the wide discretion in how the subsidies are allocated; and the complexity of the terms and conditions for which the insurance will be provided.

- **Size of subsidies and small number of recipients.** With only six insurance contracts being granted, the number of subsidy “winners” will be very small, but the financial gains to those winners very high. Two reactors get \$500 million in coverage each with no deductible. Four additional reactors each get \$250 million in coverage, but with a deductible in the form of absorbing 180 days of losses prior to getting coverage, and then being covered only for 50% of the losses. Compounding the fact that there are so few subsidies being granted is the large incremental benefit for being among the first two contracts, rather than among the subsequent four.
- **Wide discretion in how subsidy recipients are chosen.** Based on both language in Section 638 of the Energy Policy Act of 2005, and in a variety of the commentary in the DOE FR notification, it is clear that the Secretary of Energy and his related agents have fairly wide discretion with the subsidy. This includes determining how the subsidized insurance contracts will be awarded, who will receive them, what terms they will entail, and how much will be covered. This type of latitude often results in a non-transparent process which is difficult to oversee, and for which influencing key decision makers through bribery or other means can alter the allocation process in sub-optimal ways.
- **Complexity of insurance contracts.** The insurance contracts themselves are quite complex, and small alterations in the wording of covered conditions can have quite large implications for how likely and how large payments under the program will be, though be difficult to detect in advance by most reviewers.

While we would all like to believe that corruption is a developing world problem, the recent exposure of the military contracting bribery activities of Representative Randy “Duke” Cunningham (R-CA) serves as a clear reminder that it is not. The structure of the program can, and must, be done in such a way that the corruption and bribery risks are minimized.

C. High Litigation Risk Associated With Allocation of Delay Insurance Rights

Related to the corruption risks of the allocation of delay insurance rights are the very large litigation risks. Firms or consortia that do not receive these very valuable insurance subsidies have a strong incentive to challenge the allocation decisions in court. The incentive to sue rises as the transparency of the subsidy allocation decision declines. As noted above, transparency in the rules appears to be low, and discretion of a small number of administration officials quite high.

DOE notes (FR page 71108) that concerns over policy allocation and terms “can be addressed best by the Department being willing to enter into binding agreements with sponsors that submit COL [construction and operating license] applications to the Commission, at any time on or after such an application is submitted. These agreements between the Department and project sponsors would not themselves be standby support contracts, but would commit the Department to enter into standby support contracts under

section 638 with the sponsors of the first six reactors which a COL is granted and construction commenced.”

This approach would seem to create an enormous incentive to be first to file with the Commission. Where early filers did not have the most viable or comprehensive plans, a litigation risk for the government would exist. Where early filers commenced construction commensurate with their order in the filing line, but then progressed or completed that construction at a slower rate than subsequent filers, significant litigation risk would seem to exist.

Issues regarding the terms under which a policy could be cancelled would also seem ripe for litigation, given the magnitude of the subsidy to the insured. So too would approaches that allow Secretarial discretion in providing different levels of funding (subsidy) for each eligible facility (FR p. 71109).

The program must be structured with the recognition that allocations are at high risk for litigation, and steps taken to mitigate that risk from the outset. In addition to the \$2 billion in federal subsidies the program provides by intent, it makes no sense to incur tens of millions of dollars in additional costs due to litigation resulting from poor program design.

D. Measurement Problems Regarding Covered Losses

As your request for comments states, there are quite difficult problems regarding this type of insurance in terms of what is a covered loss. It will be appropriate for DOE to summarize with candor and clarity which of these areas remain murky even after you have processed all comments received. Trying to paper over these gray areas will simply open the Department to litigation years from now as industry brings suit for coverages that DOE did not think it had offered.

As a model for this problem, DOE should usefully examine the growing financial exposure it faces for Yucca Mountain delays, where it will now be paying for on-site storage of spent nuclear wastes at more and more reactors around the country. In that case, as potentially in this one, the risks for delays in providing a technically complex and politically contentious service were shifted from the private sector to the public sector with little or limited understanding of the challenges to deliver on time. An existing settlement with Exelon will cost the federal government \$600 million in storage fees through 2014, with costs expected to rise sharply after that point if a permanent repository has not yet been opened. Extrapolating that settlement to the entire industry (scores of suits are in process) generates a federal cost of \$3.6 billion through 2014, though estimates for the total federal liability for this poorly structured contractual agreement range as high as \$60 billion.

Actions regarding third parties (e.g., state governments, public citizens) that delay the construction process or by the NRC due to safety concerns, would all seem potentially appropriate outcomes in a democracy. It is critical that DOE be able to differentiate appropriate delays from delays due to incompetence or negligence in how it structures policies. Under no circumstances should legitimate delays to provide adequate

oversight to the construction process, or to design problems that become evident only after construction has commenced, trigger massive losses to the taxpayer under Section 638.

II. Options for Program Structure to Reduce Cost, Corruption, and Litigation Risks

One positive aspect of the fairly vague language in Section 638 of the Energy Policy Act is the latitude to adopt a number of strategies to more effectively control the costs and public sector financial risks of this program. These include the use of market-based approaches to allocate the subsidized insurance contracts, the syndication of a portion of the insurance to private insurance markets, and the detailed up-front stipulation of the terms that any successful nuclear utility must abide by if they want to partake of this particular government largesse.

