

GRANTS/CONTINGENT AWARD REQUEST



To: Grants and Loans Office

Date: 2/20/2013

Project Manager: John Hingtgen

Phone Number: 916-327-1434

Office: Energy Generation Research Office

Division: Energy Research and Development

MS- 43

Project Title: Davis Future Renewable Energy and Efficiency ("Davis FREE")

Type of Request: (check one)

[X] New Agreement: (include items A-F from below) Agreement Number: PIR-12-011
Program: PIER E / Renewables
Solicitation Name and/or Number: PON-12-502-44 (Community Scale Renewable Energy Development,
Legal Name of Recipient: City of Davis
Recipient's Full Mailing Address: 23 Russell Blvd
Davis, CA 95616
Recipient's Project Officer: Mitch Sears Phone Number: 530-752-0204
Agreement Start Date: 6/1/2013 Agreement End Date: 3/31/2015

[ ] Amendment: (Check all that apply) Agreement Number:
[ ] Term Extension - New End Date:
[ ] Work Statement Revision (include Item A from below)
[ ] Budget Revision (include Item B from below)
[ ] Change of Scope (include Items A - F as applicable from below)
[ ] Other:

ITEMS TO ATTACH WITH REQUEST:

- A. Work Statement
B. Budget
C. Recipient Resolution, if applicable. (Resolution may be requested in Special Conditions if not currently available.)
D. Special Conditions, if applicable.
E. CEQA Compliance Form
F. Other Documents as applicable
• Copy of Score Sheets
• Copy of Pre-Award Correspondence
• Copy of All Other Relevant Documents

California Environmental Quality Act (CEQA)

[X] CEC finds, based on recipient's documentation in compliance with CEQA:
[X] Project exempt: Section 15262 NOE filed:
[ ] Environmental Document prepared: NOD filed:
[X] Other: City finds there are no significant direct effects on environmental factors.
[ ] CEC has made CEQA finding described in CEC-280, attached

Funding Information:

\*Source #1: PIER-E Amount: \$ 300,000.00 Statute: 11- FY: 12-13 Budget List #: 501.027J
\*Source #2: Amount: \$ Statute: FY: Budget List #:
\*Source #3: Amount: \$ Statute: FY: Budget List #:

If federally funded, specify federal agreement number:

\* Source Examples include ERPA, PIER-E, PIER-NG, FED, GRDA, ARFVT, OTHER.

Business Meeting Approval: (refer to Business Meeting Schedule)

Proposed Business Meeting Date: 5/8/2013 [ ] Consent [X] Discussion
Business Meeting Participant: John Hingtgen Time Needed: 10 minutes

Agenda Notice Statement: (state purpose in layperson terms)

Possible approval of a [X] Grant / [ ] Contingent Award to...
Possible approval of grant agreement PIR-12-011 with the City of Davis for \$300,000 to formulate a preliminary long-term renewable energy deployment roadmap for Davis, CA. The roadmap will be developed using state-of-the-art analytical tools and methods to identify the most cost-effective options for supplying all electricity and natural gas using locally available renewable sources.

## Exhibit A WORK STATEMENT

### TECHNICAL TASK LIST

CPR	Task #	Task Name
	1	Administration
	2	Program Management and Direction
	3	GIS and Energy Usage Database Development
	4	Local Renewable Energy Supply Curve Development
	5	Zero Net Energy Guidelines
X	6	Technology Selection
	7	Deployment Planning
	8	Community Engagement

### KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Mitch Sears - City of Davis	City of Davis	City of Davis
2	Richard Flood - City of Davis / Valley Climate Action Center	City of Davis	IRES Network
3	Bruce Boyd - City of Davis	City of Davis UC Davis	City of Davis Pacific Gas & Electric Co. IRES Network
4	Richard Flood	City of Davis DNV-KEMA UC Davis	IRES Network
5	Rob Hammon - BIRA Energy	BIRA Energy UC Davis	
6	Richard Flood	City of Davis DNV-KEMA BIRA Engineering	
7	Mitch Sears - City of Davis	Aztec Solar Valley Climate Action Center	City of Davis
8	Mitch Sears	City of Davis Valley Climate Action Center	City of Davis Pacific Gas & Electric Co. and Valley Climate Action Center

