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Fraunhofer Center for Sustainable Energy Systems Selected to Lead US Department of Energy Sunshot Project

Five-year, \$11.7M research project will increase residential adoption of solar energy technologies through the development of “plug and play” systems

Boston, MA – December 12, 2012 – The Fraunhofer Center for Sustainable Energy Systems (CSE) today announced that it had been selected to receive project funding from the US Department of Energy’s SunShot Initiative, a collaborative national effort to make solar energy cost-competitive with other forms of energy by the end of the decade. Fraunhofer CSE’s 5-year, \$11.7M research project focuses on the development of “plug and play” solar photovoltaic (PV) systems that can be purchased, installed, and connected by homeowners without the need to engage outside consultants or contractors. This project is part of a larger \$21M DOE investment aimed at developing technology solutions that reduce the “soft” costs of residential solar PV systems – the non-module hardware costs that now account for a majority of the total cost of residential systems, and represent a significant barrier to wider adoption of solar power in the United States.

Fraunhofer CSE will leverage its established R&D capabilities in photovoltaics, building energy efficiency, and distributed electrical energy systems to lead a multidisciplinary team of manufacturers, utilities, local governments, and research institutions. “To be selected to contribute to the SunShot Initiative is a tremendous honor,” said Nolan Browne, the Center’s Managing Director. “This award not only acknowledges the quality of our principal investigators, teams, partners, and capabilities, but also our ability to assemble a multi-

disciplinary team of PV, Building Technology, and Smart Grid scientists to deliver highly integrated R&D projects.”

Under the scope of the DOE investment, Fraunhofer CSE will create technologies, components, systems, and standards that reduce the cost and complications of residential solar deployment. The ultimate aim is to develop a range of pre-configured systems that can be selected, purchased, installed, and commissioned by a homeowner within the space of one day – all without the need for dedicated building inspections. Removing these sources of “soft cost” will make residential solar PV systems more cost competitive and attractive to homeowners, paving the way for a large new market for solar power production in the United States.

Key features of CSE’s envisioned technology solution include lightweight solar modules and self sealing roof mounts, distributed power conversion for safe and simple wiring on the outside of the building, self-testing system components, and a communications protocol that allows the installed system to easily communicate with local utilities and obtain the necessary permissions to access the utility grid. In addition, Fraunhofer CSE’s team will work with the national code and standards community to identify hurdles to system deployment, propose code changes, and develop technologies that ensure compliance with local building requirements and regulations.

Fraunhofer CSE’s “plug and play” program will leverage existing efforts by the City of Boston and the Commonwealth of Massachusetts to accelerate the deployment of solar PV systems, including the Solarize Massachusetts program which aims to increase residential solar adoption and lower the cost of solar in Massachusetts. As part of a nation-leading suite of statewide clean energy policies, Governor Deval Patrick set the ambitious goal of reaching an installed solar energy capacity of 250MW in Massachusetts by 2017, reaching 176MW installed as of this month. Helping to meet that goal is the Solarize program, a joint venture between the Massachusetts Clean Energy Center and the Massachusetts Department of Energy Resources’ Green Communities Division.

“Finding new ways to make solar more efficient and affordable will expand its use and drive expansion of the growing solar industry here in Massachusetts,” said MassCEC CEO Alicia Barton McDevitt. “We’re thrilled to support Fraunhofer in its efforts to develop innovative technologies to create a clean energy future for Massachusetts residents and businesses.”

“We are thrilled to see one of our partners in the Commonwealth’s clean energy revolution be recognized as a leader by the Department of Energy,” said Massachusetts Department of Energy Resources Commissioner Mark Sylvia. “This is another step forward in our effort to reduce soft costs for solar installations so that these prices continue to be competitive in the marketplace. Massachusetts has the most aggressive greenhouse gas emission reduction goals in the nation and work like this is fundamental to our success.”

About Fraunhofer CSE

The Fraunhofer Center for Sustainable Energy Systems (CSE) is a not-for-profit applied R&D laboratory dedicated to the commercialization of technologies for a sustainable energy future. CSE engages in collaborative research with private companies, government entities, and academic institutions, and works with emerging sustainable energy startups to help develop their technologies, bridging the gap from laboratory to production.

Currently headquartered in Cambridge, MA, CSE will be moving into a state-of-the-art facility in the Boston Seaport District in 2013. The new facility – known as the Building Technology Showcase – will be a living laboratory for R&D of advanced building technologies and will house CSE's advanced laboratories for building energy efficiency, solar photovoltaics, and distributed electrical energy systems as well as the TechBridge early-stage commercialization program. Fraunhofer CSE is a subsidiary of Fraunhofer USA, a 501 (c) (3) non-profit contract R&D organization, affiliated with Fraunhofer Gesellschaft, Europe's largest contract R&D group.

For additional information about our work, please view our website at <http://cse.fraunhofer.org> or read our blog at <http://cleantechnotes.org>