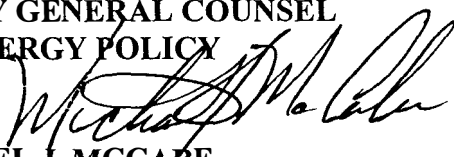


**MEMORANDUM FOR: DAVID K. GARMAN
ASSISTANT SECRETARY FOR ENERGY
EFFICIENCY AND RENEWABLE ENERGY**

**DAVID N. HILL
DEPUTY GENERAL COUNSEL
FOR ENERGY POLICY**



**FROM: MICHAEL J. MCCABE
BUILDING TECHNOLOGIES PROGRAM
MANAGER**

**PAUL A. GOTTLIEB
ASSISTANT GENERAL COUNSEL FOR
TECHNOLOGY TRANSFER AND
INTELLECTUAL PROPERTY**



**SUBJECT: Approval of Exceptional Circumstances Determination for Inventions
Arising Under the Solid State Lighting (SSL) Program**

This Memorandum requests that you approve the attached Exceptional Circumstances (E-C) Determination for Inventions Arising Under the SSL Program. The E-C Determination, drafted by the National Energy Technology Laboratory (NETL) patent counsel in consultation with Headquarters patent counsel, finds that circumstances surrounding the SSL Program are exceptional and justify modified intellectual property arrangements as allowed by the Bayh-Dole Act (35 U.S.C. 202(a)(ii)). As the Manager of the Building Technologies Program, I ask that you approve the attached E-C Determination.

Background

The Department of Energy (DOE) is implementing the SSL Program through the Building Technologies Program. In partnership with NETL, the Building Technologies Program will, through the SSL Program, develop advanced solid state lighting technologies that, compared to conventional lighting technologies, are much more energy efficient, longer lasting, and cost-competitive, by targeting a product system efficiency of 50 percent with lighting that accurately reproduces sunlight spectrum. It is envisioned that SSL products of this quality will have substantial market penetration and with their improved performance would save significant energy.

The SSL Program has a multi-tier structure. One tier consists of a competitively selected SSL Partnership whose membership includes organizations that have or will have the capacity to manufacture SSL systems, i.e. the entire package from wall plug to

illumination. This group includes a significant portion of the United States manufacturing base of SSL products for general lighting applications. Another tier is the Core Technology Program, which will enter into funding agreements with DOE to develop solutions to the more difficult shared technical barriers identified by the SSL Partnership.

A Memorandum of Agreement (MOA) was entered into between DOE and the SSL Partnership, under which no federal funding will be provided to the Partnership. The Partnership will provide a manufacturing and commercialization focus for the SSL Program and accelerate the commercialization of SSL technologies through DOE access to the technical expertise of the organization's members, communication of SSL Program accomplishments within the SSL community, and cooperative efforts of the Partnership to develop and promote demonstrations of SSL technologies. Some members of the Partnership may also be selected for the award of cost shared cooperative agreements under the SSL product development solicitations, the third tier of the SSL Program structure.

In order for the link between the SSL Partnership and the Core Technology Program to succeed, the members of the SSL Partnership will require a guaranteed right to license the technologies developed by Core Technology Program participants. However, most of the Core Technology Program participants are expected to be domestic small businesses or domestic nonprofit organizations, such as universities, including DOE laboratories and those laboratories subject to a class waiver. These entities are entitled under the Bayh-Dole Act, or their laboratory operating contracts, to retain title to any inventions they conceive or first actually reduce to practice under their government-funded awards. Fortunately, the Bayh-Dole Act also allows an agency to make a determination of exceptional circumstances when it finds that encumbering the right to retain title to any subject invention will better promote the policy and objectives of the Bayh-Dole Act.

Specifics of SSL Program Exceptional Circumstances Determination

The proposed intellectual property arrangement will allow members of the Core Technology Program to retain title to inventions made under their SSL Program awards, but will require them to offer to each member of the SSL Partnership the first option to enter into a non-exclusive license upon terms that are reasonable under the circumstances, including royalties, for these inventions. Field of use of the license could be limited to solid state lighting applications, although greater rights could be offered at the discretion of the invention owner. In addition, any entity having the right to use or sell any subject invention in the United States and/or any other country — including the Core Technology Program participant — must agree that any products embodying the subject invention or produced through the use of the subject invention will be substantially manufactured in the United States.

