



How can the U.S. accelerate new nuclear builds?

The promise of nuclear power—clean, dispatchable, and reliable—positions it to match the ambitions of tech, industrial, and utility giants. But how do we turn ambition into action?

Uncertainty around nuclear energy's capital cost is daunting, and the financial risk of pioneering new builds must be addressed.

Reliable nuclear power has incredible lifetime value. The ultimate project cost will pencil out over 40 or more years. We must focus on reducing the key risk: construction cost uncertainty for new nuclear.

When a project developer is staring at a plot of land, they must think about the final cost and add every type of risk in preparation for worse-case scenarios. This uncertainty creates a dollar figure—far higher than just construction costs—including escalation and contingency. Without a representative first-of-a-kind project to create a baseline, the error bars for escalation and contingency balloon.

Actually building a project requires funding, and a project developer for a multibillion-dollar project would likely need both an equity investor, which owns the project, and a lender, to provide the rest of the money.

The equity investor would have to both provide their share of money for the expected cost of the project and reserve extra for potential escalation. These reserve funds cannot be used to make other investments, which waters down any positive return on the project.

If the return gets too watered down, the equity investor will not invest in the project, and you can imagine that financial institutions will not commit to lending the rest.

Good project management is key to reducing real project cost, but how can financial risk be minimized before a shovel even goes into the ground?

For a reactor project to move forward, investors must move, and this requires a return on investment. The person buying the power must be willing to pay what it costs. Several tools can be used to increase risk tolerance, such as adding an external guarantor like the Department of Energy's Loan Programs Office, developing a consortium to "peanut butter spread" the high costs behind the meter, a new government program that provides a limited backstop for unexpected escalation, or a powerful combination of the three.

By focusing on reducing project risk, the United States can accelerate new nuclear builds, not only making nuclear power a viable option to meet our growing energy needs but also moving us closer to a clean, reliable energy future. ☒

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