

CONTRACT REQUEST FORM (CRF)

CEC-94 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

A) New Agreement 300-17-004 (To be completed by CGL Office)

ERDD	James Friedrich	51	916-445-5317
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Industrial Economics Incorporated	04-2735625
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Measuring Innovation Progress to Guide Future Investment: Evaluation of EPIC Benefits Methodology

6/29/2018	1/15/2021	\$ 3,000,000
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<input type="checkbox"/> Operational agreement (see CAM Manual for list) to be approved by Executive Director			
<input type="checkbox"/> ARFVTP agreements under \$75K delegated to Executive Director.			
Proposed Business Meeting Date	5/9/2018	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	James Friedrich	Time Needed:	5 minutes

Please select one list serve. EPIC (Electric Program Investment Charge)

Agenda Item Subject and Description

INDUSTRIAL ECONOMICS INCORPORATED. Proposed resolution approving Agreement 300-17-004 with Industrial Economics Incorporated for a \$3,000,000 contract to develop and pilot new methodologies that will be used to better evaluate the ratepayer benefits of projects funded through the Electric Program Investment Charge. (EPIC funding) Contact: James Friedrich. (Staff presentation: 5 minutes)

1. Is Agreement considered a "Project" under CEQA?
☒ Yes (skip to question 2) ☒ 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 this project will consist of analysis to develop methods to measure benefits of EPIC projects.

2. If Agreement is considered a "Project" under CEQA:
☐ a) Agreement **IS** exempt. (Attach draft NOE)
☐ Statutory Exemption. List PRC and/or CCR section number: _____
☐ Categorical Exemption. List CCR section number: _____
☐ Common Sense Exemption. 14 CCR 15061 (b) (3)
 Explain reason why Agreement is exempt under the above section: _____

☐ b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)
 Check all that apply
☐ Initial Study ☐ Environmental Impact Report
☐ Negative Declaration ☐ Statement of Overriding Considerations
☐ Mitigated Negative Declaration

Legal Company Name:	Budget	SB	MB	DVBE
Energy Market Innovations, Inc. dba EMI Consulting	\$ 367,255	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jai J. Mitchell Analytics	\$ 211,572	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Emerald Energy Consulting, LLC	\$ 173,330	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TIA Consulting, Inc.	\$ 38,500	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
McHale Consulting	\$ 76,439	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
360 Innovation LLC	\$ 39,548	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Atlas Public Policy	\$ 50,867	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise Futures dba iCatalysts	\$ 56,097	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Legal Company Name:

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**J) Budget Information**

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
EPIC	16-17	301.001D	\$1,647,212
EPIC	17-18	301.001E	\$1,352,788
R&D Program Area: EDMFO: EDMF			\$ 3,000,000
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Name:		Samantha Ead		Name:		Angela Vitulli	
Address:		2067 Massachusetts Ave		Address:		2067 Massachusetts Ave	
City, State, Zip:		Cambridge, MA 02140-1340		City, State, Zip:		Cambridge, MA 02140-1340	
Phone:	617-354-0074/	Fax:	617-354-0074	Phone:	617-354-0074 /	Fax:	- -
E-Mail:	SEad@indecon.com			E-Mail:	avitulli@indecon.com		

<input checked="" type="checkbox"/> Solicitation	Select Type	Solicitation #:	RFP-17-307	# of Bids:	3	Low Bid?	<input type="checkbox"/> No <input type="checkbox"/> Yes
<input type="checkbox"/> Non Competitive Bid	(Attach CEC 96)						
<input type="checkbox"/> Exempt	Select Exemption (see instructions)						

<input checked="" type="checkbox"/> Private Company (including non-profits)
<input type="checkbox"/> CA State Agency (including UC and CSU)
<input type="checkbox"/> Government Entity (i.e. city, county, federal government, air/water/school district, joint power authorities, university from another state)

	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
If yes, check appropriate box:	<input type="checkbox"/> SB <input type="checkbox"/> MB <input type="checkbox"/> DVBE

- ☐ Not Applicable (Agreement is with a CA State Entity or a membership/co-sponsorship)
- ☐ Public Resources Code 25620, et seq., authorizes the Commission to contract for the subject work. (PIER)
- ☒ The Services Contracted:
- ☐ are not available within civil service
 - ☐ cannot be performed satisfactorily by civil service employees
 - ☒ are of such a highly specialized or technical nature that the expert knowledge, expertise, and ability are not available through the civil service system.
- ☐ The Services are of such an:
- ☐ urgent
 - ☐ temporary, or
 - ☐ occasional nature that the delay to implement under civil service would frustrate their very purpose.

Justification:

The California Public Utilities Commission (CPUC) established the EPIC program to bring new energy innovations to market that provide benefits to electric ratepayers in California's IOU service territories. The CPUC defines "ratepayer benefits" as greater reliability, lower costs, and increased safety. Because of the diversity and complexity of the EPIC project portfolio, and the fact realized benefits are conditional on market and technical uncertainties, measuring the ratepayer benefits of EPIC-funded projects is challenging.

