

Alert 10-112



DOE GRANT ANNOUNCEMENTS: SOLAR, MARINE and HYDROKINETIC TECHNOLOGIES

I. Overview, The Department of Energy ("DOE") has announced the availability of more than \$171 million in grants, cooperative agreements, and technology-investment agreements "to expand and accelerate the development, commercialization, and use of solar and water power technologies throughout the United States" (<http://www.eere.energy.gov/>). This funding continues a strong emphasis in the DOE, since the passage of the Recovery Act, on projects that promote alternative energy development, sustainability, and green jobs. The goal is to further the development of "evolving technologies," i.e., those that are not existing commercial technologies. This *Client Alert* provides key details behind the two major initiatives included within these announcements, particularly what information is necessary to complete a competitive application.

The Public Policy & Infrastructure Practice has worked with a number of Reed Smith clients in crafting competitive applications for grant funding and complementary strategies to achieve funding, including obtaining support and assistance from members of Congress. We remain available to assist in the preliminary notice and development of a competitive application for funds under these Funding Opportunity Announcements ("FOAs").

II. Photovoltaic ("PV") Manufacturing Initiative (DE-FOA-0000237 and DE-FOA-0000259). Funding: \$125 million is expected to be awarded over five years, with \$15 million to be awarded in Fiscal Year 2010.

A. Description. This initiative is for "manufacturing-focused research projects that will have near and mid-term impact on the U.S. solar industry and will catalyze greater cooperation within the industry." Applicants must first submit a Concept Paper by June 3, 2010, and pass initial compliance review in order to be eligible to submit a final application, which is expected to be due in early August. According to the FOA: "these papers will allow DOE to provide feedback to applicants on the potential of their proposal to meet the PV Manufacturing Initiative's goal of strengthening the U.S. PV industry." Topic One of the FOA is University-Focused, to "provide universities with a competitive funding source to perform industry-relevant R&D, guided by direct industry input and oversight." Topic Two is Industry-Focused, "to provide the U.S. PV industry with a resource to rapidly develop pre-competitive and competitive manufacturing technologies."

B. Who is Eligible to Apply for Funds? As noted above, Topic One is University-Focused. The FOA notes that "at least 75% of the research work is required to be performed by universities in university facilities." Further, "the remaining 25% could be performed in the facilities of partner companies, in shared consortium facilities, in fee-for-use manufacturing facilities, and/or in other facilities deemed appropriate." Topic Two is Industry-Focused. The FOA notes here that "applications under this model would be based on a consortium where participants would define and pursue pre-competitive and collaborative industry product and process development projects. A consortium structure is intended to allow increased responsiveness to dynamic PV industry conditions and create the potential for additional sources of funding to be leveraged with federal funds. The primary consortium participants would be industry members from PV manufacturing companies and their associated supply chains.

C. Is a Match of Cost-Share Required? At least a 20 percent non-federal match is required for Topic One projects. At least a 50 percent non-federal match is required for Topic Two projects.

D. Funding and Awards. Of the \$125 million to be awarded over five years, \$12.5 million to \$25 million will go to projects falling under Topic One, and \$33 million to \$100 million will go to projects falling under Topic Two. The DOE anticipates awarding the funds as either cooperative agreements or Technology Investment Agreements (TIAs) under this announcement. They define TIAs as a "type of assistance instrument used to support or stimulate research projects involving for-profit firms, especially commercial firms that do business primarily in the commercial marketplace." These

are flexible instruments that "encourage non-traditional Government contractors" to apply by varying from standard grant terms.

E. Concept Paper and Application Information. The Concept Paper should be no more than 10 pages and should include the following information:

1. Organizational Objectives. Includes "well stated goals and frameworks that address specific industry needs," as well as a "detailed description of the parts of the supply chain which are expected to be the main participants in the proposed organization and how they will commercialize or otherwise implement the technologies or advancements developed through the organization."
2. Capabilities and Resources. Includes commitments from members and expected funding sources and expenses. "These estimates should be provided for the initial 5 years of the organization and include the request for DOE funding."

For those concept papers that receive initial approval, the subsequent application requires the following information:

1. Project/Performance Site Location(s)
2. Project Summary Abstract File. Not to exceed more than one page.
3. Executive Summary. Not to exceed more than three to five pages. This is a summary of the proposed activity, as noted in the project narrative described below.
4. Project Narrative. All information on the project, not to exceed 30 pages, "including cover page, table of contents, charts, graphs, maps, photographs, and other pictorial presentations."

