

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 02/13)

CALIFORNIA ENERGY COMMISSION

New Agreement EPC-14-038 (To be completed by CGL Office)

Division	Agreement Manager:	MS-	Phone
ERDD	David Hungerford	43	916-327-2341

Recipient's Legal Name	Federal ID Number
Indicia Consulting	54-6773381

Title of Project
Fieldwork to Document Technology Adoption and Behavior Change Across Diverse Geographies and Populations to Inform Energy Efficiency Program Design

Term and Amount	Start Date	End Date	Amount
	5/8/2015	1/31/2019	\$ 574,545

Business Meeting Information			
<input type="checkbox"/> ARFVTP agreements under \$75K delegated to Executive Director.			
Proposed Business Meeting Date	4/8/2015	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	David Hungerford	Time Needed:	5 minutes
Please select one list serve. EPIC (Electric Program Investment Charge)			

Agenda Item Subject and Description
Proposed resolution approving Agreement EPC-14-038 with Indicia Consulting for a \$574,545 grant to analyze and document the role of emerging attitudes and practices around energy efficiency that can help improve design of programs that effectively address how people experience and respond to technologies in their lives.

California Environmental Quality Act (CEQA) Compliance
1. Is Agreement considered a "Project" under CEQA? <input type="checkbox"/> Yes (skip to question 2) <input checked="" type="checkbox"/> No (complete the following (PRC 21065 and 14 CCR 15378)): Explain why Agreement is not considered a "Project": Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because the project consists of interviews with utility customers and data analysis on the researchers' computers; neither of which have any impact on the physical environment.
2. If Agreement is considered a "Project" under CEQA: <input type="checkbox"/> a) Agreement IS exempt. (Attach draft NOE) <input type="checkbox"/> Statutory Exemption. List PRC and/or CCR section number: _____ <input type="checkbox"/> Categorical Exemption. List CCR section number: _____ <input type="checkbox"/> Common Sense Exemption. 14 CCR 15061 (b) (3) Explain reason why Agreement is exempt under the above section: <input type="checkbox"/> b) Agreement IS NOT exempt. (Consult with the legal office to determine next steps.) Check all that apply <input type="checkbox"/> Initial Study <input type="checkbox"/> Environmental Impact Report <input type="checkbox"/> Negative Declaration <input type="checkbox"/> Statement of Overriding Considerations <input type="checkbox"/> Mitigated Negative Declaration

List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)
Legal Company Name: _____ Budget _____
\$ _____

Exhibit A Scope of Work

A. Task List

Task #	CPR ¹	Task Name
1		General Project Tasks
2	X	Documenting and analyzing emerging attitudes, emotions, experiences, habits, and practices around technology adoption
3		Identifying the attributes and characteristics and psychological drivers of cybersensitives
4		Assess cybersensitives' valence with technology
5	X	Developing critical insights for supporting residential engagement in energy efficient behaviors
6		Recommending an alternative energy efficiency potential model
7		Evaluation of Project Benefits
8		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
ABC	Attitude-Behavior-Choice
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CPR	Critical Project Review
EDTM	Ethnographic Decision Tree Modeling
EE	Energy Efficiency
HRAF	Human Relations Area Files: an ethnographic classification system on human behavior, social life and customs, material culture, and human-ecological environments
GHG	Greenhouse Gas
IHD	In-home Device
OCM	Outline of Cultural Materials: subjects covered in the HRAF
PON	Program Opportunity Notice
MEL	Miscellaneous End Load
PTEM	Physical-Technical-Economic-Measure
SPSS	Statistical Program for the Social Sciences
TAC	Technical Advisory Committee

I. PURPOSE OF AGREEMENT, PROBLEM/SOLUTION STATEMENT, AND GOALS AND OBJECTIVES

A. Purpose of Agreement

The purpose of this Agreement is to fund research into understanding the effect of engagement with technology and technological systems on relative responsiveness to and participation in

¹ Please see subtask 1.3 in Part III of the Scope of Work (General Project Tasks) for a description of Critical Project Review (CPR) Meetings.

Exhibit A Scope of Work

energy efficiency initiatives—particularly those with a technology component. This research would form the basis for an alternative energy end-use demand model that would demonstrate the cost-effectiveness of programs designed to address how people experience and respond to technologies in their lives. This research would provide data for improving predictions about the use of energy in California homes, and at the same time identify opportunities to improve savings by improving program designs.

B. Problem/ Solution Statement

Problem

Innovation has produced improvements in energy efficiency with respect to the technologies in our lives and homes; however, over time it has become clear that without a greater understanding of the human factors involved, potential energy savings will remain both unidentified and unrealized. Documenting and analyzing emerging attitudes, emotions, experiences, habits, and practices around technology adoption, and subsequent usage, is essential for developing predictive indicators regarding energy consumption in California for two reasons.

The first reason is the rapid proliferation of consumer electronic devices and other miscellaneous plug-loads, which is changing the means through which energy is consumed, in both positive and negative directions. Research has shown that people make many decisions concerning energy-related technologies interpersonally and socially, through word-of-mouth recommendations and social networks. Understanding the role of technology engagement in such transactions will contribute to the building of more realistic models with better predictions. Understanding what, why, and when consumers purchase and interact with consumer electronics can aid in sharpening predictions about future end-use demand. A prior study co-authored by the lead investigator (Foster and Mazur-Stroman 2012) defined a subpopulation of people with greater than average response to, and affinity for, technological engagement as “cybersensitives” and “cyberawares” (the top two deciles in terms of “technological engagement”).

The second reason is that cybersensitives and cyberawares respond more positively to technological interventions concerning their energy consumption than the rest of the population. Identifying and characterizing this subpopulation can help shape program design choices to better reap the higher savings from past research while reducing technology program implementation costs through more precise targeting.

