

Hearing Idea: Nuclear Financial Incentives



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The success of renewable technology is due in large part to significant financial incentives, including loan guarantees, production and investment tax credits, and power purchase agreements. Nuclear needs the same support. As advanced reactors move towards commercialization, these financial incentives need to grow in sophistication to recognize the variety of partnerships needed to move from early innovation to deployment.

Federal Power Purchase Agreements (PPA) have provided long-term certainty to renewable power generation and can do the same for advanced nuclear. Currently, DOE provides on-site PPAs for renewable generation. Advanced nuclear should be eligible for both on- and off-site PPAs, which should be available for *at least* 20 years.

Specifically, on-site PPAs hold important potential for small modular reactors (SMRs), which could be a uniquely valuable generation option for DOE or Department of Defense (DOD) facilities beyond both renewable and fossil generation.¹ Federal agencies will hopefully continue moving towards clean energy, but it is also important that these agencies have baseload power. Building SMRs on or near

certain DOE or DOD facilities could be mutually beneficial—the agencies could lower their emissions using a reliable technology with a small footprint, while SMRs get the guarantee of an initial customer. Additionally, an on-site PPA could potentially help to streamline regulatory siting and permitting issues for future reactors.

Loan guarantees for advanced nuclear were first authorized in the Energy Policy Act of 2005. In 2008, DOE offered a total of \$18.5 billion in loan guarantees for advanced nuclear power plants and an additional \$2 billion for uranium enrichment plants. DOE received requests totaling \$122 billion.² Despite market conditions that prevented many projects from moving forward, there was clearly significant private sector interest.

In tandem with other policies that recognize the value of nuclear's carbon-free baseload generation, loan guarantees play a crucial role in expanding and improving our nuclear fleet. In fact, loan guarantees were essential for deployment of reactors currently under construction, like those at Plant Vogtle in Georgia, and they will be essential for future advanced reactor deployment.

In June, Third Way surveyed advanced reactor companies on their priorities and found that loan guarantees were consistently listed at or near the top—proving that this support is still vitally important. The DOE Loan Program must be protected to support advanced reactors, and DOE must engage with innovators to identify and remove potential barriers to access.

Possible witnesses:

- Peter Davidson, CEO of Aligned Intermediary and former Executive Director of DOE's Loan Programs Office.
- Jeff Navin, Partner at Boundary Stone Partners and former Acting Chief of Staff at the Department of Energy who oversaw research and deployment programs, including the Loan Programs Office.

- Seth Kirshenberg, Managing Partner at Kutak Rock, where he advises clients on PPAs and other energy financing mechanisms.
- Brian Oakley, Director at Scully Capital, where he specializes in corporate finance and project finance.
- John Kotek, Vice President for Policy Development and Public Affairs at the Nuclear Energy Institute.
- John Hopkins, Chairman and CEO of NuScale Power.
- Energy official from the Department of Defense or specific service branch.

Supporting Documents:

1. *Purchasing Power Produced by Small Modular Reactors: Federal Agency Options*
DOE Report
2. *Assessment of Small Modular Reactor Suitability for Use On or Near Air Force Space Command Installations*
Sandia Report
3. DoD Study
4. *Third Way Survey of Advanced Nuclear Companies – Coming Soon*

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END NOTES

- 1.** United States, Department of Energy, Office of Nuclear Energy, “DOE SMR Workshop - The Pathway to SMR Commercialization,” Report, Small Modular Reactor Licensing and Technical Support Program, p. 11, October 2016. Accessed November 1, 2016. Available at: <http://energy.gov/ne/downloads/doe-smr-workshop-pathway-smr-commercialization>.
- 2.** “US Nuclear Power Policy,” Report, World Nuclear Association. Accessed October 31, 2016. Available at <http://www.world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power-policy.aspx>.