

Written Testimony of Will Regan, Ph.D.
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Before the House Committee on Science, Space, and Technology; Energy Subcommittee
“Igniting America’s Future: The Promise and Progress of Fusion Power”
Thursday, September 18, 2025

Chairman Weber, Ranking Member Ross, and Members of the Committee:

My name is Will Regan, and I am the Co-Founder and President of Pacific Fusion. Thank you for the opportunity to testify today on the potential of fusion energy, and for your longstanding support of fusion research that has put commercial power within reach. I am here to share our company’s progress and to discuss how the government can help ensure that the U.S. leads in deploying low-cost, reliable, safe, and abundant fusion power.

I have spent nearly 20 years working on advanced energy technology, and have been fortunate to play a key role in the most exciting decade yet of fusion’s century-long development. In 2015, while working at the Department of Energy’s ARPA-E, I helped launch the fusion industry by building a program called ALPHA, which catalyzed several of the leading private fusion companies active today. I then joined Google X, where I spent eight years building ambitious energy projects (including fusion) that integrated advanced computation and hardware. And in 2023, I co-founded Pacific Fusion, now the world’s leading inertial fusion company.

In just 10 years, fusion energy has transformed from a scientific dream into an imminent reality. Given the urgency of today’s energy challenges and the central role that energy plays in both our economic and national security, this transformation could not come at a better time.

Electricity demand in the United States is rising at a pace not seen since World War II. Electrification of transport and buildings, new industrial loads, and the rapid growth of data centers to power AI are all driving skyrocketing demand for affordable, reliable power.

Fusion offers an ideal solution. It’s the process that powers the sun and stars, and it can provide the same reliable, on-demand power as fossil fuels or nuclear fission but without carbon emissions or high-level waste. Today, thanks to recent advances that I discuss in detail below, it is no longer a distant aspiration but an emerging reality.

That is why my co-founders and I started Pacific Fusion: to transform recent fusion breakthroughs into practical power plants capable of powering cities, industries, and homes. The Federal government has played a pivotal role in supporting the research to get us to this point, and now has an opportunity to jumpstart this new energy industry and ensure long-term U.S. leadership in its deployment, especially as China ramps up its efforts to go all in and win.

Key takeaways from my testimony are below, and the following sections detail them further:

Where Fusion is Today and the Challenge Before Us

- I. **Breakthroughs in 2022 proved that fusion can power the future.** Scientific breakthroughs in inertial fusion, paired with a major pulsed power engineering advancement, opened the path to build practical power plants. This motivated us to start Pacific Fusion in 2023 and raise \$900+ million in tranching funding to bring inertial fusion to market. By 2030, we will demonstrate “net facility energy gain”—the critical milestone needed to unlock commercial fusion power generation.
- II. **The U.S. fusion industry is on the cusp of commercialization.** We are not alone. According to the Fusion Industry Association, there are around 25 fusion ventures in the United States that have raised over \$7.5 billion to achieve similar milestones this decade. America wrote the playbook on investing in fundamental scientific breakthroughs and then scaling their industrial application through the private sector. Fusion is no different, and today we’re at the last mile of solving the key scientific challenges to enabling commercial deployment.
- III. **China is moving fast to take the lead in commercial fusion.** Although behind the U.S. in scientific advancement, China is positioning itself to win at power plant deployment through heavy coordinated government investment.

In just the few years following the U.S. achievement of ignition at the National Ignition Facility (NIF), Chinese state-backed entities have by recent estimates put up to \$10–13 billion into building new fusion facilities and funding state-owned fusion companies. A Chinese company has even recently set a goal to build the first power plant that uses fusion by 2031. Without a response, the U.S. risks inventing fusion energy but losing the industry to China, as it has too many times in other sectors.

- IV. **We can leverage past successful U.S. playbooks to stay ahead.** Fortunately, this Committee has already helped pioneer the solution. We reasserted our leadership in the space industry through milestone-based public-private partnerships. The time is right to use that playbook again, including completing the Milestone-Based Fusion Development Program and launching a *Fusion Demonstration Program*.

If done right, we can accelerate the start of construction of multiple fusion power plants to 2028, pulling ahead schedules by multiple critical years. We believe this will keep the U.S. ahead of China in fusion power deployment. With targeted investments now—that are less than the up to \$10–13 billion that China has invested since 2023—the U.S. can secure both energy dominance and the economic prosperity that will result from this new multi-trillion dollar sector.

