



COURAGE, STRENGTH, OPTIMISM

For true energy security, the US must hurry to develop fusion technology

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I've spent my career working to build energy security — first as a Senate staffer, then in think tanks here in D.C. For more than a decade, I wrote, traveled, and spoke about how to build energy security for the United States and our allies, especially in Europe.

The Russian invasion of Ukraine is far worse than any nightmare that energy security analysts anticipated. Putin's invasion underlines how the Russian dominance of energy exports to Europe has created a political and economic dependence that feeds both the Russian war machine and the anti-NATO political parties across Europe supported by the Kremlin.

And we feel the impact here in the U.S., too. Sixteen years after President George W. Bush said in his [2006 State of the Union](#) that “America is addicted to oil,” the price spike in oil and gasoline over the last few months shows how little we have done to kick that addiction. Even though America now exports more oil and gas than it consumes, the economic damage from the Russian invasion is undeniable evidence that oil dependence means the U.S. is still held hostage to the whims of dictators abroad. Meanwhile, we're still having the same fights about oil production vs. clean energy that we've had for decades.

The way forward is through new technology. That's why last year I moved from leading a small [national security think tank](#) to become the CEO of the [Fusion Industry Association](#), working to accelerate the date when safe, sustainable, always-available fusion energy is ready for the marketplace.

Fusion energy comes from harnessing the powerful energy released when light elements are pushed together in extreme conditions — the power of a small sun on Earth.

In short, we need an energy revolution that will permanently replace dependence on scarce resources with leadership in technology. The best way to create real energy security is to will transition energy from a resource that any dictator can control to a good that is manufactured. Fusion will permanently separate energy from geopolitics and national security.

Fortunately, after decades of scientific research at national labs and universities around the country, that time is nearly at hand. Last year, we saw a [“burning plasma”](#) for the first time, [record amounts of energy](#), the building of the [most powerful large magnet in history](#), and [record-setting temperatures](#) in privately built fusion plants.

Now, private investment is allowing fusion energy companies to build the proof-of-concept devices that will show that fusion energy can work. [Over \\$4.3 billion](#) in private investment to date will allow fusion companies to achieve a “Kitty Hawk moment” and then rapidly move to building the pilot plants that will prove fusion energy is ready for the marketplace.

As fusion transitions from the lab to commercialization, private companies need the American government to become a real partner in this effort. That's why it's so important that, in the annual spending bill for 2022, [Congress approved record spending of \\$713 million](#) for fusion energy research, including \$45 million to initiate a new public-private partnership program that would support the private sector's aggressive efforts.

In March, the White House also hosted a summit to plan a “[Bold Decadal Vision for Commercial Fusion Energy](#),” which sets out how, in 10 years, the U.S. can have multiple fusion pilot plants of different sizes, approaches, and fuels operating in new fusion technology hubs around the country. There is no better way to show that the U.S. has broken from Putin's energy dominance than by initiating a new program to lead the world in clean, safe, sustainable fusion energy.

Are there scientific and technological challenges still to overcome? Of course. That's why companies need a comprehensive partnership with the U.S. government. As the private sector builds the power plants, the U.S. government will build the infrastructure and train the workforce that will enable the fusion energy revolution to be “American made.” In a virtuous cycle, greater investment and partnerships from the U.S. government will “crowd in” more private fusion investment and will attract more foreign companies to build and operate in the United States.

And, to support safe deployment, industry is [working publicly](#) with the Nuclear Regulatory Commission to ensure that fusion energy is safe and appropriately regulated.

Without Russia's dominance in energy, Putin would not have been able to finance his war machine, nor dared invade Ukraine. As we respond to the crisis of today, we should also make investments that secure the peace for the long term. Fusion energy will provide the basis for prosperity, safety, and security, so long as we make the investments now.

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