# Exhibit A WORK STATEMENT

## GLOSSARY

*Specific terms and acronyms used throughout this scope of work are defined as follows:*

<b>Term/ Acronym</b>	<b>Definition</b>
CAAP	Climate Action and Adaptation Plan (City of Davis)
CEC	California Energy Commission
CPM	Commission Project Manager
CPR	Critical Project Review
CSREDDI	Community Scale Renewable Energy Development, Deployment and Integration (CEC)
FREE	Davis “Future Renewable Energy & Efficiency” program (this proposal)
GHG	Greenhouse Gas
GIS	Geographical Information System
IEPR	Integrated Energy Policy Report
NZD	Net Zero Davis (scoping study and report)
PG&E	Pacific Gas & Electric Company
PV	Photovoltaic
RESCO	Renewable Energy Secure Community
ZNE	Zero Net Energy

### **Problem Statement:**

The City of Davis (the Recipient, or the city) has carbon neutrality goals that, if achieved on or ahead of schedule, may serve as a model for other California communities. Davis has been a pioneer in community renewable development, in partnership with the Pacific Gas & Electric Company (PG&E) and the University of California, Davis (UC Davis). However, transferring the insights and tools gained from innovative renewable energy deployments to new deployments is complicated by the need to integrate community renewables with existing infrastructure to the maximum extent possible.

### **Goals of the Agreement:**

The goal of this agreement is to develop a preliminary long-term renewable energy deployment roadmap for the Recipient. The roadmap will be developed using state-of-the-art analytical tools and methods to identify the most cost-effective options for supplying all electricity and natural gas using local renewable sources.

### **Objectives of the Agreement:**

The objectives of this Agreement are to: (1) develop databases, supply curves, and net zero building guidelines to determine which initiatives recommended in previous analyses should receive priority in the next phase of the Recipient’s Climate Action and Adaptation Plan (CAAP) implementation; and (2) to develop methodologies and community energy flow models that will be used to plan subsequent community renewables deployment phases.

# **Exhibit A WORK STATEMENT**

## **TASK 1 ADMINISTRATION**

### **Instructions for Submitting Electronic Files and Developing Software**

#### **Electronic File Format**

The Recipient will deliver an electronic copy (CD ROM or memory stick or as otherwise specified by the Commission Project Manager (CPM) of the full text of any Agreement products in a compatible version of Microsoft Word (.doc).

The following describes the accepted formats of electronic data and documents provided to the Energy Commission as products and establishes the computer platforms, operating systems, and software versions that will be required to review and approve all software deliverables.

- Data sets will be in Microsoft (MS) Access or MS Excel file format.
- PC-based text documents will be in MS Word file format.
- Documents intended for public distribution will be in PDF file format, with the native file format provided as well.
- Project management documents will be in MS Project file format.

#### **Software Application Development**

If this Scope of Work includes any software application development, including but not limited to databases, websites, models, or modeling tools, the Recipient will use the following standard Application Architecture components in compatible versions:

- Microsoft ASP.NET framework (version 3.5 and up) Recommend 4.0.
- Microsoft Internet Information Services (IIS), (version 6 and up) Recommend 7.5.
- Visual Studio.NET (version 2008 and up) Recommend 2010.
- C# Programming Language with Presentation (UI), Business Object and Data Layers.
- SQL (Structured Query Language).
- Microsoft SQL Server 2008, Stored Procedures Recommend 2008 R2.
- Microsoft SQL Reporting Services Recommend 2008 R2
- XML (external interfaces).

Any exceptions to the Electronic File Format requirements above must be approved in writing by the Energy Commission's Information Technology Services Branch.