I. Pacific Fusion Builds on a Foundation of U.S. National Laboratory Breakthroughs

2022 Breakthroughs at Lawrence Livermore National Laboratory & Sandia National Laboratories

Over the past decade, major fusion technology advances have led to a surge in investment and the establishment of a robust private fusion industry. And then in 2022, three pivotal advances created a new path to commercial power using inertial fusion:

1. The NIF at Lawrence Livermore National Laboratory (LLNL) became the first fusion machine to achieve fusion ignition using lasers — resulting in more fusion energy output than laser energy delivered to the fuel target — establishing the *scientific* feasibility of inertial fusion energy.¹
2. Near the same time, the Z Machine at Sandia National Laboratories (SNL)² reported the highest *pulser-driven* inertial fusion performance ever, second only to laser-driven fusion. This showed that a more efficient path to inertial fusion was also possible.
3. A team at LLNL demonstrated an advanced modular, compact, affordable pulser technology that established the *economic* feasibility of pulser-driven inertial fusion.

Together, these advances opened a path to commercial fusion that simply did not exist before.

It was following these breakthroughs that my co-founders and I decided to launch Pacific Fusion in 2023, with the goal of translating those breakthroughs into a system that could produce low-cost commercial fusion energy.

About Pacific Fusion

We have assembled a world-class team of more than 120 staff, including fusion scientists from the national labs and leading talent from hard technology companies. And we have set clear milestones: (1) to build the world's first Demonstration System (DS) that achieves net facility gain by 2030 (releasing more energy from fusion than is initially stored in the machine), and (2) to deliver commercial power plants by no later than the mid-2030s. We have raised over \$900 million in a milestone-based, tranching funding structure that ensures accountability and focus.

Pacific Fusion's approach is pulser-driven inertial fusion, building off the basic approach of the SNL Z Machine, but with improved scientific insight and capabilities developed at the NIF and using new, higher-performing pulser technology. We use fast-rising, high-current pulses to magnetically squeeze and heat small containers of deuterium-tritium fuel, driving the fuel to fusion conditions.

¹ [Lawrence Livermore National Laboratory Achieves Fusion Ignition](#), Lawrence Livermore National Laboratory (December 13, 2022).

² Matthew Weis & Whitney Lacy, [Z Machine – An Engine of Discovery](#), Sandia National Laboratories (2020).

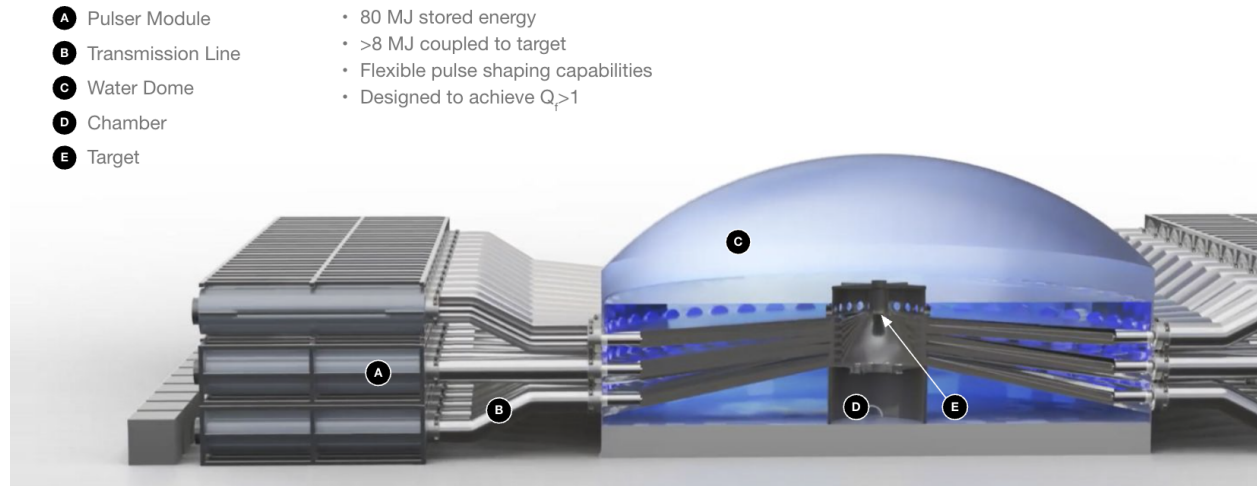


Figure 1: A rendering of Pacific Fusion's Demonstration System that will achieve net facility gain by 2030

