

## RESEARCH AND TECHNICAL ASSISTANCE PROGRAM FOR FOREIGN ENTITIES<sup>1,2</sup> AT OAK RIDGE NATIONAL LABORATORY (ORNL)

### Legal Authority

The Department of Energy (DOE) sponsors a research and technical assistance program for foreign entities. Within DOE, this research and technical assistance is called the Work for Others (WFO) program. For foreign entities, DOE is authorized to provide specialized technical assistance and to make arrangements (including contracts and agreements) for conducting research and development activities with foreign entities. This work activity includes participating in joint or cooperative research, developmental, or experimental projects. The legal authority for such activity comes from statutes such as the Atomic Energy Act of 1954 (as amended), the Energy Reorganization Act of 1974 (Section 107a of Public Law 93-438) and the DOE Organization Act (Public Law 95-91).

### Foreign Entity

A foreign entity is (1) a non-U.S. organization based external to the United States; and/or (2) is not principally under the laws and regulations of the United States (even though a subsidiary may be); and/or (3) means any partnership, corporation, association, or institution where 75 percent or more of the voting interest is owned by non-U.S. citizens. A foreign entity falls into one or more of these categories:

1. International Organizations (e.g., International Red Cross)
2. United Nations Organizations (e.g., International Atomic Energy Agency)
3. Foreign Governments (e.g., Canada, Germany, Japan, Brazil, Egypt)
4. Foreign Companies (e.g., Siemens AG in Germany, Phillips Electronics in the Netherlands, Matsushita in Japan)
5. Foreign Government Corporations (e.g., British Petroleum of Great Britain, Thompson-CSF of France)
6. Non-Governmental Organizations (NGO, which normally are a voluntary, non-profit type of organization and which have a social service, medical, humanitarian, or environmental objective to accomplish, e.g., “*Doctors Without Borders*” or “*Green Peace*”)
7. Foreign Persons (The term foreign person means any person who is not a citizen or national of the United States or lawfully admitted to the United States for permanent residence under the Immigration and Nationality Act (8 USC 1101 et seq.), and includes foreign corporations, international organizations, and foreign governments. Source: 22 USC Sec. 2778(9) (C))

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<sup>1</sup> See Appendix A for definitions.

<sup>2</sup> As of October 13, 2010

## **Types of Research or Technical Assistance Provided by DOE**

DOE can provide specialized help in three domains of expertise. These are:

1. Non-nuclear research or technology assistance.
2. Limited nuclear research or nuclear-related technology assistance. (See 10 CFR 810 for policy and approval requirements.)
3. Visits or assignments of foreign nationals to DOE facilities.

## **What Does ORNL Bring to the Table?**

- Access to DOE's most diverse multi-program research and technical facilities at ORNL for:
  - ◆ Basic Research
  - ◆ Applied Research
  - ◆ Applied Development
- World-class energy research capability
- The world leader in neutron science
- Incredible Biotechnology and Bioengineering expertise
- Environmental security
- World-class materials science research and facilities
- World-class supercomputer computational & network capability
- Specialized consulting in multiple scientific fields
- Access to rest of DOE National Laboratory System
- Access to University Research through University of Tennessee (UT)
- Access to National Transportation Research Center, Inc. (NTRC)
- Access to Battelle Corporation and Affiliates expertise

## **Legal Parameters**

For those activities involving nuclear-related activities, a review will be done for compliance with the Price Anderson Act, as amended and Nuclear Non-Proliferation concerns. This requirement is based on the liability considerations of the Price Anderson Act and Amendments (PAAA) (42 U.S.C. 2282a).

All DOE activities involving foreign entities must also comply with U.S. Export Compliance laws and regulations. Employees and subcontractors who send or personally carry outside the United States any equipment, commodities, information, or computer hardware and software must follow requirements in accordance with U.S. export control<sup>3</sup> laws and regulations.