# Exhibit A WORK STATEMENT

## Task 1.1 Attend Kick-off Meeting

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement.

### The Recipient shall:

- Attend a “Kick-Off” meeting with the CPM, the Grants Officer, and a representative of the Accounting Office. The Recipient shall bring its Project Manager, Agreement Administrator, Accounting Officer, and others designated by the CPM to this meeting. The administrative and technical aspects of this Agreement will be discussed at the meeting. Prior to the kick-off meeting, the CPM will provide an agenda to all potential meeting participants.

The administrative portion of the meeting shall include, but not be limited to, the following:

- Discussion of the terms and conditions of the Agreement
- Discussion of Critical Project Review (Task 1.2)
- Match fund documentation (Task 1.6) *No work may be performed until this documentation is in place.*
- Permit documentation (Task 1.7)
- Discussion of subcontracts needed to carry out project (Task 1.8)

The technical portion of the meeting shall include, but not be limited to, the following:

- The CPM's expectations for accomplishing tasks described in the Scope of Work
- An updated Schedule of Products
- Discussion of Progress Reports (Task 1.4)
- Discussion of Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
- Discussion of the Final Report (Task 1.5)

The CPM shall designate the date and location of this meeting.

- Submit an updated Schedule of Products, List of Match Funds, and List of Permits to the CPM.

### Recipient Products:

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits

### Commission Project Manager Product:

- Kick-Off Meeting Agenda

# **Exhibit A WORK STATEMENT**

## **Task 1.2 Critical Project Review (CPR) Meetings**

The goal of this task is to determine if the project should continue to receive Energy Commission funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule, or budget.

CPRs provide the opportunity for frank discussions between the CPM and the Recipient. The CPM may schedule CPRs as necessary, and CPR costs will be borne by the Recipient.

Participants include the CPM and the Recipient, and may include the Commission Grants Officer, the Energy Research and Development Division technical lead, other Energy Commission staff and Management, and any other individuals selected by the CPM to provide support to the Energy Commission.

### **The Commission Project Manager shall:**

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the Energy Commission, but they may take place at another location or may be conducted via electronic conferencing (e.g., WebEx), as determined by the Commission Project Manager.
- Send the Recipient the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion of both match funding and permits.
- Conduct and make a record of each CPR meeting. One of the outcomes of this meeting will be a schedule for providing the written determination described below.
- Determine whether to continue the project, and if so whether modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. If the CPM concludes that satisfactory progress is not being made, this conclusion will be referred to the Deputy Director of the Energy Research and Development Division.
- Provide the Recipient with a written determination in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more products that were included in the CPR.

### **The Recipient shall:**

- Prepare a CPR Report for each CPR that discusses the progress of the Agreement toward achieving its goals and objectives. This report shall include recommendations and conclusions regarding continued work on the project. This report shall be submitted along with any other products identified in this Scope of Work. The Recipient shall submit these documents to the CPM and any other designated reviewers at least 15 working days in advance of each CPR meeting.

## **Exhibit A WORK STATEMENT**

- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

### **Commission Project Manager Products:**

- Agenda and a list of expected participants
- Schedule for written determination
- Written determination

### **Recipient Product:**

- CPR Report(s)

### **Task 1.3 Final Meeting**

The goal of this task is to close out this Agreement.

#### **The Recipient shall:**

- Meet with Energy Commission staff to present the project findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement.

This meeting will be attended by, at a minimum, the Recipient, the Commission Grants Office Officer, and the CPM. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be divided into two separate meetings at the discretion of the CPM.

The technical portion of the meeting shall involve the presentation of an assessment of the degree to which project and task goals and objectives were achieved, in addition to findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The CPM will determine the appropriate meeting participants.

