

## STATEMENT OF CONSIDERATIONS

REQUEST FOR ADVANCE WAIVER OF PATENT RIGHTS BY SOUTHERN  
COMPANY SERVICES INC., UNDER DOE AWARD  
NO. DE-FC26-06NT42391; W(A)-2017-001, CH-1775

Petitioner, Southern Company Services Inc., has requested a waiver of: (a) domestic and foreign patent rights for all subject inventions conceived solely by Petitioner and (b) Petitioner's undivided interest, based on its employees' 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 support a cooperative agreement between Petitioner, Mississippi Power Company, and Kellogg Brown & Root LLC in designing, constructing, and operating a coal-based Integrated Gasification Combined Cycle ("IGCC") power plant to demonstrate the Transport Integrated Gasification technology (TRIG™) with CO<sub>2</sub> capture and compression as well as anhydrous ammonia and sulfuric acid product streams (referred to herein as the "Kemper Project"). TRIG™ is an advanced circulating fluidized bed gasification system that produces more power and offers lower capital, operation and maintenance costs than oxygen-blown gasification. The Kemper Project combines advanced gasification technology with an abundant, low cost resource to provide affordable electricity in an environmentally friendly way.

The total anticipated cost of the award is \$2,065,013,164.00 including the Petitioner's contribution of \$1,634,591,164.00, or about seventy-nine percent (79%) 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 February 2006 to 30 April 2020.

Referring to items 5-9 of the waiver petition, Petitioner is a wholly owned subsidiary and service company of Southern Company. Southern Company is a premier energy company serving the Southeast United States. Petitioner owns electric utilities in four states and a growing competitive generation company. Additionally, Petitioner has experience conducting large-scale power plant research and development projects such as the Power Systems Development Facility ("PSDF"). Petitioner was engaged in prior PSDF cooperative agreements (DE-NT000749 and DE-FC21-90MC25140) from which much of the TRIG™ technology has arisen. Petitioner has multiple patents relating to the base and/or components of TRIG™. In addition, Petitioner has made significant financial and technological investments in clean coal research that has led to the development of TRIG™ including contributing extensive funding to the design and construction of the Kemper facility which will allow for testing under the Cooperative Agreement under the Kemper Project. As of January 2016, the Kemper plant costs have totaled \$6.6 B (inclusive of the DOE contribution of \$430,422,000.00). The anticipated sales of byproducts such as carbon dioxide captured in the Kemper plant gasification process are expected to generate additional income which will lower the overall cost to customers once the plant is in service. Further, Petitioner will bear the bulk of the cost to design, construct and operate the coal-based Integrated Gasification Combined Cycle (IGCC) power plant to demonstrate TRIG™ combined cycle technology which demonstrates a substantial invention to further the scope of the project.



Petitioner retains title to the Intellectual Property encompassed in the TRIG™ technology and is currently marketing this technology domestically and internationally. In addition, TRIG™ is being actively and diligently marketed, both domestically and internationally by Southern Generation Technologies, LLC (Petitioner's affiliate) and Kellogg Brown & Root LLC. The parties have entered into a Technology Agreement and Collaboration Agreement that outlines the rights and responsibilities of the parties with regard to TRIG™ and its marketing and commercialization. The technologies, operational processes, and other inventions that will be conceived, developed or first reduced to practice under the Kemper Project will enhance the overall IP portfolio that comprises TRIG™ and will be incorporated in the Licensable Technology to enhance the prospects of commercializing TRIG™ and more effectively promoting the development and commercial utilization of TRIG™. In addition, Petitioner will pursue patents which will enable it to commercialize inventions developed during the course of the Kemper Project. Accordingly, Petitioner has significant experience in developing technology within this field and will continue to further develop the contracted work.

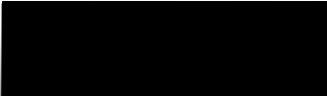
Petitioner has agreed that this waiver will be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, set out in 35 U.S.C. 202-204. Further, Petitioner has agreed to the attached U.S. Competitiveness provision (paragraph (t)). The Petitioner further 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 with the requirement to submit reports being waived if there has been no utilization of the subject inventions in that reporting year. 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.

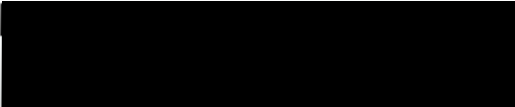
Referring to item 10 of the waiver petition, granting this waiver will not have an adverse impact on competition. Numerous companies, domestic and international, are developing and offering gasification technologies that will directly compete with Petitioner's gasification technology. In fact, it is more likely that the granting of the waiver will increase competition in the marketplace by introducing and expanding this cost effective, efficient and feasible coal-based power generation technology. Thus, 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.

  
Karen L. Blouin  
Patent Attorney  
Intellectual Property Law Division

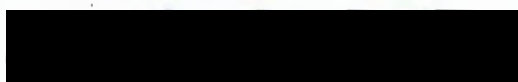
Date: 20 DEC 17

  
Michael J. Dobbs  
Assistant Chief Counsel  
Intellectual Property Division

Date: 12/27/17

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:



Angelos Kokkinos  
Director of Office of Advanced  
Fossil Technology Systems, FE-22

Date: Jan. 23, 2018

APPROVAL:



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

Date: 2/15/18