

# 2013

## U.S. DEPARTMENT OF ENERGY (DOE) TECHNOLOGY TRANSFER MECHANISMS



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**AGREEMENTS FOR COMMERCIALIZING TECHNOLOGY (ACT)**

Mechanism	Description	Characteristics/Features
<p>Agreements For Commercializing Technology</p>	<p>ACT represent work performed at ORNL for a non-federal entity on a reimbursable basis for which the sponsoring entity is the DOE management and operating contractor (UT-Battelle, LLC). ACT differ from other types of reimbursable work as they allow UT-Battelle, LLC to execute agreements with third parties in the contractor’s private capacity for work to be performed at ORNL. For such agreements, UT-Battelle, LLC assumes financial and performance risk in return for financial consideration from the 3rd party sponsor of the work.</p>	<ul style="list-style-type: none"> <li>• UT-Battelle, LLC will have no authority to bind the DOE in any way with such terms and conditions. The DOE will have no obligation to UT-Battelle, LLC due to such terms and conditions.</li> <li>• The outside third party to the ACT cannot use U.S. appropriated funds to fund the ACT.</li> <li>• UT-Battelle, LLC must not perform ACT activities that would place it in direct competition with the U.S. private sector.</li> <li>• UT-Battelle, LLC may use staff and other resources associated with this DOE Contract for the purposes of conducting research and furthering the DOE technology transfer mission.</li> <li>• UT-Battelle, LLC assumes all Contractor Liability and Indemnification in the performance and execution of an ACT.</li> <li>• Disposition of intellectual property (IP) arising from ACT work shall be governed by DOE Class Waiver W(C)-2011-013 (ACT Class Waiver).</li> <li>• UT-Battelle, LLC shall be responsible for providing adequate advance payment for ACT work consistent with procedures defined in the DOE's Financial Management Handbook. UT-Battelle, LLC shall be solely responsible for collecting payments from third parties for any work conducted and such collections shall be independent of providing advance payment. For such payments and for any costs, obligations, or liabilities arising due to UT-Battelle, LLC's ACT work, the UT-Battelle, LLC is entirely at risk and the DOE shall have no risk.</li> </ul> <p>(Note: ORNL staff members are legal employees of UT-Battelle, LLC.)</p>

**COLLEGIAL INTERCHANGE & CONSULTING**

Mechanism	Description	Characteristics/Features
Collegial interchange, conference, publication	The informal and free exchange of information among professional colleagues is encouraged.	Includes: <ul style="list-style-type: none"> <li>• presentation at professional and technical conferences</li> <li>• publication in professional journals</li> </ul> ( <b>Note:</b> ORNL staff members are legal employees of UT-Battelle, LLC and will avoid premature disclosure of information that may be the subject of a patent application or proprietary data.)
Consulting by ORNL experts	Consultation is provided to a private sector party by ORNL (UT-Battelle) personnel to further technology transfer initiatives	<ul style="list-style-type: none"> <li>• DOE and UT-Battelle, LLC must approve of the personal consulting arrangement.</li> <li>• Conflicts of interest will be avoided.</li> </ul>
Consulting by industry experts to ORNL	A party outside ORNL provides technical advice or information	<ul style="list-style-type: none"> <li>• There is a formal written contract, generally short-term and specific.</li> <li>• The consultant must certify that no intellectual property conflicts exist.</li> </ul>

## COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT (CRADA)

Mechanism	Description	Characteristics/Features
Cooperative Research and Development Agreement (CRADA)	<p>This is a contractual agreement among one or more federal laboratories/facilities, such as ORNL, and one or more non-federal parties under which the DOE through its laboratories/facilities provides personnel, facilities, equipment or other resources with or without reimbursement. Note that the DOE does not provide funds directly to the non-federal partner.</p>	<ul style="list-style-type: none"> <li>• The non-federal partner provides funds, personnel, services, facilities, equipment, or other resources to conduct specific research or development efforts consistent with ORNL's mission.</li> <li>• Costs are shared. An example is where there is a <i>"no funds"</i> exchange with a non-federal party and ORNL doing their respective parts of the statement of work. The DOE is funding ORNL's participation in the CRADA up to a preset funding limit at no cost to the non-federal partner. However, the non-federal partner may also provide funds (<i>"funds-in"</i>) to ORNL.</li> <li>• The CRADA is not considered a procurement action, grant, or cooperative agreement as defined in 31 USC 6303-6305.</li> <li>• Rights to inventions and other intellectual property are negotiated between the non-federal partner and ORNL as part of the agreement.</li> <li>• Certain information generated by either partner, either non-federal or ORNL, which qualifies as "protected CRADA information" may be withheld from public distribution for a period up to five years.</li> <li>• Each CRADA must have a joint work statement (JWS) that is reviewed and approved by DOE.</li> <li>• DOE has granted a class patent waiver to inventions arising from the CRADA work.</li> <li>• The CRADA includes U.S. competitiveness and product liability provisions.</li> </ul>