Solution

The project will develop qualitative and quantitative metrics to identify affinity for and engagement with technology and technological systems.

Identifying the attributes and characteristics and latent psychological motivations of cybersensitives will add to the overall scientific understanding of behavior and energy consumption. Through this identification, the targeting of cybersensitives will allow energy efficiency programs to better allocate resources, and reap higher rates of energy savings in return. These energy savings will, at the same time, be both more sustainable and more predictable, allowing behavior-based programs to move closer to becoming a reliable resource. Documentation and analysis of current behavior will lead to a better understanding of how energy consumption differs across the population. Having an empirically sourced and

Exhibit A Scope of Work

theoretically grounded explanation for differing responses to programmatic offerings will enhance the ability to forecast consumption and identify opportunities for energy savings, including improving program design for behavioral energy efficiency.

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are to:

- Document and explain energy use behavior through cultural, psychological, and social factors
- Document emerging attitudes, emotions, and practices around technology adoption
- Add to the overall scientific understanding of behavior and energy consumption
- Determine energy use behavior among underserved populations in California
- Develop predictive indicators of energy consumption in California, including models of future residential load shapes.

Ratepayer Benefits:² This Agreement will help achieve the ratepayer benefits of greater electricity reliability and lower costs by increasing understanding of consumer residential energy consumption and designing energy efficiency programs that have decreased administrative costs and higher effectiveness. Over the last decade, studies suggest that electricity savings from the increasing efficiency of major household appliances and lighting has been largely offset by the power consumption associated with the rapid increase in the purchase and use of consumer electronic devices and other miscellaneous plug-loads. The proliferation of energy consuming devices in the home means that the percentage of electricity usage from appliances with consumption relatively less driven by user behavior (e.g. refrigerators and water heaters) has become smaller in relation to that powering devices where consumption is relatively more driven by user behavior (e.g. televisions and computers).

Increased understanding of consumption patterns can improve forecasting precision, which reduces procurement costs by minimizing over-procurement of capacity in forward markets and allowing grid planners to optimize infrastructure investments—both leading to lower costs to ratepayers. Energy efficiency program design can be improved by designing programs to fit the needs of ratepayers, taking into account the range of responses to offerings.

Understanding (and engaging with) cybersensitives, will create a more factual picture of residential energy use. The insights can be transferred to other demographic groups and energy sectors, and predict future load shapes. This approach, which is less focused on broad outreach and more targeted for reaping higher savings, could result in additional benefit of having lower administrative and material costs.

Technological Advancement and Breakthroughs: This Agreement will help advance technologies and lead to breakthroughs to overcome barriers to the achievement of the State of California's statutory energy goals by recommending an alternative end-use demand model.

² California Public Resources Code, Section 25711.5(a) requires projects funded by the Electric Program Investment Charge (EPIC) to result in ratepayer benefits. The California Public Utilities Commission, which established the EPIC in 2011, defines ratepayer benefits as greater reliability, lower costs, and increased safety (See CPUC "Phase 2" Decision 12-05-037 at page 19, May 24, 2012, http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF).

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This new model would draw upon variables descriptive of culture and behavior among California sub-populations, and demonstrate the cost-effectiveness of programs designed to holistically address how different people experience and respond to technologies in their lives. Cybersensitives enjoy interacting with technology in their everyday lives, and are otherwise more viscerally responsive to technological interventions than peers in cohorts organized by class, gender, neighborhood, age, or income stratification.

Identifying the attributes and characteristics and latent psychological and social drivers of cybersensitives will add to the overall scientific understanding of behavior and energy consumption. Through this identification, the targeting of cybersensitives (and a neighboring decile we will term the cyberaware) will allow energy efficiency programs to better allocate resources, reaping higher rates of energy savings in return and be more sustainable and predictable. This could allow behavior to move closer to a goal of becoming a reliable resource for planners.

Agreement Objectives

The objectives of this Agreement are to:

- Document and analyze emerging attitudes, emotions, experiences, habits, and practices around technology adoption.
- Identify the attributes and characteristics and latent psychological drivers of cybersensitives.
- Assess whether cybersensitives enjoy interacting with technology in their everyday lives, and/or are otherwise more viscerally responsive to technological interventions than peers in cohorts organized by class, gender, neighborhood, age, or income stratification.
- Develop critical insights useful for determining how to more effectively support residential engagement in energy efficient behaviors.
- Develop critical insights useful for determining how to more effectively support residential engagement in energy efficient behaviors.
- Recommend improvements to the current end-use demand forecast model.
- Improve prediction of energy consumption across the state and segmented by demographics, as well as offer a prediction as to future load shapes for the state of California.

Exhibit A

Scope of Work

II. TASK 1 GENERAL PROJECT TASKS

PRODUCTS

Subtask 1.1 Products

The goal of this subtask is to establish the requirements for submitting project products (e.g., reports, summaries, plans, and presentation materials). Unless otherwise specified by the Commission Agreement Manager (CAM), the Recipient must deliver products as required below by the dates listed in the **Project Schedule (Part V)**. Products that require a draft version are indicated by marking “**(draft and final)**” after the product name in the “Products” section of the task/subtask. If “(draft and final)” does not appear after the product name, only a final version of the product is required. With respect to due dates within this Scope of Work, “**days**” means working days.

The Recipient shall:

For products that require a draft version

- Submit all draft products to the CAM for review and comment in accordance with the Project Schedule (Part V). The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt, unless otherwise specified in the task/subtask for which the product is required.
- Submit the final product to the CAM once agreement has been reached on the draft. The CAM will provide written approval of the final product within 15 days of receipt, unless otherwise specified in the task/subtask for which the product is required.
- If the CAM determines that the final product does not sufficiently incorporate his/her comments, submit the revised product to the CAM within 10 days of notice by the CAM, unless the CAM specifies a longer time period.

