How to Protect Intellectual Property in Department of Energy Funding Programs

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**Introduction**

An applicant for DOE grant funding or other financing incentives (including a loan guarantee and cash grant in lieu of investment tax credit) needs to understand the intellectual property ("IP") rights provisions under such programs and take the actions required to protect IP starting with protecting confidential information submitted in a funding application or concept paper.

Ownership of inventions first conceived or actually reduced to practice in the performance of work under an agreement with the federal government ("Government") belongs to the Government (except under the initial ARPA-E solicitation discussed below) and the contractor has only a limited license unless a different allocation of ownership is negotiated and agreed to in writing. Ownership of technical data developed and delivered under an agreement with DOE belongs to the contractor and the Government has a license which can range from very limited rights to unlimited rights to use and disclose such data.

The key leverage a contractor may have in negotiating rights with the Government is the need to have strong IP rights in order to undertake and finance commercialization of a technology important to a DOE mission requirement. The contractor needs to build a case with DOE for an allocation of IP rights for both inventions and technical data that will enable commercialization. For example, the IP in a thin film solar manufacturing technology may include both patentable inventions and know-how ("technical data"). The contractor may be unable to obtain the financing needed for commercialization if the Government has such broad rights that the contractor is not able to protect its competitive business position.

A key planning consideration is to carefully identify the required deliverables and determine, deliverable by deliverable, which will be developed with Government funding under the agreement, which deliverables are developed with private funds and which deliverables will be developed with a mix of private and Government funding ("mixed funding"). The deliverables that need to be protected by the contractor for commercialization purposes need to be identified with granularity since the public policy is that the Government should have broad rights to deliverables developed with public funds. The contractor’s case for allocating IP rights needs to identify which deliverables will be completed with small amounts of Government funds to try to avoid a loss of IP rights when substantial development was funded privately.

The Government and contractor will document the allocation of IP rights in a grant or cooperative agreement, or in some cases, a Technology Investment Agreement ("TIA") under which the technology will be developed. The discussion below with respect to protecting IP during the application stage applies to all three types of agreements. A TIA is a separate case in the agreement stage and is discussed separately below.

**Application Stage**

The application for a DOE program should disclose patentable ideas, trade secrets, proprietary or confidential commercial or financial information (collectively, "Confidential Information") only to the extent needed to communicate an understanding of the value proposition of the proposed project and to persuade DOE to fund the project. The submission of Confidential Information should be minimized but enough information needs to be disclosed to get the money.

The applicant must identify and mark Confidential Information in a conspicuous manner in accordance with the specific funding Opportunity Announcement ("FOA"). This action needs to be taken for all types of applications not just research related. For example, the disclosure of Confidential Information may be required in order to persuade the reviewer that a loan guarantee application should be approved over another applicant’s application.

The consequence of disclosure of a patentable invention without taking precautions to protect Confidential Information could be a public disclosure which, while perhaps not immediately fatal in the U.S., could bar the inventor from obtaining a patent around the world.

The language below from the initial ARPA-E solicitation for concept papers illustrates the actions needed to protect Confidential Information at the application stage:

>“Patentable ideas, trade secrets, proprietary or confidential commercial or financial information, disclosure of which may harm the applicant, should be included in a concept paper or application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

>“The data contained in pages [insert pages] of this application have been submitted confidentially and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. Any disclosure outside the Government shall be made only to a party subject to an appropriate obligation to the Government to protect the confidentiality of the application. This restriction does not limit the government’s right to use or disclose data obtained without restriction from any source, including the applicant.

>“To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

>“The following contains proprietary information that [name of applicant] requests not be released to persons outside the Government, except for purposes of review and evaluation.”

**Patent Rights**

The Government will have certain statutory rights in an invention that is conceived or first actually reduced to practice under a grant or a cooperative agreement (a “Subject Invention”). The allocation of rights under a TIA will be discussed below. A contractor that is a domestic small business or non-profit organization has the option to retain title to a Subject Invention under the Bayh-Dole Act, (the “Bayh-Dole Act”), subject to certain Government...
retained rights and provided the contractor fulfills various obligations specified in the Act.

A business is “small” if it meets the specific size standard for its industry as established by the Small Business Administration (SBA). The two widely used SBA standards are 500 employees for select manufacturing and mining industries, and $7 million in annual receipts for certain non-manufacturing industries.

