

Congress of the United States
Washington, DC 20515

April 28, 2021

The Honorable Marcy Kaptur
Chair
Energy and Water Development, and
Related Agencies
House Appropriations Committee
2362-B Rayburn House Office Building
Washington, DC 20515

The Honorable Mike Simpson
Ranking Member
Energy and Water Development, and
Related Agencies
House Appropriations Committee
1016 Longworth House Office Building
Washington, DC 20515

Dear Chair Kaptur and Ranking Member Simpson:

As Members with a strong interest in clean energy innovation and maintaining U.S. global energy leadership, we thank the subcommittee for continuing to fund several key Department of Energy (DOE) research and innovation programs and request that these programs are given high priority as you consider the Fiscal Year (FY) 2022 Energy and Water Appropriations bill. While we support a robust clean energy R&D portfolio with programs and investments across the spectrum from basic science to applied demonstration projects, we are specifically writing to support three complementary approaches to tackling the critical energy innovation challenges before us: the Advanced Research Projects Agency-Energy (ARPA-E) program, Energy Innovation Hubs, and Energy Frontier Research Centers (EFRCs).

As you know, DOE plays an important role in the development and incubation of clean energy innovation that benefits our nation and the economy. DOE programs such as these support scientific research and technological advances at multiple stages of the innovation pipeline. These programs represent a robust portfolio of energy R&D investments, each of which complements the others to maximize our nation's ability to achieve energy breakthroughs as quickly as possible. These programs, outlined below, deserve your highest consideration.

- **ARPA-E: \$500 million**
- **Energy Innovation Hubs: \$94.088 million**
- **EFRCs: \$130 million**

Advanced Research Projects Agency-Energy (ARPA-E): With significant federal investments, the DOD-funded Defense Advanced Research Projects Agency (DARPA) has been responsible for some of the most innovative technological breakthroughs of our time, from Global Positioning Systems (GPS) to the Internet. ARPA-E was created to replicate the successful DARPA model by incentivizing researchers to develop promising research into game-changing technologies that can meet our future energy needs. Despite the potential for a huge payoff, the private sector does not invest sufficiently in this kind of “high-risk, high-reward” energy research. Supporting ARPA-E is a bet on Americans’ proven ability to turn creative ideas into market-creating, job-growing businesses. Since 2009, 177 of these projects have attracted more than \$4.9 billion in private sector follow-on funding.

We urge the committee to fully fund ARPA-E to enable it to become as transformative and successful as DARPA has been. At current levels, more projects that have the potential to add high

value to the ARPA-E portfolio are identified than can be funded. Additional funding for ARPA-E would help achieve program goals and expand its impact by supporting a greater breadth of research and helping to accelerate the development of technologies that have demonstrated early-stage success toward private sector investment. For FY 2022, we request \$500 million to enable ARPA-E to continue to invest in innovative ideas and to ensure promising technologies have a chance to demonstrate their full potential.


Energy Innovation Hubs (Hubs): The Hubs are large, integrated research centers involving multiple disciplines, investigators, and institutions with a focus on bridging the gap between scientific breakthroughs and industrial commercialization. The Hubs use a centralized, mission-oriented research approach like that employed by the Manhattan Project or at AT&T's Bell Laboratories. DOE has established and Congress has supported hubs focusing on: Batteries and Energy Storage; Critical Materials; and Energy-Water Desalination. For FY 2022, we request \$94.088 million to fully fund the hubs.

Energy Frontier Research Centers (EFRCs): EFRCs consist of small groups of researchers focused on the fundamental science that underlies roadblocks to revolutionary energy technologies, such as interfacial chemistry for solar energy conversion and electrical energy storage. Unlike the Hubs and ARPA-E, these centers specifically focus on long-term chemical and materials science for energy applications. The centers also play a significant role in training graduate students in scientific disciplines central to overcoming energy-related grand challenges. There are now 41 EFRCs with related research activities being conducted in 34 states. For FY 2022, we request \$130 million to support these centers.

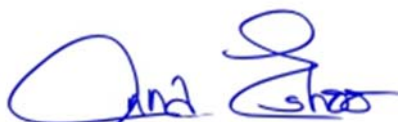
America's innovation history is built on a foundation of robust federal investment in fundamental scientific research. At the same time, the public sector has a deep history of working hand-in-hand with the private sector to bring the fruits of this research to market, address market failures, provide needed expertise, and raise capital for high-payoff, though riskier, projects in which industry would not otherwise invest. Without such partnerships, the stories of the transcontinental railroad, the aviation sector, and biotechnology industries would be dramatically different. As in these past projects, the government has a critical role to play in helping to support and foster the new ideas that will serve as the foundation for the nation's future energy economy.

Thank you for your consideration of these important DOE innovation programs.

Sincerely,



Donald S. Beyer Jr.



Anna G. Eshoo



Adam B. Schiff



Member Signers

Joyce Beatty
Gerald E. Connolly
Doris Matsui
Scott Peters
Brian Fitzpatrick
Joseph D. Morelle
Sean Casten
Salud Carbajal
Chellie Pingree
Paul D. Tonko
Judy Chu
Debbie Dingell
John P. Sarbanes
Mark DeSaulnier
A. Donald McEachin
Thomas R. Suozzi
Suzanne Bonamici
Nanette Diaz Barragán
Kim Schrier, M.D.
Donald M. Payne, Jr.
Jerry McNerney
Diana DeGette
Brian Higgins
Julia Brownley
Steven Horsford
Joaquin Castro
Yvette D. Clarke
Anthony G. Brown
Jimmy Panetta
Jan Schakowsky
Peter Welch
Ted W. Lieu
Eric Swalwell
Darren Soto
Bill Foster
Mike Doyle
Alan Lowenthal
William R. Keating
Andy Levin
Mark Takano
Bobby L. Rush

Peter A. DeFazio
Rick Larsen
Alma S. Adams, Ph.D.
Teresa Leger Fernández
Rick Larsen
Abigail D. Spanberger
Conor Lamb
Mike Levin
Seth Moulton
Ayanna Pressley
Adam Smith
Steve Cohen
Elissa Slotkin
Jared Huffman
Kuster
Jim Costa
John B. Larson
Ted Deutch
Bill Pascrell, Jr.
Haley Stevens
Tony Cárdenas
Chris Pappas
Colin Allred
Dean Phillips
Susan Wild
Jamie Raskin
Richard E. Neal
Gregory W. Meeks
Marc A. Veasey
Antonio Delgado
Cheri Bustos
Robert C. "Bobby" Scott
Gwen S. Moore
Ami Bera, M.D.
Lisa Blunt Rochester
Lizzie Fletcher
Salud Carbajal
Jim Costa
James P. McGovern
Zoe Lofgren
Mike Thompson

Adam B. Schiff
Linda T. Sánchez
Eleanor Holmes Norton
Jimmy Panetta
André Carson
Mary Gay Scanlon
Jim Himes
David Scott
John Katko
Daniel T. Kildee
Ro Khanna
Jackie Speier
Marilyn Strickland
Jamie Raskin
James R. Langevin
Jamaal Bowman, Ed.D.
Danny K. Davis
Joe Neguse
Matt Gaetz
Pramila Jayapal
Albio Sires
Barbara Lee