For products that require a final version only

- Submit the product to the CAM for approval.
- If the CAM determines that the product requires revision, submit the revised product to the CAM within 10 days of notice by the CAM, unless the CAM specifies a longer time period.

For all products

- Submit all data and documents required as products in accordance with the following Instructions for Submitting Electronic Files and Developing Software:
 - **Electronic File Format**
Submit all data and documents required as products under this Agreement in an electronic file format that is fully editable and compatible with the Energy Commission’s software and Microsoft (MS)-operating computing platforms, or with any other format approved by the CAM. Deliver an electronic copy of the full text of any Agreement data and documents in a format specified by the CAM, such as memory stick or CD-ROM.

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The following describes the accepted formats for electronic data and documents provided to the Energy Commission as products under this Agreement, and establishes the software versions that will be required to review and approve all software products:

- Data sets will be in MS Access or MS Excel file format (version 2007 or later), or any other format approved by the CAM.
 - Text documents will be in MS Word file format, version 2007 or later.
 - Documents intended for public distribution will be in PDF file format. The Recipient must also provide the native Microsoft file format.
 - Project management documents will be in Microsoft Project file format, version 2007 or later.
-
- ***Software Application Development***
Use the following standard Application Architecture components in compatible versions for any software application development required by this Agreement (e.g., databases, models, modeling tools), unless the CAM approves other software applications such as open source programs:
 - 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 CAM. The CAM will consult with the Energy Commission's Information Technology Services Branch to determine whether the exceptions are allowable.

MEETINGS

Subtask 1.2 Kick-off Meeting

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

The Recipient shall:

- Attend a "Kick-off" meeting with the CAM, the Commission Agreement Officer (CAO), and any other Energy Commission staff relevant to the Agreement. The Recipient will bring its Project Manager and any other individuals designated by the CAM to this meeting. The administrative and technical aspects of the Agreement will be discussed at the meeting. Prior to the meeting, the CAM will provide an agenda to all potential

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meeting participants. The meeting may take place in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The administrative portion of the meeting will include discussion of the following:

- Terms and conditions of the Agreement;
- Administrative products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Match fund documentation (subtask 1.7);
- Permit documentation (subtask 1.8);
- Subcontracts (subtask 1.9); and
- Any other relevant topics.

The technical portion of the meeting will include discussion of the following:

- The CAM's expectations for accomplishing tasks described in the Scope of Work;
 - An updated Project Schedule;
 - Technical products (subtask 1.1);
 - Progress reports and invoices (subtask 1.5);
 - Final Report (subtask 1.6);
 - Technical Advisory Committee meetings (subtasks 1.10 and 1.11); and
 - Any other relevant topics.
- Provide an *Updated Project Schedule, List of Match Funds, and List of Permits*, as needed to reflect any changes in the documents.

The CAM shall:

- Designate the date and location of the meeting.
- Send the Recipient a *Kick-off Meeting Agenda*.

Recipient Products:

- Updated Project Schedule (*if applicable*)
- Updated List of Match Funds (*if applicable*)
- Updated List of Permits (*if applicable*)

CAM Product:

- Kick-off Meeting Agenda

Subtask 1.3 Critical Project Review (CPR) Meetings

The goal of this subtask is to determine if the project should continue to receive Energy Commission funding, and if so whether any modifications must be made to the tasks, products, schedule, or budget. CPR meetings provide the opportunity for frank discussions between the Energy Commission and the Recipient. As determined by the CAM, discussions may include project status, challenges, successes, advisory group findings and recommendations, final report preparation, and progress on technical transfer and production readiness activities (if applicable). Participants will include the CAM and the Recipient, and may include the CAO and any other individuals selected by the CAM to provide support to the Energy Commission.

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CPR meetings generally take place at key, predetermined points in the Agreement, as determined by the CAM and as shown in the Task List on page 1 of this Exhibit. However, the CAM may schedule additional CPR meetings as necessary. The budget will be reallocated to cover the additional costs borne by the Recipient, but the overall Agreement amount will not increase. CPR 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 CAM.

The Recipient shall:

- Prepare a *CPR Report* for each CPR meeting that: (1) discusses the progress of the Agreement toward achieving its goals and objectives; and (2) includes recommendations and conclusions regarding continued work on the project.
- Submit the CPR Report along with any other *Task Products* that correspond to the technical task for which the CPR meeting is required (i.e., if a CPR meeting is required for Task 2, submit the Task 2 products along with the CPR Report).
- Attend the CPR meeting.
- Present the CPR Report and any other required information at each CPR meeting.

The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient's input.
- Send the Recipient a *CPR Agenda* and a *List of Expected CPR Participants* in advance of the CPR meeting. If applicable, the agenda will include a discussion of match funding and permits.
- Conduct and make a record of each CPR meeting. Provide the Recipient with a *Schedule for Providing a Progress Determination* on continuation of the project.
- Determine whether to continue the project, and if so whether modifications are needed to the tasks, schedule, products, or budget for the remainder of the Agreement. If the CAM 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 *Progress Determination* on continuation of the project, in accordance with the schedule. The Progress Determination may include a requirement that the Recipient revise one or more products.

Recipient Products:

- CPR Report(s)
- Task Products (draft and/or final as specified in the task)

CAM Products:

- CPR Agenda
- List of Expected CPR Participants
- Schedule for Providing a Progress Determination
- Progress Determination

Subtask 1.4 Final Meeting

The goal of this subtask is to complete the closeout of this Agreement.