The administrative portion of the meeting shall involve a discussion with the CPM and the Grants Officer about the following Agreement closeout items:

- Disposition of any equipment purchased with Energy Commission funds
- Energy Commission's request for specific "generated" data (not already provided in Agreement products)
- Need to document Recipient's disclosure of "subject inventions" developed under the Agreement
- "Surviving" Agreement provisions
- Final invoicing and release of retention

## **Exhibit A WORK STATEMENT**

- Prepare written documentation of any agreements made between the Recipient and Commission staff during the meeting.
- Prepare a schedule for completing the closeout activities for this Agreement.

### **Products:**

- Written documentation of meeting agreements
- Schedule for completing closeout activities

### **Task 1.4 Monthly Progress Reports**

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the research objectives of this Agreement on time and within budget.

The objectives of this task are to summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, and to form the basis for determining whether invoices are consistent with work performed.

### **The Recipient shall:**

- Prepare a Monthly Progress Report that summarizes all Agreement activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due to the CPM within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in the Terms and Conditions of this Agreement.
- In each Monthly Progress Report and invoice, document and verify:
  - Energy Commission funds received by California-Based Entities (CBEs);
  - Energy Commission funds spent in California; and Match fund expenditures
  - Provide synopsis of project progress.

### **Product:**

- Monthly Progress Reports

### **Task 1.5 Final Report**

The goal of the Final Report is to assess the project's success in achieving its goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.

## **Exhibit A WORK STATEMENT**

The objectives of the Final Report are to clearly and completely describe the project's purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further projects and improvements.

The Final Report shall be a public document. If the Recipient has obtained confidential status from the Energy Commission and will also prepare a confidential version of the Final Report, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

### **The Recipient shall:**

- Prepare an Outline of the Final Report.
- Prepare a Final Report following the approved outline and the latest version of the Final Report guidelines which will be provided by the CPM. The CPM shall provide written comments on the Draft Final Report within 15 working days of receipt. The Final Report must be completed at least 90 days before the end of the Agreement Term.
- Submit one bound copy of the Final Report with the final invoice.

### **Products:**

- Draft Outline of the Final Report
- Final Outline of the Final Report
- Draft Final Report
- Final Report

### **Task 1.6 Identify and Obtain Match Funds**

The goal of this task is to ensure that the match funds planned for this Agreement are obtained and applied to this Agreement during the term of this Agreement.

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. Although the Energy Commission budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds shall be spent concurrently or in advance of Energy Commission funds for each task during the term of this Agreement. Match funds must be identified in writing and the associated commitments obtained before the Recipient can incur any costs for which the Recipient will request reimbursement.

### **The Recipient shall:**

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the CPM at least 2 working days prior to the

## **Exhibit A WORK STATEMENT**

kick-off meeting. If no match funds were part of the proposal that led to the Energy Commission awarding this Agreement and none have been identified at the time this Agreement starts, then state such in the letter. If match funds were a part of the proposal that led to the Energy Commission awarding this Agreement, then provide in the letter a list of the match funds that identifies the:

- Amount of each cash match fund, its source (including a contact name, address and telephone number), and the task(s) to which the match funds will be applied.
- Amount of each in-kind contribution, a description, documented market or book value, its source (including a contact name, address and telephone number), and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient shall identify its owner and provide a contact name, address, telephone number, and the address where the property is located.
- Provide a copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured. For match funds provided by a grant a copy of the executed grant shall be submitted in place of a letter of commitment.
- Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide a letter including the appropriate information to the CPM if during the course of the Agreement additional match funds are received.
- Provide a letter to the CPM within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR.

### **Products:**

- A letter regarding match funds or stating that no match funds are provided
- Copy(ies) of each match fund commitment letter(s) (if applicable)
- Letter(s) for new match funds (if applicable)
- Letter that match funds were reduced (if applicable)

### **Task 1.7 Identify and Obtain Required Permits**

The goal of this task is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track.

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Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement. Although the Energy Commission budget for this task will be zero dollars, the Recipient shall budget match funds for any expected expenditures associated with obtaining permits. Permits must be identified in writing and obtained before the Recipient can make any expenditure for which a permit is required.