F. Application Review. Applications will be evaluated under the following five criteria:

1. Organization Objectives (20 percent). Includes the "degree to which the applicant demonstrates a deep and technical understanding of the domestic PV industry's needs" and the "likelihood that the main participants in the proposed organization will be able to commercialize or otherwise implement the technologies or advances developed through the organization."
2. Management and Business Plan (25 percent). Includes the "extent to which the management plan presents a thorough understanding of the issues and challenges associated with the proposed organization structure."
3. Research and Development Management Plan (20 percent). Includes "appropriateness of methodology for selecting and prioritizing R&D projects that will be funded by the organization and/or supported in a manufacturing development facility" and "quality of proposed R&D management plan."
4. Intellectual Property Management Plan (15 percent). Includes "adequacy of the IP management plan for supporting the needs of the organization, its members, the broader PV manufacturing industry, and the Department of Energy."
5. Capability and Resources (20 percent). Includes "extent to which the capabilities, experience, and qualifications of the organization and its members are consistent with and support the proposed scope of work and the organization's objectives," and "adequacy of the facilities, facility staffing and assignees and resources," and "degree of support as evidenced by letters of commitment from anticipated organization members, suppliers, and customers."

III. Marine and Hydrokinetic Technology Readiness Advancement Initiative (DE-FOA-0000293).
Funding: \$15.36 million for Fiscal Year 2010, with additional funding possible at comparable levels for two years, dependant on congressional appropriation.

A. Description. This initiative is intended to promote the research, development and demonstration of marine and hydrokinetic projects, i.e., those that produce energy from "waves, tides, currents, and ocean thermal gradients." The DOE recognizes that the development of this technology is in its beginning stages and will utilize Technology Readiness Levels ("TRLs") concepts currently in use by the Department of Defense and NASA to rank the readiness levels of technologies, from concept paper all the way to a fully proved technology (TRLs 1-9). Topic Area One of the FOA will fund those projects on the TRL 1-3 levels, what the DOE terms as "Discovery/Concept Definition/Early Stage

Development, Design and Engineering." Topic Area Two of the FOA will fund those projects on the TRL 4-9 levels, what the DOE terms as "Prototype Development" through "Commercial Deployment." Applicants must categorize the TRL (1) where they fully meet DOE standards and definitions, and (2) where they intend to advance their technology.

B. Who is Eligible To Apply for Funds? For Topic Area One, eligible entities are "(1) institutions of higher education; (2) nonprofit and for-profit entities; (3) State and local governments; and (4) consortia of entities (1) through (3). All types of entities are eligible to apply, except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995." For Topic Area Two, eligibility "is restricted to industry members or industry-led partnerships. The industry member or industry lead can be a technology developer, project developer, private utility, public municipal or cooperative utility, privately-funded research organization, or services company. Only one application should be submitted by the lead member on behalf of the partnership."

C. Is a Match of Cost-Share Required? For Topic Area One, at least a 20 percent non-federal match is required. For Topic Area Two, the amount of local match depends on how far up the TRL level the project lies: for TRL 4, the non-federal cost share remains at least 20 percent of total cost; for TRLs 5-6, the non-federal cost share increases to at least 40 percent; for TRLs 7-9, the non-federal cost share increases to at least 50 percent.

D. Funding and Grant Awards. For Topic Area One, \$1.6 million is expected to be awarded for up to eight grant awards, ranging from \$160,000 to \$240,000. For Topic Area Two, \$36.72 million is expected to be available for up to 18 grant awards, ranging from \$240,000 to \$10 million.

E. Application Review. Projects falling under Topic Area One will be evaluated under the following four criteria:

1. Strength of the Scientific/Technical Approach (40 percent). Includes "degree to which application is based on sound principles and defensible assumptions" and "credibility of approach to predict cost of energy."
2. Potential Market Impact/Advancement (20 percent)
3. Team Member Qualifications/Available Resources (20 percent)
4. Innovation (20 percent). Includes "degree to which application presents a novel approach or novel technological solution" and "likelihood that the critical enabling technologies needed to achieve success can be developed."

Projects falling under Topic Area Two will be evaluated under the following four criteria:

1. Potential Market Impact/Advancement (30 percent). Includes "likelihood that proposed technology will result in broadly applicable deployment" by 2020.
2. Technical Approach (30 percent). Includes "adequacy of the identification and assessment of critical success factors, risks and barriers."
3. Qualifications and Resources (30 percent). Includes "demonstrated level of the involvement of private industry to ensure rapid introduction of technologies to the marketplace."
4. Project Management Plan (10 percent). Includes "the degree to which the plan is clear and well-organized in responding to the FOA objectives."

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