Management of University Intellectual Property

Department of Energy Policies, Practices and Experiences

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http://www.gc.doe.gov/intellectual_prop_lab_partner.htm

DOE Missions

- Basic research: High energy physics, human genome, etc.
- Applied research to produce commercial technology: Clean Coal, FreedomCar, etc.
- Applied research to produce products for DOE use: Stockpile Stewardship, clean up, etc.

R&D transactions: Ownership of new inventions through Patents

- At DOE, Bayh-Dole Act
  - Applies to R&D funding agreements with Small business, non-profit and university contractors
  - Applies to DOE lab M&O contractors except naval reactors labs and weapons funded research.
  - Contractor right to elect title to “subject inventions” subject to gov’t license, march-in rights, **U.S. preference (requirement to substantially manufacture in US applies only to exclusive licensing for use or sales in the US)**.
- Executive Order 12591(1987): Follow Bayh-Dole *to the extent permitted by law.*

DOE Specific Statutes re Title to Inventions

- Atomic Energy Act & Federal Nonnuclear Energy Research & Development Act of 1974
    - Title in the Government in “subject inventions” unless waived
    - Applies to any “arrangement” for R&D but not Other Transactions
    - As a matter of policy, **U.S. manufacture/benefit to U.S. economy**, regardless of where use or sales occur, has been a consideration in all waivers since mid-1980’s.
- At DOE labs, through waivers, operating contractor has right to elect title to new inventions. Bayh-Dole and the Executive Order cited as one of the reasons to grant these waivers.

R&D transactions: Rights in Technical Data Produced

- DOE has a statutory obligation to disseminate scientific, technical and practical information acquired or developed under its programs.
- Right to post journal articles on our web pages?

Computer software

- Acquisition: FAR 52.227-14 alternate IV: “For computer software, the Contractor grants to the Government and others acting on its behalf, a paid-up, nonexclusive, irrevocable, worldwide license for all such computer software to reproduce, prepare derivative works, and perform publicly and display publicly (**but not to distribute copies to the public**), by or on behalf of the Government.”
- Assistance: 10 CFR 600.136 “DOE reserves a royalty-free, nonexclusive and irrevocable right to reproduce, **publish** or otherwise use the work for Federal purposes and to authorize others to do so.”
- Department has mandated or encouraged dissemination as open source subject to either under GPL or BSD type licenses.

DOE labs are involved in thousands of transactions each year

Type	2004	2005	2006
Active Tech licenses	4345	5677	5916
Patent licenses			1420
Lic. income	$25 m.	$27 m.	$35 m.
Pat. Applic.	661	812	726

Doe receives about 200-300 disclosures from non labs per year

Jan 2008 Secretarial Policy Statement On Technology Transfer at DOE Facilities

3. It is the policy of DOE that commercialization transactions involve partners with substantial business plans to further develop and deploy the technology as expeditiously as possible.

5. Royalties and equity interests received as a result of licensing transactions are not the measure of success and should not be the centerpiece for negotiation of any partnering transaction; rather, those financial returns are intended as an incentive to the scientists and facility to actively participate in technology partnering and to promote a continuing substantive business commitment by the licensee.

Applied Research: Accelerated Commercialization

- Energy Policy Act of 2005, sec. 912 (h) Next Generation Lighting Initiative and Energy Independence and Security Act of 2007 sec. 641(h) Energy Storage Competitiveness both support exceptional circumstance:
  - Industrial participants granted first option to negotiate in the infield at least a nonexclusive license with core technology invention owner
  - For a period of time Patent holder may not negotiate with anyone else.
  - Energy Storage says terms must be reasonable “as determined by the Secretary.”
- Exceptional circumstance applied the waiver US competitiveness standard

Benefits to CORE Technology Program Awardees

- Industrial Participants are a pool of most likely licensees in the program field (e.g. solid state lighting).
- Licensing in program field (e.g. solid state lighting) may stimulate commercial activity and licensing potential in other fields

DOE BioEnergy Research Centers

- Entities to conduct basic, genomics-based research and were encouraged to involve diverse institutions, academia, non-profits and private sector.

- ORNL
  - *National Labs*: Oak Ridge National Laboratory, National Renewable Energy Research Laboratory, Brookhaven National Laboratory
  - *Non-profit Research Foundation:* Samuel Roberts Noble Foundation
  - *Universities:* The University of Tennessee, University of Georgia, Georgia Institute of Technology, Dartmouth College, University of California at Riverside, Washington State University, University of Minnesota, Virginia Polytechnic Institute and State University, North Carolina State University, Cornell University
  - *Industrial Research Partners:* ArborGen, LLC, Mascoma Corporation, Verenium Corporation
- Great Lakes BRC
  - *Universities*: University of Wisconsin, Michigan State University, Illinois State University, Iowa State University, University of Florida
  - *National Labs*: Pacific Northwest National Labs, Oak Ridge National Labs
  - *Industry*: Lucigen, C 5, 6 Technologies
- LBNL
  - *National Labs*: LBNL, Lawrence Livermore National Laboratory (LLNL), Sandia National Laboratories (SNL)
  - *Universities*: University of California–Davis (UCD), University of California–Berkeley (UCB), and the Carnegie Institution

Intellectual Property Rights

- Because of the various collaborations planned, and to promote the longevity of each BRC, during negotiations of each award, DOE required that each Center have an IP management plan to facilitate technology transfer. Preexisting or pending agreements with third parties will be addressed.
- DOE provided a set of Principles to Guide the IPR negotiations.