The Recipient shall:

- Meet with Energy Commission staff to present project findings, conclusions, and

Exhibit A Scope of Work

recommendations. The final meeting must be completed during the closeout of this Agreement. This meeting will be attended by the Recipient and CAM, at a minimum. The meeting may occur in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be divided into two separate meetings at the CAM's discretion.

- The technical portion of the meeting will involve the presentation of findings, conclusions, and recommended next steps (if any) for the Agreement. The CAM will determine the appropriate meeting participants.
- The administrative portion of the meeting will involve a discussion with the CAM and the CAO of the following Agreement closeout items:
 - Disposition of any state-owned equipment.
 - Need to file a Uniform Commercial Code Financing Statement (Form UCC-1) regarding the Energy Commission's interest in patented technology.
 - The Energy Commission's request for specific "generated" data (not already provided in Agreement products).
 - Need to document the Recipient's disclosure of "subject inventions" developed under the Agreement.
 - "Surviving" Agreement provisions such as repayment provisions and confidential products.
 - Final invoicing and release of retention.
- Prepare a *Final Meeting Agreement Summary* that documents any agreement made between the Recipient and Commission staff during the meeting.
- Prepare a *Schedule for Completing Agreement Closeout Activities*.
- Provide *All Draft and Final Written Products* on a CD-ROM or USB memory stick, organized by the tasks in the Agreement.

Products:

- Final Meeting Agreement Summary (*if applicable*)
- Schedule for Completing Agreement Closeout Activities
- All Draft and Final Written Products

REPORTS AND INVOICES

Subtask 1.5 Progress Reports and Invoices

The goals of this subtask are to: (1) periodically verify that satisfactory and continued progress is made towards achieving the project objectives of this Agreement; and (2) ensure that invoices contain all required information and are submitted in the appropriate format.

The Recipient shall:

- Submit a monthly *Progress Report* to the CAM. Each progress report must:
 - Summarize all Agreement activities conducted by the Recipient for the preceding month, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. See the Progress Report Format Attachment for the recommended specifications.

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- Provide a synopsis of the project progress, including accomplishments, problems, milestones, products, schedule, fiscal status, and any evidence of progress such as photographs.
- Submit a monthly or quarterly *Invoice* that follows the instructions in the “Payment of Funds” section of the terms and conditions. In addition, each invoice must document and verify:
 - Energy Commission funds received by California-based entities;
 - Energy Commission funds spent in California (*if applicable*); and
 - Match fund expenditures.

Products:

- Progress Reports
- Invoices

Subtask 1.6 Final Report

The goal of this subtask is to prepare a comprehensive Final Report that describes the original purpose, approach, results, and conclusions of the work performed under this Agreement. The CAM will review and approve the Final Report, which will be due at least **two months** before the Agreement end date. When creating the Final Report Outline and the Final Report, the Recipient must use a Style Manual provided by the CAM.

Subtask 1.6.1 Final Report Outline

The Recipient shall:

- Prepare a *Final Report Outline* in accordance with the *Style Manual* provided by the CAM.
- Submit a draft of the outline to the CAM for review and comment.
- Once agreement has been reached on the draft, submit the final outline to the CAM. The CAM will provide written approval of the final outline within 10 days of receipt.

Recipient Products:

- Final Report Outline (draft and final)

CAM Product:

- Style Manual

Subtask 1.6.2 Final Report

The Recipient shall:

- Prepare a *Final Report* for this Agreement in accordance with the approved Final Report Outline and the Style Manual provided by the CAM.
- Submit a draft of the report to the CAM for review and comment. Once agreement on the draft report has been reached, the CAM will forward the electronic version for Energy Commission internal approval. Once the CAM receives approval, he/she will provide written approval to the Recipient.
- Submit one bound copy of the Final Report to the CAM.

Products:

Exhibit A Scope of Work

- Final Report (draft and final)

MATCH FUNDS, PERMITS, AND SUBCONTRACTS

Subtask 1.7 Match Funds

The goal of this subtask is to ensure that the Recipient obtains any match funds planned for this Agreement and applies them to the Agreement during the Agreement term.

While the costs to obtain and document match funds are not reimbursable under this Agreement, the Recipient may spend match funds for this task. The Recipient may only spend match funds during the Agreement term, either concurrently or prior to the use of Energy Commission funds. Match funds must be identified in writing, and the Recipient must obtain any associated commitments before incurring any costs for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a *Match Funds Status Letter* that documents the match funds committed to this Agreement. 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 this 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 cash match funds, their source(s) (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied.
 - The amount of each in-kind contribution, a description of the contribution type (e.g., property, services), the documented market or book value, the 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 must identify its owner and provide a contact name, address, telephone number, and the address where the property is located.
- A copy of a letter of commitment from an authorized representative of each source of match funding that the funds or contributions have been secured.
- At the Kick-off meeting, discuss match funds and the impact on the project if they are significantly reduced or not obtained as committed. 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 *Supplemental Match Funds Notification Letter* to the CAM of receipt of additional match funds.
- Provide a *Match Funds Reduction Notification Letter* to the CAM if existing match funds are reduced during the course of the Agreement. Reduction of match funds may trigger a CPR meeting.

Products:

- Match Funds Status Letter
- Supplemental Match Funds Notification Letter (*if applicable*)

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- Match Funds Reduction Notification Letter (*if applicable*)

Subtask 1.8 Permits

The goal of this subtask 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. Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement, with the exception of costs incurred by University of California recipients. Permits must be identified and obtained before the Recipient may incur any costs related to the use of the permit(s) for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a *Permit Status Letter* that documents the permits required to conduct this Agreement. If no permits are required at the start of this Agreement, then state this in the letter. If permits will be required during the course of the Agreement, provide in the letter:
 - A list of the permits that identifies: (1) the type of permit; and (2) the name, address, and telephone number of the permitting jurisdictions or lead agencies.
 - The schedule the Recipient will follow in applying for and obtaining the permits.

