



President-Elect Biden's History with Nuclear Energy What to Expect for Nuclear Power under a Biden Administration

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The presumptive President-Elect Biden has generally been favorable and supportive of nuclear power throughout his political career, dating back to his days as Delaware Senator. While his views have evolved over the years, nuclear is now firmly embedded as an indispensable part of his overall climate change strategy. Although there is bipartisan support for nuclear in Congress presently, challenges remain, including competing priorities, differences on issues pertaining to the domestic nuclear fuel sector, and managing progressive voices that have historically downplayed nuclear's contributions to clean energy.

Joe Biden's History on Nuclear Power

During his tenure in the US Senate and afterwards, Biden's views on nuclear power have been largely favorable, but he has been a staunch adherent of a safety-first attitude and upholding public confidence.

As a junior Senator from Delaware in the 1970s, Biden closely observed the events and oversight provided by the NRC at the plants bordering his home state. Those plants include the Salem and Hope Creek Stations, located just across the Delaware River in New Jersey. While he was very tough on the utility (PSE&G) and NRC during the 1980s and 1990's over safety and operations at the plants, then Senator Biden did nevertheless continue to support the use of nuclear power overall.

In the 2008 election as Vice Presidential candidate, Biden followed the Democratic platform which underscored a global climate change threat and the need to act. The platform also emphasized protecting Nevada and its communities from high-level nuclear waste being sited at Yucca Mountain. In the early years of the Obama-Biden administration, there was a heavy emphasis on renewable development, jobs growth and use of federal funding and loan programs to accelerate clean energy deployment, in particular subsidized wind and solar projects.

By the 2012 election, the Obama-Biden administration had shifted towards a sustainable energy-independent future--seeking to harness all of America's natural resources--as the country witnessed reduced costs in developing natural gas fracking technology and manufacturing of wind and solar renewable components. These trends steered the administration's energy policy towards favoring an "all-of-the-above approach" that would encourage developing all of America's energy resources, such as clean coal, oil, natural gas, geothermal, wind, solar, hydropower, and nuclear power.

After leaving the White House, Vice President Biden took the position that nuclear power is needed as an essential zero-carbon energy source to address climate change. He has publicly supported the development of small modular reactors, which he believes are safer and less expensive than conventional large-scale nuclear plants. He is reported to have

told the Washington Post that he was likely in favor of a carbon tax that could enable nuclear and renewable energy to be more competitive with natural gas plants.

Most recently, the Biden 2020 presidential campaign included its outline to modernize and build a sustainable clean energy future. Biden's plans for the power sector are extremely ambitious, seeking to have America achieve a carbon emissions-free sector by 2035. In the view of the Biden campaign, such a plan would enable the US to meet the existential threat of climate change while creating millions of jobs. Critics, on the other hand, see the 2035 objective as unattainable for a host of reasons, including funding.

That said, within a Biden administration's first term, it would appear that his plans include continuing to leverage the carbon-pollution free energy from existing sources, including nuclear and hydropower, while assuring rigorous safety and environmental standards. His plan also intends to drive new technologies, including advanced nuclear, rapidly seeking commercialization and ensuring those technologies are manufactured in America. A Biden administration would also seek to develop a new Advanced Research Projects Agency on Climate (ARPA-C) to target affordable clean energy technologies, including advanced nuclear reactors. Biden believes those reactors would be smaller, safer, and more efficient than today's conventional reactors at half the construction cost.

Nuclear Power under a Biden Administration

A Biden administration will make its best efforts to maintain the campaign's energy policy and plans; however, that can be affected by a number of other post-election outcomes. The ability to meet its objectives will be dependent on whether the Senate remains in the control of the Republican Party. It is assumed that the House of Representatives will remain in the control of the Democrats, but by a significantly slimmer margin than was expected going into the elections.

As to what changes could be expected for nuclear power, this will be dependent on the proposal packages that a Biden administration would bring to Congress along with consideration being given to a number of existing pieces of legislation in the works in both the House and the Senate. The current Senate has been very much a support for nuclear power and on a bi-partisan basis. The Senate in particular over the last few years has worked tirelessly to lead in enabling legislation to support the existing U.S. reactor fleet, as well as develop and demonstrate future SMRs, advanced reactors, and micro-reactors.