### **The Recipient shall:**

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the CPM at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
  - A list of the permits that identifies the:
    - Type of permit
    - Name, address and telephone number of the permitting jurisdictions or lead agencies
  - The schedule the Recipient will follow in applying for and obtaining these permits.
- Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule, and copies of the permits. The implications to the Agreement if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in the Progress Reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, provide an updated list of permits (including the appropriate information on each permit) and an updated schedule to the CPM.
- As permits are obtained, send a copy of each approved permit to the CPM.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CPM within 5 working days. Either of these events may trigger an additional CPR.

### **Products:**

- Letter documenting the permits or stating that no permits are required
- Updated list of permits as they change during the term of the Agreement (if applicable)
- Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)
- A copy of each approved permit (if applicable)

### **Task 1.8 Obtain and Execute Subcontracts**

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The goal of this task is to ensure quality products and to procure subcontracts required to carry out the tasks under this Agreement consistent with the terms and conditions of this Agreement and the Recipient's own procurement policies and procedures. This task will also provide the Energy Commission an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, and that the budgeted expenditures are reasonable and consistent with applicable cost principles.

### **The Recipient shall:**

- Manage and coordinate subcontractor activities.
- Submit a draft of each subcontract required to conduct the work under this Agreement to the Commission Agreement Manager for review.
- Submit a final copy of the executed subcontract.
- If the Recipient decides to add new subcontractors, it shall notify the Commission Agreement Manager.

### **Products:**

- Draft subcontracts
- Final subcontracts

# **Exhibit A WORK STATEMENT**

## **TECHNICAL TASKS**

### **TASK 2: PROGRAM MANAGEMENT AND DIRECTION**

The goal of this task is to formalize the research design for all components of the project. The recipient will establish: (1) program and research task-specific management and communication structures; (2) an Executive Planning Committee; and (3) Advisory Boards for data development, resource and technology selection, and deployment planning components necessary for the successful completion of all program tasks and maximum influence on the CAAP. This task will ensure that the correct teaming arrangements, work plans, contracts, deliverables, schedules, performance evaluation and corrective action, and coordination methods are in place to efficiently control work flow.

#### **The Recipient shall:**

- Conduct planning meetings.
- Establish decision structures.
- Develop detailed work plans and agreements for each participating organization (subcontractors and partners).
- Standardize reporting and communications channels among participants.
- Develop a detailed Program Implementation Plan.

#### **Products:**

- Program Implementation Plan

### **TASK 3 GIS AND ENERGY USAGE DATABASE DEVELOPMENT**

The goal of this task is to develop a Geographical Information System (GIS) suitable for spatial analysis of the rooftop renewable energy production potential and increased energy efficiency potential of existing single-family homes in Davis. This will include integration of parcel-level energy usage data from program partner PG&E.

#### **The Recipient shall:**

- Modify the city's current enterprise GIS system to enable premise, neighborhood, and city-level energy analysis.
- Design energy analysis scenarios.
- Procure aerial imagery identification software.
- Create parcel-based GIS data for:
  - Identifying rooftop orientation and tree shading on open roofs (for targeting), and locating existing PV and solar thermal systems (for baselining);
  - Incorporating historical building permit information regarding PV installations and major energy efficiency improvements; and
  - Incorporate County Assessor data on residential construction history

## **Exhibit A WORK STATEMENT**

and construction attributes.

- Create a GIS layer for data from the Cool California Challenge (over 350 Davis participants) to map concentrations of potentially interested households.
- Integrate electricity and natural gas energy billing history data from PG&E with the survey population sites.
- Consult with PG&E on electric and natural gas infrastructure issues, and refine the model based on factors such as distribution feeders and grid integration requirements.
- Identify buildings, neighborhoods, business parks, or other sites that can benefit from dedicated energy supply resources and enhanced energy efficiency.
- Submit Screen Captures/Shots of GIS System Operation that demonstrate the GIS system capabilities and performance.
- Create Solar and Efficiency Potential Maps that show zones with ranked potential for cost-effective energy efficiency and solar upgrades.

