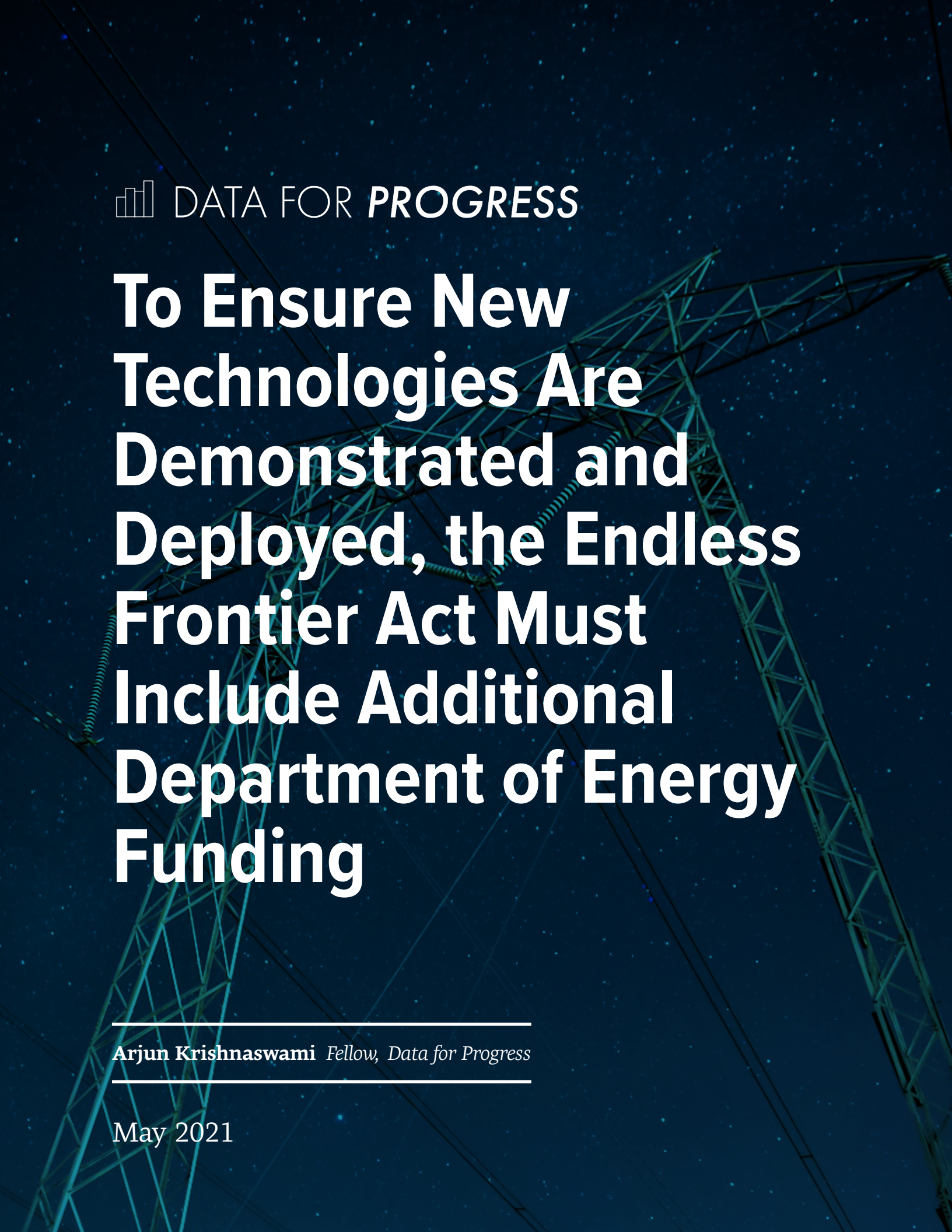

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To Ensure New Technologies Are Demonstrated and Deployed, the Endless Frontier Act Must Include Additional Department of Energy Funding

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Last night, the Senate voted to advance the Endless Frontier Act (EFA), a bipartisan bill to expand the federal government's technology and innovation programs and lay the foundation for long-term economic growth. The bill would help jumpstart innovation on key issues from artificial intelligence to disaster mitigation and advanced energy. While the EFA would help keep the United States on the cutting edge of scientific research, its upgrades are insufficient without comparable expansion of applied demonstration commercialization, demand-pull, and mass deployment activities at specialized agencies like the Department of Energy (DOE). While Senator Ben Ray Luján (D-NM) has led passage of an amendment to allocate EFA funds to DOE labs and user facilities, it is critical that this funding is incorporated in the final bill.

The EFA would authorize a significant expansion in science and energy research. The bill would create a new Directorate at the National Science Foundation (NSF) focused on advancing ten key technology areas, increase technology-focused funding through existing NSF programs, and authorize new funding at DOE to make critical technological innovations. The bill includes almost $30 billion over five years for the new directorate, about $50 billion for NSF programs outside of the directorate, and $17 billion for DOE. The average authorized funding levels are almost double existing funding for science and energy research and development at the DOE, which houses most of the federal government's non-military technology-focused innovation.

It is important that the new NSF directorate build on existing work at DOE. DOE maintains a robust program to fund basic science, training for scientists and innovators, and technology innovation for many of the technology priorities included in EFA. DOE also houses the bulk of the federal government's technology commercialization efforts.

Moreover, DOE and the national labs are staffed with the nation's top scientists, engineers, and energy experts, as well as experts in designing and implementing public innovation programs. NSF, meanwhile, would need to start up a manufacturing and energy program from scratch. The NSF Director should leverage DOE's expertise to help design and run the directorate. DOE participation could help get the directorate running faster, ensure that it is complementary with existing programs, and make better use of federal funds.

The bill advanced yesterday includes provisions to ensure coordination between NSF, DOE, and other agencies and provides funding directly to DOE, a change from the version introduced earlier this year. It is critical that these provisions make it into the final version.

Moreover, the work of building out federal innovation policy cannot end here. The level of investment authorized in EFA is appropriate and sorely needed. However, such a large expansion of basic science funding *must* be paired with expansion of later-stage R&D and technology commercialization to increase U.S. competitiveness and bring new technologies into the domestic economy through manufacturing and adoption. DOE is home to the primary federal programs focused on tech commercialization and late-stage R&D. To round out the innovation portfolio and successfully increase U.S. technological competitiveness, we must also dramatically increase funding for large-scale demonstration projects, technology deployment, and other infrastructure investments that will help bring newer, better technologies into peoples' lives.

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