Congress of the United States
Washington, DC 20515

March 6th, 2025

The Honorable Donald J. Trump
President of the United States of America
1600 Pennsylvania Ave. NW
Washington, D.C. 20500

Dear Mr. President,

We write today to express our strong support for fusion energy and to emphasize the importance of critical investments to ultimately meet America's growing energy needs, strengthen our country's energy security, and continue America's global technological superiority and energy dominance. Fusion energy stands at the cusp of commercial viability within the next decade with the potential to provide clean, safe, and virtually limitless baseload power. Recent achievements and a rapidly growing U.S.-led commercial fusion industry have shown that we are closer than ever to harnessing this revolutionary technology. Most importantly, private sector fusion companies are making significant advancements and committing billions of dollars to fusion development. However, the private sector cannot win the race alone. Without adequate federal government investment to support the development of key commercial fusion milestones, we risk losing the fusion race to other nations, including China. We have the unique opportunity, under your leadership, to make America the world leader in fusion energy—and it's critically important that we don't let this moment go to waste.

In 2020, at your direction, the entire fusion industry worked together with the Department of Energy (DOE) Fusion Energy Sciences Advisory Committee (FESAC)—made up of experts from universities, National Laboratories, and the private fusion industry—to develop a long-range plan[1] highlighting the technological investments and research priorities needed to make commercial fusion energy a reality. In the consensus report, the FESAC emphasized that failing to provide adequate funding for research and development for commercial fusion projects "will cost the U.S. its position as a global leader in fusion energy and plasma science and will compromise future developments with important societal implications."[2]

This commercial fusion energy plan largely sat dormant during the Biden Administration, which failed to prioritize the funding or infrastructure deemed essential in the long-range plan. On the other hand, China is making critical fusion energy investments each day. Notably, the Communist Party of China (CCP) has committed billions of dollars to fusion development, with plans to substantially increase funding over the next decade. For example, China launched a new national industrial consortium of twenty-five state-owned companies and research institutions focused on the development and advancement of fusion technology and is investing significant resources to build-out the fusion research infrastructure identified in the FESAC report four years ago.[3] Moreover, Chinese national companies are investing billions of dollars into private Chinese fusion companies, many of whom mirror U.S. fusion companies and their technical approaches to commercialization. In short, the CCP is making the kinds of fusion investments that your Administration identified but, since you left office, have largely been ignored. To this day, America's federal fusion investments have largely followed the status quo—and to be frank Mr. President, following the status quo will not result in America being the world leader in fusion energy.

Similar to artificial intelligence and quantum technologies, we understand that commercial fusion power will exert its presence on the global economy this century. China also understands this, and it does not take a stretch of the imagination to see what a Chinese commercial fusion power industry could do through the Belt and Road Initiative—thereby cementing China's economic and foreign policy interests throughout the world for decades to come.

Simply put, fusion energy is at an inflection point. There are over twenty companies in the United States seeking to make fusion commercially available within the next decade. Several have made key announcements about commercial customers and

[1] DEPARTMENT OF ENERGY FUSION ENERGY SCIENCES ADVISORY COMMITTEE, *Powering the Future: Fusion & Plasmas*, https://usfusionandplasmas.org/wp-content/themes/FESAC/FESAC_Report_2020_Powering_the_Future.pdf.
[2] *Id.*
[3] Jennifer Hiller, *Wall Street Journal*, CHINA OUTSPENDS THE U.S. ON FUSION IN THE RACE FOR ENERGY'S HOLY GRAIL (Jul. 8, 2024), https://www.wsj.com/world/china/china-us-fusion-race-4452d3be.

siting the first fusion power plants which will begin construction during your 2nd term. While the private fusion industry continues to push forward, the federal government should support and expand key federal fusion initiatives to drive commercial innovation and keep pace with other nations. A key pillar of this commercialization effort is the Milestone-Based Fusion Development Program (the Program), which was authorized in the Energy Act of 2020 that you signed into law during your first term. The Program's overriding purpose is to "support the development of a U.S.-based fusion power industry" and ultimately enable the construction of grid-scale fusion power plants through public-private partnerships. From its inception, the Program's intent was to grow an entirely new fusion industry built on a new, game-changing and world-leading energy technology, bringing with it high-quality jobs and a myriad of other benefits to the U.S. economy and the American taxpayer. The Program was also modeled on an initiative pioneered by the National Aeronautics and Space Administration (NASA) and Elon Musk's SpaceX that catalyzed the U.S. commercial space industry. A recent report by the Government Accountability Office (GAO) noted the DOE's efforts to commercialize fusion through the Program, and other initiatives, have received about 1.2 percent of total fusion funding from 2020–2023.[4] With this current funding dynamic, we fear that the United States will lose the commercial fusion race—this is unacceptable.

Therefore, we encourage you to look further at America's fusion potential. A key aspect of the milestone-based partnership model is that each selected fusion company accepts all the financial and technical risk to execute on pre-agreed milestones leading to a fusion power plant design. Only when a company successfully achieves its milestones, and such achievements are verified by the DOE, are companies reimbursed at an agreed upon fixed price. Unlike other federal programs, any cost overruns or schedule delays under the Program are borne completely by the private fusion company—taxpayer dollars are never at risk. Not only must private companies bring all the capital to the table to achieve the milestones and bear all the technical and financial risk, the federal government reimburses companies for only a fraction of the cost required to achieve them. Consistent with your desires for a more efficient government, previous use of this milestone-based approach by NASA has shown that program management costs were reduced by a factor of 2.5 to 4. The Program is beginning to demonstrate impressive technical progress, but we need to consider additional steps, such as expanding it to help cost-share the first-of-a-kind fusion power plants, which will help the U.S. keep pace with China.

The need for enhanced U.S. commitment to fusion energy is critical, as we risk our energy leadership role to other nations. To maintain America's competitive edge, we urge your Administration to act on the FESAC long-range plan and consider the following actions:

1. Provide full funding for the Program through the current fusion power plant design phase;
2. Expand and fully fund a DOE Milestone-based program for cost-sharing initial commercial fusion power plant development; and
3. Provide full funding for the DOE FES program and implement the recommendations of the Trump-era FESAC long-range plan, realigning the program around commercial deployment, and building out the research infrastructure prioritized in the long-range plan.

By taking these steps, we can ensure that the United States remains at the forefront of fusion energy development, securing your vision of energy dominance and creating high-paying jobs in a new, transformative industry. Fusion energy offers a unique opportunity to address our long-term energy needs while simultaneously strengthening our national security. Together, we must seize this moment to invest in America's energy future.

We appreciate your attention to this matter and look forward to working with your Administration to make commercial fusion energy a reality.

Sincerely,

[4] U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-25-107-037, FUSION ENERGY: ADDITIONAL PLANNING WOULD STRENGTHEN DOE'S EFFORTS TO FACILITATE COMMERCIALIZATION (2025), https://www.gao.gov/assets/gao-25-107037.pdf.

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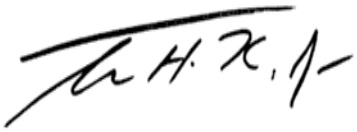

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