

## STATEMENT OF CONSIDERATIONS

PETITION FOR ADVANCE WAIVER OF PATENT RIGHTS BY SIEMENS ENERGY, INC. ("SIEMENS") UNDER COOPERATIVE AGREEMENT NO. DE-FE0023955; W(A)2016-007; CH-1765

Petitioner, SIEMENS, has requested a waiver of domestic and certain foreign patent rights for all subject inventions that may be conceived or first actually reduced to practice by Petitioner arising from its participation under the above referenced cooperative agreement entitled "Ceramic Matrix Composite Advanced Transition for 65% Combined Cycle." The period of performance for this award is October 1, 2014 and extended through September 30, 2018.

The objective of the project is the development of a Ceramic Matrix Composite (CMC) based design for the Siemens Advanced Transition cone of a combined cycle engine system designed to operate at 65% efficiency. This CMC design is intended to reduce cooling air consumption and result in emissions and performance improvements beyond current Advanced Transition. The design produced during the period of this Award is expected to be ready for prototype manufacturing and testing.

The original cost of the award was \$811,818.00 with the government providing \$649,454.00 and with Petitioner providing \$162,364.00. After all modifications, the total cost of the award after is approximately \$8,118,348.00, with the Government providing \$6,494,678.00 and with Petitioner providing \$1,623,670.00 (about 20%) cost sharing. This waiver is contingent upon the Petitioner maintaining, in aggregate, at least 20% cost share over the course of the cooperative agreement.

As noted in its waiver petition, Petitioner is a world leader in the design and manufacture of high performance turbine engines and combustion systems. As of the date of the petition, Petitioner employed greater than 7,000 US employees within the gas turbine design construction, operation, and service fields. Petitioner has been granted 17 US patents on the Advanced Transition system, with an additional 40 patent applications pending. Petitioner's contribution to the U.S. technology base is also significant, with over \$875 million spent annually on research and development within the U.S.

Considering Petitioner's technical expertise and significant investment in this technology including sizable cost sharing in this cooperative agreement, it is reasonable to conclude that Petitioner will continue to develop and ultimately commercialize the technology and products which may arise from this cooperative agreement.

As set out in the attached waiver petition, Petitioner also notes the intent to separately negotiate rights in the subject inventions of its lower tier subcontractors other than small businesses and nonprofit entities. It is believed that this approach will facilitate timely commercialization of the technology by furthering the establishment of business and technical relationships between the parties and providing a mechanism for obtaining meaningful cost sharing between the parties. This waiver contemplates that the parties will allocate title or other rights to inventions among

themselves as they deem appropriate during the course of their association consistent with the terms of this waiver. Accordingly, title will be waived directly to Petitioner upon mutual agreement of Petitioner and the subcontractor. However, this waiver will only apply to such subcontractor(s) who provide a letter to DOE acknowledging their right to ask for a waiver. This waiver shall not impact the rights of those parties including small businesses and nonprofit entities subject to Public Law 96-517, as amended, nor shall it grant any rights in inventions made by employees of the National Laboratories.

Petitioner 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, Petitioner has agreed to the attached U.S. Competitiveness provision paragraph (t). In brief, Petitioner has agreed that products embodying a waived invention or produced through the use of a waived invention will be manufactured substantially in the United States unless the Petitioner can show to the satisfaction of the DOE that is not commercially feasible to do so.

Referring to item 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition. Petitioner has multiple direct competitors within the gas turbine industry. These competitors are themselves researching technologies in the 65% combined cycle efficiency gas turbine, as well as researching power generation technology outside the turbine arena. Petitioner also has an extensive history of partnership and licensing arrangements with companies in various commercial markets.

Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in the commercialization of the results of the cooperative agreement in a fashion which will make the above technology available to the public in the shortest practicable 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]  
Jacob A. Heafner  
Patent Attorney  
Intellectual Property Law Division  
DOE ISC-CH


Date: 08/30/2018

[REDACTED]  
Michael J. Dobbs  
Deputy Chief Counsel  
Intellectual Property Law Division  
DOE ISC-CH

Date: 8/30/2018


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 described 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 cooperative agreement has been substantially altered.

CONCURRENCE:

  
Regis K. Conrad  
Director  
Division of Advanced Energy Systems  
FE-221

Date: 5 Sep 2018

APPROVAL:

  
Brian J. Lally  
Assistant General Counsel for Technology  
Transfer and Intellectual Property  
GC-62

Date: 9/6/18

(f)(7)(iii) A copy of each patent issued by the U.S. Patent and Trademark Office on subject inventions.

(h) Reporting on utilization of subject inventions.

The Contractor agrees to submit annual reports on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor and any of its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as DOE may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by DOE in connection with any march-in proceedings undertaken by DOE in accordance with paragraph (j) of this clause. To the extent data or information supplied under this paragraph is considered by the Contractor, its licensee or assignee to be privileged and confidential and is so marked, DOE agrees that, to the extent permitted by law, it shall not disclose such information to persons outside the Government.

(t) 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 the DOE that it is not commercially feasible to do so. In the event the 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 agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.