DOE BioEnergy Research Centers: IP Management Plan

- Ownership of IP stays with inventing partner
- Core technical areas to be established for each center.
- **Simplified means to negotiate IP licenses in the core technical areas. Licensing in other fields left to owner**.
- Must address costs for protecting IP.
- **No Preferential licensing without DOE approval. Preexisting preferential agreements addressed during negotiations.**
- Business plans required for all licensing.
- Industrial partners of a BRC who will new IP they make with Government funding in their own activities shall provide Center ability to license in core technical area if they don't meet business plan.
- **60% of royalties from licensing in core areas reserved for BRC, remainder to inventing partner and inventor.**
- Must have conflicts of interest management plan.
- Maximize benefit to the US economy and provide fairness of opportunity
- **All data owned by Govt.**
- Data must be appropriately shared among team members and with other Centers.

- **V. Computational Software**
- The International Society for Computational Biology (ISCB) recommends that funding agencies follow ISCB guidelines for open-source software at a “Level 0” availability. ISCB states that research software will be made available free of charge, in binary form, on an “as is” basis for non-commercial use and without providing software users the right to redistribute. OBER will follow ISCB recom-mendations at a Level 0 availability. OBER recommends that research software developed with GTL funding that result in a peer-reviewed software publication is to be made accessible through either an open source license (www.opensource.org) or deposited to an open source software com-munity such as SourceForge.

ITER

- International agreement to build a $10 billion plus fusion reactor in France
- EU, as host, pays half the cost
- US and 6 others pay 1 billion each

ITER IP rights

- Secondees are employees of US institutions who are assigned as quasi employees to ITER: Intellectual Property generated by seconded staff of the ITER Organization shall be owned by the ITER Organization
- Members who incorporate Background IP into items provided to ITER Organization which BIP is required for construction, operation, or R&D, or maintenance or repair, or as deemed necessary by the Council, shall grant:
  - An irrevocable, non-exclusive, royalty free license to such Background Intellectual Property to other Members and to the ITER Organization, with the right of the ITER Organization to sub-license and the right of Members to sub-license to their research institutes and institutes of higher education within their respective territory for the purposes of publicly sponsored fusion research and development programmes.
- Members/ITER Organization shall use its ***best efforts*** to make sure that the Background Intellectual Property is available on reasonable terms and conditions, or use its best efforts to grant on an equal and non-discriminatory basis a non-exclusive license to the other Members for commercial fusion use, with the right to sub-license for such use by such Members' own domestic third parties within such Members' own territory, on terms no less favorable than the basis upon which such Member/ITER Organiziation licenses such Background Intellectual Property to third parties within or outside such Member's own territory. Members/ITER Organization shall use its ***best efforts*** to make sure that the Background Intellectual Property is available on reasonable terms and conditions, or use its best efforts to grant on an equal and non-discriminatory basis a non-exclusive license to the other Members for commercial fusion use, with the right to sub-license for such use by such Members' own domestic third parties within such Members' own territory, on terms no less favorable than the basis upon which such Member/ITER Organiziation licenses such Background Intellectual Property to third parties within or outside such Member's own territory.

Bayh-Dole as a Model: Non-Proprietary User Agreements to Facilitate University Access to DOE Laboratories

- Piloted at the Nanoscale Science Research Centers
- General scope of work directed toward precompetitive research that advances the state of the art in the user's area of interest, rather than toward producing a specific commercial end result (*e.g.,* a marketable product);
- Applies when using unique equipment or engaging in collaborative research;
- Intend to publish their research results in the open scientific literature;
- User pays for its own costs (can use federal funds obtained through a separate agreement with federal agency); DOE funds DOE machine and DOE laboratory scientists' time.
- This agreement is complementary to a WFO or CRADA, which are more complex, more difficult to negotiate and require DOE approval.

Bayh-Dole as a Model: Non-Proprietary User Agreements

- Standardized Agreement at all DOE labs
  - Streamlines negotiations: allows for a one time execution of a master agreement
  - Promotes uniformity
  - Nature of these agreements makes this approach acceptable to virtually all users.
- Allocation of Intellectual Property Rights:
  - Lab may elect title to its Subject Inventions per the M&O contract
  - USER may elect title to its Subject Inventions subject to:
    - Government Use License
    - March In Rights and US Preference apply
    - no US Competitiveness provision
  - Mirrors Bayh-Dole
  - No restriction on publication of Technical Data that is produced