

March 18, 2009

Mr. Paul A. Gottlieb Assistant General Counsel for Technology Transfer and Intellectual Property GC-62/Forrestal Building U.S. Department of Energy 1000 Independence Avenue, SW Washington, D.C. 20585

**Subject**: Questions Concerning Technology Transfer Practices at DOE Laboratories (Federal Register / Vol.73, No. 229 / November 26, 2008 / Notices)

Dear Mr. Gottlieb:

Thank you for the opportunity to respond to the questions published in the Federal Register. Your questions are timely and well thought out. Battelle, as a leader in the management and operation of Department of Energy (DOE) national laboratories, places great value on the transfer of technology from the national laboratories into the private sector. The transfer of technology through commercialization is one of Battelle's founding principles, and remains central to our core business purposes.

Now, more than ever, the ability to quickly and efficiently leverage U.S. science and technology to solve our nation's challenges is critical. Using innovations from our national laboratories can be a key economic differentiator during these challenging world times. No where is that more evident than in the sphere of energy technology innovation, where the assets of the national laboratories play a unique role in defining the energy technologies essential to meet our national energy policy objectives. The essential enabler necessary to realizing the societal benefits of lab-derived energy discoveries is the ability to effectively and efficiently collaborate with industry to translate these discoveries into commercial innovations.

Most significantly, Battelle's recent experience suggests that addressing the challenges of energy in a carbon constrained world requires industry to effectively collaborate with multiple laboratories, each with specific aspects of the technology solutions essential to transforming the U.S. energy economy to meet current policy goals. As noted below, this proves to be a major challenge under DOE's current suite of industry agreements.

We look forward to working with you to accelerate and expand technology partnering mechanisms in the future.

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Battelle's high-level responses in critical areas follow. You may receive responses as well from the Battelle-affiliated laboratories, providing their own unique insights.

### **Question 1: Existing and Other Agreements**

### **Existing Agreements**

First, Battelle's experience is that the agreements currently authorized for use by DOE provide value across multiple types of transactions. Over the past several years Battelle has invested over \$20M in energy, health, and national security research and development, capability development, and technology maturation at DOE national laboratories. We have direct experience with the time and complexity related to instituting agreements with the laboratories. We also hear from the laboratories that we manage for DOE, and it is our own experience, that specific terms are more difficult for industry to accept. These include advanced payment, U.S. Competitiveness requirements, indemnification provisions, and venue/choice of law as frequently encountered examples. In addition, the development of an expanded set of terms/alternative clauses could offer new avenues to collaborate more efficiently and effectively with industry, and should be implemented on a consistent basis across the various laboratories/site offices, enabling multiple laboratories to become a force in innovation through joint efforts with industry.

A second recommendation is that uniform criteria for enabling laboratory-industry collaboration should be adopted and implemented at each laboratory/field office. Today for a single effort multiple DOE sites will apply dramatically different criteria governing the selection of which type of agreement should be used for the effort, i.e., Work for Others (WFO) or Cooperative Research and Development Agreement (CRADA). Consistent implementation of contracting mechanisms is important to industry to streamline agreements with individual DOE laboratories and is critical to efforts that involve multiple labs. Our experience has shown that one national laboratory may utilize a CRADA while another in the same situation may utilize a WFO agreement. This inconsistency leaves industry to guess what type of contract mechanism will be offered to them and complicates contracting terms if industry is trying to pursue complementary technologies from different national laboratories. Of particular importance to industry is clarity and consistency with respect to the options for accessing Intellectual Property (IP) rights and other terms.

Another attribute that would greatly expand technology transfer and commercialization outcomes would be to allow the laboratory contractor to collaborate with non-federal clients on competitive development and deployment procurements, where the laboratory has unique capabilities or technology critical to the non-federal partner's success. This attribute would allow the public and private sectors to more effectively and efficiently leverage a laboratory's intellectual and science resources to solve our nation's challenges.

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# New Agreement Mechanisms

Battelle believes that additional contract mechanisms are needed to enhance and accelerate the transfer of technologies from the DOE national laboratories into the marketplace. These new mechanisms would support DOE's role as a leading force for creativity and innovation in public/private partnerships and in achieving critical outcomes in global competitiveness and energy independence.