Participants in the Core Technology Program must hold open license offers to SSL Partnership members for at least 1 year after the U.S. patent has issued on a new invention made under the Core Technology Program. Up to and during this one year

period, the invention owner can enter into licensing negotiations for solid state lighting applications only with members of the Partnership. The invention owner must agree to negotiate in good faith with any and all members of the Partnership that indicate a desire to obtain at least a non-exclusive license. Exclusive licensing may be considered if only one Partnership member expresses an interest in licensing the invention. If no agreement is reached after nine months of negotiations, the individual Partnership member can take action in a court of competent jurisdiction to force licensing on reasonable terms and conditions.

In developing the E-C Determination, the SSL Program strove to minimize the licensing obligations that the Core Technology Program participants would have to agree to. They would retain title to their inventions and would be free to enter into additional licenses in other fields of use (besides solid state lighting) at any time. Additionally, one year after the U.S. patent issues, they would be free to enter into licenses in any field of use with any interested party. The licensing of background patents owned by the invention owner is not required.

Separately, under the SSL Program, a number of product developers will receive cost shared cooperative agreements as a result of competitive Product Development solicitations. This E-C Determination also imposes a requirement that any entity having the right to use or sell any subject invention under one of these cooperative agreements in the United States and/or any other country — including the Product Developer — must agree that any products embodying the subject invention or produced through the use of the subject invention will be substantially manufactured in the United States.

The term of the E-C Determination will be 10 years from the date it is approved by the General Counsel or her designee. However, the Government reserves the unilateral right to cancel or revoke this Determination in the event that the SSL Partnership organization dissolves or becomes bankrupt or insolvent, or in the event that the MOA between DOE and the SSL Partnership is terminated by either party for any reason. In addition, if any of these events occurs and DOE subsequently enters into a similar agreement with another partnership, DOE reserves the unilateral right to continue the E-C Determination, with the benefits accruing to the successor partnership.

Justification for Approving the SSL Program Exceptional Circumstances Determination

Exceptional circumstances determinations are authorized by the Bayh-Dole Act when the agency determines that restricting of the right to retain title to an invention resulting from federally sponsored research and development will better promote the goals of the Act, e.g., to use the patent system to:

- Promote collaboration between commercial concerns, and nonprofit organizations and small businesses, universities, and non-profit laboratories;

- Ensure that inventions made by such organizations are used to promote free competition and enterprise; and
- Promote the commercialization and public availability of inventions made in the United States by United States industry and labor.

As discussed in the E-C Determination, the Building Technologies Program believes the proposed modification to the standard intellectual property allocation meets these goals.

Potential Concerns


- Some members of the SSL Partnership may prefer to submit a proposal to the Product Development solicitation and thus keep most development work in-house. However, the Building Technologies Program feels this is not necessarily the best technical approach or best use of public funds. Individual companies would typically not possess a concentration of the best talent; redundant equipment and facilities would have to be purchased; and redundant research and development efforts would have to be performed. This would negate the SSL Program goal of leveraging the most difficult problems to accelerate commercialization of this nationally important technology.
- Some small businesses may object to this E-C Determination because they want to reserve the right to practice their inventions themselves, rather than to license them to the SSL Partnership members. DOE has a large Small Business Innovative Research (SBIR) program to which this Determination does not apply. Small businesses have the option to apply for an award through the DOE SBIR program if they want to pursue a more entrepreneurial path towards commercialization.
- Some affected entities, especially universities, may object in principle to any restrictions of their intellectual property rights, no matter how compelling the logic is. Entities who believe that the Determination is contrary to the intent of Bayh-Dole may: (a) complain to Departmental officials and/or members of Congress; (b) pursue an administrative appeal to DOE; or (c) file a petition for review in the United States Court of Federal Claims. In addition, the Secretary of Commerce has the statutory authority to object to this Determination, but no right to disapprove, if he believes that the Determination is contrary to the policies of the Act. In that event, the Secretary of Commerce shall so advise the Secretary of Energy and the Administration of the Office of Procurement Policy and recommend corrective action. The Building Technologies Program feels that DOE can adequately justify its action in the face of such a challenge.

A similar Exceptional Circumstances Determination was approved in November 2000 under Fossil Energy's Solid State Energy Conversion Alliance (SECA) program. Neither the Secretary of Commerce nor the industry raised concerns regarding that E-C Determination.

Conclusion

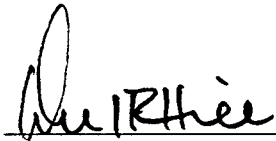
The Building Technologies Program believes that approval of the Exceptional Circumstances Determination will benefit DOE program objectives, the SSL Partnership, and the Core Technology Program participants.

