DOE Request for Information (RFI)

U. S.-CHINA CLEAN ENERGY RESEARCH CENTER (CERC)

DATE: November 17, 2009

SUBJECT: Request for Information (RFI)

DESCRIPTION: The Department of Energy (DOE) is seeking feedback from stakeholders on a planned competitive funding opportunity announcement (FOA) to manage parts of the U.S.-China Clean Energy Research Center (CERC).

PROGRAM MANAGER/AREA: TBD

PURPOSE: The purpose of this Request for Information (RFI) is to solicit feedback on a possible approach to implementing U.S. activities under the US-China Clean Energy Research Center. That approach is described in more detail below. This is a Request for Information (RFI) and not a Funding Opportunity Announcement (FOA). DOE is not accepting applications and is instead seeking information from interested parties to help shape a possible FOA.

BACKGROUND: The United States and China are the world's top energy consumers, energy producers and greenhouse gas emitters. They will play central roles in the world's transition to a clean energy economy in the years ahead.

Technology will play an important role in this transition, and the U.S. and China have a strong shared interest in advances in key technologies. The U.S.-China Clean Energy Research Center (CERC) will focus initially in three areas:

- **Building Energy Efficiency**. Buildings are the largest source of global energy demand and central to efforts to address climate change. The U.S. building sector represents 40% of total national energy consumption. China is building half of the world's new floor space each year.
- **Clean Coal Including Carbon Capture and Storage**. Coal accounts for almost 80% of electricity production in China, and approximately 50% in the U.S. Both countries have a strong interest in developing and

deploying technologies that would allow them to use their ample coal resources without polluting the air or warming the planet.

- **Clean Vehicles**. The U.S. and China are the world's two largest markets for both oil and automobiles, making clean vehicles another promising area for cooperation.

U. S.-China Clean Energy Research Center (CERC)

This week in Beijing, the Protocol establishing the US-China Clean Energy Research Center (CERC) was signed by the U.S. and Chinese Governments. The Center will facilitate joint research and development on clean energy by teams of scientists and engineers from the U.S. and China, as well as serve as a clearinghouse to help researchers in each country.

International Governance

A Joint Steering Committee will provide high-level review and guidance for the activities and direction of research conducted in connection with the Center. The Joint Steering Committee will consist of representatives of the U.S. Department of Energy, Ministry of Science and Technology and National Energy Agency of the People's Republic of China and other relevant ministries, departments and agencies of either government as jointly determined by DOE, China's Ministry of Science and Technology (MOST) and China's National Energy Administration (NEA). The Joint Steering Committee will meet annually or at such other time as the co-chairs jointly decide. The Joint Steering Committee will set policy and direction for the Center. It will not control budgets or personnel of Center operations in either country.

A Joint Advisory Panel will also be established. The Joint Advisory Panel will consist of six eminent business and academic experts selected by the Joint Steering Committee from each country. The Joint Advisory Panel will provide suggestions and insights to ensure that issues of importance are brought to the attention of the Joint Steering Committee. The Joint Advisory Panel will meet at least annually. It will be responsible for reaching out to the United States and Chinese clean energy science and technology communities for suggestions and encouraging participation of these communities in Center activities through an annual workshop or other appropriate means.

Proposed Governance of U.S. Activities

To operationalize the U.S.-China Clean Energy Research Center within the U.S., DOE is considering executing cooperative agreements with consortia in each of the CERC's three initial work areas. One agreement would be executed with a consortium established to work on energy-efficiency buildings; one with a consortium established to work on clean coal including carbon capture and storage; and one with a consortium established to work on clean vehicles. Recipients of the cooperative agreements would independently select and/or administer research projects to advance the goals of the US-China Clean Energy Research Center, including in particular cooperative work with

Chinese researchers in these areas. National labs, universities, private companies, and others would be eligible to be members of the entities receiving the cooperative agreements.

Each consortium would receive an award of up to $12.5 million over five years, to be distributed in equal annual amounts and subject to Congressional appropriations. Each consortium would be required to match this award with funding of at least the same amount from its own resources, to help fund Center activities.

Consortium members might receive (i) preferred access to intellectual property created as a result of the activities of the CERC; (ii) membership on the consortium's advisory board; (iii) right to send members to center meetings; (iv) right to send up to 2 researchers-in-residence; and (v) access to students, faculty and staff for consulting and future workforce.

