STATEMENT OF CONSIDERATIONS

REQUEST BY OWENS CORNING SCIENCE AND TECHNOLOGY LLC (OWENS CORNING) FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER DOE AWARD NO. DE-EE0005436; W(A) 2011-065

OWENS CORNING has requested a waiver of domestic and foreign patent rights of the United States of America in all subject inventions arising from its participation under the above referenced cooperative agreement entitled "Development and Productization of High-Efficiency, Low-Cost Building-Integrated Photovoltaic Shingles Using Monocrystalline Silicon Thin Film Solar Cells."

OWENS CORNING is a sub-awardee under the cooperative agreement. Solexel Inc. is the prime awardee. This waiver only applies to subject inventions of OWENS CORNING.

As described in the petition, the objective of the project funded by the cooperative agreement is to "[d]evelop a Building Integrated Photovoltaics (BIPV) roofing shingle that uses a high efficiency, low cost crystalline silicon photovoltaics (PV) cells that can be integrated into a BIPV roofing shingle that is affordable, attractive, and easy-to-install. The work will be conducted in two primary phases. In Phase 1, integrate a high-efficiency monocrystalline silicon cells into a BIPV shingle with a form factor similar to a conventional asphalt roof shingle. The development of an attachment panel (with power management electronics) to which the shingles will be easily integrated into the roof. The work will demonstrate technical proof of concept as well as produce and prototype BIPV shingles. In Phase 2, which will take place over two years, the BIPV shingle design will be refined to include integrated power management electronics and easy-installation accessories designed to make the product simple for roofing contractors to install." OWENS CORNING is providing the technology and knowledge relating to the shingle. Solexel Inc. is providing its extensive knowledge and experience relating to photovoltaic cell technology.

This project supports the Solar Energy Technology Program objective, under the Extreme Balance of System Hardware (BOS-X) Funding Opportunity Announcement (DE-FOA-0000493), to develop "new methods to integrate PV cells or modules within a BIPV application that will result in lower installed cost as well as higher efficiencies of the encapsulated/embedded PV module."

The cooperative agreement has two phases. The total anticipated cost of the cooperative agreement, including the two phases is $23,800,000. The total cost for phase I contributable to the work to be performed by OWENS CORNING is $1,345,500 with OWENS CORNING providing $269,100 as cost share for a cost percentage of 20%. Although the total cost and cost share amounts for phase II are still under review and subject to DOE's approval, the total anticipated cost for phase II contributable to the work to be performed by OWENS CORNING is $4,804,560 with OWENS CORNING providing $4,804,560 as cost share for a cost share percentage of 50%. This waiver is contingent upon OWENS CORNING maintaining at least a 20% cost share for Phase I and, to extent Phases II is approved, at least a 50% cost share for Phase II.

As set forth in its petition, OWENS CORNING is part of a corporate family that is "the recognized market-leading innovator of glass fiber technology, with glass fiber materials found in over 40,000 end-use applications, and a leading provider of home building systems including insulating materials, roofing, acoustic products, and basement remodeling." Its roofing and asphalt business has approximately $2 billion in annual sales. It has over 100 active patents and pending patent applications related to the roofing field, employs over 100 scientists and engineers to support its roofing and asphalt business, and has a world class science and technology center to support its research and development efforts in the roofing and asphalt field.

OWENS CORNING "has a long track record of successful innovation, having invented and commercialized applications for glass fiber insulating and reinforcing materials. By combining the best glass fiber technology with asphalt chemistry, OWENS CORNING reinvented the asphalt roofing shingle in the 1970s and continues to innovate in the roofing industry. Since 1977, OWENS CORNING has been a leading manufacturer of shingles and accessories for the residential roofing market. Though best known for its PINK® Fiberglas® insulation, OWENS CORNING is also a leader in the roofing market. In fact, according to a Hanley-Wood Publishing survey of 3,400 U.S. buildings, OWENS CORNING™ Roofing products were voted 'the most recognizable brand in the market.'"

OWENS CORNING has agreed that this waiver shall be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, comparable to those set out in 35 U.S.C. 202-204. Further, OWENS CORNING has agreed to the U.S. competitiveness provisions as attached to this Statement. In brief, OWENS CORNING has agreed that products embodying any waived invention or made through the use of any waived invention shall be substantially manufactured in the United States, and that OWENS CORNING will not license, assign, or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements.

Referring to item 10 of the waiver petition, OWENS CORNING does not expect that the granting of the waiver will have an anti-competitive effect. There currently exist other BIPV and BAPV products in the marketplace, *e.g.*, Dow Chemical's Powerhouse PV solution. The ability to offer these current competing products should be unaffected by the granting of this waiver. Moreover, OWENS CORNING believes that the technology developed under this project should spur further innovations by its competitors.

Considering the foregoing, it is believed that granting this waiver will provide OWENS CORNING with the necessary incentive to invest its resources in commercializing the results of the cooperative agreement in a manner that will make the above technology available to the public in the shortest time. Therefore, upon evaluation of the waiver petition and in view of the objectives and considerations set forth in 10 CFR 784, all of which have been considered, it is recommended that the requested waiver be granted.

[redacted]

Glen R. Drysdale
Patent Attorney
Golden Field Office

Date: 12/7/2012

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope determined above, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of the cooperative agreement, where through such modification or extension, the purpose, scope, or cost of the agreement has been substantially altered.

CONCURRENCE:

[redacted]

Minh Le
Acting Program Manager
Solar Energy Technology Program

Date: Nov 9, 2012

APPROVAL:

[redacted]

John T. Lucas
Assistant General Counsel for Technology
Transfer and Intellectual Property

Date: 12/5/2012

U.S. COMPETITIVENESS

The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States, unless the Contractor can show to the satisfaction of DOE that it is not commercially feasible to do so. In the event DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, *e.g.*, recoupment of the Government's investment, etc. The Contractor further agrees to make the above condition binding on any assignee or licensee or any entity otherwise acquiring rights to any waived invention, including subsequent assignees or licensees. Should the Contractor or other such entity receiving rights in any waived invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in any waived invention is suspended until approved in writing by DOE.