Approved

Date: 6-6-05

**ASSISTANT SECRETARY FOR
ENERGY EFFICIENCY AND
RENEWABLE ENERGY**

Approved:


**DEPUTY GENERAL COUNSEL
FOR ENERGY POLICY**Date: 3-18-05**Attachment**

cc: J. Brodrick
B. Marchick, GC-62
C. E. Christy, NETL
D. F. Gyorke, NETL
R. R. Jarr, NETL
L. A. Jarr, NETL

**STATEMENT OF ANALYSIS OF DETERMINATION
OF EXCEPTIONAL CIRCUMSTANCES FOR WORK PROPOSED
UNDER THE SOLID STATE LIGHTING PROGRAM**

For the reasons set forth below, the Department of Energy (DOE) has determined, pursuant to 35 U.S.C. § 202 (a)(ii), that the circumstances surrounding the DOE's Solid State Lighting (SSL) Program being implemented by DOE's Energy Efficiency and Renewable Energy's (EERE's) Office of Building Technologies and the National Energy Technology Laboratory (NETL), to develop improved lighting products described within various solicitations and National Laboratory funding calls implemented under the SSL program, are exceptional. Accordingly, a disposition of patent rights different from that generally available under Public Law 96-517 and Public Law 98-620 for funding agreements with small businesses, universities and other nonprofit organizations, and work done by DOE government-owned, contractor-operated (GOCO) National Laboratories, whether operated by nonprofit or for profit organizations, is warranted. These laws generally entitle such entities to retain title to inventions made under Government sponsorship, with minimal licensing obligations. The disposition of patent rights specified below will better promote the policies and objectives set out in 35 U.S.C. § 200, as described in detail below.

The goal of the SSL Program is to, by 2025, develop advanced solid state lighting technologies that, compared to conventional lighting technologies, are much more energy efficient, longer lasting, and cost-competitive, by targeting a product system efficiency of 50 percent with lighting that accurately reproduces sunlight spectrum. It is envisioned that SSL products of this quality would have substantial market penetration and with their improved performance would save significant energy.

The SSL Program has a multi-tier structure. One tier consists of a competitively selected SSL Partnership whose membership includes organizations that have or will have the capacity to manufacture SSL systems, *i.e.*, the entire package from wall plug to illumination. This group includes a significant portion of the United States manufacturing base of SSL products for general lighting applications. Another tier is the Core Technology Program, which will focus on finding solutions to the more difficult shared technical barriers identified by the SSL Partnership.

In order for the link between the SSL Partnership and the Core Technology Program to succeed, the SSL Partnership will require a guaranteed right to license the technologies developed by Core Technology Program participants. However, most of the Core Technology Program participants are expected to be domestic small businesses or domestic nonprofit organizations, such as universities, including DOE laboratories, and those laboratories subject to a class waiver. These entities are entitled under the Bayh-Dole Act (35 U.S.C. § 200 *et seq.*), or their laboratory operating contracts, to retain title to any inventions they conceive or first actually reduce to practice under their Government-funded awards.

It is anticipated that the Government share of the budget for this 20-year program will be over 200 million dollars. Except for the DOE GOCO National Laboratories, the organizations

participating in the Core Technology Program will provide 20% cost-share. A Memorandum of Agreement (MOA) was entered into between DOE and the SSL Partnership, under which no federal funding will be provided to the Partnership. The Partnership will provide a manufacturing and commercialization focus for the SSL Program and accelerate the commercialization of SSL technologies through DOE access to the technical expertise of the organization's members, communication of SSL Program accomplishments within the SSL community, and cooperative efforts of the Partnership to develop and promote demonstrations of SSL technologies. Some members of the Partnership may also be selected for the award of cost shared cooperative agreements under the SSL product development solicitations.

Exceptional circumstances determinations are authorized by 35 U.S.C. § 202(a) when the agency determines that restriction of the right to retain title to an invention resulting from federally sponsored research and development "will better promote the policy and objectives of this chapter." This exceptional circumstances determination will better promote the following policy and objectives of the Congress as described in 35 U.S.C. § 200: to use the patent system to promote the utilization of inventions arising from federally supported research or development; to promote collaboration between commercial concerns and nonprofit organizations, including universities; to ensure that inventions made by nonprofit organizations and small business firms are used in a manner to promote free competition and enterprise; and to promote the commercialization and public availability of inventions made in the United States by United States industry and labor.