At the core of the system is an advanced pulsed power driver known as the impedance matched Marx generator (IMG), which was co-invented by Pacific Fusion's Chief Technology Officer, Keith LeChien. The IMG delivers power far more efficiently (~90%) by synchronizing the discharge of capacitors with the speed of electromagnetic waves. This innovation cuts the size of pulsed power fusion systems in half while boosting performance.³ It also enables the use of standard, lower-voltage components, making the system safer, easier to build, and more cost-effective. Recent peer-reviewed papers⁴ in *Physics of Plasmas* discuss the robust evidence that underpins our path to achieve net facility gain by 2030 using this approach.

Our fusion driver is modular and mass-manufacturable. Each “brick”—made of two capacitors and a switch—is a building block for scalable power. These are assembled into modules that fit in shipping containers, enabling rapid deployment and low-cost maintenance. Our compact cylindrical fusion chamber further simplifies operations and maintenance.



Figure 2: Progress on an IMG stage

The result is a fusion platform that is efficient, practical, and built for scale—a system that will be designed to achieve net facility gain in the near-term and commercial power soon afterwards. Our ultimate goal is to rapidly deploy fusion power plants at scale, delivering firm power at less than \$0.05/kWh.

³ Andrew Alexander et al., [Affordable, Manageable, Practical, and Scalable \(AMPS\) High-Yield and High-Gain Inertial Fusion](#), Cornell University, arXiv (April 14, 2025).

⁴ Leland Ellison, [Validating the Path to Fusion Ignition](#), Pacific Fusion (September 3, 2025).

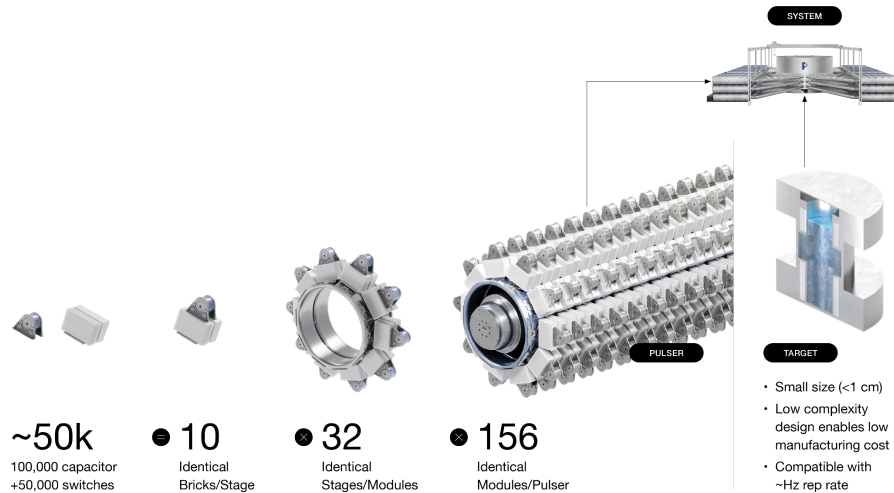


Figure 3: Pacific Fusion's modular design allows for mass-manufacturable fusion machines

Today, Pacific Fusion stands shoulder to shoulder with the leading fusion companies in the world. What distinguishes us further is that our approach is grounded directly in the highest-performing results from operating fusion machines at U.S. National Laboratories, and engineered from the start to be modular, manufacturable, and cost-competitive.

II. The U.S. Fusion Industry is on the Cusp of Commercialization

Fusion energy is arriving. Secretary of Energy Chris Wright recently stated, “fusion has hit that tipping point where things are going to happen fast,” and we couldn’t agree more.⁵ While challenges remain, the fusion industry, working in partnership with the Federal government, National Labs, and academia, is advancing at an unprecedented pace to solve the remaining science challenges.

