



Energy under the Trump Administration

Nuclear Energy and the Coming Administration

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By Will Davis

* The past eight years have witnessed renewed momentum for advanced nuclear energy technologies, but there is concern that the momentum may be lost

* The incoming administration may halt some initiatives, but would seem likely to advance others

There has been much speculation in the press about the policies which will be enacted by the incoming Donald Trump administration--and as well, much speculation about which policies will be truncated or eliminated. Since nuclear energy is a key component of America's clean energy generation, there is concern among proponents of nuclear energy that all of the positive momentum that nuclear energy has achieved in the eight years of the previous administration might be lost. It's important then to examine what that momentum is, why it exists, and why it's still far too early to write off nuclear energy from a policy standpoint.

Momentum

Nuclear energy's major face to the public, and to those seriously interested in environmental issues, has been that of highly advanced concepts in the field. These concepts, loosely known as "Gen-IV" reactors, are touted as being more compact, more efficient, more versatile, and much safer than the existing LWR or Light Water Reactor technology widely in use. To this end, several of the previous administration's initiatives have been focused on this sector.

In November 2015, the White House held an almost unprecedented "Nuclear Energy Summit," in which many stakeholders in advanced nuclear technologies were invited to participate. This summit was held concurrently with a declaration by the White House that the FY2016 budget included "more than \$900 million for the Department of Energy (DOE) to support the US

civilian nuclear energy sector by leading federal research, development and demonstration efforts in nuclear energy technologies, ranging from power generation, safety, hybrid energy systems, and security technologies, among other things." [i] The administration also pointed out at that time that \$12.5 billion in loan guarantees were still available for companies and entities engaged in developing advanced nuclear technologies.

However, the centerpiece of the announcement that November was even more ambitious: the Department of Energy launched its GAIN or Gateway for Accelerated Innovation in Nuclear. This program provides a unified access point for "technical, regulatory and financial support necessary" [ii] to develop, commercialize, and license advanced nuclear technologies in the United States. While the programs to network those developing advanced reactors (and to provide additional funding for them) have received the most coverage, there were also programs announced to both assist the existing LWR nuclear fleet and advance light water-cooled Small Modular Reactors (SMR). It is fair to say that the GAIN initiative covered most of the bases in advancing nuclear energy, and some of the bases in keeping light water competitive.

Change of Course

It's not any sort of secret that serious concern for the environment (specifically, the reduction of greenhouse gases) has been the driver behind both the new interest in Gen-IV nuclear energy, and the outgoing administration's push for nuclear energy R&D (as part of the well-known "all of the above" clean energy strategy). However, the incoming administration is sending serious and clear signals that there is about to be a fundamental shift in leadership, which might lead to fundamental changes in policy.

To find such prospects of change, one needs to look no further than the nominee to head the Environmental Protection Agency, Republican Oklahoma Attorney General Scott Pruitt. Pruitt has been a vocal opponent of the EPA Clean Power Plan, suing the EPA over it more than once as Oklahoma AG. The nominee is also on record as opposing the EPA Clean Power Plan.

Opposition to the Clean Power Plan is not in itself a bad thing so far as nuclear energy is concerned. As was proven by some intrepid and deep diving members of the American Nuclear Society in 2014, under the Clean Power Plan as written, it's possible (and, in the case of 15 states, beneficial under the plan) to shut down nuclear plants and replace them with combined cycle, natural gas fired plants. This is a serious contradiction, in terms of the reduction of environmental impact intended by any plan calling itself "Clean Power." What is needed is a complete rewriting of the plan to give nuclear energy not just credit as clean, but rather a dedicated place, by name, as a clean energy generator. It's not impossible to imagine that an incoming Republican administration would be far more favorable to nuclear energy if (more likely, when) it revisits, revises, and reissues the EPA Clean Power Plan.

Push Instead of Pull

There may be another factor put into play in the upcoming administration which would change the direction of nuclear energy in the United States. At present, nuclear energy could be thought of as being pulled from the front, by policy (which means Federal resources and funding) into a future of advanced reactors (as well as sustainability of the existing light water type). Even if this is reduced somewhat under the Trump administration, it's possible that a push from behind may yet occur: specifically, movement on the spent nuclear fuel issue.

