

STATEMENT OF CONSIDERATIONS

REQUEST BY JOHNSON CONTROLS, INC. FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER DOE AWARD NO. DE-EE0002858 W(A) 2010-027

The Petitioner, Johnson Controls, Inc. (Johnson Controls), has requested a waiver of domestic and foreign patent rights for all subject inventions arising from its participation under the above-referenced award entitled "Novel Energy Conversion Equipment for Low Temperature Geothermal Resources."

The objective of this award is to develop equipment that generates electricity from low temperature geothermal resources. Johnson Controls will evaluate new designs using its mass-produced chiller equipment for "reverse refrigeration" to generate electricity. The goal is to maximize the use of current, proven equipment and optimize it for power generation. This approach will take advantage of economies of scale and manufacturing experience gained from current products, while minimizing performance risks. Johnson Controls will increase process efficiencies over the current state of the art in two ways: better working fluids and improved cycle heat management.

The total anticipated cost of the agreement is \$2,172,423, with Johnson Controls cost sharing \$1,124,709, or 52%. This waiver is contingent upon Johnson Controls maintaining the above cost share percentage.

As indicated in more detail in its petition, Johnson Controls is one of the leading commercial suppliers of chiller equipment. Johnson Controls is a global diversified technology and industrial leader serving customers in over 150 countries. In addition to supplying chiller equipment, Johnson Controls creates quality products, services and solutions to optimize energy and operational efficiencies of buildings; lead-acid automotive batteries and advanced batteries for hybrid and electric vehicles; and interior systems for automobiles.

Johnson Controls 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, Johnson Controls has agreed to the U.S. competitiveness provisions as attached to this Statement. In brief, Johnson Controls has agreed that products embodying intellectual property developed under this agreement shall be substantially manufactured in the United States, and that Johnson Controls 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, granting this waiver is not anticipated to have any adverse impact on competition. According to the petition, there are multiple other vendors that offer similar products that convert heat to electricity. It is anticipated that research performed under this award will allow Johnson Controls to match or slightly better the technology of the established players, but it does not anticipate gaining a dominant position as a

result of this award. The granting of this waiver should not impact the other competitors' ability to continue their efforts.

Considering the foregoing, it is believed that granting this waiver will provide Johnson Controls with the necessary incentive to invest its resources in commercializing the results of the 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.



Julia Cook Moody
Patent Counsel
Golden Field Office

Date: 3 June 2010

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 agreement, where through such modification or extension, the purpose, scope, or cost of the agreement has been substantially altered.

CONCURRENCE:

APPROVAL:

Jay Nathwani
Acting Program Manager
Office of the Geothermal Technology
Program

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

Date: _____

Date: _____

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.