**CONTRACT, GRANT, COOPERATIVE AGREEMENT**

Mechanism	Description	Characteristics/Features
Contract	A contract is an acquisition instrument reached between the DOE and a contractor so that the contractor can provide goods or services to the DOE.	<ul style="list-style-type: none"> <li>• This vehicle may be used to fund research and development that may be transferred to the private sector.</li> <li>• The allocation of patent rights is decided by the type of contractor performing the work.                             <ul style="list-style-type: none"> <li>▪ Large businesses may frequently obtain a waiver on inventions where waiver criteria are satisfied.</li> <li>▪ Nonprofit organizations/small businesses may obtain title to inventions under Public Law (PL.) 96-517.</li> </ul> </li> <li>•ORNL can technically support the grant or cooperative agreement recipient in the execution of the award separately under an independent Work For Others (WFO) agreement.</li> </ul>
Co-funded and Cost - shared Contract	A contract reached between the DOE and a non-federal party in which costs associated with the work are shared as identified in the contract.	<ul style="list-style-type: none"> <li>• Arrangements are in-cash or in-kind.</li> <li>• Both partners must benefit from the work.</li> <li>• Commercially valuable data may be protected for a limited period.</li> <li>• Advance waivers are frequently granted where the contractor agrees to cost share at least 20% of the total contract cost.</li> <li>• ORNL can technically support the contract winner in the execution of the award separately under an independent Work For Others (WFO) agreement.</li> </ul>
Grants and Cooperative Agreements (Assistance Instruments)	Grants and cooperative agreements are entered into solely by the DOE with a recipient under which money or property is transferred to the recipient to support or stimulate research.	<ul style="list-style-type: none"> <li>• Only the DOE can enter these agreements; the laboratories or other facilities cannot.</li> <li>• There is substantially less involvement (contract oversight) between the DOE and recipients than normal contracts (acquisition instruments).</li> <li>• ORNL can technically support the grant or cooperative agreement recipient in the execution of the award separately under an independent Work For Others (WFO) agreement.</li> </ul>

## EDUCATION AND TRAINING, LICENSING

Mechanism	Description	Characteristics/Features
Education and Training	Consists of structured activities designed to have trainees master a defined set of knowledge and skills	<p>This includes:</p> <ul style="list-style-type: none"> <li>• Professional courses</li> <li>• On-The-Job Training</li> <li>• Modification and delivery of training curriculum to meet needs of the private sector and academia.</li> <li>• Mentoring of post-doctoral students.</li> </ul>
Licensing from the DOE or ORNL	Licensing is the transfer of "less-than-ownership rights" in intellectual property to a third party. This allows the third party to use the intellectual property for commercial reasons.	<ul style="list-style-type: none"> <li>• Licensing by ORNL is governed by the terms of the DOE contract with ORNL.</li> <li>• Licensing by the DOE follows the General Services Administration (GSA) issued licensing regulations with preference for nonexclusive licenses. Where an exclusive license is granted, a notice of availability is published allowing an opportunity for the public to object to any plans or intentions to commercialize the products derived from the licenses.</li> <li>• Licensing can be exclusive, or nonexclusive, for a specific field of use, geographical area, or for U.S. or foreign usage.</li> <li>• The potential licensee must present plans and intentions for government review to commercialize the invention.</li> <li>• The U.S. government obtains/retains a nonexclusive, royalty-free, worldwide license to the invention.</li> <li>• ORNL licenses: <ul style="list-style-type: none"> <li>▪ are subject to conflict-of-interest consideration and U.S. preference provisions.</li> <li>▪ require that a major portion of the royalties return to ORNL.</li> <li>▪ share royalties with the ORNL inventor.</li> </ul> </li> </ul>

