

Subcommittee on Energy
Hearing on
“Building a 100 Percent Clean Economy: Advanced Nuclear Technology’s Role in a
Decarbonized Economy”
March 3, 2020

Mr. Chris Levesque
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The Honorable Robert E. Latta (R-OH):

1. Given the global competition to meet demand, how important is it to have a strong and durable civilian nuclear industry? Any strategic advantages to this?

RESPONSE:

As the world grows from roughly 7.6 billion people today to 9.7 billion by 2050, while simultaneously looking to eliminate carbon pollution, there will be a massive increase in demand for advanced nuclear technologies. A report from the consulting firm UxC estimates \$5.88 trillion in spending on nuclear reactors between now and 2050¹.

To seize this opportunity, the United States needs a strong and durable advanced nuclear industry that is offering products that are cost competitive and attractive to customers. We will need human capital, supply chains, access to advanced high assay low enriched uranium, and, given that we are competing with state owned Chinese and Russian companies, the appropriate level of support from the US Government to demonstrate and export our technology.

American companies are at a disadvantage when competing with Russian and Chinese companies backed by their governments who can offer financing, fuel, and even offers to take back spent fuel. But our advantage is in our technology. With support from the US government in demonstrating American technology through programs like the Advanced Reactor Demonstration Program, and with a renewed focus on supporting the export of American advanced nuclear technology, we are confident we can win a large share of the global market for clean, reliable energy, so long as Congress continues to act with urgency and supports these programs.

¹ <https://www.nei.org/resources/reports-briefs/uxc-global-nuclear-market-assessment-report>

2. How can the United States avoid reliance on foreign nuclear technologies and resources?

RESPONSE:

The United States will need advanced nuclear technologies to meet its goals of assuring reliable, clean affordable power in the United States. The most important step the US government can take is to support the demonstration of advanced nuclear technologies in partnership with innovative American companies. The Advanced Reactor Demonstration Program (ARDP) is the key to bringing domestic technology to market, and continued support by Congress for the ARDP is the most important step Congress can take to ensure that we are not relying on foreign nuclear technology to meet our energy needs.

The Honorable Pete Olson (R-TX):

1. Can you please elaborate on the effect of nuclear innovation and the impact it has on national security?

RESPONSE:

With the rise in global population and rapidly growing demand for pollution free energy, there will be a race among countries to dominate the \$5.88 trillion global market for new nuclear reactors between now and 2050.²

But beyond the trillions of dollars of economic opportunity, the global market for nuclear technologies is unique. Russia and China have state owned nuclear power companies actively working to export their technology around the world. There is a clear economic incentive for them to do so, but these exports also serve an important purpose for their governments' regional geopolitical goals. The Russians, for example, offer their advanced nuclear technology along with financing, an agreement to operate and maintain the reactor for decades, agreements to provide fuel, and agreements to take back spent fuel. When these reactors are sold in Europe, Asia and the Middle East, Russia is developing a 50 to 80-year strategic relationship with that country. Without American advanced technology to compete with the Russians and Chinese, we are ceding more than just the loss of economic opportunity in these regions.

The good news is that the US government is investing in innovative, advanced nuclear projects that can compete directly with these foreign reactors. The Advanced Reactor Demonstration Program (ARDP), created by Congress and implemented by the

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Department of Energy, is working to bring innovative nuclear projects to market in this decade. If this can be coupled with efforts to make it easier to export American advanced nuclear technology, I am confident that we can successfully compete with foreign, state sponsored nuclear companies.