

STATEMENT OF CONSIDERATIONS

ADVANCE CLASS WAIVER OF PATENT RIGHTS FOR TECHNOLOGY DEVELOPED UNDER THE FUNDING OPPORTUNITY ANNOUNCEMENT, "RECOVERY ACT - GEOTHERMAL TECHNOLOGIES PROGRAM: GROUND SOURCE HEAT PUMPS." DE-FOA-0000116; W(C)-2009-017

This advance class waiver will expedite implementation of the American Recovery and Reinvestment Act of 2009 ("Recovery Act") and is intended to apply to inventions of all current and future recipients, including subrecipients, awarded under the first and second topic areas of the Funding Opportunity Announcement (FOA), "*Recovery Act - Geothermal Technologies Program: Ground Source Heat Pumps*," regardless of tier, except recipients eligible to obtain title pursuant to P.L. 96-517, as amended, and National Laboratories.

This FOA addresses Section 931(a)(2)(C) of the Energy Policy Act (EPAct) of 2005, which includes authorization to promote the deployment of ground source heat pumps, also known as geothermal heat pumps (GHPs). More specifically, through this FOA, the U.S. Department of Energy's (DOE) Geothermal Technologies Program (GTP) is seeking to increase the deployment of ground source heat pumps through new commercialization strategies that incorporate the three following topic areas: (1) innovative commercial-scale or residential community technology demonstration projects; (2) data gathering and analysis related to system costs, performance, and installation techniques; and (3) a national GHP certification standard. These strategies should address key barriers that have prevented this technically-mature technology from reaching its full commercial potential, including the high cost of installation, limited consumer knowledge and trust in GHP systems, and the lack of business and financing approaches to deliver the technology in a cost-effective and ubiquitous manner in the marketplace. The funding is being made available through the Recovery Act.

Under the first topic area, GTP is funding mid- or large-scale (*i.e.*, provide 50-100 tons of heating and/or cooling) cost-shared technology demonstration projects that incorporate innovative business and financing strategies or technical approaches designed to overcome commercialization barriers that currently exist for GHPs. Each project will include three phases. During Phase I, recipients will conduct a feasibility study to ensure that a ground source heat pump can be utilized and provide a comprehensive design approach for the GHP installation, including the bore-field and ground loop system design. During Phase II, recipients will procure and install the equipment for the ground source heat pump and to report data on capital costs. During Phase III, recipients will operate the geothermal heating/cooling facility for 2-3 years. These projects are likely to include data gathering, analysis and reporting component, to provide hard data on system performance and benefits, installation techniques and other best practices. The data generated from these projects will be presented via the GTP website or other means and made available to aid consumers in their purchase decisions.

Under the second topic area, GTP is funding data gathering and analysis research papers related to system costs, performance, and installation techniques which will provide insights into the lowest life-cycle cost applications for GHPs and assist consumers in determining project feasibility. The projects are likely to involve collaboration with industry, academia and National Laboratory partners to assemble independent, statistically valid data on the costs and benefits of GHPs in a variety of building applications to target those that are most cost effective from a life cycle standpoint. Projects are also likely to include modeling of system performance and cost benefits for a variety of system designs and applications, from small residential to large district heating systems, and identify GHP applications based on lowest life cycle cost.

Under the third topic area, GTP is funding an organization or organizations to create a national certification standard for the GHP industry designed to increase consumer confidence in the technology, reduce the potential for improperly installed systems, and assure product quality and performance. Projects are likely to solicit information and input from a variety of industry stakeholders, manufacturers, professional and trade organizations to develop a certification standard for all primary personnel involved in the installation of GHP systems, including drillers; plumbers and electricians; heating, ventilating, and air conditioning (HVAC) and refrigeration specialists; engineers; and architects.

36 awards have been or will be awarded under the first and second topic areas of this FOA. The prime recipients include 6 large businesses, 10 local or state government entities, 18 non-profit organizations (including 14 institutions of higher education), and 2 domestic small businesses.

In addition to the foregoing prime recipients, each prime recipient may be teamed with one or more subrecipients. It is anticipated that each of the teams will develop an appropriate allocation of patent rights among the recipients to facilitate the commercial development of the respective technical areas forming the subject matter of each award, taking into account the provisions of the Bayh-Dole Act.

The minimum cost share varies by topic area. Specifically, for topic area 1, the minimum cost share is 50%. However, using the Secretary's statutory authority, under the Recovery Act, to reduce cost share requirements, a recipient may propose cost share as low as 25%. For topic area 2, the minimum cost share is 20%. However, using the Secretary's statutory authority, under the Recovery Act, to reduce cost share requirements, a recipient may propose cost share as low as 10% for topic area 2. For topic area 3, there are no cost share requirements. For Indian Tribes or Tribal Energy Resource, the cost share may be waived in full for any of topic areas.