This is no surprise, as it is what America excels at—investing in fundamental scientific breakthroughs through our National Laboratories and universities, and then scaling their industrial application through the private sector. The current U.S. lead in fusion science is the result of decades of sustained investment and world-class research at our National Laboratories and academic institutions, supported by the U.S. Department of Energy (DOE) Office of Science and DOE National Nuclear Security Administration.

As Key Science Challenges Are Solved, a U.S. Fusion Industry is Forming

As the key fundamental science challenges that gate fusion deployment are being solved, an industry is rapidly arising. There are ~25 fusion ventures in the United States. According to the Fusion Industry Association, globally, private fusion investment into fusion companies has

⁵ Special Competitive Studies Project, [Episode 25: A Conversation With the Secretary of Energy, Chris Wright](#), YouTube at 11:05 (2025).

reached approximately \$10 billion, with a recent slate of major investments over the last year.⁶ Of that funding, one source estimates that \$7.5 billion has been directed towards U.S. fusion companies.⁷ Several fusion energy companies are now projecting that they will reach net facility gain or an equivalent milestone by 2030,⁸ which would eliminate any doubt that fusion energy is viable and open the door to commercial deployment.

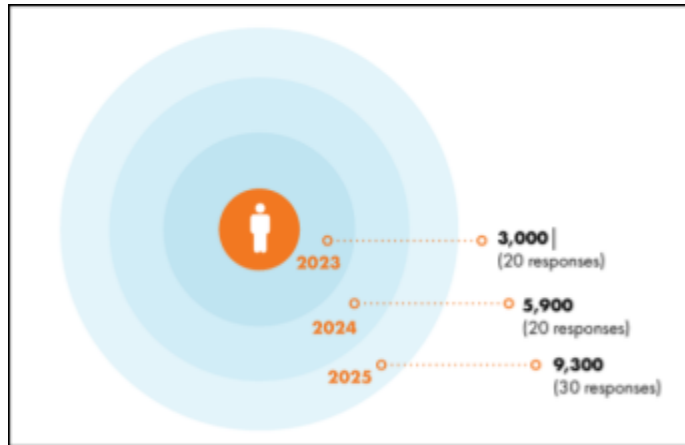


Figure 4: Supply chain jobs created
(source: Fusion Industry Association)

And the fusion industry is far more than just the power plant developers. Key progress in fusion energy is being supercharged by advancements in enabling technologies such as superconductors, magnets, materials, and high-performance computing and machine learning. This, in turn, is fueling a thriving U.S. supply chain in those technology areas and others. While the Fusion Industry Association already estimates that there are nearly 5,000 employees at fusion

companies, the number of jobs created in the supply chain is nearly double, at nearly 10,000—an over 200 percent increase since 2023.⁹

To that end, Ranking Member Lofgren and Representative Obernolte’s ***STEM Education and Skilled Technical Workforce for Fusion Act*** is a great step in the right direction, which will further strengthen our workforce for demonstration and deployment.¹⁰ I thank them for their foresight and long-standing dedication to seeing this industry grow.

Along with scientific innovation, we would be remiss to not call out the incredible role both the U.S. Nuclear Regulatory Commission (NRC) and Congress have played in clearing a regulatory pathway for deployment. The NRC’s decision to establish a risk-informed regulatory framework for fusion energy, separate from traditional nuclear fission, has been pivotal for this nascent industry.¹¹ Congress’s strong leadership in the ADVANCE Act cemented a clear and

⁶ [The Global Fusion Industry in 2025](#), Fusion Industry Association (July 22, 2025); [Commonwealth Fusion Systems Raises \\$863 Million Series B2 Round to Accelerate the Commercialization of Fusion Energy](#), Commonwealth Fusion Systems (August 28, 2025).

⁷ Sam Wurzel, [September 2025 Fusion Equity Investment Update](#), Fusion Energy Base (September 1, 2025).

⁸ See, e.g., [Commonwealth Fusion Systems to Build World’s First Commercial Fusion Power Plant in Virginia](#), Commonwealth Fusion Systems (December 17, 2024).

⁹ [The Global Fusion Industry in 2025](#), Fusion Industry Association (July 22, 2025).

¹⁰ Reps. Lofgren & Obernolte, [H.R.4999 - Fusion Workforce Act](#), available at Congress.gov (introduced August 19, 2025).