The list of permits and the schedule for obtaining them will be discussed at the Kick-off meeting (subtask 1.2), and a timetable for submitting the updated list, schedule, and copies of the permits will be developed. The impact on the project 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 progress reports and will be a topic at CPR meetings.

- If during the course of the Agreement additional permits become necessary, then provide the CAM with an *Updated List of Permits* (including the appropriate information on each permit) and an *Updated Schedule for Acquiring Permits*.
- Send the CAM a *Copy of Each Approved Permit*.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 days. Either of these events may trigger a CPR meeting.

Products:

- Permit Status Letter
- Updated List of Permits (*if applicable*)
- Updated Schedule for Acquiring Permits (*if applicable*)
- Copy of each Approved Permit (*if applicable*)

Subtask 1.9 Subcontracts

The goals of this subtask are to: (1) procure subcontracts required to carry out the tasks under this Agreement; and (2) ensure that the subcontracts are consistent with the terms and conditions of this Agreement.

The Recipient shall:

- Manage and coordinate subcontractor activities in accordance with the requirements of this Agreement.
- Incorporate this Agreement by reference into each subcontract.
- Include any required Energy Commission flow-down provisions in each subcontract, in addition to a statement that the terms of this Agreement will prevail if they conflict with the subcontract terms.

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- If required by the CAM, submit a draft of each *Subcontract* required to conduct the work under this Agreement.
- Submit a final copy of the executed subcontract.
- Notify and receive written approval from the CAM prior to adding any new subcontractors (see the discussion of subcontractor additions in the terms and conditions).

Products:

- Subcontracts (*draft if required by the CAM*)

TECHNICAL ADVISORY COMMITTEE

Subtask 1.10 Technical Advisory Committee (TAC)

The goal of this subtask is to create an advisory committee for this Agreement. The TAC should be composed of diverse professionals. The composition will vary depending on interest, availability, and need. TAC members will serve at the CAM's discretion. The purpose of the TAC is to:

- Provide guidance in project direction. The guidance may include scope and methodologies, timing, and coordination with other projects. The guidance may be based on:
 - Technical area expertise;
 - Knowledge of market applications; or
 - Linkages between the agreement work and other past, present, or future projects (both public and private sectors) that TAC members are aware of in a particular area.
- Review products and provide recommendations for needed product adjustments, refinements, or enhancements.
- Evaluate the tangible benefits of the project to the state of California, and provide recommendations as needed to enhance the benefits.
- Provide recommendations regarding information dissemination, market pathways, or commercialization strategies relevant to the project products.

The TAC may be composed of qualified professionals spanning the following types of disciplines:

- Researchers knowledgeable about the project subject matter;
- Members of trades that will apply the results of the project (e.g., designers, engineers, architects, contractors, and trade representatives);
- Public interest market transformation implementers;
- Product developers relevant to the project;
- U.S. Department of Energy research managers, or experts from other federal or state agencies relevant to the project;
- Public interest environmental groups;
- Utility representatives;
- Air district staff; and
- Members of relevant technical society committees.

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The Recipient shall:

- Prepare a *List of Potential TAC Members* that includes the names, companies, physical and electronic addresses, and phone numbers of potential members. The list will be discussed at the Kick-off meeting, and a schedule for recruiting members and holding the first TAC meeting will be developed.
- Recruit TAC members. Ensure that each individual understands member obligations and the TAC meeting schedule developed in subtask 1.11.
- Prepare a *List of TAC Members* once all TAC members have committed to serving on the TAC.
- Submit *Documentation of TAC Member Commitment* (such as Letters of Acceptance) from each TAC member.

Products:

- List of Potential TAC Members
- List of TAC Members
- Documentation of TAC Member Commitment

Subtask 1.11 TAC Meetings

The goal of this subtask is for the TAC to provide strategic guidance for the project by participating in regular meetings, which may be held via teleconference.

The Recipient shall:

- Discuss the TAC meeting schedule with the CAM at the Kick-off meeting. Determine the number and location of meetings (in-person and via teleconference) in consultation with the CAM.
- Prepare a *TAC Meeting Schedule* that will be presented to the TAC members during recruiting. Revise the schedule after the first TAC meeting to incorporate meeting comments.
- Prepare a *TAC Meeting Agenda* and *TAC Meeting Back-up Materials* for each TAC meeting.
- Organize and lead TAC meetings in accordance with the TAC Meeting Schedule. Changes to the schedule must be pre-approved in writing by the CAM.
- Prepare *TAC Meeting Summaries* that include any recommended resolutions of major TAC issues.

Products:

- TAC Meeting Schedule (draft and final)
- TAC Meeting Agendas (draft and final)
- TAC Meeting Back-up Materials
- TAC Meeting Summaries

Exhibit A Scope of Work

III. TECHNICAL TASKS

TASK 2 Document and Analyze Emerging Attitudes and Practices

The goal of this task is to use ethnographic research to tease out the context for cybersensitive/*aware* behaviors.

The Recipient shall:

- Identify three sites within each electricity Investor Owned Utility (IOU) territory.
- Mail letters to the selected households approximately a month in advance of the research, introducing the team and research objectives.
- Collect data through formal, structured in-depth interviews at each site.
- Collect data over a period of nine-months.
- Prepare *Outline for Preliminary Ethnographic Report on Cybersensitives and Technology*
- Prepare draft *Preliminary Ethnographic Report on Cybersensitives and Technology* that follows the agreed outline and includes how the sites were selected, information about the selected households, and the fieldwork and early findings from the interviews and the nine month data collection.
- Consider and incorporate comments from the technical advisory committee (TAC) and the CAM and prepare final *Preliminary Ethnographic Report on Cybersensitives and Technology*
- Conduct CPR and prepare *CPR Report #1*

Products:

- Outline for Preliminary Ethnographic Report on Cybersensitives and Technology
- Preliminary Ethnographic Report on Cybersensitives and Technology (draft and final)
- CPR Report #1

TASK 3 Identify the Attributes of Cybersensitives

The goal of this task is to analyze the data from Task 2.