### **Products:**

- Screen Captures/Shots of GIS System Operation
- Solar and Efficiency Potential Maps

### **TASK 4 LOCAL RENEWABLE ENERGY SUPPLY CURVE DEVELOPMENT**

The goal of this task is to examine the cost of renewable energy electricity generation and natural gas offset for building-scale and community-scale applications specific to the local renewable resources available to the city. The task will also involve the development of greenhouse gas (GHG) carbon reduction calculation methods that will be used for the Davis Climate Action and Adaptation Plan.

### **The Recipient shall:**

- Obtain information from the network of RESCO grant recipients regarding their data modeling, supply curve, and resource/technology selection processes; and collaborate on integration of components directly related to the Davis initiative.
- Characterize the solar, wind, biomass, geothermal, and in-conduit hydro resources specific to the Davis area.
- Select the resource categories and technologies most likely to be cost-effective.
- Use data developed for the Energy Commission for selected building and community renewable energy technology categories applicable to the city.
- Apply the cost trajectory and cost driver methodology and information to the development of costs for additional renewable energy technologies that the team expects to be applicable to the city.
- Develop cost of generation estimates for the selected resource mix, backed by a full assessment of published literature.

## **Exhibit A WORK STATEMENT**

- Examine cost drivers, trends, and the weighted average cost of capital for each technology, and provide a range (high, medium, low) of expected costs.
- Determine the most cost-effective technology mix for the city.
- Prepare a Report on the Cost of Renewable Resource Generation for the selected renewable resources.
- Submit any Data Files produced during this task to the CPM.

### **Products:**

- Report on the Cost of Renewable Resource Generation
- Data Files

### **TASK 5 ZERO NET ENERGY GUIDELINES**

The goal of this task is to develop zero net energy retrofit guidelines for existing residential buildings. The Guidelines will become a component of the recommendations for improvements to the city's Green Building Ordinance (see Task 7).

### **The Recipient shall:**

- Develop a stepped ZNE retrofit market approach.
- Develop multiple energy-efficiency packages that range from moderate efficiency improvements to ZNE retrofits.
- Develop program messaging and a viable market approach.
- Define steps in the retrofit process, including assessments, tailoring of packages, and quality installations (include best practice installation guides).
- Design training programs for subcontractors and homeowner participants.
- Integrate renewable energy systems into the retrofit guidelines and program.
- Address miscellaneous electric loads.
- Develop a program monitoring and evaluation process.
- Review published research and monitored results on other ZNE residential projects in Davis, including: the UC-Davis West Village RESCO project, Parkview Place ZNE quad-plex new construction, First Street ZNE duplex retrofit, and Aggie Village ZNE single-family home retrofit (the latter three are to be completed in 2013). Incorporate findings into the retrofit guidelines and program. Incorporate energy equipment performance, interactive system effects, and the overall building energy performance results from real-time monitoring of any of the sites above.
- Prepare a Report on ZNE Retrofit Guidelines that includes the first nine items above.
- ZNE Building Monitoring Report that includes the first nine items above.

### **Products:**

- Report on ZNE Retrofit Guidelines.

## **Exhibit A WORK STATEMENT**

- Report on ZNE Building Monitoring

### **TASK 6 TECHNOLOGY SELECTION**

The goal of this task is to determine the most cost-effective renewable resource mix and the specific renewable energy technology options that will guide renewable energy investment decisions by residents of the city.

#### **The Recipient shall:**

- Consolidate information from Tasks 3, 4, and 5.
- Apply a systems model predicting the GHG reductions potential of the various renewable resource mix scenarios.
- Identify the most cost-effective renewable energy technologies applicable to each resource.
- Develop, compare, and rank a variety of cost-effective energy action options to reach the CAAP energy reduction and carbon reduction goals.
- Conduct expert and public workshops to further advise the energy technology selection process in order to identify issues that could encourage or impede greater integration and deployment of renewable energy technologies in the city.
- Perform a gap analysis to consider any critical elements missing from the research, and propose methods for accommodating them.
- Prepare a Report on the Renewable Energy Technology Review and Selection Process that summarizes the selection process and includes workshop summaries.
- Conduct a Critical Project Review with CEC staff to deliver findings and recommendations, and to consider methods to incorporate project data into other CEC research and information programs.