¹¹ Scott Burnell, [NRC to Regulate Fusion Energy Systems Based on Existing Nuclear Materials Licensing](#), NRC News (April 14, 2023).

risk-appropriate path forward.¹² It is quite possible that Pacific Fusion would not have been able to raise the funds it did—or launch at all—had the regulatory framework been different.

The New Challenge is Commercial Deployment

Solving the science opens up a new, exciting challenge—commercial deployment. The long-term fate of U.S. fusion leadership will depend on our ability to build and operate the first fusion power plants faster than our competitors abroad. This is because, among other reasons, the first country to realize fusion power generation will immediately become the global hub for fusion progress, and win the mantle to shape the future of this global trillion-dollar industry.

III. China is Moving Fast to Take the Lead in Commercial Fusion

Since 2023, following the NIF’s announcement of ignition, China has moved aggressively into fusion, leveraging massive state investment and centralized coordination to accelerate its progress. The trend is obvious—China has seen the progress in the United States and knows that fusion is arriving. China has now overtaken the U.S. in investment into fusion companies.

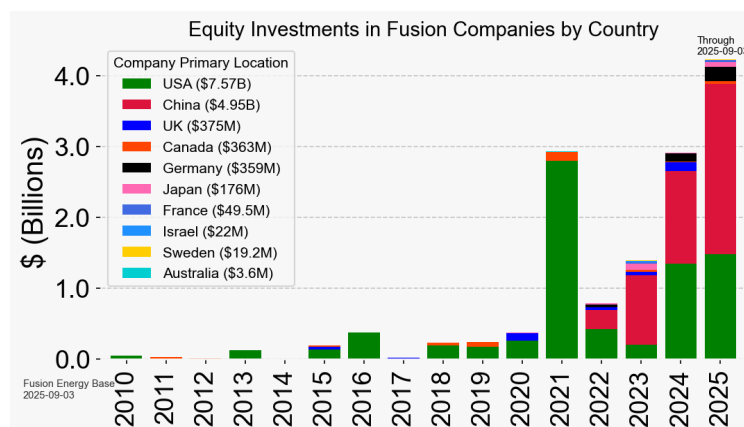


Figure 5: Investment in fusion companies: green is U.S., red is China (source: Fusion Energy Base¹³)

Moreover, as laid forth in detail by the Strategic Competitive Studies Project (SCSP) in their recent analysis, China has deployed at least \$6.5 billion and upwards of \$10-13 billion since 2023 towards fusion facilities and standing up commercial companies.¹⁴ The vast majority of this funding is provided through China's central and municipal governments, showcasing its willingness to use state resources to win the fusion race. Unfortunately, while the U.S. excels at innovation, the Chinese government has its own established playbook to capture industries at the critical cusp of commercialization through deep dedicated state investment. It has done this repeatedly in renewable energy, batteries, and critical minerals,¹⁵ and could do so in fusion.

¹² [About the ADVANCE Act](#), NRC (2024).

¹³ Sam Wurzel, [September 2025 Fusion Equity Investment Update](#), Fusion Energy Base (September 1, 2025).

¹⁴ [Cash, Scale, and Speed: Why China's \\$6.5 Billion Fusion Buildout Should Shock the World](#), SCSP (September 15, 2025).

¹⁵ Hanming Fang, Ming Li, and Guangli Lu, [Mapping Two Decades of China's Industrial Policies](#), Stanford Center on China's Economy and Institutions (July 1, 2025).

We list a few examples of recent Chinese investment:

- Earlier this year, China established its first state-owned fusion energy champion, China Fusion Energy Corp., with a registered capital of over \$2 billion.¹⁶ This corporation is supported by China's leading nuclear developer, China National Nuclear Corporation (CNNC), a large company with 25 nuclear fission reactors in operation and 18 in construction.¹⁷ We expect CNNC has not invested in fusion to simply develop the science further, but to leverage its core competency and build fusion power plants.

