

✘ Anyone who is serious about combatting climate change must be serious about considering nuclear power. Fission generation produces virtually no emissions, and given the difficulties we will have in reducing the world's carbon footprint, to ignore nuclear power is to my mind irresponsible.

But "considering" nuclear power hardly means adopting it. Nuclear power plants are fabulously expensive to build, maintain, and keep safe. Moreover, the Achilles Heel of nuclear power has always been nuclear waste, which is not only potentially devastating on a variety of levels, but from a lifecycle point of view substantially reduces the emissions savings from it. These technical issues precede any reasoned attempts to deal with the issue from a policy standpoint.

That's why it was good to see the latest issue of Foreign Affairs devote space for [a useful article on the issue](#) (sub. required), by Ernest Moniz, Physics Professor at MIT and director of the Institute's Energy Initiative. Moniz' article is titled "Why We Still Need Nuclear Power: Making Clean Energy Safe and Affordable". That's a misnomer: most of the article lays out in impressively balanced style, many of the formidable technical and financial difficulties as well as the potential benefits of relying on nuclear power as a potential wedge in fighting climate change. Its consideration of new generation nuclear technologies that require less up-front capital costs is particularly instructive, although as Moniz admits, it is very early and has not received serious testing. Read the whole thing.

But what about waste? That's where the article gets maddeningly vague. Here is the money graf:

Washington must find an alternative to Yucca Mountain for storing nuclear waste in the long run. As it does so, it must adopt a more adaptive and flexible approach than it did last time, holding early negotiations with local communities, Native American tribes, and states. Sweden upgraded its waste disposal program with just such a consensus-based process, and for a dozen years the U.S. Department of Energy has operated a geological repository for transuranic waste near Carlsbad, New Mexico, with strong community support. The government should also investigate new approaches to disposal. For example, it might make sense to separate out the long-living transuranic elements in nuclear reactor waste, which constitute a nasty but very small package, and dispose of them in a miles-deep borehole, while placing the shorter-living materials

in repositories closer to the surface. Given the sustained challenge of waste management, an overhaul to the existing program should include the establishment of a new federally chartered organization that is a step or two removed from the short-term political calculus.

That's it? It's not quite clear what this means, or really whether it means anything. Maybe the United States does not use a Swedish process because, well, it's not Sweden. It's a lot easier to build consensus in a smaller and more homogenous state. To be sure, sometimes good processes can build consensus, but we need to know a **lot** more before assuming that that is the case. What exactly happened in Carlsbad to make a nuclear waste depository, usually the mother of all LULUs, a good neighbor?

Then there is the vague word "nasty" to describe potentially catastrophic long-living transuranic nuclear waste buildups. How nasty is nasty? (Cue [Janet Jackson](#)). What do we know about these risks, how they can be mitigated, what their costs are, etc. etc. etc.? And a new federal bureaucracy insulated from politics to carry plans forward? That is so early 20th century, and in any event, good luck with that.

As I suggested above, I'm an agnostic on the issue, and I don't think we can avoid balancing costs and risks when it comes to energy policy. To reject research on the matter seems self-defeating. But if that's the best that advocates for nuclear energy can do, then they've got a very long way to go.