We believe that a new, more commercially-oriented collaboration mechanism would expand opportunities for the laboratories to work with the private sector in delivering innovations into commercial use. Typically, industry partners are interested in efficiency in negotiations, flexibility to incorporate provisions, accountability for performance, and the ability to follow commercial payment terms tailored to their business needs. A new mechanism, with attributes that balance risks and rewards, would make partnerships more attractive to industry and would incentivize contractors like Battelle for success. Industry partners would be more willing to make the investment necessary to further develop technology from the national laboratories and apply it to their unique problems.

The provisions necessary to construct this new mechanism would continue to protect DOE's and the government's interest in minimizing risk to the taxpayer, while allowing laboratory contractors to take on additional risk and perhaps earn incremental returns associated with the use of this new mechanism. We acknowledge that a contractor's willingness to accept greater risk is directly related to their ability to earn greater rewards. We believe that there is precedent for such changes and that the actions are within DOE's authority and would have a dramatic impact on each contractor's ability to attract and accommodate the non-federal collaborators necessary to accelerate the transfer of new technology to the private sector.

We welcome the opportunity to discuss with DOE specific recommendations for the changes necessary to develop a new agreement mechanism that could be implemented across all the DOE national laboratories.

#### **Question 2: Best Practices**

Energy Efficiency and Renewable Energy's (EERE) efforts to move technologies toward commercial products through the EERE Technology Commercialization Fund, is an example of a Best Practice within DOE. Such a concept has been practiced by Battelle for many years and is helping to more rapidly commercialize technology. Five Battelle-affiliated national laboratories are currently participating in this program and have seen several examples of enhanced outcomes and quicker deployment of technology. Several Battelle-affiliated national laboratories are also participating in the EERE Entrepreneur in Residence program, enabling staff to work with venture capital-backed entrepreneurs to accelerate the commercialization of lab-based technology.

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Another best practice is the design employed in the Solid State Energy Conversion Alliance program managed by Fossil Energy. This program design provides for both the development of core technologies essential to develop a new high temperature fuel cell industry while enabling proprietary advantage to industry collaborators in translating these innovations to targeted market opportunities.

Other specific examples of best practices or new models that may open new avenues for industry, academia and other partners to work with the national laboratories include:

- Expanded technology maturation programs
- Technology incubation and accelerator programs
- Expanded venture capital fund relationships
- Expansion of technical assistance programs currently offered by some laboratories
- Access to laboratory expertise through arrangements similar to academia, e.g., the Massachusetts Institute of Technology Industrial Liaison Program and university entrepreneurship programs
- Support for Small Business Innovation Research/Small Business Technology Transfer proposal development.

## **Question 3: U.S. Competitiveness**

Battelle supports DOE's openness to streamlining negotiation of the U.S. Competitiveness issue and shares DOE's commitment to the U.S. economy, while dealing with the realities of the global marketplace. Battelle supports the modification of the DOE implementation of the U.S. Competitiveness requirements as outlined in the Federal Register notice. While this is not an insurmountable issue at present, other federal agencies' treatment of U.S. Competitiveness is less stringent than DOE, and more aligned with the nature of the evolving global economy.

### Question 4: Intellectual Property Rights Disposition in WFO Agreements

We recommend that the current DOE policy, established before laboratory contractors were authorized to take title to inventions, be brought into better alignment with the practices of other federal agencies and university research institutions.

Battelle acknowledges that individual laboratories have developed, over time, philosophies and approaches to IP rights disposition reflecting their unique situations. Battelle looks forward to working with DOE to improve the implementation of existing mechanisms and to develop new mechanisms that benefit both the U.S. government and industry.

### **Question 5: Negotiable or Non-negotiable User Agreements**

Battelle supports the use of non-negotiable user agreements to streamline the time to place the agreements, and in view of the fact that the facilities in question are government-owned and operated at taxpayer expense.

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# **Question 6: Other Technology Transfer Issues**

We would like to discuss an approach in which the laboratory contractor could retain more authority to approve and execute individual transactions. DOE would continue to provide oversight through periodic reviews of contractor systems. This step would speed transaction time and lower the cost of administering agreements without increasing risk.

Thank you again for the opportunity to provide our input on these critical issues. I look forward to working together to continue to enhance DOE technology transfer and commercialization approaches.

Sincerely,

eft Crudson to Dr. Jeffrey Wadsworth

President and Chief Executive Officer

Battelle Memorial Institute

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Note: Per the Federal Register instruction, Battelle identifies itself as a private, 501(c)(3) entity with over 20,000 employees across Battelle and its affiliated laboratories.