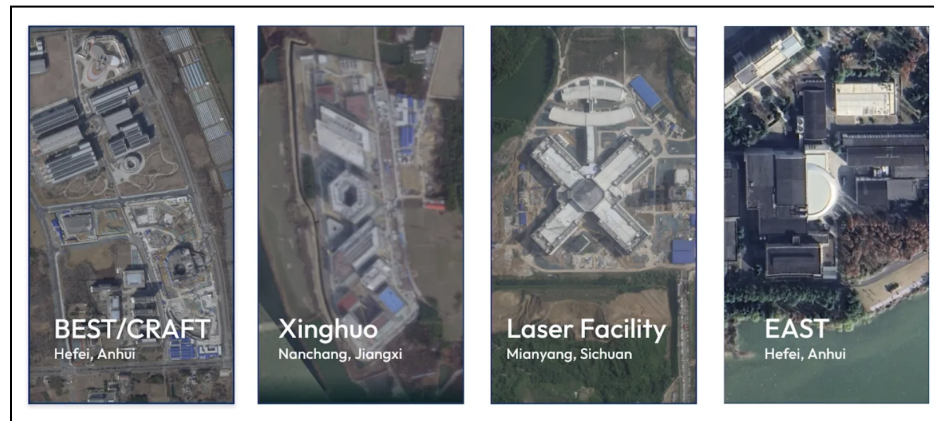


Figure 6: Primary centers of China's fusion infrastructure (source: SCSP¹⁸)

- China has, in just a couple of years, progressed rapidly in building the world's largest inertial fusion facility in Mianyang, China.¹⁹ Having tracked the results of U.S. leadership in inertial fusion science at the NIF, they are now close to operating a facility that could produce up to 10 times more yield, an enormous capability gap that—if unmatched—would wrest leadership from the U.S. This is just one of four major facilities that China has been rapidly constructing to accelerate fusion deployment, as seen above in Figure 6.

¹⁶ ANS Nuclear Cafe, [China Launches Fusion-Focused Company](#), Nuclear Newswire (July 30, 2025).

¹⁷ [Major Chinese Operators Report Nuclear Output for 2024](#), World Nuclear News (January 14, 2025).

¹⁸ [Cash, Scale, and Speed: Why China's \\$6.5 Billion Fusion Buildout Should Shock the World](#), SCSP (September 15, 2025).

¹⁹ Gerry Doyle, [Exclusive: Images Show China Building Huge Fusion Research Facility, Analysts Say](#), Reuters (January 28, 2025).



Figure 7: China is rapidly building an inertial fusion facility in Mianyang, China

- Jiangxi Electronics Group, a Chinese state-owned entity, has announced plans to build and start operations of a power plant that combines fusion and fission, aiming to generate 100 MWe by 2031, far in advance of prior Chinese projections of fusion deployment. It is currently raising the nearly \$3 billion needed to make it happen.²⁰ Whether or not this date holds, it showcases that China is interested in deploying fusion at a commercial scale faster than most current U.S. company estimates.

IV. We Can Leverage Past Successful U.S. Playbooks to Stay Ahead

China's rise in fusion has created an existential threat to long-term U.S. energy leadership—and one we cannot afford to solve through the status quo. We need bold action, specifically to accelerate the timeline of U.S. fusion energy deployment to ensure we stay ahead of China.

Fortunately, just as we have a model for solving big science challenges, there are playbooks that have worked to keep the U.S. ahead of its peers on deployment too, and particularly ones this Committee has helped pioneer.

In particular, we find ourselves in a position not too different from the burgeoning private *space* industry in the mid-2000s and the *advanced fission* industry just five years ago—rapidly advancing up the technology curve, with substantial private sector growth, but approaching bottlenecks to commercialization. In both cases, the U.S. government set a clear market signal to rally the private sector and accelerate deployment against state-backed international competition.

²⁰ Jeff Pao, [China Aims for World's First Fusion-Fission Reactor by 2031](#), Asia Times, (March 29, 2025); Tom Clynes, [Is China Pulling Ahead in the Quest for Fusion Energy? New Reactors Signal China's Plan to Lead the World in Fusion R&D](#), IEEE Spectrum (April 29, 2025).

If done right for fusion, the same playbooks applied here can accelerate the construction timeline for fusion, and put shovels in the ground on multiple fusion power plants by 2028, pulling ahead deployment schedules by multiple critical years. We believe this would keep the U.S. ahead of China (and any other international competitors) in fusion power deployment, securing the U.S. as the leader of this multi-trillion dollar industry.

