



April 13, 2020

The Honorable Eddie Bernice Johnson, Chair  
House Committee on Science, Space and Technology  
2306 Rayburn House Office Building  
Washington DC 20510

The Honorable Frank Lucas, Ranking Member  
House Committee on Science, Space and Technology  
2405 Rayburn House Office Building  
Washington, DC 20515

The Honorable Conor Lamb, Chair  
Subcommittee on Energy  
1224 Longworth House Office Building  
Washington DC 20510

The Honorable Randy Weber, Ranking Member  
Subcommittee on Energy  
107 Cannon House Office Building  
Washington, DC 20510

Dear Chairmen Johnson and Lamb, and Ranking Members Lucas and Weber:

I am writing on behalf of the Clean Energy Business Network in response to the House Committee on Science, Space and Technology's (HSST) call for stakeholder input on ideas for responding to the economic impacts of the COVID-19 pandemic.

The Clean Energy Business Network is the small business voice for the clean energy economy, spanning more than 3,500+ business leaders across all 50 states, mainly from small and midsize clean energy companies. Based on prior surveys, roughly a quarter or more CEBN members are from early-stage companies highly relevant to policy areas under the jurisdiction of the HSST. CEBN's parent organization—the Business Council for Sustainable Energy—represents a coalition of corporations, utilities, and trade associations from the energy efficiency, renewable energy, and natural gas sectors. BCSE has separately submitted its comments to HSST, which include a summary of CEBN's recommendations; further detail on areas of unique concern to small businesses is provided below.

CEBN prepared these recommendations via conversations with dozens of energy innovators, incubators, accelerators, and other partners across the nation. Over the coming weeks, CEBN will continue to engage these stakeholders in further discussion to continue to refine and/or expand these recommendations.

### **Near-Term Response to COVID Impacts on the larger Research Enterprise**

#### **1. Supplements to Existing Grants**

**Provide option for no-cost extensions of all existing federal grants and prize competitions that are suspended during the COVID-19 crisis:** Many federal grant recipients are unable to complete their projects at this time due to voluntary and mandatory business closures. Once the immediate public health crisis is over, it may take a few months to truly get these projects back on track, as employees may have been furloughed/laid off, or may be recovering from illness. Additionally, some experiments to date may require a restart/repetition. All federal extramural R&D programs should be required to create a simple, short-form application for project recipients to request a no-cost extension of up to 12 months. Agencies should be required to issue approvals no later than 30 days after application submission.

**Temporarily reduce/waive cost share requirements across various grant programs:** ARPA-E and non-SBIR extramural research programs typically have a 20-50% cost-share requirement. Even in normal circumstances, according to the [Small Business Technology Council](#), "The 20% cost sharing requirement for DOE Broad Area Announcements and 50% requirement for ARPA-E funding opportunities preferentially burdens small businesses when compared with universities and large corporations." This challenge is particularly true under the current economic uncertainty created by the

COVID-19 epidemic. Even those businesses who have corporate partners or investors are expressing difficulty leveraging those relationships to secure the needed cost share as all businesses are facing reduced cashflow. Across the federal R&D budget, Congress should consider suspending federal cost-share requirements for grants issued to small businesses over the next 12 months, or at least capping the cost-share at a lower percentage.

## **Long-term Economic Stimulus/Recovery**

### **1. Funding for new grants and cooperative agreements**

**Collaborative R&D between labs and small businesses:** [Small Business Vouchers](#) are an elegant way to incentivize both small startups and large national labs to collaborate on commercially promising research. By running a single competition where small businesses proposed their own technical projects, DOE took on the burden of finding the right experts at the right labs for the most promising partnerships, and ensured that the business/lab collaboration agreements were easy and rapid to execute. Since these collaborations were worth \$50–300,000 at no cost to the small business, there was a strong incentive to participate. During the present COVID-19 crisis, DOE could adapt the program so that small businesses receive both a voucher for collaborative lab R&D as well as a cash component for internal R&D. The program should be revitalized and extended across all DOE labs at an annual funding level of at least \$30 million. (Allocated proportionally among the DOE applied offices, this would be approximately \$15.5 million for EERE, \$8.5 million for NE, \$4 million for FE, \$1 million for OE, and \$1 million for CESER.)

