

## STATEMENT OF CONSIDERATIONS

REQUEST FOR ADVANCE WAIVER OF PATENT RIGHTS BY LG FUEL CELL SYSTEMS INC., UNDER DOE AWARD NO. DE-FE0023337; W(A)-2014-024, CH-1717

Petitioner, LG Fuel Cell Systems Inc. (LG), has requested a waiver of: (a) domestic and foreign patent rights for all subject inventions conceived solely by LG and (b) LG's undivided interest, based on its employee's contributions, to joint domestic and foreign patent rights for all subject inventions conceived, arising under the above referenced award.

The objective of Petitioner's award is to develop a solid oxide fuel cell (SOFC) stack and primary subsystems that will comprise a 1 MW SOFC power system. The aim of the research is to develop lower cost cells and stack materials of increased reliability for that power system. In particular, Petitioner will research materials for substrates, substrate seals, anodes and cathodes, and interconnects.

The total anticipated cost of the award is \$9,256,300.00 including the Petitioner's contribution of \$1,851,260.00, or about twenty percent (20%) of the total cost of the work under the award. This waiver is contingent upon Petitioner maintaining, in aggregate, the above cost sharing percentage over the course of the award. The period of performance is from 1 October 2014 to 31 March 2016.

Referring to items 5-9 of the waiver petition, Petitioner has engaged in the research and development of solid oxide fuel cells for greater than twenty years. Further, Petitioner has expended approximately \$171 million, with \$92 million in the last three years, in the fuel cell technology which is the primary subject of the award. Petitioner has also developed supporting technology in this field including high performance cathodes, compositions for anodes, catalysts, multistage combustors, and reducing gas generators for fuel cells. Accordingly, Petitioner has significant experience in developing technology within this field and will continue to further develop the contracted work.

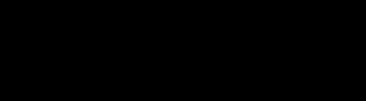
Petitioner has agreed that this waiver will be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, set out in 35 U.S.C. 202-204. Further, Petitioner has agreed to the attached U.S. Competitiveness provision (paragraph (t)). The Petitioner further has agreed to the attached revised paragraph (h) to submit annual reports on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by Petitioner and any of its licensee or assignees. If sold or transferred this reporting obligation will pass on to the buyer or transferee.

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 it is not commercially feasible to do so. Petitioner has further agreed to make the above conditions binding on any assignee or licensee or any entity otherwise acquiring rights in the waived inventions, including subsequent assignees and licensees. Should Petitioner or other such entity receiving rights in a waived invention


undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived inventions is suspended until approved in writing by DOE.

Referring to item 10 of the waiver petition, granting this waiver will not have an adverse impact on competition. Numerous companies are developing fuel cell technology in parallel with Petitioner. For example, Acumentrics Corp is studying hybrid ceramic/metallic heat exchangers for SOFC generators, GE Global Research is actively working to prevent degradation in cathodes, and Precision Combustion, Inc. is advancing water neutral fuel processing and sulfur cleaning procedures. Additionally, industry is investing significantly in technologies competing with fuel cells. Granting the Petition will not hinder competition in the field.

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 agreement in a fashion which will make the 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.

  
Jacob A. Heainer  
Patent Attorney  
Intellectual Property Law Division

Date: 2/27/15

  
Brian J. Lally  
Deputy Chief Counsel  
Intellectual Property Division

Date: 7/28/15



Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the U.S. 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 will not apply to any modification or extension of the award, where through such modification or extension, the purpose, scope or cost of the award has been substantially altered.

CONCURRENCE:



Dr. Darren J. Millot  
Director of Office of Advanced  
Fossil Technology Systems, FE-22

Date:

3/7/17

APPROVAL:



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

Date:

4/3/17