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<sup>3</sup> Export Control at ORNL is governed by the U.S. laws and regulations. Contact the Export Compliance Manager, Rolf Migun, at (865) 576-7230 to determine if any export/import licenses are required. Recognize early any need to export and plan ahead. A license from the Department of State or Commerce can take several months to process.

Contacts with foreign entities are also covered under the Foreign Corrupt Practices Act (FCPA). Both DOE and ORNL mandate that all professional or business contacts will scrupulously adhere to the letter and spirit of the FCPA. The FCPA prohibits giving any thing of value to a foreign official for the purpose of influencing a foreign government. All transactions involving foreign officials must be coordinated with ORNL and DOE legal departments.

### **Why should a Foreign Entity come to DOE for research and development or technical assistance?**

The U.S. government's interest in furthering scientific advances encourages innovative approaches and solutions to technical problems facing the U.S. government and international concerns. This U.S. governmental concern provides various options in solving issues early in a product or systems developmental life cycle that are available to be shared with non-U.S. activities under certain policies. Based on the U.S. government's considerable investments in basic technology research and development, there is a substantive scientific foundation of knowledge in the National Laboratory and Technology Center system which is available for technology transfer under specified criteria. A normal commercial contract may not be suitable for initial research efforts and prototype tests where product or scientific feasibility is being established.

The use of the U.S. government-funded National Laboratory can establish the scientific parameters of achievement during this early research phase where subjective evaluations are the rule rather than the objective evaluation of criteria against business strategies. At this research stage in the project life cycle, general performance specifications only cover the minimum essential requirements. A sponsor's performance specifications express the sponsor's technical requirements as output, function, or operation of items or equipment. This allows an unbiased technical approach in the details of design, fabrication, formulation, and internal production to the DOE research team.

To reach the stage where design specifications are available for maximum commercial development, a model is developed. To assure adequacy of the performance specifications, the prototype is tested and deficiencies are corrected at minimal cost. Since performance specifications are not restrictive to any particular method or process, this approach permits an objective approach when the sponsor prototypes are finished, conserves project funds, and expedites the system or product when it is ready for final development, manufacturing, and/or marketing.

### **DOE Administrative Processing**

DOE accepts taskings from a foreign entity to meet a research or technological requirement. DOE performs work that is consistent with its overall scientific mission, is relevant to the DOE unique capabilities or special competencies, is consistent with U.S. foreign policy objectives, and is in consonance with U.S. laws. Prior to work beginning, ORNL will prepare for DOE approval

a research proposal describing the work to be performed. Upon approval, DOE will formally notify ORNL to begin contractual negotiations with the foreign entity sponsor so that work can begin.

Some tasks require DOE-Headquarters in Washington, D.C., approval for foreign entity transactions. Examples of these transactions are:

1. Work directly funded by a foreign sponsor and performed at a DOE facility requires the review and concurrence of the Office of International Science and Technology Cooperation.
2. General Counsel establishes policy on patent and technical data, advises on patent and technical data clauses of contracts, and approves waiver of patent rights for foreign entities.
3. Work for Others activities involving human subjects, including research that is classified and proprietary, whether performed domestically or in an international environment, can begin only if it is conducted in compliance with Federal regulations and DOE requirements for human subject protection.
4. Work that involves a space nuclear reactor or non-commercial power reactor and radioisotope power source projects at DOE facilities requires the concurrence of the Director, Office of Space and Defense Power Systems.
5. DOE Program Secretarial Officers review and concur in foreign-sponsored WFO agreements that use program developed technologies

### **Contractual Agreements**

Research or technical assistance efforts at ORNL are performed under one of two contractual mechanisms, either a Material Services Order Form (MSOF) or a DOE WFO Standard Contract.