The Recipient shall:

- Transcribe data collected in Task 2.
- Analyze data qualitatively using psychosocial methods.
- Prepare *Outline for Psychosocial Drivers of Technology Engagement Among Cybersensitives Report*.
- Prepare draft *Psychosocial Drivers of Technology Engagement Among Cybersensitives Report* that follows the agreed outline and includes results of the data analysis and identification of the psychological drivers of cybersensitive behavior.
- Consider and incorporate comments from the technical advisory committee (TAC) and the CAM and prepare final *Psychosocial Drivers of Technology Engagement Among Cybersensitives Report*.

Products:

- Outline for Psychosocial Drivers of Technology Engagement Among Cybersensitives Report.

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- Psychosocial Drivers of Technology Engagement Among Cybersensitives Report (draft and final)

TASK 4 Assess Cybersensitives' Valence with Technology

The goal of this task is assess whether members of the target sub-population interact with technology in their everyday lives, and/or are otherwise more viscerally responsive to technological interventions than peers in cohorts organized by class, gender, neighborhood, age, or income stratification.

The Recipient shall:

- Use oral histories and participant observation from Task 3 to document whether cybersensitives are more viscerally responsive to technological interventions than their peers
- Transcribe selected sets of data from Task 3
- Code data using Outline of Cultural Materials (OCM) Subjects from the Human Relations Area Files (HRAF) databases
- Enter coded data into Excel and/or SPSS worksheets
- Conduct telephone surveys to representative cohorts at the three selected sites (Task 2) in order to provide baseline data to measure valence of technology engagement
- Interpolate datasets and run statistical operations against various factors
- Prepare *Outline for Cybersensitive Response to Technology Report*.
- Prepare draft *Cybersensitive Response to Technology Report* that follows the agreed outline and includes a discussion of cybersensitives' response to technological interventions, and results of telephone surveys and data analysis.
- Consider and incorporate comments from the technical advisory committee (TAC) and the CAM and prepare final *Cybersensitive Response to Technology Report*

Products:

- Outline for Cybersensitive Response to Technology Report
- Cybersensitive Response to Technology Report (draft and final)

TASK 5 Develop Critical Insights for supporting residential engagement

The goal of this task is to use partner utility energy data to compare against a representative sample of local energy consumers' data in order to establish the delta of energy consumption and responsiveness.

The Recipient shall:

- Set ethnographic data alongside larger numerical data sets.
- Organize and analyze a quantitative data set consisting of energy usage data, such as from a utility or aggregator or participants.
- Identify a consistently repeating set of characteristics, including behavioral, demographic, and energy usage, which can be attributed to the cybersensitive profile.
- Prepare an *Outline on Cybersensitive Energy Consumption Patterns Report*

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- Prepare a Draft *Cybersensitive Energy Consumption Patterns Report* that follows the approved outline and includes a description of the difference in behaviors and outcomes attributed to cybersensitives compared to local energy consumers.
- Consider and incorporate comments from the technical advisory committee (TAC) and the CAM and prepare final *Cybersensitive Energy Consumption Patterns Report*
- Conduct CPR and prepare *CPR Report #2*

Products:

- Outline for *Cybersensitive Energy Consumption Patterns Report*
- *Cybersensitive Energy Consumption Patterns Report* (draft and final)
- *CPR Report #2*

TASK 6 Recommend an Alternative Energy Efficiency Potential Model.

The goal of this tasks is to determine how the targeting of cybersensitives would provide higher rates of energy savings in return.

The Recipient shall:

- Use Ethnographic Decision-tree Modeling (EDTM) to show the predicted behavior of cybersensitives based on data collected during fieldwork
- Calculate potential energy savings based on the output from the EDTM
- Recommend redesign of energy efficiency program approaches geared towards this population segment
- Prepare an *Outline for Engaging Cybersensitives and Cyberawares in Energy Efficiency Report*
- Prepare *Engaging Cybersensitives and Cyberawares in Energy Efficiency Report* that follows the approved outline and includes the results of EDTM modeling, potential energy savings, and recommendations for energy efficiency program approaches for cybersensitives.
- Consider and incorporate comments from the technical advisory committee (TAC) and the CAM and prepare final *Engaging Cybersensitives and Cyberawares in Energy Efficiency Report*.

Products:

- Outline for *Engaging Cybersensitives and Cyberawares in Energy Efficiency Report*
- *Engaging Cybersensitives and Cyberawares in Energy Efficiency Report* (draft and final)

TASK 7 Evaluation of Project Benefits

The goal of this task is to report the benefits resulting from this project.