The governance structure for each recipient could include:

- Director: A director would be responsible for ongoing operations.
- Private Sector Board (PSB): A Private Sector Board would be composed of entities that contribute pre-determined amounts annually. The PSB could have the authority to recommend project selection criteria to the director and provide assessments of specific proposals upon request. The entities included in the PSB could participate in research projects, pursuant to the IPR provisions laid out by DOE and the recipient. Contributions by the PSB are expected to be used to fulfill cost share requirements outlined by the recipient.
- Technical Advisory Committee (TAC): A Technical Advisory Committee would be established by the director in consultant with the PSB. The TAC could consist of relevant subject-matter experts who provide advice and support on general project selection criteria as well as assessments of specific proposals upon request. The TAC could be comprised of distinguished academics, experts from national labs and non-profits, and representatives of private sector companies.

Consortia should leverage existing resources and physical infrastructure rather than construct any new "bricks and mortar" facilities. To keep the focus on research and international collaboration, it is anticipated the most favorable infrastructure will be keep the management, administrative and/or permanent research staff to a minimum.

Potential IPR Provisions

The CERC might employ intellectual property rules similar to those used by other consortia that have successfully encouraged high-impact research, by connecting world-class university researchers with the private sector firms best positioned to commercialize new intellectual property. The IPR provisions will have to take into account the IPR policies of the U.S. Government, the IPR interests of the consortium

members and the IPR interests of entities that will be performing the research and creating new technology, but also will have to take into account the interests of the international partners, the U.S. and Chinese governments.

As one possible IPR structure, consortium members might jointly share access to all new intellectual property resulting from the effort during the 5-year period of the consortium. This might imply non-exclusive royalty-free rights for core members of the consortium (e.g. PSB members participating at the maximum funding level) or perhaps a preferred option to obtain rights at a preferred royalty. Junior participants (e.g. private companies entering at a relatively low contribution level) might be required to pay royalties under standard terms. Thereafter, consortium members might have first right of refusal for an additional 5 years before the intellectual property became available to all interested parties under standardized licensing terms. These rights would apply in the United States; coverage in other geographies including China would be determined on a case-by-case basis. Finally, both governments would retain permanent license rights to all intellectual property resulting from the CERC but for governmental purposes in its territory only.

Selection Criteria

DOE is considering the following selection criteria for proposals to establish consortia to run parts of the Center:

1. Scientific and Technical Importance of Proposed Activities
2. Feasibility of Proposed Work Plan
3. Capabilities and Background of Applicant Team
4. Adequacy of Consortium Management Plan
5. Extent of US-China Collaboration (extent to which plan promotes collaborative work with Chinese researchers and/or collaboration between the two countries more broadly in developing and deploying clean energy technology)
6. Ability to Meet Cost-Share and Composition of Proposed Private Sector Board

Governance of Chinese Activities

The Chinese will determine the structure of their portion of the CERC.

REQUEST FOR INFORMATION FEEDBACK QUESTIONS:

QUESTION 1: Please comment on the proposed governance structure described above. What are its strengths and weaknesses?

QUESTION 2: What structure or components would best facilitate commercialization outcomes or technology transfer activities from a consortium?

QUESTION 3: What IPR management plan would encourage participation in a consortium?

Question 4: Are there any elements of the proposed FOA that you deem especially important or damaging to your interests?

Question 5: Given the structure and governance identified in this RFI, what would be the anticipated administrative costs for a consortium?

Question 6: Are there any other issues DOE should consider in finalizing arrangements for US governance of the CERC?

REQUEST FOR INFORMATION (RFI) RESPONSE GUIDELINES:
Responses to this RFI must be submitted electronically to CERC@hq.doe.gov no later than 5:00PM Eastern Time on December 7, 2009. Responses must be provided as a Microsoft Word (.doc) attachment to the email, of no more than 10 pages in length, 12 point font, 1 inch margins. Only electronic responses will be accepted.

Parties interested in submitting a response to this RFI should first review these RFI Guidelines. Please identify your answers by responding to a specific question or topic if possible. Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for planning and strategy development. DOE will review and consider all responses in its formulation of program strategies for. Information or data that is restricted in any way or limited for use by the Government is not solicited and will not be considered. Please do not respond with any information you deem proprietary or confidential. DOE will not respond to individual submissions or publish publicly a compendium of responses. A response to this RFI will not be viewed as a binding commitment to develop or pursue the project or ideas discussed. DOE may also decide at a later date to issue Funding Opportunity Announcements (FOAs) based on consideration of the feedback received from this RFI.

Respondents are requested to provide the following information at the start of their response to this RFI:

- University/Company/Institutional name,
- University/Company/Institutional contact,
- Contact's address, phone number, and e-mail address.

DOE will not pay for information provided under this Request for Information (RFI). This RFI is not accepting applications for financial assistance or financial incentives. DOE has no obligation to respond to those who submit comments, and/or give any feedback on any decision made based on the comments received.

DOE thanks you for your assistance and comments in helping to advance clean energy technologies.