

STATEMENT OF CONSIDERATIONS

PETITION FOR ADVANCE WAIVER OF PATENT RIGHTS BY ARIZONA PUBLIC SERVICE INC. ("APS") UNDER COOPERATIVE AGREEMENT NO. DE-FE0001099 BETWEEN APS AND DOE; W(A)-2009-065; CH-1536

The Petitioner, APS, 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 APS arising from its participation under the above referenced cooperative agreement entitled "Integrated Energy System with Beneficial Carbon Dioxide Use."

The objective of the project is to demonstrate an innovative concept for the beneficial use of carbon dioxide at a sufficient size for gathering information on cost and feasibility of implementing and operating a commercial size carbon dioxide to algae to biofuels facility and to design, construct, operate, and evaluate an engineering scale coal hydrogasifier to provide significant information on carbon conversion with resulting gasification product distribution. And finally developing a process design for a commercial scale, near zero emission facility for the co-production of electricity and SNG.

The total cost of the project is approximately \$88,125,000.00 with APS providing about 20% cost sharing. This waiver is contingent upon the Petitioner maintaining, in aggregate, the above cost sharing percentage over the course of the cooperative agreement.

As noted in its waiver petition, the APS team has significant background in the technical aspects of this project. APS and its contractors hold several patents in the area of coal gasification, gas clean-up, algae cultivation, algae culture dewatering, and biofuel production.

Considering APS's technical expertise and significant investment in this technology including sizable cost sharing in this cooperative agreement, it is reasonable to conclude that APS will continue to develop and ultimately commercialize the technology and products which may arise from this cooperative agreement. APS has received commitments from several companies to participate as subcontractors on this project.

In view of the cost sharing and other equities between APS and its subcontractors, it is anticipated that the parties will develop an appropriate allocation of patent rights among the participants to facilitate the expeditious development of the technology forming the subject matter of the agreement. Accordingly, DOE will waive title to all subject inventions made by APS's employees, and its subcontractors' employees, regardless of tier, except inventions made by subcontractors eligible to retain title pursuant to P.L. 96-517, as amended, or National Laboratories, to APS or its subcontractors, as mutually agreed by the parties. Except as otherwise approved in writing by DOE Patent Counsel, a party's acceptance of a subcontract under this agreement, at any tier, shall constitute APS's certification that it has provided that party with a copy of this Statement of Considerations and that party's notice to DOE that it accepts the terms and conditions


of this advance waiver. Furthermore, a subcontractor has the right to request a waiver from DOE in its own right, rather than having to pass through the contractor to acquire title to subject inventions. Additionally, subcontractors who receive title under this waiver shall notify DOE Patent Counsel in writing of such disposition of patent rights.

APS 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, APS has agreed to the attached U.S. Competitiveness provision paragraph (t). In brief, APS 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 APS 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. If anything, the technology forming the subject matter of the collaboration can be expected to stimulate competition. Currently there are other coal to gas technologies under development by large companies such as General Electric. The Advanced Hydrogasification Process would add a new dimension to the mix and benefit competition.

Considering the foregoing, it is believed that granting this waiver will provide APS 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.


Joy Alwan
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Intellectual Property Law Division


Mark P. Dvorscak
Deputy Chief Counsel
Intellectual Property Law Division

Date: 28 Dec 09

Date: Dec. 28, 2009

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:



Clarence L. Miller
Director
Office of Sequestration, Hydrogen
and Clean Coal Fuel
E-138 GTN

Date: 5/17/10

APPROVAL:



~~Paul A. Gottlieb~~ John T. Lucas, Acting
Assistant General Counsel
for Technology Transfer and
Intellectual Property

Date: 6/11/2010

WAIVER ACTION - ABSTRACT
W(A)2009-064

REQUESTOR
Arizona Public
Service

CONTRACT SCOPE
The objective of the project is to
determine the commercial viability for
the APS Hydrogasification Process

RATIONALE FOR DECISION
> 20% Cost Sharing

(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.

Status of Arizona Public Service Project
4/30/2010

Arizona Public Service (APS) has been conducting a project titled “Development of a Hydrogasification Process for Co-Production of Substitute Natural Gas (SNG) and Electric Power from Western Coals” for the Office of Fossil Energy’s Fuels and Gasification Programs. The project is currently in Phase II which was expected to be completed in August 2010. At that time, the project would have transitioned to the next phase which was focused on scaling up the hydrogasification process in addition to the algae-CO₂ capture work. This next phase would have been funded as part of the American Recovery and Reinvestment ACT of 2009 (ARRA) under the Industrial Carbon Capture and Storage (ICCS) carbon utilization activities. However, NETL was notified in March 2010 that the ARRA project will be terminated as of April 30, 2010.

As of April 28, 2010, APS has begun preparing the final report for the project that was funded by the Fuels and Gasification Programs. Coincident with their decision not to continue with the ARRA-funded scale-up of the hydrogasification and algae cultivation technologies, APS began to shut down operations on this project as well, stating they were out of funds. As it stands, APS will not be able to provide the deliverables that were included in the statement of project objectives. The NETL Federal Project Manager is exploring options to complete certain activities, such as the planned techno-economic system study which would be a useful document in the event it is desired to conduct hydrogasification R&D in the future. APS has begun the shut-down of all algae operations.