Until recently, Harry Reid (D) of Nevada had ensured that no movement could be made on restarting the licensing of the already-built Yucca Mountain spent fuel repository. In fact, his hand-picked NRC Chairman, Gregory Jaczko, halted the licensing process unilaterally. Since

November, however, there have been steady anonymous mentions to the press by Trump transition team insiders that serious consideration is being given to forcing the Yucca Mountain licensing process back into motion. There may be some real support for this idea in the Senate: John Shimkus (R-Illinois) was quoted by Bloomberg as saying that there was bipartisan interest in getting the whole spent fuel "monkey" off the back of the Federal government,[iii] which has been responsible since 1982 for taking possession of spent fuel from commercial nuclear plants but has not moved one single cask to any sort of repository or interim facility.

In some states, like Kentucky, the primary legal objection to nuclear plants being built is specifically the spent fuel issue. Should the Federal government finally be able to start in motion a process by which it would move spent fuel to either interim or permanent storage, we might see a serious objection to nuclear energy overall be removed, and might even expect progress in pushing for new nuclear in states previously locked out by the spent fuel issue.

States are Moving Regardless of Federal Policy

It seems likely that until advanced nuclear power is ready that conventional light water nuclear plants will have to stand in the breach to provide around the clock low carbon energy. The problem with that happening is simple economics--the flood of cheap shale gas has driven power prices down so far in many parts of the country that nuclear plants operating in unregulated, or merchant, markets cannot meet even their costs, much less make a profit. A number of grassroots efforts have been launched to save these plants, and notable success has occurred in Illinois and New York. Other actions are underway to try to save other nuclear plants in the country, even as in regulated markets in the South new nuclear plants are under construction.

None of these efforts to save existing plants has depended on the Federal government or the White House to succeed. Indeed, the plight of each nuclear plant in each market is different, and the tailored efforts to save these units are not then by nature instruments of Federal policy, but rather state and local. There is no reason to expect that an incoming Trump administration will have any effect on these key battles won, lost, and developing around the country.

Net Gain or Loss Still Unclear

Taking everything into account imparts a very mixed picture. The Trump administration seems likely, given all the reporting in the press, to attack policies that it views as wholly environmental, which it believes would damage private industry and business, and to some extent, the common citizen. Just how this influences nuclear energy specifically is unclear, but a rewrite of the EPA Clean Power Plan could potentially be advantageous for nuclear power, as compared to the rules as currently written.

There are just no signs at the moment which can reveal what might happen with the DOE and its GAIN program, although it's somewhat reassuring to note that the program has not itself been specifically called out even with the large amount of press that has been written about the "need" to overhaul that agency.

Moving the country forward on its legal obligation to take Federal control of the spent nuclear fuel dispersed at over a hundred nuclear plant sites around the country might well be a shining light on the horizon. Whether Yucca Mountain is ultimately used is impossible to say, but the political wind seems, given the evidence of reporting, to be again blowing in the way of finally tackling the problem. Even if the incoming administration begins cutting apart the EPA's policies, there is hope in the fact that the early signs show the presence of sufficient political will to definitively address the spent fuel problem. Taking nothing else into account, that fact in

itself is enough to create optimism.

[i] "FACT SHEET: Obama Administration Announces Actions to Ensure that Nuclear Energy Remains a Vibrant Component of the United States' Clean Energy Strategy," The White House Office of the Press Secretary, November 6, 2015, accessed January 16, 2017, <https://www.whitehouse.gov/the-press-office/2015/11/06/fact-sheet-obama-administration-announces-actions-ensure-nuclear-energy>.

[ii] "GAIN: Bridging the Gap to Advance Nuclear Technologies," Idaho National Laboratory, accessed January 16, 2017, <https://gain.inl.gov/SitePages/Home.aspx>.

[iii] Jennifer Dlouhy, "Trump Advisers Eye Reviving Nevada Yucca Nuclear Waste Dump," Bloomberg Politics, November 14, 2016, accessed January 17, 2017, <https://www.bloomberg.com/politics/articles/2016-11-14/trump-advisers-eye-reviving-nevada-s-yucca-nuclear-waste-dump>.

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