Past Successes We Can Build Off

In the space context, the NASA Commercial Orbital Transportation Services (COTS) program proved a transformative solution. This program was launched in 2006 to accelerate delivery of supplies to the International Space Station by a U.S. rocket, when at the time the only option was a Russian Soyuz rocket.²¹

The U.S. government eventually entered milestone-based contracts with multiple companies, including SpaceX, Rocketplane Kistler, and Orbital Sciences.²² After Rocketplane Kistler failed to keep up, the U.S. government terminated its contract to save taxpayer dollars.²³ Six years later, thanks to this program, SpaceX was able to deliver to the International Space Station, and Orbital Sciences followed up in 2013.²⁴

The success of this program has once again secured U.S. leadership in spaceflight. Today SpaceX has a market capitalization approaching \$400B, far outweighing the ~\$800 million price tag for the NASA COTS program.²⁵ It was so successful that it effectively pushed Russia—the former industry leader—out of much of the commercial space launch market.²⁶

In the advanced fission context, to realize the promise of advanced fission reactors (which were struggling to commercialize relative to global competitors),²⁷ Congress drove forward the Advanced Reactor Demonstration Program (ARDP) in President Trump's first term.²⁸ It officially launched it in 2020 after receiving initial funding of \$230 million.²⁹ This program has been vital

²¹ [Commercial Orbital Transportation Services](#), NASA (February 2024).

²² Eli Dourado, [A 2006 NASA Program Shows How Government Can Move at the Speed of Startups](#), The Center for Growth and Opportunity (March 15, 2021); [Veteran Space Company Orbital Sciences Ready for ISS](#), WIRED (June 11, 2012); [NASA Partners With Orbital Sciences for Space Transport Services](#), NASA (February 19, 2008).

²³ Loretta Hidalgo Whitesides, [NASA Terminates COTS Funds for Rocketplane Kistler](#), WIRED (September 10, 2007).

²⁴ [First Commercial Resupply Mission Reaches International Space Station](#), Office of Space Commerce (May 25, 2012); [NASA Partner Orbital Sciences Completes First Flight to Space Station as Astronauts Capture Cygnus Spacecraft](#), NASA (September 29, 2013).

²⁵ Loren Grush, Katie Roof, & Edward Ludlow, [Musk's SpaceX Plans Share Sale That Would Value Company at About \\$400 Billion](#), Bloomberg (July 15, 2025); [Commercial Orbital Transportation Services](#), NASA (February 2024).

²⁶ Leonid Bershidsky, [How Elon Musk Beat Russia's Space Program](#), Bloomberg (February 7, 2018); Eric Berger, [Russia Appears to Have Surrendered to SpaceX in the Global Launch Market](#), Ars Technica (April 18, 2024).

²⁷ Colleen Howe, [China Starts up World's First Fourth-Generation Nuclear Reactor](#), Reuters (December 8, 2023); Stephen Ezell, [How Innovative Is China in Nuclear Power?](#), Information Technology & Innovation Foundation, (June 17, 2024).

²⁸ [DOE Launches Advanced Reactor Demo Program](#), Nuclear News (February 17, 2020).

²⁹ [U.S. Department of Energy Launches \\$230 Million Advanced Reactor Demonstration Program](#), DOE Office of Nuclear Energy (May 14, 2020).

to boosting advanced reactor deployment.³⁰ From being seen as second-class to Russia and China, the U.S. is back in the race and showing rapid progress.³¹ According to the Nuclear Innovation Alliance, “[f]ederal funding of the ARDP is catalyzing billions of dollars in private investment in innovative nuclear technologies and creating a pathway for commercialization of new advanced nuclear reactors.”³²

Applying this Playbook to Fusion with a Fusion Demonstration Program

The lessons learned from these examples is that, when done right, milestone-based public-private partnerships can change the course of deployment for game-changing technologies, no matter the competition.

To apply this playbook to fusion, a first step would be completing the Milestone-Based Fusion Development Program, initially created in the first Trump Administration.³³ This program has accelerated preliminary design work towards the development of demonstration commercial fusion power plants.³⁴ Fully funding this program and allowing new entrants would enable U.S. fusion companies to complete their design work, setting the industry up to succeed in later deployment.

