

House Sustainable Energy & Environment Coalition
Innovation & Technology Task Force

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LEAPING AHEAD: BUILDING AND DEPLOYING THE NEXT GENERATION OF CLEAN TECHNOLOGY

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Our Commitment

The United States has vast potential to be a global leader on innovative climate solutions. However, we won't be able to lead the economy of the future if we're constantly stuck playing catch up with other countries' innovation and manufacturing capabilities. Instead, we must chart our own course by developing, scaling, and exporting clean technologies that can transform global systems and reinforce American leadership.

The world's most urgent energy and environmental challenges – such as rising costs, worsening climate impacts, grid reliability, and ecosystem degradation – demand the pursuit of not just incremental solutions, but transformational ones. That means developing technologies that are cheaper, cleaner, and more reliable.

Our history shows this is possible. Every major form of energy deployed in the U.S. has been borne out of significant federal investment. The U.S. built the nuclear sector in the 1950s in the wake of the Manhattan Project. Public investment helped launch early-stage solar and wind technologies in response to the 1970s oil embargo. Federal research supported the development of hydraulic fracturing and horizontal drilling, which together unlocked the shale gas revolution and are now opening the door to geothermal as a major energy resource. These examples prove that when government invests in research, development, and commercialization, the United States can shape global markets and remain a dominant economic force for decades.

America has always excelled at invention and early innovation, but too many breakthroughs stall before reaching commercial scale. The U.S. has shown time and again its power to invent, but the challenge of the 21st century is scaling those inventions at home, rather than ceding that opportunity to foreign competitors. This agenda is about closing that gap.

Guiding Principles

Leading for the Future

American federal research investments have spurred the innovations that underlie many of the most important technologies of today's world. With smart federal investments that meet the moment and provide real pathways to commercialization, we can once again build the clean economy of the future right here in the U.S.

Help Researchers Navigate Federal Programs

Many transformative technologies come from university labs, researchers with limited experience working with the federal government, and small businesses. Improving accessibility by providing additional technical assistance, education, and flexible funding opportunities can help provide these innovators fair access to federal funding.

Public-Private Partnerships are Key

The Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E), Loan Programs Office, and the Office of Clean Energy Demonstrations have set the groundwork to commercialize promising new energy technologies, but there remain financing gaps that creative public-private partnerships can address. Success should be measured in real world adoption, emissions reduced, jobs created, and consumer costs lowered.

Replicate What Works

The Department of Energy has shown that national labs, flexible funding, and commercialization offices can work together to turn ideas into impact. These lessons should be applied across all relevant federal agencies, including the Environmental Protection Agency, Department of Agriculture, Department of the Interior, and Department of Transportation.

Emphasize Agility to Develop Technologies Faster

Emerging technologies often develop quickly and unpredictably. Federal science agencies need to be able to react quickly and effectively to move promising technologies from bench science through the commercialization process and into the market. Flexible contracting authorities and milestone award programs have been successful in supporting novel commercial technologies, such as launching the commercial space industry in the U.S., and can provide an example for innovative ways to improve agencies' flexibility while safeguarding taxpayer investments.

Policy Priorities



Build a Federal Innovation System That Gets Clean Technology to Market

- Learn from and expand on the success of programs like ARPA-E, to ensure innovators receive support from lab to market. Make commercialization a core priority across agencies.
- Prioritize technologies that outperform today's systems in cost, resilience, and environmental outcomes.
- Accelerate pilot projects through federal coordination and place-based partnerships.



Provide Stability to Attract Private Investment

- Establish long-term authorizations, consistent appropriations, and/or mandatory spending for federal investments in innovation pathways, from basic research to commercialization.
- Use government procurement and demand-side incentives to create predictable markets for advanced technologies.
- When multiple agencies are involved, create a clear approval structure, avoid unnecessary duplication, and align funding rules across agencies.



Scale Next-Gen Technologies with Federal Investment

- Launch national strategies around energy technologies with the potential to transform entire sectors, such as commercial fusion, advanced nuclear, next generation geothermal, green hydrogen, and advanced batteries.
- Simultaneously develop a technology-neutral, attribute-based approach that focuses on outcomes such as emissions reduction and resilience, and allows agencies to pursue the most promising new technologies.
- Align federal investments to ensure consistent support as technologies move up the ladder of commercial readiness.
- Use advance market commitments and federal procurement to accelerate early-stage adoption and create commercial momentum.



Amplify the Role of Federal Labs and Scientists

- Modernize national lab authorities to act as active commercialization partners, not just research institutions.
- Scale joint ventures between the national labs, federal agencies, startups, industry leaders, and regional economic development groups to maximize the labs' place-based partnerships.
- Reward translational research and deployment-focused teams within national labs and agencies. Strengthen partnerships between research universities and national labs.



Make Funding More Flexible and Adaptive

- Create discretionary funds for fast-moving deployment opportunities.
- Allow agencies to shift resources to technologies with sudden breakthroughs or urgent deployment potential.
- Allow for risk-taking in project selection and anticipate some project failures. If government only funds projects that are virtually guaranteed to succeed, then we are leaving potential transformational breakthroughs on the table. Learning from failures can be just as important as learning from successes.
- Encourage agencies to share lessons from failed projects to inform future investments.



Lower Thresholds to Participate

- Reform cost share and eligibility requirements to support new and more ambitious technologies.
- Provide technical support and simplified application pathways for smaller organizations and underserved communities.
- Prioritize potential impact in grantmaking decisions.



Build Domestic Manufacturing and Supply Chains

- Invest in innovations throughout the supply chain for next generation technologies – from raw materials to finished products – that make each step more efficient, sustainable, and cost-effective.
- Learn from successes elsewhere to support domestic manufacturing capacity. Just as the CHIPS and Science Act propelled expanded semiconductor manufacturing in the U.S., similar tools can be leveraged to grow next generation energy technologies.
- Expand and support innovative workforce training approaches to ensure American workers can take part in and reap the benefits of domestic manufacturing.
- Build on existing supply chain efforts underway at the Department of Defense, DOE's Office of Manufacturing and Energy Supply Chains (MESC) and the National Institute of Standards and Technology (NIST).