The MSOF uses a one page abbreviated contract between the DOE M&O contractor and the requesting foreign entity if there are no intellectual property concerns involved. If the foreign entity has special requirements for proprietary information protection, ORNL will attach a Proprietary Information Agreement to the MSOF. *The sponsor's proprietary information associated with the research or technical development will be protected and safeguarded from disclosure at all times.*

Where there are intellectual information or patent rights issues involved or that need to be addressed, a DOE WFO standard contract (short form) will be initiated as the preferred form of agreement. If the foreign entity can not accept the DOE contractual language as is, a negotiated contract is the next step and will be conducted among the foreign entity, the supporting local DOE Office, and ORNL. If the foreign entity's concerns cannot be satisfied within the authorized discretionary approval areas of the local DOE Office, all future negotiations will then be conducted by DOE Headquarters in Washington, D.C., and assisted where appropriate, by the U.S. Department of State.

Periodically, there may be minor language sensitivities in abbreviations, form titles, or acronyms used within either a MSOF or contract. Where there will be no substantive difference in the

meaning of the proposed contractual agreement, DOE may agree to modify language to meet the concerns of the foreign entity. However, the English language version of the contractual agreement will always take precedence.

### **Administrative Recovery of DOE Program Costs**

Based on Section 3137 of the Strom Thurmond National Defense Authorization Act of 1999 (Public Law 105-261), DOE is authorized to charge a flat 3% surcharge to cover DOE administrative processing and overhead costs. This surcharge is called the Federal Administrative Charge (FAC) and the FAC is charged on all non-DOE-funded work.

Foreign entity sponsors will provide an advance payment in U.S. dollars equal to three months of estimated effort prior to work commencing. This advance funding provision is mandated by U.S. Federal Law and is included in the basic DOE and M&O WFO contract. During the conduct of the project, the DOE M&O contractor will invoice monthly for accumulated expenses (that is, funds spent) plus FAC against the project. It is the responsibility of the foreign entity sponsor to pay the invoices or work may be stopped.

As an exception to the 90-day advance payment option, DOE may agree to a 30-day advance payment option given the following written assurances or guarantees:

1. No DOE appropriated funds will be used to cover any foreign sponsor's work requirements (unless specifically approved in writing by DOE Chief Financial Officer as part of an U.S. Government or DOE International Voluntary Agreement).
2. The foreign sponsor must provide full funding in advance for all projects with estimated costs up to \$25,000.
3. For project costs exceeding \$25,000 and will take longer than 90 days to complete, a pre-determined partial cash advance<sup>4</sup> will be provided by the foreign sponsor by a specific monthly date agreed to in the WFO Contract. This monthly advance payment will be prior to, or in lieu of, receiving an invoice for payment for prior expenditures.
4. During the life of the project, invoice adjustments will be made to reflect actual expenditures versus advance payments<sup>5</sup>. At the end of the project, any surplus funding will be returned to the foreign sponsor.

### **DOE Relationships with its Contractors**

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<sup>4</sup> The initial partial cash advance requirement for a project is the sum of the following: (1) estimated total cost for the current business month; (2) estimated in-house cost for the next business month; and (3) estimated outstanding commitments at the end of the current business month.

<sup>5</sup> Second and subsequent partial advances will represent the sum of the next=s business months estimated in-house costs plus the change in outstanding commitments for the current business month.

DOE competitively awards management and operating (M&O) contracts to manage and operate DOE facilities. These M&O contractors are typically financially integrated with DOE and operate under strict DOE controls and guidelines. DOE M&O contractors at Oak Ridge, Tennessee, are distinct "arms-length" subsidiaries of their parent corporations and are established exclusively to perform work assigned by DOE, including work which DOE accepts from private companies. A DOE M&O contractor performs a completely different role as a financially-integrated contractor of DOE versus a contractor who fulfills a Government-Owned-Contractor-Operated function within other federal agencies. This distinction is vital to understanding the role that DOE plays in technology research and applied development for the U.S. government.

DOE establishes the programmatic controls, oversight functions, customary reporting information, and general categories and procedures for the overhead cost structure for the M&O contractors. DOE approves all overhead rate categories.

