

Mind the Gap: A Design for a New Energy Technology Commercialization Foundation

Jetta L. Wong
David M. Hart

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@jetta_wong @ProfDavidHart

About ITIF

- Independent, nonpartisan research and education institute focusing on intersection of technological innovation and public policy, including:
 - Innovation and competitiveness
 - IT and data
 - Telecommunications
 - Trade and globalization
 - Life sciences and agricultural biotech
 - Clean energy innovation
- Formulates and promotes policy solutions that accelerate innovation and boost productivity to spur growth, opportunity, and progress
- World's top think tank for science and technology policy, according to the University of Pennsylvania's authoritative *Global Go To Think Tank* Index

New ITIF Report Proposing a Foundation to Work with DOE

- Sets forth a vision and design for an Energy Technology Commercialization Foundation for Congress to consider
- Diagnoses commercialization gap in U.S. energy innovation system
- Explores structure and functions of existing federal agency-related foundations

“The need for an Energy Technology Commercialization Foundation is urgent. The United States, in spite of its scientific prowess, is not making rapid enough progress toward solving the diverse and difficult decarbonization challenges it faces. ETCF’s creation would not solve all that ails the U.S. energy innovation system. But it would help DOE to lower the mortality rate of innovators seeking to cross the valley of death and encourage other actors in the system to take actions that would have that effect as well.”

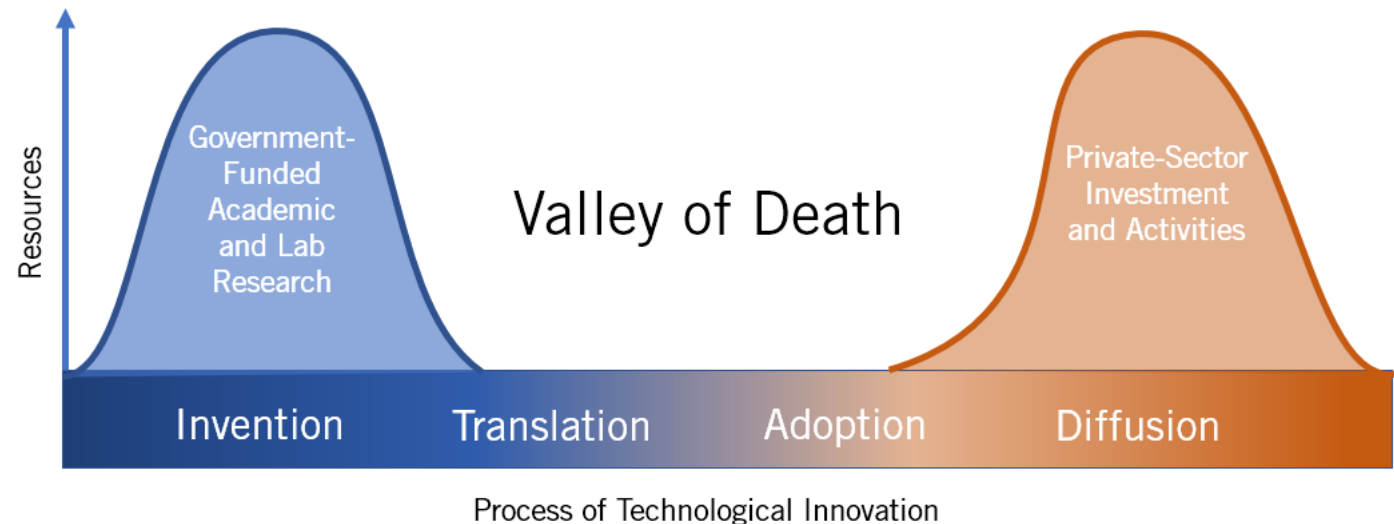
We call on Congress to authorize ETCF, provide it and DOE with the tools and incentives they need to work together harmoniously, and jump-start it with a modest one-time appropriation of \$30 million, which would leverage substantially larger contributions from nongovernmental donors.”