In addition, this determination is being made in accordance with 37 CFR 401.3(a)(2), 401.3(b), and 401.3(e). In particular, 37 CFR 401.3(b) requires that when an agency exercises an exception, it shall use a standard prescribed clause "with only such modifications as are necessary to address the exceptional circumstances or concerns which led to the use of the exception." Also, 37 CFR 401.3(e) specifies that "the agency shall prepare a written determination, including a statement of facts supporting the determination, that the conditions identified in the exception exist."

The exception to the disposition of patent rights from that generally available under Public Law 96-517 and Public Law 98-620 for funding agreements between small businesses, universities and other nonprofit organizations and for work done by DOE GOCO National Laboratories will have several components. First, it will involve requiring the participants in the SSL Core Technology Program to offer to each member of the SSL Partnership the first option to enter into a non-exclusive license upon terms that are reasonable under the circumstances, including royalties, for subject inventions developed under the Core Technology Program. The field of use of the license could be limited to solid state lighting applications, although greater rights could be offered at the discretion of the invention owner. In addition, any entity having the right to use or sell any subject invention in the United States and/or any other country — including the Core Technology Program participant — must agree that any products embodying the subject invention or produced through the use of the subject invention will be substantially manufactured in the United States. Any waiver of this requirement must be approved in writing by the Department of Energy in advance of foreign manufacture.

The Core Technology Program participant's licensing offer must be held open for at least one year after the U.S. patent issues and the invention owner must agree to negotiate in good faith with any and all SSL Partnership members that indicate a desire to obtain at least a non-exclusive license. During this one year period, the invention owner can enter into licensing negotiations for solid state lighting applications only with members of the Partnership.

Exclusive licensing may be considered if only one SSL Partnership member expresses an interest in licensing the invention. Partially exclusive licenses in a defined field of use may be granted to a Partnership member, as long as doing so would not preclude any other Partnership member that indicates a desire to license the invention from being granted at least a non-exclusive license. However, the Government will not require the patent owner to grant any exclusive or partially exclusive licenses. The Core Technology Program participant that owns or controls the invention must enter into good faith negotiations with each individual Partnership member that has indicated a desire to license the invention. Because the submission by a potential licensee of a satisfactory business plan is accepted licensing practice, DOE expects that good faith negotiations will include the invention owner requiring a satisfactory business plan from each individual Partnership member with which it is negotiating.

In the event the parties to the negotiation cannot reach agreement on the terms of the license, as set forth above, within nine months of initiating good faith negotiations, each individual SSL Partnership member shall have the right of a third party beneficiary to maintain an action in a court of competent jurisdiction to force licensing on reasonable terms and conditions. Any assignment of the invention must be made subject to these requirements.

The above described licensing option is believed to result in the minimum rights that the SSL Partnership members need to ensure that the technology developed by the Core Technology Program participants is available to promote commercialization of the solid state lighting technology. The Core Technology Program participants will retain title to the inventions and will be entirely free to negotiate and enter into additional licenses with entities other than the members of the SSL Partnership in other fields of use. This licensing for outfield uses could accelerate the SSL program because commercialization of outfield uses often benefits the commercialization of infield uses. In a similar manner, licensing leading to the commercialization of infield uses could benefit the commercialization of outfield uses. For example, SSL technology could be applied to non-lighting fields such as biological agent detection, power transistors, night vision systems, and photovoltaics. The DOE believes that this approach would ensure the most broad-based applications for the technology developed under the SSL program. To further demonstrate the fact that this licensing option minimizes the rights being extracted, the Core Technology Program participants will not be required to license their background patents. However, we would expect that a further positive outcome of this Determination will be the voluntary licensing of background technology to foster commercialization. Finally, in the event that an affected awardee may have an existing licensing arrangement or commitment that might conflict with this Determination, the DOE will seek to accommodate any such arrangement.

Based on discussions with a group of people associated with small businesses, DOE understands that some small businesses may object to this Determination because they want to reserve the right to practice their inventions themselves, rather than to license them to the SSL Partnership members. While DOE appreciates their concerns, DOE has a large Small Business Innovative Research (SBIR) program to which this Determination does not apply. Small businesses have the option to apply for an award through the DOE SBIR program if they want to pursue a more entrepreneurial path towards commercialization.