**Increase funding and speed for SBIR/STTR awards:** The Small Business Innovation Research and Small Business Technology Transfer programs are a set-aside of federal extramural R&D budgets to support high-impact research, development, and commercialization of innovative technologies by small businesses and university partners. To restart America’s innovation engine and support small businesses, Congress should provide supplemental appropriations in FY2020 amounting to a 10% increase for extramural research programs at the DOE, NSF, NASA, and other federal agencies, and temporarily require that at least 5% of these funds be directed to small businesses (compared to the traditional 3.65% SBIR set-aside). The combined increase in funding plus set-aside ensures that ample stimulus funds will also be available for universities, national laboratories, and other traditional applicants for these funds. Provide an avenue for increasing funding to existing SBIR/STTR awardees similar to a Phase IIS, in order to more quickly disburse funds to small businesses while enhancing commercialization and reducing time to market.

**Make SBIR more accessible/impactful for small businesses:** Please see this [detailed list of recommendations](#) previously submitted by CEBN on additional ways to make SBIR even more impactful and accessible to small businesses. Many of these provisions would be instrumental in helping entrepreneurs get back to work innovating new technologies once U.S. communities re-open for business.

**Streamline application requirements for federal grant programs:** Preparing a high-quality application is a complex and time-intensive task for any small business. Reviewing lengthy applications that are a poor fit is also a waste of federal resources and staff time. In recovering from the current economic crisis, it is even more important than ever to ensure that federal funds are accessible to small businesses and that barriers are removed to allow the most high-impact projects to compete. Some federal agencies provide a short-form initial application/letter of intent that is only a few pages long and can be completed without professional assistance. All agencies should be encouraged to use this approach to screen submissions for eligibility and fit.

### **2. STEM Workforce Development**

**Rapid entrepreneurial training:** [Energy I-Corps](#) is an entrepreneurial boot camp for researchers who work at the DOE National Laboratories. Teams of lab scientists are each paired with an industry mentor for a two-month intensive regimen of defining the value proposition of their technology, conducting numerous customer discovery interviews, and assessing viable market pathways. At the end of this program, teams make a “go/no-go” decision on whether to form a company dedicated to the commercialization of the lab technology. This program should be expanded to include DOE-funded teams at universities and small businesses, as well, with an annual funding level comparable to the **\$30 million I-**

Corps program at the National Science Foundation. (Allocated proportionally among the DOE applied offices, this would be approximately \$15.5 million for EERE, \$8.5 million for NE, \$4 million for FE, \$1 million for OE, and \$1 million for CESER.)

**Entrepreneurial fellowships:** [Lab-Embedded Entrepreneurship Programs](#) have been established at three of the DOE National Laboratories to “provide an institutional home for innovative postdoctoral researchers to build their research into products and train to be entrepreneurs.” These three programs—Cyclotron Road at Berkeley Lab, Chain Reaction Innovations at Argonne National Laboratory, and Innovation Crossroads at Oak Ridge National Laboratory—allow first-time entrepreneurs with deep technical expertise to access extraordinarily high-value equipment, expertise, and training over the course of two years in residence. These teams and technologies tend to emerge in an excellent position to form companies and compete for grants and investment. Sustained federal funding at **\$50 million** per year would support a new annual national cohort of 100 fellows, at an expanded number of DOE laboratories and universities. (Allocated proportionally among the DOE applied offices, this would be approximately \$26 million for EERE, \$14 million for NE, \$7 million for FE, \$1.5 million for OE, and \$1.5 million for CESER.)

### **Manufacturing - security and stability of US manufacturing capacity and supply chain over the long term**

**Support for small manufacturers:** [Sunshot Incubator](#) was a program within EERE focused exclusively on early-stage startups working to “develop and launch transformative photovoltaic, concentrating solar power, grid integration, system installation, and soft costs products and service.” Within a 10-year period, the DOE provided \$138 million funding for over 100 companies, which went on to raise more \$3.1 billion in venture capital and private equity investment. This ratio of nearly 22:1 in private-to-public dollars is impressive for a federal program. EERE should receive sustained funding of \$100 million to diffuse this startup-focused model across all of its technology offices. (Allocated proportionally among the DOE applied offices, this would be approximately \$52 million for EERE, \$28 million for NE, \$14 million for FE, \$3 million for OE, and \$3 million for CESER.)