Why Care About Energy Innovation in the United States

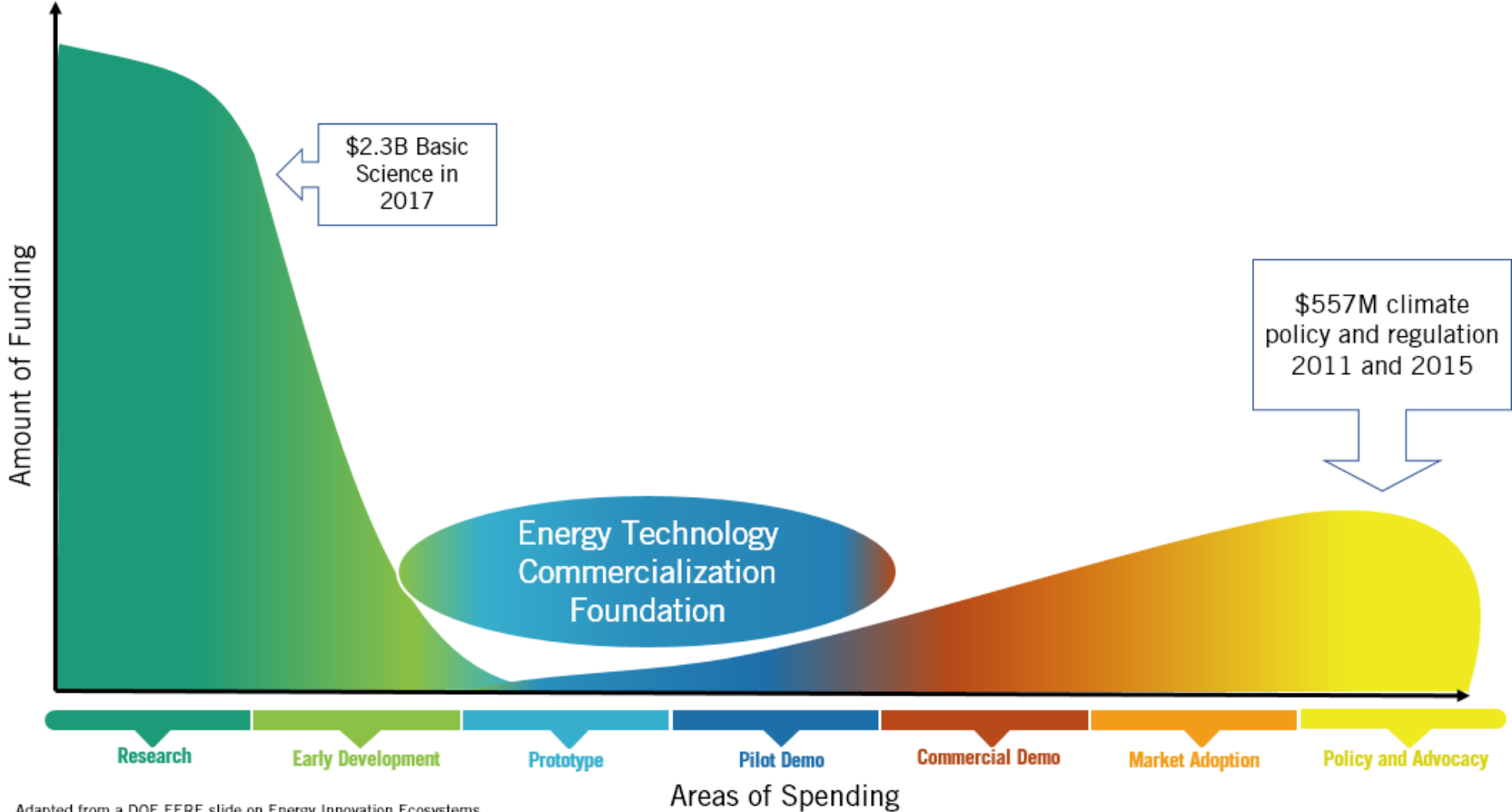
- The world must make a transition in the coming decades to a lower carbon energy system.
- The United States' strong support for energy research and development (R&D) should position it well to lead the global energy transition. But the United States has difficulty moving new technologies from early discovery to scale.
- This gap in the nation's energy innovation system could put the climate at risk by stalling the transition
- It could also open the way for China and other countries to capitalize on U.S. investments, leading to United States losing out on commercial opportunities and potentially compromising national security.

The Clean Energy Technology Commercialization Gap

- Nobody in the United States is responsible for the middle phases of the innovation cycle.
- Government and philanthropic funding tends to come too early for innovators to get to market.
- Private funders (with a few exceptions) prefer investments that pay off more quickly and with more certainty.



ETCF Could Fill the Gap



Adapted from a DOE EERE slide on Energy Innovation Ecosystems.