The Recipient shall:

- Complete three Project Benefits Questionnaires that correspond to three main intervals in the Agreement: (1) *Kick-off Meeting Benefits Questionnaire*; (2) *Mid-term Benefits Questionnaire*; and (3) *Final Meeting Benefits Questionnaire*.
- Provide all key assumptions used to estimate projected benefits, including targeted market sector (e.g., population and geographic location), projected market penetration,

Exhibit A Scope of Work

baseline and projected energy use and cost, operating conditions, and emission reduction calculations. Examples of information that may be requested in the questionnaires include:

- For Product Development Projects and Project Demonstrations:
 - Published documents, including date, title, and periodical name.
 - Estimated or actual energy and cost savings, and estimated statewide energy savings once market potential has been realized. Identify all assumptions used in the estimates.
 - Greenhouse gas and criteria emissions reductions.
 - Other non-energy benefits such as reliability, public safety, lower operational cost, environmental improvement, indoor environmental quality, and societal benefits.
 - Data on potential job creation, market potential, economic development, and increased state revenue as a result of the project.
 - A discussion of project product downloads from websites, and publications in technical journals.
 - A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.
 - Additional Information for Product Development Projects:
 - Outcome of product development efforts, such copyrights and license agreements.
 - Units sold or projected to be sold in California and outside of California.
 - Total annual sales or projected annual sales (in dollars) of products developed under the Agreement.
 - Investment dollars/follow-on private funding as a result of Energy Commission funding.
 - Patent numbers and applications, along with dates and brief descriptions.
 - Additional Information for Product Demonstrations:
 - Outcome of demonstrations and status of technology.
 - Number of similar installations.
 - Jobs created/retained as a result of the Agreement.
- For Information/Tools and Other Research Studies:
 - Outcome of project.
 - Published documents, including date, title, and periodical name.
 - A discussion of policy development. State if the project has been cited in government policy publications or technical journals, or has been used to inform regulatory bodies.
 - The number of website downloads.
 - An estimate of how the project information has affected energy use and cost, or have resulted in other non-energy benefits.
 - An estimate of energy and non-energy benefits.
 - Data on potential job creation, market potential, economic development, and increased state revenue as a result of project.

Exhibit A Scope of Work

- A discussion of project product downloads from websites, and publications in technical journals.
- A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.
- Respond to CAM questions regarding responses to the questionnaires.

The Energy Commission may send the Recipient similar questionnaires after the Agreement term ends. Responses to these questionnaires will be voluntary.

Products:

- Kick-off Meeting Benefits Questionnaire
- Mid-term Benefits Questionnaire
- Final Meeting Benefits Questionnaire

TASK 8 Technology/Knowledge Transfer Activities

The goal of this task is to develop a plan to make the knowledge gained, experimental results, and lessons learned available to the public and key decision makers.

The Recipient shall:

- Prepare an *Initial Fact Sheet* at start of the project that describes the project. Use the format provided by the CAM.
- Prepare a *Final Project Fact Sheet* at the project's conclusion that discusses results. Use the format provided by the CAM.
- Prepare a *Technology/Knowledge Transfer Plan* that includes:
 - An explanation of how the knowledge gained from the project will be made available to the public, including the targeted market sector and potential outreach to end users, utilities, regulatory agencies, and others.
 - A description of the intended use(s) for and users of the project results.
 - Published documents, including date, title, and periodical name.
 - Copies of documents, fact sheets, journal articles, press releases, and other documents prepared for public dissemination. These documents must include the Legal Notice required in the terms and conditions. Indicate where and when the documents were disseminated.
 - A discussion of policy development. State if project has been or will be cited in government policy publications, or used to inform regulatory bodies.
 - The number of website downloads or public requests for project results.
 - Additional areas as determined by the CAM.
- Conduct technology transfer activities in accordance with the Technology/Knowledge Transfer Plan. These activities will be reported in the Progress Reports.
- When directed by the CAM, develop *Presentation Materials* for an Energy Commission-sponsored conference/workshop on the results of the project.
- Prepare a *Technology/Knowledge Transfer Report* on technology transfer activities conducted during the project.

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Products:

- Initial Fact Sheet (draft and final)
- Final Project Fact Sheet (draft and final)
- Presentation Materials (draft and final)
- Technology/Knowledge Transfer Plan (draft and final)
- Technology/Knowledge Transfer Report (draft and final)

IV. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.

ENERGY RESEARCH, DEVELOPMENT, AND DEMONSTRATION AGREEMENTS

**Exhibit A Scope of Work
EPC-14-038, Indicia Consulting**

IV. PROJECT SCHEDULE

Agreement Term: 5-8-2015 to 1-31-2019

Within this Scope of Work, "**days**" means working days. Changes to due dates must be approved in writing by the CAM, and may require approval by the Energy Commission's Executive Director or his/her designee.

Task/ Subtask #	Task/Subtask Name	Meeting Name	Product(s)	Due Date
1	General Project Tasks			
1.1	Products			
1.2	Kick-off Meeting	Kick-off Meeting		5/14/2015
			Updated Project Schedule (<i>if applicable</i>)	7 days after determination of the need to update the documents
			Updated List of Match Funds (<i>if applicable</i>)	
			Updated List of Permits (<i>if applicable</i>)	
			CAM Product	
		Kick-off Meeting Agenda		7 days prior to the kick-off meeting
1.3	CPR Meeting	CPR Meeting #1 (Task 2)		9/22/2016
		CPR Meeting #2 (Task 5)		12/15/2017
		CPR Report	15 days prior to the CPR meeting	
		Task Product(s)	meeting	
		CAM Products		
		CPR Agenda	5 days prior to the CPR meeting	
		List of Expected CPR Participants	meeting	
		Schedule for Providing a Progress Determination	15 days after CPR meeting	
	Progress Determination	As indicated in the Schedule for Providing a Progress Determination		
1.4	Final Meeting	Final Meeting		1/24/2019
			Final Meeting Agreement Summary (<i>if applicable</i>)	7 days after the final meeting
			Schedule for Completing Agreement Closeout Activities	
	All Draft and Final Written Products			
1.5	Progress Reports and Invoices		Progress Reports	10 days after the first of each month
			Invoices	10 days after the first of each month or quarter
1.6	Final Report			
1.6.1	Final Report Outline		Draft Final Report Outline	7/31/2018
			Final Report Outline	As determined by the CAM
			CAM Product	
			Style Manual	At least 2 months prior to the final report outline due date
			Comments on Draft Final Report Outline	10 days after receipt of the Draft Final Report Outline
			Approval of Final Report Outline	10 days after receipt of the Final Report Outline
1.6.2	Final Report		Draft Final Report	9/28/2018
			Final Report	11/30/2018