It is the purpose of this class waiver to vest title to the parties' inventions, under the first and second topic areas, with the recipients and subrecipients in a fashion enabling them the expediently commercialize the various technologies. Accordingly, DOE will waive the Government's title to subject inventions, other than inventions made by Bayh-Dole recipients pursuant to P.L. 96-517, as amended, or National Laboratories, to the

respective recipient or other recipients as may be designated by the parties agreeing to the terms of this waiver.

This class waiver does not apply to inventions under the third topic area. In view of the nature of the work, the limited number of recipients, and the lack of cost share requirement for the third topic area, a class waiver for inventions under the third topic area is not warranted. However, the exclusion of the third topic area from this class waiver does not preclude a recipient under the third topic area from requesting a waiver of patent rights in its favor as set forth by DOE patent waiver regulations at 10 CFR Part 784.

This advance class waiver of the Government's rights in inventions is subject to the usual Government license, march-in rights, and preference for U.S. industry provisions set out in 35 U.S.C. 202-204. The class waiver also includes the attached U.S. Competitiveness clause, paragraph t, which requires that products embodying any waived invention or produced through the use of any waived invention be manufactured substantially in the United States unless the recipient demonstrates to the satisfaction of DOE Field Patent Counsel, with the concurrence of the cognizant DOE program, that it is not programmatically or commercially feasible to do so. Field Patent Counsel, for good cause shown in writing, may grant a deviation from this U.S. Competitiveness clause in advance of contracting. The recipient further agrees to make the above condition binding on any entity acquiring rights to any waived invention, including subsequent assignees or licensees. Should the recipient 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 the waived invention is suspended until approved in writing by DOE.

The grant of this class waiver is not expected to have any adverse effects on competition or market concentration. Rather, the waiver should support DOE Strategic Theme 1, Goal 1.1. (Energy Diversity) of increasing national energy options, reducing vulnerability to disruptions, and increasing flexibility of the market to meet U.S. needs. In any event, if a recipient who has obtained title is not making reasonable efforts to utilize a waived invention, DOE can exercise march-in rights.

This advance class waiver shall apply to each of the recipients under the teaming arrangements for the first and second topic areas upon the Contracting Officer's written notice to Field Patent Counsel that the recipient is obligated to provide cost sharing as set forth in the applicable Funding Opportunity Announcement, and shall remain in effect for so long as such cost sharing is maintained over the term of the agreement.

In addition to the above, all recipients under the first and second topic areas of this FOA, other than recipients which are domestic small businesses or non-profit organizations under P.L. 96-517, as amended, or National Laboratories, shall give DOE written notice of their acceptance of the terms and conditions of this class waiver prior to entering into any agreement incorporating the terms of this waiver. Except as otherwise specifically approved by DOE Patent Counsel, a recipient's acceptance of an agreement

under this award, at any tier, shall constitute that recipient's notice to DOE of its acceptance of the terms and conditions of this class waiver.

In the event a recipient which is a member of a teaming arrangement does not participate in subsequent phases of its project, the remaining recipients in that recipient's team shall retain, as a minimum, a royalty-free, nonexclusive license throughout the world, with the right to grant sublicenses, in each subject invention held by such recipient pursuant to this class waiver, except as otherwise approved by DOE Field Patent Counsel. However, in no event will recipients eligible to obtain title pursuant to P.L. 96-517, as amended, or National Laboratories be required to license other recipients its subject inventions.

Considering the foregoing, and in view of the statutory objectives to be obtained and the factors to be considered under DOE's statutory waiver policy, all of which have been considered, it has been determined that this class waiver as set forth above will best serve the interest of the United States and the general public. It is recommended that the waiver be granted.



Glen R. Drysdale
Patent Counsel
Golden Field Office

Date: 1/14/10

Based upon the foregoing Statement of Considerations, it is determined that the interests of the United States and the general public will best be served by a waiver of the United States and foreign patent rights as set forth herein, and, therefore, the waiver is granted. This waiver shall not affect any waiver previously granted.

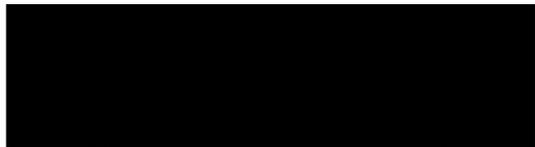
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Date: 5/13/2010

APPROVAL:



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Assistant General Counsel for
Technology, Transfer, and
Intellectual Property, GIC-62

Date: 5/14/10

(1) 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.