Proposed Agreement between California Energy Commission and California Institute for Energy and Environment

Title: Support for Renewable Distributed Generation
Amount: $1,027,230.00
Term: 36 months
Contact: Jamie Patterson
Committee Meeting: 4/25/2011

Funding

FY	Program	Area	Initiative	Budget	This Project	Remaining Balance	
09	Electric	General	Projects - Support	$1,729,454	$1,027,230	$0	0%

Recommendation

Approve this agreement with California Institute for Energy and Environment for $1,027,230 to provide university system wide support for the PIER program for 36 months. Staff recommends placing this item on the discussion agenda of the Commission Business Meeting.

Issue

The Energy Commission needs assistance in preparing feasibility studies across the state to support renewables on the distribution system. The Governor has called for adding 20,000 MW of new renewables including 12,000 MW of distributed generation and 8,000 MW of utility scale power by 2020. This also includes the development of energy storage with a rough goal that utilities procure storage equivalent to 5% of their peak load demand.

Since the electric grid is an integral part of each of these objectives listed above, their timely success is tied to the research needed for new electric transmission and distribution technologies. These technologies need to be evaluated for their application to the successful integration of renewable distributed generation.

Over the next few years, related "game changer" Energy Commission" initiatives, such as, Renewable Energy Secure Communities (RESCO), Renewable Distributed Generation, Federal Department of Defense Microgrids, and others, will also require state wide technical support.

Background

Under previous Energy Commission contracts, CIEE has provided university system wide support for research, development and demonstrations across all of California to enhance the capability of California's electric grid. This support has enlisted many of the UC campuses throughout the state. Specifically, San Diego, Irvine, Riverside, Los Angeles, Santa Barbara, Berkeley, Davis, Santa Cruz and Merced.

Proposed Work

The contractor will provide support by:

Provide support in preparing feasibility studies. A feasibility study is a summary report that provides sufficient information to make informed decisions about further pursuit of a proposed project. The informational content will be under the direction of the Commission Contract Manager and may include, but not be limited to: energy resources; energy resource and energy demand compatibility assessment; technology assessment; lab and field testing, economic and financial analysis; institutional considerations; and time schedules.

Provide facilitation and support services to develop outreach strategies, market and disseminate information highlighting specific project results to identified audiences. Coordination and support tasks include writing descriptive and technical material, producing or utilizing graphics, and coordinating with appropriate outlets for targeted distribution of information.

Assist staff in the development and design of materials needed for workshops, press conferences, reports, case studies, for distribution to general and technical audiences. Provide word processing, writing, editing, graphic design, spreadsheet analysis and presentation, database analysis and presentation, photographic services and printing services.

Assist staff in technical writing and editing needed for a wide range of program materials including presentation materials, reports, brochures, fact sheets, and newsletter articles.

Developing and updating research plans, "white papers," and candidate research activity portfolios for RD&D of new technologies for electric transmission and distribution, including smart grid

Providing technical expertise for review and guidance for selected PIER grid projects, and coordination and collaboration across multiple projects

Conduct workshops and other outreach activities that seek comments from relevant individuals, industries and organizations for purposes of planning, designing, developing, implementing, administering, evaluating and coordinating selected programs.

Developing methods for, and conduct of, technology transfer and outreach to California Stakeholders and ratepayers to maximize the implementation of the research products throughout California

Providing coordination and collaboration with other organizations involved in PIER research, design, planning, and operations

Identifying and cultivating co-funding opportunities for PIER reseach.

Arrange and provide conference facilities, logistics, meeting facilitation, and supplies for conferences, workshops, review sessions, and other activities to improve information transfer between industry groups, energy firms, small businesses, local governments, and the Energy Commission.

Justification and Goals

This project is to "...obtain, technical, scientific, or administrative services or expertise from one or more entities, to support the program ... [using] ... Public Interest Research, Development, and Demonstration Fund[s]" (Public Resources Code 25620.7.(a)).

This will be accomplished by:

- provide technical support to the Energy Commission for California's renewable energy deployment policies. Primary focus is providing support in the areas of:
- Electric transmission and distribution grid
- Renewable utility-scale and distributed generation,
- Technical challenges associated with renewable technologies,
- Renewable energy resource mapping and assessment of renewable energy resources,
- Costs associated with renewable energy systems,
- Implications of energy storage, demand response, distributed generation, electric vehicle (EV) charging, and other technologies or practices for meeting California's energy policy goals.