ENERGY RESEARCH, DEVELOPMENT, AND DEMONSTRATION AGREEMENTS

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EPC-14-038, Indicia Consulting**

IV. PROJECT SCHEDULE

Task/ Subtask #	Task/Subtask Name	Meeting Name	Product(s)	Due Date
			CAM Products	
			Comments on Draft Final Report Outline	30 days after receipt of the Draft Final Report
1.7	Match Funds		Match Funds Status Letter	2 days prior to the kick-off meeting
			Supplemental Match Funds Notification Letter <i>(if applicable)</i>	10 days after receipt of additional match funds
			Match Funds Reduction Notification Letter <i>(if applicable)</i>	10 days after any reduction of match funds
1.8	Permits		Permit Status Letter	2 days prior to the kick-off meeting
			Updated List of Permits <i>(if applicable)</i>	10 days after determination of the need for a new permit
			Updated Schedule for Acquiring Permits <i>(if applicable)</i>	
			Copy of Each Approved Permit <i>(if applicable)</i>	7 days after receipt of each permit
1.9	Subcontracts		Draft Subcontracts <i>(if required by the CAM)</i>	As determined by the CAM
			Final Subcontracts	
1.10	Technical Advisory Committee (TAC)		List of Potential TAC Members	2 days prior to the kick-off meeting
			List of TAC Members	7 days after finalization of the TAC
			Documentation of TAC Member Commitment	7 days after receipt of the documentation
1.11	TAC Meetings	TAC Meeting #1		7/15/2016
		TAC Meeting #2		1/1/2019
			Draft TAC Meeting Schedule	20 days after the kickoff meeting
			Final TAC Meeting Schedule	10 days after the first TAC meeting
			Draft TAC Meeting Agendas	20 days prior to each TAC meeting
			TAC Meeting Back-up Materials	
			Final TAC Meeting Agenda	7 days prior to each TAC meeting
			TAC Meeting Summaries	10 days after each TAC meeting

ENERGY RESEARCH, DEVELOPMENT, AND DEMONSTRATION AGREEMENTS

**Exhibit A Scope of Work
EPC-14-038, Indicia Consulting**

IV. PROJECT SCHEDULE

Task/ Subtask #	Task/Subtask Name	Meeting Name	Product(s)	Due Date
Technical Tasks				
2	Documenting and analyzing emerging attitudes, emotions, experiences, habits, and practices around technology adoption	CPR #1 Meeting	Preliminary Ethnographic Report on Cybersensitives and Technology Outline	4/29/2016
			Draft Preliminary Ethnographic Report on Cybersensitives and Technology Report	6/27/2016
			Final Preliminary Ethnographic Report on Cybersensitives and Technology Report	8/26/2016
3	Identifying the attributes and characteristics and psychological drivers of cybersensitives		Psychosocial Drivers of Technology Engagement Among Cybersensitives Report Outline	10/28/2016
			Draft Psychosocial Drivers of Technology Engagement Among Cybersensitives Report	12/30/2016
			Final Psychosocial Drivers of Technology Engagement Among Cybersensitives Report	2/24/2017
4	Assess Cybersensitives' Valence with Technology		Cybersensitive Response to Technology Report Outline	4/28/2017
			Draft Cybersensitive Response to Technology Report	6/30/2017
			Final Cybersensitive Response to Technology Report	8/31/2017
5	Developing critical insights for supporting residential engagement in energy efficient behaviors	CPR #2 Meeting	Cybersensitive Energy Consumption Patterns Report Outline	10/6/2017
			Draft Cybersensitive Energy	12/1/2017
			Final Cybersensitive Energy Consumption Patterns Report	1/31/2018
6	Recommending an alternative energy efficiency potential model		Engaging Cybersensitives and Cyberawares in Energy Efficiency Report Outline	3/30/2018
			Draft Engaging Cybersensitives and Cyberawares in Energy Efficiency Report	5/31/2018
			Final Engaging Cybersensitives and Cyberawares in Energy Efficiency Report	7/31/2018
7	Evaluation of Project Benefits		Kick-off Meeting Benefits Questionnaire	6/12/2015
			Mid-term Benefits Questionnaire	8/10/2017
			Final Meeting Benefits Questionnaire	2/1/2018
8	Technology/Knowledge Transfer Activities		Draft Initial Fact Sheet	6/12/2015
			Final Initial Fact Sheet	7/15/2015
			Draft Final Project Fact Sheet	8/30/2018
			Final Project Fact Sheet	11/30/2018
			Draft Presentation Materials	8/30/2018
			Final Presentation Materials	11/30/2018
			Draft Technology/Knowledge Transfer Plan	2/26/2016
			Final Technology/Knowledge Transfer Plan	3/28/2016
			Draft Technology/Knowledge Transfer Report	9/28/2018
Final Technology/Knowledge Transfer Report	11/30/2018			

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: INDICIA CONSULTING

RESOLVED, that the State Energy Resources Conservation and Development Commission (Energy Commission) adopts the staff CEQA findings contained in the Agreement Request Form; and

RESOLVED, that the Energy Commission approves Agreement EPC-14-038 from PON-14-306 with **Indicia Consulting** for a **\$574,545** grant to analyze and document the role of emerging attitudes and practices around energy efficiency that can help improve design of programs that effectively address how people experience and respond to technologies; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the Energy Commission.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on April 8, 2015.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Harriet Kallemeyn,
Secretariat