## APPENDIX A: DEFINITIONS

1. Non-Department of Energy (DOE) Entities includes other federal agencies; state, regional, and local governments; private or commercial firms, not-for-profit organizations; international organizations; and foreign governments. (Source: DOE Order 481.1C)
2. Sponsor is an entity that provides funding for the performance of Work for Others (WFO). (Source: DOE Order 481.1C)
3. WFO is the performance of work for non-DOE entities by DOE/Management & Operating (M&O) contractor personnel and/or the utilization of DOE facilities that is not directly funded by DOE appropriations. (Source: DOE Order 481.1C)
4. The term "foreign corporation" means a corporation that is not incorporated in the United States. (Source: 22 U.S.C. Sec. 2778)
5. The term "foreign government" includes any agency or subdivision of a foreign government, including an official mission of a foreign government. (Source: 22 U.S.C. Sec. 2778)
6. The Term "foreign person" means any person who is not a citizen or national of the United States or lawfully admitted to the United States for permanent residence under the Immigration and Nationality Act (8 U.S.C. 1101 et seq.), and includes foreign corporations, international organizations, and foreign governments. (Source: 22 U.S.C. Sec. 2778)
7. Department of Energy, Department, or DOE mean the Department of Energy, established by the Department of Energy Organization Act. (Source: Pub. L. 95-91; 42 U.S.C. 7101)
8. DOE invention means an invention covered by a U.S. or foreign patent or patent application that is vested in the government of the United States, as represented by or in the custody of the Department or any of its predecessors, and which is designated by the Department as appropriate for the grant of an express nonexclusive, exclusive, or partially exclusive license. (Source: 10 CFR 781.3)
9. Exclusive license means a license in which the licensee has the exclusive right under the patent for a part or the full term of the patent, subject only to the retention by the U.S. government of a license and rights in the invention, as specified herein. (Source: 10 CFR 781.3)
10. Partially exclusive license means (1) an exclusive license where the exclusive right granted is limited to making or using or selling the invention, or is limited to specified fields of use or use in specified geographic locations; or (2) a license where the number of licenses under the particular invention is limited. (Source: 10 CFR 781.3)

11. Predecessor means the Energy Research and Development Administration, the Atomic Energy Commission, and any of the government entities or parts thereof whose functions were transferred to DOE pursuant to title III of the DOE Organization Act. (Source: 10 CFR 781.3)
12. Secretary means the Secretary of Energy or the delegate of the Secretary of Energy. (Source: 10 CFR 781.3)
13. To the point of practical or commercial application means to manufacture in the case of composition or product, to practice in the case of a process, or to operate in the case of a machine, under such conditions as to establish that the invention is being worked and that its benefits are reasonably accessible to the public. (Source: 10 CFR 781.3)
14. United States and the general public means the U.S. government, U.S. citizens, and U.S. organizations. (Source: 10 CFR 781.3)
15. U.S. Organization means any partnership, corporation, association, or institution where 75 percent or more of the voting interest is owned by U.S. citizens. (Source: 10 CFR 781.3)
16. Person means any individual, firm, estate, trust, sole proprietorship, partnership, association, company, joint-venture, corporation, governmental unit or instrumentality thereof, or a charitable, educational or other institution, and includes any officer, director, owner, or duly authorized representative thereof. (Source: 10 CFR 781.3)
17. Firm means any association, company, corporation, estate, individual, joint-venture, partnership, or sole proprietorship or any other entity however organized including charitable, educational, or other eleemosynary<sup>6</sup> institutions, and the Federal Government including corporations, departments, Federal agencies, and other instrumentalities, and state and local governments. (Source: 10 CFR 781.3)
18. Agreement for cooperation means an agreement with another nation or group of nations concluded under sections 123 or 124 of the Atomic Energy Act. Atomic Energy Act means the Atomic Energy Act of 1954, as amended. (Source: 10 CFR Section 810.3)
19. Classified information means National Security Information classified under Executive Order 12356 or any superseding order, or Restricted Data classified under the Atomic Energy Act. (Source: 10 CFR Section 810.3)
20. General authorization means an authorization granted by the Secretary of Energy under section 57b(2) of the Atomic Energy Act to provide certain assistance to foreign atomic energy activities and which is effective without a specific request to the Secretary or the