The challenge in a Biden administration will be achieving sufficient funding support for all its energy proposals, especially considering that nuclear would compete for limited appropriations with other priorities and clean-energy technologies seeking even greater funding than previous requests. Even with strong bi-partisan support in the Senate, there will likely be more challenges for nuclear in getting its fair share of the appropriations pie.

On the House side--again assuming Democrats hold the majority--there will likely be a number of activists continuing to push the "Green New Deal" either in whole or in part. However, the authors of the "Green New Deal" have already been countered by leading Democrats in the House (as well as Democratic Senators) who appear to be seeking more temperate advances of a more inclusive green energy portfolio. At this time, given the number of seats that went to Republicans from Democrats, a progressive energy agenda is less likely to gain much attention from others.

In July, Democrats in the House Select Committee on the Climate Crisis released a Climate Crisis Action Plan aimed at achieving net-zero emissions in the US by 2050, with "net-negative" emissions by 2100, through reforms to federal energy and environmental laws. The Select Committee Plan contained similar or identical proposals as those in the draft CLEAN Future Act introduced in January (2020), as well as President-Elect Biden's climate plan.

The key for nuclear power legislation in an early Biden administration will be to maintain the current level of congressional support and try to expand governmental support programs where it can through any number of draft pieces of legislation. What is likely to happen early on in a Biden administration will be a rather large number of proposals for government funding a broader suite of clean energy technologies, e.g. renewables, electric vehicles and advanced storage. Any large number of projects and funding

proposals could prove difficult in getting justification or congressional approval, unless there are dramatic increases in appropriations levels in the energy sector or funding comes through from additional COVID stimulus.

One proposal from the Trump administration that will likely be in the crosshairs in the Biden administration is the plan to mine uranium from the Pebble Mine and around the Grand Canyon. Biden was against lifting the current 20-year ban on new mining in the area, as well as DOE's plans (announced in April 2020) that would establish a \$150 million uranium reserve to help keep US uranium mining companies and employment viable. The uranium reserve was intended to be a strategic hedge against Russia, a country that controls a significant portion of the global market.

Meanwhile, a bipartisan bill has been introduced in the Senate, the American Nuclear Infrastructure Act (ANIA), which supports revitalizing the uranium industry in contrast to President-Elect Biden's position on support for the domestic nuclear fuel sector. The Uranium Producers of America's President recently testified before the Senate on the ANIA legislation in support of the plan to establish a reserve to help revitalize the domestic uranium industry and preserve the US domestic supply chain for nuclear fuel. During that hearing before the Senate Committee on Environment and Public Works, the bill was generally supported, but with some caveats and comments—including a few from Senate confidants and former colleagues of Biden. Where this bill ultimately goes will be telling.

During the Clinton and Obama administrations, the Russians built up rights to US uranium and billions of dollars in nuclear fuel contracts which made American utility customers dependent on Russia and other foreign suppliers for upwards of 90% of US uranium needs. Under the Obama-Biden administration (supported by then Secretary of State Hilary Clinton), Russia's government-owned Rosatom was allowed to secure additional mining reserves in the U.S. through control of a Canadian company, Uranium One. This transfer under the Obama-Biden administration will likely be a topic of future debate as any nuclear legislation on uranium and nuclear fuel moves forward.

In July and during the campaign, Biden revealed his plans to transform the nation's energy industry and significantly reduce the United States' reliance on fossil fuels and the 15-year timeline for a 100% clean electricity standard. This plan will likely drive initial attempts to move US policy away from Trump's energy policies. Another factor that should be considered is the presumptive Vice President-Elect, Kamala Harris, a staunch progressive, pro-renewable advocate who had supported her home state of California in its aggressive pursuits of an energy mix centered around non-fossil resources. Harris has, in the past, made public statements against fracking.

President-Elect Biden has not called for a ban on fracking, at least not immediately. He does, however, want to see tighter regulations on pollution from oil and gas production. While he has not expressed the same opinions as Harris has made previously on fracking, he has had within his circle of advisors both advocates and opponents of fracking—including a number who grasp the geopolitical importance of current U.S. exports of LNG. His broader energy and environmental plan also calls for a White House council on environmental justice that would oversee any proposed revamping of the EPA's civil rights office and assistance to frontline communities. Much more to come...

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