



Opening Statement of Chairman Frank Lucas

Energy Subcommittee Hearing

Bridging the Valley of Death: ARPA-E's Role in Developing Breakthrough Technologies

March 12, 2024

Today, we have an opportunity to explore American research and development in the Department of Energy's ARPA-E program and hear about some of the cutting-edge technologies that hold great promise for our energy independence, global competitiveness, and environmental stewardship.

ARPA-E was created in 2009 by the America COMPETES Act with an initial budget of about \$400 million.

The program was modeled after the Department of Defense's highly successful DARPA program to provide R&D funding for innovative projects that will have a quick, transformative impact on critical economic, environmental, national security, and energy sector challenges.

What makes ARPA-E so unique within DOE is that the program focuses on energy technologies that are too early stage or too high risk to attract private sector investment.

It supports fundamental research over a wide range of breakthrough energy technology areas, including transportation biofuels, long term energy storage, and fusion power, just to name a few.

Throughout its history, ARPA-E has had a tremendous impact on the development of new energy technologies. For example, Fervo Energy has used ARPA-E funding to leverage previous federal investment in horizontal drilling and reduce the drilling time for geothermal wells by 70%, saving millions of dollars per well.

These are the kind of ARPA-E projects that unlock previously unthought of pathways for the entire industry.

As the saying goes: a rising tide lifts all boats, and that's exactly what ARPA-E can do for large segments of our domestic energy industry.

ARPA-E's record of success in producing transformative innovation is why I introduced a bill to reauthorize ARPA-E in 2019.

This bill was signed into law as part of the Energy Act of 2020, but the authorization only lasts until FY 25. So, the time to extend the program's activities and make necessary reforms is quickly approaching.

One area that could be reformed in ARPA-E's approach to risk tolerance in project selection. The Committee has heard from various stakeholders that only a small percentage of projects are cancelled during their term.

While other programs might flaunt that as a success, ARPA-E's mission is to fund high-risk, high-reward projects.

Therefore, they can't be afraid to fund projects that ultimately fail or are cancelled. Cancellations mean you're taking risks, and taking risks means that the projects that succeed have groundbreaking impacts. It's only when the program is right at the cutting edge of what's possible that we will see the best return on the taxpayers' dollars.

With the right mission goals and direction, I believe ARPA-E's innovative approach will continue to fast track new technologies that will grow our economy and maintain U.S. leadership in science and technology around the world.

I want to thank our witnesses for their testimonies today, and I look forward to a productive discussion. Thank you, Chairman Williams, I yield back the balance of my time.