Simultaneously, this Committee should pioneer a ***Fusion Demonstration Program*** to accelerate the start of commercial fusion deployment to 2028, building off of and improving over past programs. The Fusion Demonstration Program would have three key characteristics:

- A clear and unequivocal goal to accelerate the deployment of at least three different fusion power plant approaches, with construction starting by the end of 2028 and entering operation by the early 2030s.
- Milestone-based, cost-shared funding that only awards those who show *substantial* progress towards the goal (e.g., achieving ignition or equivalent in a prior research system, and meeting the 2028 start of construction deadline). Those that do not meet their milestones will not get funded and would have their awards terminated.

³⁰ Judi Greenwald & Erik Cothron, [The Case for Continued Investment in the Advanced Reactor Demonstration Program](#), Nuclear Innovation Alliance (February 6, 2025).

³¹ [The Global Race for Advanced Nuclear Is On](#), Clean Air Task Force (October 24, 2024). For example, one of the two Advanced Reactor Demonstrations awardees, TerraPower, has already filed for a license with the NRC and broke ground on its power plant in June of 2024. [TerraPower Begins Construction on Advanced Nuclear Project in Wyoming](#), TerraPower (June 10, 2024). The other, X-energy, has partnered with Dow Chemical Company to build four Xe-100 reactors in Seadrift, Texas. [X-energy, Dow Apply to Build an Advanced Reactor Project in Texas](#), Nuclear News (March 31, 2025). One of the Risk Reduction awardees, Kairos Power, has received its construction permit and is well underway building its Hermes test reactor in Tennessee. [Kairos Power Receives DOE Funding to Support Development of Hermes Reactor](#), Nuclear Engineering International (February 28, 2024).

³² [The Case for Continued Investment in the Advanced Reactor Demonstration Program](#), Nuclear Innovation Alliance (February 6, 2025).

³³ [Energy Act of 2020](#) (Sec. 2008), Committee on Science, Space, and Technology (2020).

³⁴ [DOE Opens Milestone Fusion Pilot Plant Program to New Companies and Teams](#), Nuclear News (June 12, 2025).

- Selection of participants based not just on scientific merit, but also by requiring a clear path to commercial and business success.

This program can be funded in stages to limit upfront costs and risks for the Federal government. For example, around the time Congress launched ARDP, it appropriated \$230 million, which was enough to initiate work and send a clear market signal.³⁵ Additional funding arrived as the program progressed³⁶ and broad support increased. A similar path could be taken here. Here, a program costing a fraction of the roughly \$10–13 billion China has invested just since 2023 would enable the U.S. to dominate the future of a trillion-dollar industry.

As the Fusion Demonstration Program develops, there is also still critical science and engineering work to be done to accelerate commercial deployment, such as engineering new systems to close the tritium fuel cycle and developing improved materials to withstand commercial fusion chamber environments. Such testbeds would support the broader industry and are critical for ensuring the U.S. commercial fusion industry can take off before China's.

The Fusion Demonstration Program may represent a new style of DOE fusion program. The DOE's Office of Science has brought fusion to the doorstep of commercialization and has started the shift towards applied research and commercialization through its Milestones program.³⁷ However, the Fusion Demonstration Program will require a much more applied focus, distinct and complementary to the Office of Science's science mission. To win the fusion race, DOE may need to bring on additional capabilities.³⁸

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Thank you for the opportunity to testify before this Subcommittee. I could not be more proud of the work that Pacific Fusion has done to date and inspired at the incredible progress the fusion community has made in just the last decade. The work this Subcommittee has done has transformed countless U.S. industries and lives. By leveraging playbooks that have proven successful in other industries, the U.S. can ensure energy dominance and economic prosperity by being the first nation to bring commercial fusion energy to scale.

³⁵ [U.S. Department of Energy Launches \\$230 Million Advanced Reactor Demonstration Program](#), DOE Office of Nuclear Energy (May 14, 2020).

³⁶ [The Case for Continued Investment in the Advanced Reactor Demonstration Program](#), Nuclear Innovation Alliance (February 6, 2025).

³⁷ [Department of Energy Announces Milestone Public-Private Partnership Awards](#), Fusion Industry Association (May 31, 2023).

³⁸ The SCSP *Commission on the Scaling of Fusion Energy* has evaluated how to establish this capability within DOE. See, e.g., [Fusion Power, Enabling 21st Century American Dominance](#), Commission on the Scaling of Fusion Energy (February 24, 2025).