A “nonprofit organization” is an institution of higher education, 501(c) (3) tax-exempt organization or other nonprofit scientific or education organization qualified as a nonprofit under applicable state law.

Under the Bayh-Dole Act, the contractor must elect to retain title to a Subject Invention by notifying the DOE in writing generally within 24 months. If the contractor elects to retain title, the Government is granted a non-exclusive, non-transferable, irrevocable, paid-up, world-wide license to practice or have practiced the Subject Invention as established by the Small Business Administration (“SBA”). The two organizations qualified as nonprofit under applicable state law are “nonprofit organization” as defined by industry.

The ARPA-E class waiver permits contractors who do not qualify under the Bayh-Dole Act to retain title to Subject Inventions subject to the same Government rights specified above. In addition, under the waiver, the contractor must be cost sharing on at least a 20% basis and agree to manufacture new technology developed under the agreement in the U.S. or provide other net economic benefits to the U.S. The class waiver permits the U.S. manufacturing requirement to be negotiated on a case by case basis.

The circumstances under which DOE may require assignment of a Subject Invention, the reporting requirements and march-in rights under the class waiver are substantially similar to those under the Bayh-Dole Act but the times for contractor disclosure and patent filing under the class waiver are shorter than under the Bayh-Dole Act.

Rights in Technical Data

The rights in technical data provisions are the same for both large and small businesses. The definition of “technical data” includes research and test data, technical designs, drawings, specifications and other scientific and technical information. Technical data developed in the performance of work under an agreement with DOE belongs to the contractor and the Government has license rights (royalty free, worldwide, nonexclusive, irrevocable) in such data which can range from very limited rights to broad unlimited rights in terms of both use and further disclosure of the applicable data. In general, the scope of the license is dependent on the source of funding for the development of the technical data but with some flexibility in order to enable the contractor to successfully commercialize the results. The contractor must identify and mark the technical data deliverables in accordance with the applicable restrictions.

As indicated above, in order to have negotiating leverage, the contractor needs to build a case with DOE for an allocation of IP rights for both inventions and technical data that will enable commercialization by providing a competitive business advantage. If, for example, the IP in a thin film solar manufacturing technology includes a Subject Invention and know-how (technical data), the contractor will likely need enforceable IP rights to both the Subject Invention and technical data in order to have a competitive business advantage. As with Subject Inventions, technical data deliverables may be developed under the agreement with Government funding, with private funds or with mixed funding. If a contractor is required to deliver technical data to the Government that is Confidential Information, the contractor needs to negotiate the agreement with the Government to protect such information.

The “Rights in Technical Data Provisions” chart below identifies the types of rights that can be negotiated by a contractor. The primary license rights that the Government is granted are unlimited rights, government purpose rights or limited rights.
Unlimited Rights

The Government generally receives an unlimited rights license to technical data first developed or delivered under an agreement with a contractor. Except in the case of Special Protected Data Rights discussed below, the Government always has unlimited rights in certain other data including the following: (i) form, fit, and function data (data that describes the physical characteristics of an item, component, or process to the extent necessary to permit identification of physically and functionally interchangeable items); (ii) data needed for installation, operation, maintenance, or training purposes (other than detailed manufacturing or process data); (iii) data that is otherwise publicly available or has been released or disclosed by the contractor without any restrictions; or (iv) data in which the Government has obtained unlimited rights under another Government contract.

The “unlimited rights” license is the broadest license and permits the Government to use, disclose, reproduce, prepare derivative works of, distribute copies of, and publicly perform and display the applicable technical data in any manner and for any purpose, including commercial purposes, and to authorize others to do the same.

Government Purpose Rights

The “government purpose rights” license (“GPR”) may be used for technical data developed with mixed funding. The GPR license authorizes the Government to use, modify, reproduce, release, perform, display, or disclose technical data within the Government without restriction but not for commercial purposes. GPR covers any activity in which the Government is a party, including cooperative agreements with international or multinational defense organizations, or sales or transfers to foreign governments or international organizations.

The GPR license is usually effective for only 5 years but the period is negotiable. The Government has unlimited rights in the data after the expiration of the five-year or other negotiated period.

