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Nuclear Waste Management: Minimum Requirements for Reforms and Legislation

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Senator Ron Wyden (D-OR), chairman of the U.S. Senate Committee on Energy and Natural Resources, is expected to put forth a bill to reform nuclear waste management in the U.S. According to media reports, the bill under consideration maintains the same basic structure of America's current, failed system for waste management.¹

While such a bill might meet some near-term interests of the federal government and the nuclear utilities, it would make implementing the reforms necessary to fix nuclear waste policy over the long-term almost impossible. Completely privatizing the current system overnight may not be practical, but instituting a reform effort that transitions from a government-run approach to one driven more by market forces and corporate responsibility can be achieved.² Indeed, the following criteria would do just that and should be the minimum requirements for any nuclear waste management reform effort to move forward.

Criterion #1: Complete the Yucca Mountain Permit Review at the NRC. The Nuclear Waste Policy Act of 1982, as amended, obligates the Department of Energy (DOE) to submit an

application to the Nuclear Regulatory Commission (NRC) for the repository and gives the NRC a specific time frame within which to review the application. The Obama Administration, in defiance of the law, has attempted to terminate the project, and the NRC, despite being almost complete with its review, has stopped all work on its review in deference to Administration policy.

Regardless of the NRC's final conclusion, the nation deserves to know the outcome. It is worth bearing in mind that finishing the application does not necessarily mean that the repository will be built. It simply allows the nation to move forward with developing a long-term solution to nuclear waste management. If the NRC approves the Yucca permit, then Americans can debate how to move forward from that point.³ If it denies the permit, the nuclear industry and federal government can then begin the process of finding a replacement.

Criterion #2: Permit a Permanent Repository First. America is currently operating under a system of interim storage facilities, namely sites used for defense nuclear waste and existing nuclear power plants. More formally permitting a consolidated interim storage site, as the DOE currently recommends, eliminates any incentive to build the permanent site that the nation needs.

This is due to a deal that the utilities struck with the government in 1982, which handed responsibility for waste management and disposal over to the government for a set fee unconnected to the actual cost of service. The utilities have since been paying the U.S. Treasury about \$750 million per year to take the waste off their hands. But the government completely defaulted on its obligation and is now

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accumulating at least \$500 million per year in liability costs that it owes to the utilities.

Interim storage is a quick but shoddy fix for both problems: It gets the waste off the utilities' sites and eliminates the DOE's growing liability.⁴ It does nothing, however, to solve the larger problem. Ultimately, the nation needs a permanent repository. There is almost no political or technical disagreement over that fact.

Criterion #3: Make Producers Responsible for Waste Management. Whether in France, Finland, Japan, or Sweden, the one common thread to all functioning nuclear waste programs is that the waste producers are responsible for waste management. In the U.S., private nuclear plant operators produce waste, but the government is responsible for managing and disposing of it. This removes the incentive for those who financially depend on waste production—the nuclear utilities—to have any interest in how the waste is managed. Washington, however, has proved unable to implement anything close to a workable solution.

This outcome is predictable given a structure that fundamentally misaligns incentives, responsibilities, and authorities. While a full transfer at this time may not be realistic, setting in motion a system that leads to that transfer is and should be a minimum criterion for any legislation.

Criterion #4: Accurate Pricing for Management and Disposal Services. Under the current system, nuclear utilities produce waste and then pay the federal government a flat fee for an undefined, not-rendered service. The lack of these market forces in this system is at the heart of America's current problems with nuclear waste policy.

Accurate pricing is critical to any efficient marketplace. Prices provide suppliers and purchasers a critical data point to determine the attractiveness of a product or service, and they give potential

competitors the information they need to introduce new alternatives.

Though full-scale reform of pricing for waste management would be preferred, a more transitory approach would be acceptable. To establish accurate pricing at a minimum, the system should allow waste producers to pay directly for services rendered. The payment should only be for actual services rendered, and the amount should be for the actual cost of the service.

Criterion #5: Allow for Competition in Waste Management. Though full privatization of waste management services should be the new *modus operandi*, a transition that begins with simply allowing for competition would meet this criterion. For example, the government could still provide waste management services for a price (as described above), but any legislative reform should, at a minimum, allow waste producers to seek waste management services from NRC-regulated, nongovernment entities. So if a company can provide waste management services more economically than government, then the waste producers could choose the company's service.

Under such a system, waste producers would have the incentive to determine what approach or combination of approaches would best meet their unique waste management needs. For example, a utility that operates 15 reactors would likely have much different waste needs than one that operates only one or two. This divergence in needs would likely increase as new reactor and fuel technologies are introduced into the marketplace.

Real Nuclear Waste Policy Reform. Policies that introduce market forces and corporate responsibility are the key that could finally unleash the nuclear renaissance to let nuclear energy succeed (or fail) on its own merits. Connecting waste management to nuclear power providers engages those

1. Alex Guillen, "Senate Gives Symbolic Thumbs Up to KXL," *Politico*, March 25, 2013, <http://www.politico.com/morningenergy/0313/morningenergy10290.html> (accessed March 27, 2013).

2. Jack Spencer, "Blue Ribbon Commission on Nuclear Waste: Missing Opportunity for Lasting Reform," Heritage Foundation *Backgrounder* No. 2600, August 22, 2011, <http://www.heritage.org/research/reports/2011/08/blue-ribbon-commission-on-nuclear-waste-missing-opportunity-for-lasting-reform>.

3. Jack Spencer, "Yucca Mountain and Nuclear Waste Policy: A New Beginning?," Heritage Foundation *WebMemo* No. 3085, December 16, 2010, <http://www.heritage.org/research/reports/2010/12/yucca-mountain-and-nuclear-waste-policy-a-new-beginning>.

4. Jack Spencer, "DOE Nuclear Waste Plan Ignores Basic Flaw of Current Policy," The Heritage Foundation, *The Foundry*, January 14, 2013, <http://blog.heritage.org/2013/01/14/doe-nuclear-waste-plan-ignores-basic-flaw-of-current-policy/>.

who have the means and know-how to develop long-term, sustainable solutions to waste management and allows government to focus on doing a better, more efficient job of issuing permits, regulating, and oversight.

Instituting such reforms could yield multiple outcomes—all of which are better than the current system. It might be that the private sector just cannot provide some or all of waste management services as well as the government, in which case the government entity would exist as the sole waste

manager. More likely though, America will see that the private sector can provide the entire spectrum of services better than government can, and the new government entity will eventually cease to exist. No matter what scenario plays out, this framework provides waste producers the opportunity to choose what works best for their needs.

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