

**Congress of the United States**  
**Washington, DC 20515**

March 16, 2018

The Honorable Mike Simpson  
Chairman  
Energy and Water Development, and  
Related Agencies  
House Appropriations Committee  
2362-B Rayburn House Office Building  
Washington, DC 20515

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

Dear Chairman Simpson and Ranking Member Kaptur:

As Members with a strong interest in ensuring our nation's future energy security, 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) 2019 Energy and Water Appropriations bill. 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: \$346.5 million**
- **Energy Innovation Hubs: \$108.4 million**
- **EFRCs: \$110 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, 136 of these projects have attracted more than \$2.6 billion in private sector follow-on funding. For FY 2019, we request \$346.5 million to enable ARPA-E to continue to invest in innovative ideas.

**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. To date, DOE has established and Congress has supported five hubs focusing on: Fuels from Sunlight; Modeling and Simulation for Nuclear Reactors; Batteries and Energy Storage; Critical Materials; and Desalination. For FY 2019, we request \$108.4 million to fully fund the five 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. After 2016, there are now 36 EFRCs with related research activities being conducted in 35 states and Washington, DC. For FY 2019, we request \$110 million to support these centers.

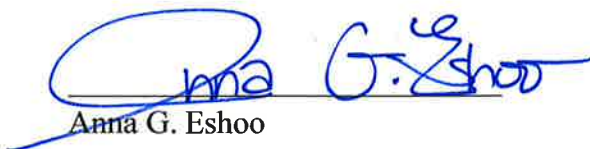
America's innovation history is built on a foundation of robust federal investment in fundamental scientific research. At the same time, the public sector has a deep history of working hand-in-hand with the private sector to bring the fruits of this research to market, address market failures, provide 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.

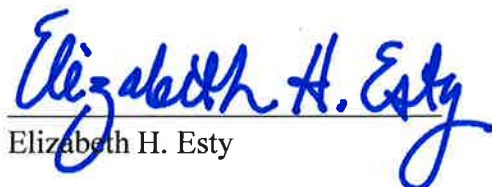
Sincerely,

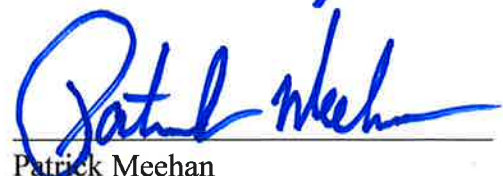
  
Donald S. Beyer Jr.

  
Carlos Curbeo

  
Anna G. Eshoo

  
Brian Fitzpatrick

  
Elizabeth H. Esty

  
Patrick Meehan

  
Bobby L. Rush

  
Elise Stefanik

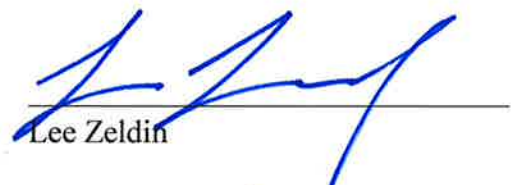
  
Salud O. Carbajal


  
Tom Marino

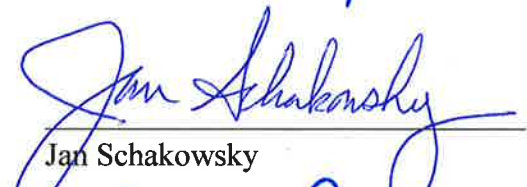
  
Paul D. Tonko

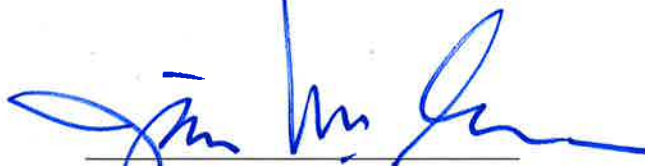
  
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Lee Zeldin

  
John K. Delaney

  
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James P. McGovern

  
Owen S. Moore

  
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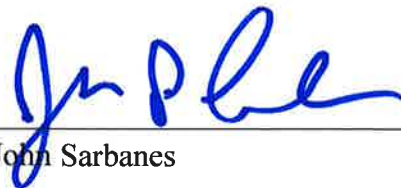
Ted Deutch



Ro Khanna



Sean Patrick Maloney



John Sarbanes




Dave Loebsack




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Steve Cohen

  
Joaquin Castro

  
Joyce Beatty

  
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Sheila Jackson Lee

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Peter King

Peter King

Kyrsten Sinema

Kyrsten Sinema

*Karen Bass*

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