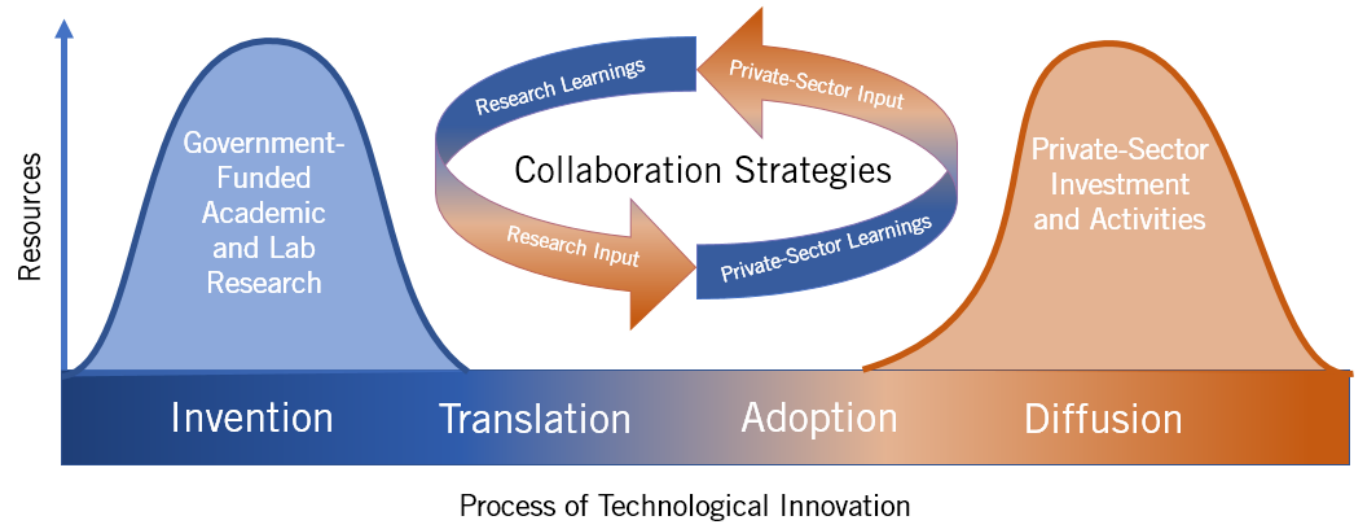
Precedents from Established Agency-Related Foundations

- National Park Foundation was established in 1935 and works with “friends” groups for individual parks around the country.
- Foundation for the National Institutes of Health has raised over \$1 billion and sustains public-private R&D partnerships.
- Foundation for Food and Agriculture works with the USDA and makes creative use of innovation prizes and challenges.
- Report reviews nine congressionally-authorized non-profit foundations that work with federal agencies.

ETCF Collaboration Strategies

At the core of our design for ETCF are two strategies aimed at catalyzing and incubating collaborations between the public, private, and philanthropic communities:

1. Responding to cross-cutting national challenges
2. Strengthening regional energy innovation ecosystems.



ETCF-Funded Commercialization Activities

ETCF would raise most of its funds from philanthropic and private sector partners and make grants and provide other resources to innovation organizations, including DOE offices and labs for these activities:

1. Streamline access to facilities and expertise;
2. Educate and train researchers to become entrepreneurs;
3. Carry out R&D to turn prototypes or other early-stage technologies into marketable products; and
4. Convene energy innovation stakeholders.



Congressional Authorization and ETCF Governance

Congressional authorization would:

- Establish ETCF mission of strengthening U.S. competitiveness in a carbon-constrained world
- Provide minimum requirements for the composition of its governing board, including membership for DOE leadership, and conflict of interest and ethics policies.
- Outline its main strategies, activities, and programs.
- Streamline mechanisms for ETCF and DOE to work together.

ETCF would be a self-governing private nonprofit organization with:

- A diverse board representing key institutions in national energy innovation ecosystem, regions of the country, and DOE leadership.
- A staff with exceptional technical and business expertise and strong understanding of DOE and the philanthropic sector.
- Techno-economic and investment advisory committees.

The Bottom Line

- The United States has much to contribute to the innovations that will power the energy transition—and much to gain from them as well. ETCF would be a valuable mechanism for both enhancing the contributions the nation makes to this critical global effort and ensuring it receives a reasonable share of the economic gains from it.

The creation of a DOE-related foundation has been endorsed by a wide array of organizations.

Such a foundation could “attract significant private capital”

American Energy Innovation Council
(made up of CEOs and venture capitalists)

All federal agencies should establish nonprofit foundations “to accelerate technology maturation, transfer, and commercialization.”

National Institutes of Standards and Technology
technology transfer green paper (2019)

Thank You!

Jetta L. Wong | jetta@jlwadvising.com | [@jetta_wong](https://twitter.com/jetta_wong)

David M. Hart | dhart@itif.org | [@ProfDavidHart](https://twitter.com/ProfDavidHart)