**PERSONNEL EXCHANGES, RESEARCH AND DEVELOPMENT CONSORTIA (R&D),  
SMALL BUSINESS COMPANY(SBC) RESEARCH PROGRAMS**

<b>Mechanism</b>	<b>Description</b>	<b>Characteristics/Features</b>
Personnel Exchanges	This is an assignment of personnel from either ORNL to another research partner's facility (either federal or non-federal) or vice versa. The purpose is to interchange expertise and information among the parties concerned.	<ul style="list-style-type: none"> <li>• Generally, there is no exchange of proprietary data or classified information.</li> <li>• All costs are paid by the organization sending the personnel.</li> <li>• Programs are normally one year or less.</li> </ul>
Research and Development Consortia	This is a method leveraging DOE research and providing new technology to a wide segment of industry.	<ul style="list-style-type: none"> <li>• Two or more industrial partners are involved.</li> <li>• Industrial partners are normally from one industrial sector.</li> <li>• There is a commitment by all partners to diffuse the technology throughout the industry.</li> <li>• ORNL may participate as either a lead or as a subrecipient. As a subrecipient, there must be a DOE Work For Others (WFO) agreement in place between one or more members of the consortia.</li> </ul>
Small Business Innovation Research (SBIR)	The SBIR program is federally funded to promote small business company (SBC) participation in government programs.	<ul style="list-style-type: none"> <li>• Data have a two-year confidentiality limit.</li> <li>• Small business partners acquire titles to inventions.</li> <li>• DOE may provide further funds during incremental research stages from feasibility to private commercialization dependent upon the products viability.</li> <li>• ORNL can technically support the small business applicant in the proposal response subject to a DOE OSO approval and in execution of the award separately under an independent Work For Others (WFO) agreement.</li> </ul>
Small Business Technology Transfer Research (STTR)	The STTR is a federally-funded program that expands the public/private sector partnership to include the joint venture opportunities for small businesses and nonprofit research institutions. The unique feature of the STTR program is the requirement for the small business to formally collaborate with a research institution in Phase I and Phase II. The STTR's most	<ul style="list-style-type: none"> <li>• Data have a two-year confidentiality limit.</li> <li>• Small business partners acquire titles to inventions.</li> <li>• DOE may provide further funds during incremental research stages from feasibility to private commercialization dependent upon the products viability.</li> </ul>

important role is to bridge the gap between performance of basic science and commercialization of resulting innovations.

- STTR differs from SBIR in three important aspects:
  1. The SBC and its partnering institution are required to establish an intellectual property agreement detailing the allocation of intellectual property rights and rights to carry out follow-on research, development or commercialization activities.
  2. STTR requires that the SBC perform at least 40% of the R&D and the single partnering research institution to perform at least 30% of the R&D.
  3. Unlike the SBIR program, STTR does not require the Principal Investigator to be primarily employed by the SBC.
- ORNL can technically support the small business applicant in the proposal response subject to a DOE OSO approval and in execution of the award separately under an independent Work For Others (WFO) agreement.

**TECHNICAL ASSISTANCE AND USER FACILITIES**

<b>Mechanism</b>	<b>Description</b>	<b>Characteristics/Features</b>
<p>Technical Assistance</p>	<p>ORNL personnel provide specialized technical assistance to a private sector party for a finite period in order to further technology transfer</p>	<ul style="list-style-type: none"> <li>• Specialized help is given to solve a particular problem, normally not to exceed 40 man-hours directly charged.</li> <li>• ORNL must approve of the personal consulting arrangement.</li> <li>• Potential conflict of interest by the ORNL staff must be avoided.</li> <li>• Routine costs are borne by ORNL under a separate DOE work authorization.</li> </ul>
<p>User Facilities</p>	<p>User facilities are unique, complex experimental scientific facilities, including equipment and technology expertise at ORNL. These facilities are designated by the DOE for use by the technical community, universities, industry, other laboratories, and other government facilities.</p>	<ul style="list-style-type: none"> <li>• User facilities are designated as such by DOE and are Centers of Excellence.</li> <li>• Research may be conducted on a proprietary or non-proprietary basis.</li> <li>• Full cost recovery is required from the non-DOE partner on proprietary research and development (R&amp;D).</li> <li>• Class patent waiver is granted in which title goes to the user and the user's proprietary data can be protected.</li> <li>• For non-proprietary R&amp;D, title to inventions goes to the user but data generated are freely available.</li> <li>• If funded under another U.S. government contractor or international agreement, users are subject to those particular intellectual property clauses.</li> </ul>

## WORK FOR OTHERS (WFO) PROGRAM

Mechanism	Description	Characteristics/Features
Work For Others (WFO) Program	This is work done by ORNL for a non-DOE entity, either private or federal. Work is fully funded by the non-DOE entity.	<ul style="list-style-type: none"><li>• WFO may be research and development (R&amp;D) or non-R&amp;D specialized technical services to the requesting organization.</li><li>• Work must be consistent with the missions of DOE and/or special expertise of ORNL.</li><li>• Work must not affect the achievement of DOE work requirements.</li><li>• Work must not directly compete with the domestic U.S. private sector.</li><li>• Title to invention of WFO sponsor's requirement goes to sponsor under class patent waiver.</li><li>• Sponsor's proprietary data will be protected.</li><li>• The U.S. government retains a nonexclusive royalty free license to any WFO invention.</li><li>• Safeguards are in place to preclude organizational conflicts of interest (e.g., disclosure to WFO sponsor regarding background intellectual property).</li></ul>