

Nano Science, Technology and Industry Scoreboard

US Solar Energy Technologies Office Fiscal Year 2020 Perovskite Funding Program

2020-08-26

On August 13, 2020, the U.S. Department of Energy (DOE) announced the Solar Energy Technologies Office Fiscal Year 2020 Perovskite (SETO FY20 PVSK) funding program, which will provide \$20 million in funding for projects that will advance device and manufacturing research and development (R&D) and performance validation for perovskite photovoltaics (PV).

These projects will help achieve the solar office's goal of lowering solar electricity costs and increase U.S. solar manufacturing by improving the efficiency, reliability, and durability of perovskite PV materials and reducing the costs of materials and processes. Learn more about <u>SETO's goals</u> and <u>how to apply</u> for a funding opportunity.

<u>SETO</u> expects to make about 6-10 awards under the SETO FY20 PVSK funding opportunity announcement (FOA), ranging from approximately \$500,000 to \$10 million each. Cost share information by topic:

- Topics 1&2: Require cost share. R&D tasks require at least 20% and demonstration tasks require at least 50%.
- Topic 3: Cost share not required;

This funding program encourages collaborative work to generate and accelerate outcomes. SETO seeks diverse teams comprising researchers, solar developers, members of companies or community organizations, and other stakeholders who work across various technology sectors, locations, and scientific disciplines.

To facilitate the creation of teams, SETO will publish a list of organizations that have volunteered to be project partners. The list will provide contact information, area of technical expertise, and a brief description of capabilities. Applicants are urged to view this list and form project teams.

Topic Areas

TOPIC AREA 1: Device R&D (Efficiency and Stability)

3-6 awards, \$500,000 - \$1.5 million each

This topic area will fund research projects that advance perovskite efficiency and stability at the cell or mini-module scale, improve understanding of performance and degradation, and offer a path to producing commercially competitive devices. Projects may explore material combinations, interface design, passivation to deactivate defects, and other post-treatment approaches. Projects may also develop and apply new measurement and characterization techniques to increase knowledge of efficiency and stability.

TOPIC AREA 2: Manufacturing R&D

2-4 awards, \$1.5 million - \$2.5 million each

This topic area will fund research projects that address challenges with manufacturing perovskite modules. The office seeks projects that fabricate devices at commercially relevant sizes and throughput to understand and address manufacturing challenges, improve process control, reduce cell-to-module efficiency losses, and validate production cost estimates. Projects should seek to demonstrate viability of their approach at a level that shows a clear path to commercialization. Only for-profit business entities may apply as prime recipients to this topic area.

TOPIC AREA 3: Validation and Bankability Center

1 award, \$8 million - \$10 million

This topic area seeks to establish a neutral, independent validation center to verify perovskite device performance and address acceptance and bankability challenges. Proposals should present a clear plan for a center that works with the research community to establish test protocols for characterization, acceptance, accelerated life testing, and field validation of perovskite technologies. Only DOE/National Nuclear Security Agency Federally Funded Research and Development Centers and National Laboratories may apply as prime recipients to this topic area.

Prior to submitting a full application for this opportunity, you must submit a concept paper by September 23, 2020, at 5:00 p.m. ET.

Read the <u>original article</u> on US Department of Energy (DOE).		