The Government may not release or disclose data licensed under the GPR unless prior to release or disclosure, the recipient is subject to the non-disclosure agreement at 227.7103–7 of the Defense Federal Acquisition Regulation Supplement (DFARS), or the recipient is a party to a Government contract provision Rights in Data − Programs Covered Under Special Protected Data Statutes, 10 C.F.R. §600, Appendix A to Subpart D, apply, but the agreement must specifically list and identify the data or categories of data first developed under the agreement that will be made available to the public and which data will be treated as protected data.

Limited Rights

A limited rights license to the Government is primarily used for technical data developed exclusively with private funding.

“Limited rights” mean the rights to use, modify, reproduce, release, perform, display, or disclose data, in whole or in part, within the Government but not for commercial purposes. The Government may not, without the written permission of the contractor, release or disclose the data outside the

Special Protected Data Rights

The ARPA-E initial funding solicitation illustrates the use of special protected data rights that may be negotiated to protect certain technical data deliverables from public disclosure for up to five (5) years. This category of rights is generally the most protective of the contractor. Generally, the contract provision Rights in Data − Programs Covered Under Special Protected Data Statutes, 10 C.F.R. §600, Appendix A to Subpart D, apply, but the agreement must specifically list and identify the data or categories of data first developed under the agreement that will be made available to the public and which data will be treated as protected data.

Identification and Marking of Technical Data Delivered with Restrictions

Technical data deliverables which are to be provided to the Government with restrictions on use, release or disclosure must be identified in an attachment to the agreement (the “Attachment”) and marked with the applicable restrictive legend when actually delivered. The contractor may not deliver any data with restrictive markings unless they are listed on the Attachment but may usually identify other restricted data after the contract award based on new information or an inadvertent omission.

The contractor must conspicuously mark technical data deliverables on all forms of media with the applicable restrictive legend (GPR, limited rights, special protected data rights) at the time of delivery. The restrictive legend must be placed on the transmittal document or storage container and, for printed material, each page containing restricted data. When only portions of a page are subject to the restrictions, those portions must be identified by circling, underlining, with a note, or other appropriate identifier. Technical data transmitted electronically also needs to contain the applicable restrictive legends.
Technology Investment Agreements

The third type of agreement, the TIA which is negotiated between the contractor and the Government, should be requested when there are deliverables developed in whole or part under the agreement which need to be protected for commercialization. The initial ARPA-E FOA authorized the use of a TIA. The primary reasons the DOE may approve the use of a TIA are to expand the base of technology available to meet DOE mission requirements, to foster new relationships and practices within the technology base, to advance national economic and energy security and to promote scientific and technological innovation in support of the DOE mission. The final agreement between the Government and the contractor must be consistent with certain regulatory guidance in 10 C.F.R. §603.845 through 10 C.F.R. §603.8754.

Summary

The initial action step is to protect Confidential Information submitted to DOE as part of a concept paper or application for a grant or other incentive. Failure to do so can be a public disclosure which may immediately bar patent protection at least outside of the U.S.

The contractor should consider requesting the use of a TIA whenever technology development will be required because of the greater flexibility in negotiating IP rights that can provide a competitive advantage for commercialization purposes.

The contractor needs to initially identify which required deliverables will be developed under an agreement, which deliverables are funded with private funds and which deliverables will be mixed funding and build the case for negotiating the allocation of IP rights needed for successful commercialization. The deliverables that need to be protected should be identified with granularity since the public policy is that the Government should have broad rights to deliverables developed with public funds.

A contractor which qualifies under the Bayh-Dole Act or a class or individual waiver must elect to retain title to a Subject Invention by notifying the DOE in writing within the specified deadline.

A contractor which is required to deliver technical data to the Government that is Confidential Information needs to negotiate the agreement with the Government to protect such information as restricted with limited rights, GPR or special protected data and mark the deliverables accordingly.


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<tr>
<th>Contractor Owns Technical Data</th>
<th>Restrictions on Disclosure Outside Government</th>
<th>Non-disclosure Agreement Required With Recipient Outside Government</th>
<th>Contractor Consent Required for Disclosure Outside Government</th>
<th>Expiration of Protection</th>
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<td>Negotiated but generally may not modify, reproduce, release, perform, display or disclose technical data outside the Government.</td>
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