A) Auction Rather than Allocate Subsidized Insurance Contracts

Competitive bidding is common in many state-level renewable energy portfolio programs. While all eligible energy sources may receive subsidies that help them meet prevailing market conditions, the size and duration of these subsidies can be minimized by competing the eligible sources against each other. Those eligible resources able to enter the market with the smallest level of public subsidy win the competitive process.

This approach should be used in the allocation of subsidized delay insurance for new nuclear power plants. Eligible recipients would submit bids on the level of guarantee they required in order to bring a new plant to market; the plants able to do so with the least public subsidy would get the contracts.

The auction approach would solve a number of important problems. First, it would minimize the public outlay associated with the programs, as not every new build consortia would require the full level of potential subsidies under Section 638. If the objective of the legislation is to encourage new build, and this new build can occur with a lower level of public subsidy than the arbitrary cap included in the current language, the policy objective of the law would be achieved at a lower public cost.

Second, an auction approach would address the high corruption and litigation risks associated with administrative allocation of such valuable rights to a small number of parties. This includes who gets the particular contracts, and possible differences in the covered amounts for each one. Third, because winners of the first two (most valuable) insurance contracts would likely win only if they absorbed a sizeable portion of the overrun risks themselves, the auction approach would more properly align the incentives of parties by effectively creating a deductible that currently exists only on contracts 3-6.

The viability of the auction approach rests in the ability of the Secretary to accept payments from third parties to cover the risks of the insurance plan. Note that Section 638 states “The Secretary may receive and accept payments from any non-Federal source, which shall be made available without further appropriation for the payment of the covered costs.” There is no reason to believe that the third party could not also be the

insured party, allowing the policy recipients to pay a portion of the policy coverage level (of either \$500m or \$250m) into the program. This would effectively discount the taxpayer exposure under the rule. An auction approach, which would merely serve as the mechanism to objectively determine which parties would contribute what funding to specific contracts, would be permissible under the law.

B) Syndicate Portion of Remaining Risk Exposure to Private Insurer

For the face value of the policy, the auction would reduce the total federal exposure because the winning bids would be those able to absorb a portion of that risk internally. For the remaining exposure, it would make a good deal of sense for the federal government to syndicate at least a portion of it to private market insurers or reinsurers.

Syndication has a number of important benefits for the quality of federal oversight for this program. First, it reduces the aggregate federal exposure for nuclear plant construction delays. This is useful, given that a single significant nuclear accident anywhere in the world would have ripple effects through the US sector, likely triggering payments on all of the contracts. Second, syndication would ensure that independent third parties would review, comment, and modify insurance contracts. The federal government is not always particularly good at setting up detailed and comprehensive insurance contracts that appropriately limit taxpayer exposure to losses. Given the wide ranging lack of experience with the COL process, the new technologies deployed, the difficulties with the last round of plant builds in the country, and high political pressure to site and build new plants (often resulting in tactical or technical errors), the Section 638 insurance contracts would seem ripe for improper federal risk management. Syndication can serve as a reality check, helping to mitigate these risks. Third, syndication generates market price information for the risks being shifted to taxpayers, quite useful when trying to gauge the relative interfuel distortions caused by various federal policies.

C) Require Eligible Parties to Contract for Standby Capacity in Advance

The delay insurance will cover losses associated with having to meet power contract commitments with an alternative supply versus the cost to provide the energy had the reactor opened “on time”. To ensure accurate comparisons, DOE must require all parties to establish these standby contracts (including pricing) in advance of being selected as an insured party. Without this requirement, applicants have strong incentives to game the system to maximize payouts in the event of a delay; and/or would be paying for short-term spot power purchases at higher prices than would have been available had they entered long-term standby arrangements at the outset of construction. In conjunction with the auction system (under which all plants will likely bear some portion of the overrun risks themselves), applicants will not have an incentive to boost standby power costs in order to boost the federal payments should there be delays.

To the extent that spot-market prices at the time of delay are less expensive than the pre-contracted standby capacity, the lower of the two rates should apply.

D) Restrict Delay Payments to Costs of Delay, Not Pay-down of Principal

Section 638 allows the insurance to pay for the “principal or interest on any debt obligation of an advanced nuclear facility owned by a non-federal entity.” The logic of this wording is that loan payments, even in the early years, may include some amortization of principal. If that portion of the payment is not made, the plant would still be in default. However, unless a plant is cancelled, there seems to be no justifiable reason for the principal to become a long-term liability of the taxpayer. Principal payments made during over-runs to keep a plant out of default should be reimbursed later (plus interest) once the plant begins operations. Federal insurance contracts should include a clause to this effect, stipulating that the principal component of these payments would be reimbursed to the federal government once plant operations begin, unless the plant is cancelled.

Thank you for your attention to these comments, and please enter them into the official record.

Sincerely,

Doug Koplow
Earth Track, Inc.