**Expand American-Made Challenges Program:** [American-Made Challenges](#) represent a relatively new model within EERE, moving clean energy entrepreneurs through a rapid tournament of three sequential prize competitions, from planning (\$50,000) to proof of concept (\$200,000) to pilot partnership (\$500,000). Beginning with solar technologies, this model has now been used to generate startup activity in manufacturing efficiency, wave power, and other promising arenas. EERE could devote at least \$10 million per year of the Incubator funds above toward establishing American-Made Challenges across its technology offices. Other federal agencies should also be encouraged to develop rapid-fire, iterative prize competitions such as DOE’s American-Made Challenges.

**Increase funding for Advanced Manufacturing Office and direct competitive awards toward regional manufacturing and test centers that can support rapid, iterative R&D across technology sectors:** Small businesses working to commercialize new technologies often face challenges securing components for rapid-fire, iterative R&D to adapt their products to the particular needs of early customers. Addressing this challenge would not only assist with economic recovery, but also increasing the availability of technology solutions critical to responding and preparing for national crises such as the COVID-19 epidemic (medical supplies, reliable power sources, etc.). Congress should provide supplemental appropriations in FY2020 accounting for a \$200M increase to the DOE’s Advanced Manufacturing Office (current enacted level: \$375M), and direct funds to be competitively awarded to regional partners that can support the development of small-scale, iterative manufacturing institutes and test centers to support rapid, iterative R&D and commercialization of new technologies. This funding level could support 3-7 regional manufacturing centers at a \$30-60M level, comparable to prior funding [levels](#) for national manufacturing institutes.

**Reinstate federal support for coordination of the National Incubator Initiative for Clean Energy (NIICE) and competitively award funding to incubators, accelerators, and similar ecosystem partners to develop or enhance programs to help entrepreneurs successfully commercialize their innovations:** The Electric Power Research Institute (EPRI) is now coordinating the Incubatenergy Network, which arose out of the original NIICE program. However, restoring federal funding for this national coordination and regional incubator partners would support a national

ecosystem of innovation to get struggling startups back on their feet rapidly innovating next-generation technologies that will restore U.S. competitiveness in the global economy. The recommended funding level for this initiative is \$32 million, which would enable \$1 million grants to roughly 1/3-1/2 of the major regional incubators per year and \$2 million to scale up industry-wide showcase platforms and national coordination.

**Provide grant or loan opportunities in the \$2-25M range for pilot/demo stage iterative R&D with early customers:**

Once they have developed a technology that is near-ready for commercialization, entrepreneurs often face a final valley of death in customizing those technologies for first customers. Iterative R&D is required to develop product specifications to meet early customers' needs. The customer does not want to pay for this, but rather purchase a finished product. There are gaps in government and private-sector funding to support this pilot stage. Small Business Administration (SBA) loans are typically only available to more mainstream businesses. Technology startups carry too much technology risk and an uncertain balance sheet. Meanwhile, demo programs like the DOE's Loan Programs Office typically only invest in large projects (\$50M+) and are not accessible to small businesses. There is a lack of available resources in the \$2-25M range to support pilot projects by small companies. The DOE and other federal agencies should be encouraged to leverage existing programs such as the unofficial SBIR "Phase III" awards, ARPA-E SCALEUP, and Loan Programs Office to make more sustained, regular investments in small-scale pilot projects. Doing so will help ensure commercialization and greater return on investment for taxpayer-funded R&D. Funds could be offered as grants or as loans that can be forgiven at no fault if a company cannot repay the loan (e.g., if the iterative R&D does not go as planned and the customer does not place the expected order).

**Refine and expand the Small Business Investment Company (SBIC) program:** SBICs are privately managed investment funds, backed by a loan guarantee from the U.S. Small Business Administration (SBA). Today there are about 300 SBIC funds investing some \$30 billion in small businesses, which tend to be relatively mature companies with low technology risk. The Senate Small Business Committee has developed bill text that would catalyze a new generation of "Innovation SBICs" that would promote U.S. advanced manufacturing and the financing of innovative technology companies.

Thank you for your work to assist communities across America impacted by this pandemic. We appreciate your consideration of our views.

Sincerely,



Lynn Abramson, President