#### **Product:**

- Report on the Renewable Energy Technology Review and Selection Process

### **TASK 7 DEPLOYMENT PLANNING**

The goal of this task is to develop: (1) goals, milestones, and action plans needed for the renewable energy-related components of the Climate Action and Adaptation Plan; and (2) a detailed roadmap for the phased increase of renewable energy systems and advanced energy efficiency improvements.

## **Exhibit A WORK STATEMENT**

### **The Recipient shall:**

- Identify public and private source models for the financing of renewable energy systems for the primary market sectors represented in the city.
- Review and consolidate information on utility and state incentives, state and federal tax credits, technical service programs, and other secondary financing support opportunities.
- Identify the key market influencers serving Yolo County (including city agencies, state agencies, PG&E customer programs, energy industry representatives, and non-profit advocacy groups), and consolidate information on their services.
- Leverage market delivery resources with the host of 2013-14 state agency and utility programs providing energy and climate change education, technical services, incentives, loans, and customer marketing programs.
- Review and consolidate information on current and proposed legislation and regulations that may influence the energy and environmental objectives and activities of CAAP.
- Develop methods for periodically updating the above (5) items beyond 2014.
- Provide recommendations for “fast-track” paths to reaching the 2015 CAAP energy reduction goal with mature, commercially-available renewable energy and energy efficiency technologies, existing financing methods, and 2013-14 utility customer services marketing programs.
- Develop and deliver a “fast track” solar water heating deployment plan that will decrease natural gas use and carbon emissions prior to 2015, and take advantage of the currently attractive incentives available for this technology.
- Emphasize demand response approaches that enable high penetration of variable renewable energy systems interconnected with and feeding into electricity distribution circuits and facilities.
- Propose methods and schedules for regularly communicating the progress of this project to key stakeholders and the community at large. Solicit responses and integrate feasible suggestions into the deployment plan.
- Present the Davis City Council with a Deployment Plan for CAAP consideration and adoption.
- Propose improvements to the city’s Green Building Ordinance (up to and including ZNE).
- Propose improvements to the city’s time-of-sale safety inspection to include discretionary and mandatory measures for energy efficiency improvements and solar readiness.
- Prepare a Summary Report on the Fast Track SWH Deployment Plan.
- Prepare a Summary Report on the Final CAAP Deployment Plan.

### **Product:**

- Summary Report on the Fast Track SWH Deployment Plan
- Summary Report on the Final CAAP Deployment Plan

### **TASK 8 COMMUNITY ENGAGEMENT**

## **Exhibit A WORK STATEMENT**

The goals of this task are to develop ongoing communication and collaboration with local policy-makers, stakeholders, and partners to improve the Davis FREE program design and delivery; communicate project results and recommendations of the project to other communities that seek to emulate it; and establish confidence in the energy action plans developed for the CAAP.

### **The Recipient shall:**

- Establish the Valley Climate Action Center as the communication hub in the city to support citizen investment decisions on renewable energy, energy efficiency, and carbon emissions reductions.
- Conduct workshops and public forums periodically throughout the term of the CEC project agreement to: (1) discuss the progress of Davis FREE program; (2) obtain public input on the program's direction and recommendations; and (3) respond to media inquiries.
- Develop means of directly delivering site-specific information and recommendations on renewable energy and energy efficiency improvements to building owners.
- Interact with other RESCO initiatives through affiliation with the Integrated Renewable Energy Systems Network (IRES-N).
- Design a Social Media marketing and messaging program.
- Drive customer engagement and conversion through traditional and social media.
- Post and maintain Davis-FREE and CAAP program updates and information resources on <http://www.climateactioncenter.org>.
- Prepare non-technical descriptions of the work and results for distribution through the Local Government Commission and other venues, to reach other municipalities and counties.
- Prepare a Summary Report on Task 8 Activities and Results.