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<sup>6</sup> Means altruistic, non-profitable, or charitable.



issuance of an authorization to a particular person. (Source: 10 CFR Section 810.3)

21. IAEA means the International Atomic Energy Agency. (Source: 10 CFR Section 810.3)
22. NNPA means the Nuclear Non-Proliferation Act of 1978. (Source: 10 CFR Section 810.3)
23. NPT means the Treaty on the Non-Proliferation of Nuclear Weapons. (Source: 10 CFR Section 810.3)
24. Nuclear reactor means an apparatus, other than a nuclear explosive device, designed or used to sustain nuclear fission in a self-supporting chain reaction. (Source: 10 CFR Section 810.3)
25. Open meeting means a conference, seminar, trade show, or other gathering that all technically qualified members of the public may attend and at which they may make written or other personal record of the proceedings, notwithstanding that (1) a reasonable registration fee may be charged, or (2) a reasonable numerical limit exists on actual attendance. (Source: 10 CFR Section 810.3)
26. Person means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than DOE, any state or political entity within a state; and (2) any legal successor, representative, agent, or agency of the foregoing. (Source: 10 CFR Section 810.3)
27. Persons under U.S. jurisdiction are responsible for their foreign licensees, contractors, or subsidiaries to the extent that the former have control over the activities of the latter. (Source: 10 CFR Section 810.3)
28. Public information means: (1) Information available in periodicals, books, or other print or electronic media for distribution to any member of the public, or to a community of persons such as those in a scientific, engineering, or educational discipline or in a particular commercial activity who are interested in a subject matter; (2) Information available in public libraries, public reading rooms, public document rooms, public archives, or public data banks, or in university courses; (3) Information that has been presented at an open meeting (see definition of "open meeting"); (4) Information that has been made available internationally without restriction on its further dissemination; or (5) Information contained in an application which has been filed with the U.S. Patent Office and eligible for foreign filing under 35 U.S.C. 184 or which has been made available under 5 U.S.C. 552, the Freedom of Information Act. Public information must be available to the public prior to or at the same time as it is transmitted to a foreign recipient. It does not include any technical embellishment, enhancement, explanation, or interpretation which in itself is not public information, or information subject to sections 147 and 148 of the Atomic Energy Act. (Source: 10 CFR Section 810.3)
29. Restricted Data means all data concerning (1) design, manufacture, or utilization of atomic

weapons; (2) the production of special nuclear material; or (3) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 142 of the Atomic Energy Act. (Source: 10 CFR Section 810.3)

30. Sensitive nuclear technology means any information (including information incorporated in a production or utilization facility or important component part thereof) which is not available to the public (see definition of "public information") which is important to the design, construction, fabrication, operation, or maintenance of a uranium enrichment or nuclear fuel reprocessing facility or a facility for the production of heavy water, but shall not include Restricted Data controlled pursuant to Chapter 12 of the Atomic Energy Act. The information may take a tangible form such as a model, prototype, blueprint, or operation manual or an intangible form such as technical services. (Source: 10 CFR Section 810.3)
31. Source Material means: (1) Uranium or thorium, other than special nuclear material or (2) ores which contain by weight 0.05 percent or more of uranium or thorium, or any combination of these. (Source: 10 CFR Section 810.3)
32. Special nuclear material means (1) plutonium, (2) uranium-233, or (3) uranium enriched above 0.711 percent by weight in the isotope uranium-235. (Source: 10 CFR Section 810.3)
33. Specific authorization means an authorization granted by the Secretary of Energy under section 57b(2) of the Atomic Energy Act to a person to provide specified assistance to a foreign atomic energy activity in response to an application filed under 10 CFR part 810. (Source: 10 CFR Section 810.3)
34. United States, when used in a geographical sense, includes all territories and possessions of the United States. (Source: 10 CFR Section 810.3)
35. Government agency means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the government. (Source: 5 U.S.C. 101)