Because of the nature of this program, without this exceptional circumstances determination, the small businesses, universities, other nonprofits and DOE GOCO National Laboratories participating in the Core Technology Program would automatically be entitled, pursuant to Public Law 98-620 and Public Law 96-517 or advance patent waivers, to elect to retain title to their inventions. Should this occur, the Core Technology Program participants described above will be under no obligation to share the technology/innovations developed with the members of the SSL Partnership, or in the alternative, could choose to share the developed technology with only certain members. This would create a situation where some Partnership members would not have assurance of licensing rights to use the new technology developed. Such a situation, if allowed to occur, might stifle the ability of the Government to work with a broad base of participants in the SSL Program and would stifle the widest application of the developed technology, the very intent of the proposed Core Technology Program.

The SSL Program exceptional circumstances determination is justified for several additional reasons including the following:

- If Core Technology Program participants could exclusively license to anyone they choose, including non-members of the SSL Partnership, or could choose to not license anyone, then it would be unlikely that the SSL Partnership would be willing to, at no cost to the Government, support the SSL Program, including collaboratively defining the Core Technology Program objectives. This could seriously impede the SSL program goal of leveraging Government funds to address the most difficult problems in an effort to accelerate commercialization of this nationally important technology.
- A market for the intellectual property is being created. The Core Technology Program participants will have a ready set of potential licensees to which to license their invention(s), and, if the SSL Partnership members are successful in commercializing their lighting systems, reap income in the form of royalties.
- If the intellectual property was held by a small company, university, or DOE GOCO National Laboratory that is unwilling to negotiate in good faith, that technology could be unavailable for an extended period of time. This would be detrimental to U.S. national interests.

As further support for this Determination, the Conference Report for the FY 2005

Department of Interior and Related Agencies Appropriation Bill states in Note 8:

The managers understand that the Department will soon issue an Exceptional Circumstances Determination with regard to solid state lighting core technology research, with the purpose of facilitating favorable access to the resulting intellectual property by members of the Next Generation Lighting Industry Alliance [the "SSL Partnership" in this Determination]. This access is in exchange for the active work for the Alliance in using its experience and expertise to bring a manufacturing and commercial focus to the solid state lighting project portfolio, as stipulated in the competitive solicitation by which the Alliance was selected. The managers support this arrangement and believe it will facilitate the deployment of solid state lighting technologies and accelerate reductions in electrical energy consumption.

The duration of this Determination will be 10 years from the date it is approved by the General Counsel or her designee. However, the Government reserves the unilateral right to cancel or revoke this determination in the event that the SSL Partnership organization dissolves or becomes bankrupt or insolvent, or in the event that the MOA between DOE and the SSL Partnership is terminated by either party for any reason. In addition, if any of these events occur and DOE subsequently enters into a similar agreement with another partnership, DOE reserves the unilateral right to continue the Determination, with the benefits accruing to the successor partnership.

The membership of the SSL Partnership may change as companies join and drop out. Individual companies will receive the benefits of this determination commencing on the date they become a member of the Partnership group. An individual company will be entitled to the licensing benefits described above for subject inventions made under Core Technology Program projects that have been selected for award after the time the company's membership in the Partnership becomes effective. A project is selected for award when the DOE source selection official has signed the selection statement for the core technology solicitation under which it is proposed. The DOE will maintain a log of Core Technology Program projects and their selection dates. The Partnership group shall maintain a log of membership, including the effective date of each company's membership. If an individual company elects to discontinue its membership in the Partnership, it will receive licensing benefits under this determination only for patent applications filed prior to the date when the company's membership ends.

Separately, under the SSL Program, a number of product developers will receive cost shared cooperative agreements from NETL as a result of competitive product development solicitations. This determination also imposes a requirement that any entity having the right to use or sell any subject invention under one of these cooperative agreements in the United States and/or any other country—including the product developer--must agree that any products embodying the subject invention or produced through the use of the subject invention will be substantially manufactured in the United States. Any waiver of this requirement must be approved in writing by the Department of Energy in advance of foreign manufacture.

For the foregoing reasons, the Department of Energy has determined that exceptional circumstances exist as provided in 35 U.S.C. § 202(a)(ii) in any agreement with a small business, university or other nonprofit organization, or GOCO National Laboratory selected as a Core Technology Program participant under SSL, such as to give rise to the need for the licensing provisions described herein.

Under 35 U.S.C. § 203(2), a contractor has a right to appeal any agency's determination of exceptional circumstances. Accordingly, each Core Technology Program and product developer participant to which this determination applies will be provided with notice of this determination and a right to appeal.