### **Product:**

- Summary Report on Task 8 Activities and Results



Award Number: PIR-12-011

Date: 3 / 01 / 2013

**Note:** The Energy Commission Project Managers Manual includes detailed instructions on how to complete this section, with examples of grants that are “Projects” and are not “Projects”. When the Project Manager is completing this section, if questions arise as to the appropriate answers to the questions below, please consult with the Energy Commission attorney assigned to review grants or loans for your division.

1. Is grant/loan considered a “Project” under CEQA?  Yes (skip to question #2)  No (continue with question #1)

Please complete the following: [Public Resources Code (PRC) 21065 and 14 California Code of Regulations (CCR) 15378]:

Explain why the grant/loan is **not** considered a “Project”? The grant/loan will not cause a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because grant/loan involves:

2. If grant/loan is considered a “Project” under CEQA: (choose either **IS** or **IS NOT**)

Grant/loan **IS** exempt:

Statutory Exemption: (List PRC and/or CCR section numbers) PRC 21102, 21150; 14 CCR 15262

Categorical Exemption: (List CCR section number) \_\_\_\_\_

Common Sense Exemption. (14 CCR 15061(b)(3))

Explain reason why the grant/loan is exempt under the above section:

The project involves the development of a renewable energy deployment roadmap for the City of Davis.

Please attach draft Notice of Exemption (NOE). Consult with the Energy Commission attorney assigned to your division for instructions on how to complete the NOE.

Grant/loan **IS NOT** exempt. The Project Manager needs to consult with the Energy Commission attorney assigned to your division and the Siting Office regarding a possible initial study.

To: Office of Planning and Research  
PO Box 3044, 1400 Tenth Street, Room 222  
Sacramento, CA 95812-3044

From: California Energy Commission  
1516 Ninth Street, MS-48  
Sacramento, CA 95814

Project Title: Davis Future Renewable Energy and Efficiency ("Davis FREE")

Project Location – Specific: 23 RUSSELL BLVD

Project Location – City: Davis, CA Project Location – County: Yolo

**Description of Project:**

Renewable energy cost-of generation studies for identification of the optimal mix of cost-effective, locally available renewable resources specific to Davis, and assessment of the energy technologies appropriate for community-wide deployment. Expansion of the City's enterprise GIS system to allow parcel-specific data development on the potential for renewable energy and enhanced energy efficiency interventions. Development of analytical and modeling tools to support building owner and ratepayer decision-making on renewable energy and efficiency investments. Development of Zero Net Energy Retrofit Guidelines for existing residential buildings. Development of a rapid deployment plan for solar water heating. Specific analysis of the optimal paths, milestones and action plans for building-related energy and carbon reductions for inclusion in the Davis "Climate Action and Adaptation Plan" (CAAP) and Green Building Ordinance.

Name of Public Agency Approving Project: California Energy Commission

Name of Person or Agency Carrying Out Project: City of Davis

**Exempt Status:** *(check one)*

- Ministerial (Sec. 21080(b)(1); 15268);
- Declared Emergency (Sec. 21080(b)(3); 15269(a));
- Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- Categorical Exemption. State type and section number \_\_\_\_\_
- Statutory Exemptions. State code number. PRC 21102, 21150; 14 CCR 15262
- Common Sense Exemption. 15061(b)(3)

**Reasons why project is exempt:**

Feasibility or planning studies for possible future actions that the agency has not approved, adopted, or funded.

**Lead Agency**

Contact Person: John Hingtgen Area code/Telephone/Ext: 916-327-1434

**If filed by applicant:**

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project?  Yes  No

Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Title: \_\_\_\_\_

**Signed by Lead Agency**

**Signed by Applicant**

**Date received for filing at OPR:** \_\_\_\_\_