Industrial Economic Incorporated, the proposed contractor, and its team of subcontractors, is uniquely well-qualified to tackle these challenges and support the EPIC program in developing a comprehensive, defensible, and usable framework for estimating the benefits of EPIC-funded projects.

The framework developed under this contract will address a critical need of the EPIC program by ensuring funded projects adhere to the primary goal of the program to provide benefits to ratepayers. The work will involve evaluating and identifying gaps in the current benefits methodology and resources of the EPIC program, reviewing best practices used by other research organizations, recommending methods and tools to support benefits analysis, and developing new tools and resources where existing tools and resources are insufficient.

The breadth of skills required to do this highly complex work, including advanced expertise in program and technology evaluation, is not available within civil service. The proposed work is of such a highly specialized and technical nature that the expertise and ability to perform the work solicited in this contract are not available through the civil service system.

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**P) Payment Method**

- ☒ A. Reimbursement in arrears based on:
- ☒ Itemized Monthly ☐ Itemized Quarterly ☐ Flat Rate ☐ One-time
- ☐ B. Advanced Payment
- ☐ C. Other, explain:

1. Is Agreement subject to retention? ☐ No ☒ Yes
- If Yes, Will retention be released prior to Agreement termination? ☒ No ☐ Yes

This contract was selected through a competitive solicitation process. As part of this competitive solicitation process, 30 percent of the total score is based on the average loaded hourly rate. The score for Average Loaded Hourly Rate is derived from a mathematical cost formula which compares the cumulative average loaded hourly rate of all loaded hourly rates listed in the subject Bidder's Cost Bid, with the cumulative average loaded hourly rate of all loaded hourly rates listed in the Lowest Bidder's cost bid.

1. ☐ Exempt (Interagency/Other Government Entity)
2. ☒ Meets DVBE Requirements DVBE Amount:\$ 211,572.00 DVBE %: 7%
- ☐ Contractor is Certified DVBE
- ☒ Contractor is Subcontracting with a DVBE: Jai J. Mitchell Analytics
3. ☐ Contractor selected through CMAS or MSA with no DVBE participation.
4. ☐ Requesting DVBE Exemption (attach CEC 95)

1. Will there be Work Authorizations? ☒ No ☐ Yes
2. Is the Contractor providing confidential information? ☒ No ☐ Yes
3. Is the Contractor going to purchase equipment? ☒ No ☐ Yes
4. Check frequency of progress reports
- ☒ Monthly ☐ Quarterly ☐ _____
5. Will a final report be required? ☐ No ☒ Yes
6. Is the agreement, with amendments, longer than a year? If yes, why? ☐ No ☒ Yes

The Department of General Services has agreed to give the Commission blanket authority to execute multi-year contracts to support the Commission's RD&D Programs.

- | | | |
|---|---|--|
| 1. Exhibit A, Scope of Work | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |
| 2. Exhibit B, Budget Detail | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |
| 3. CEC 96, NCB Request | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 4. CEC 30, Survey of Prior Work | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 5. CEC 95, DVBE Exemption Request | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 6. CEQA Documentation | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 7. Resumes | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |
| 8. CEC 105, Questionnaire for Identifying Conflicts | | <input checked="" type="checkbox"/> Attached |

Agreement Manager

Date

Office Manager

Date

Deputy Director

Date

EXHIBIT A SCOPE OF WORK

I. TASK ACRONYM/TERM LISTS

TASK LIST

Task #	CPR ¹	Task Name
1		General Project Tasks
2		Benefits Methodology Review
3		Benefits Methodology Enhancement and Development
4		Methodology Resource Development
5		Methodology Pilot
6		Methodology Resource Development Training

ACRONYMS/GLOSSARY

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

Acronym	Definition
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CPR	Critical Project Review
EPIC	Electric Program Investment Charge
TAC	Technical Advisory Committee

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

A. Purpose of Agreement

The purpose of this Agreement is to fund the development of a methodology to evaluate the benefits to ratepayers of projects funded through the Electric Program Investment Charge (EPIC).

B. Problem/ Solution Statement

Problem

The EPIC Program provides a crucial “technology push” policy to complement California’s “market pull” policies for clean energy technologies. However, measuring the ratepayer benefits of “technology push” policies and the resulting projects can be challenging. Specific challenges include:

- Projecting cost curves for funded technologies as the technology matures.
- Quantifying benefits that have traditionally been reported qualitatively, such as energy security and increased safety.
- Providing monetary values to ratepayer benefits that are not directly tied to customer costs, such as grid reliability and various environmental benefits.
- Evaluating the value of technology demonstration and deployment projects in increasing technology diffusion, such as microgrids, zero net energy buildings, and bioenergy.

¹ Please see subtask 1.13 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

- Estimating the benefits of technologies that expand or create new markets for energy solutions.

Solution

The contractor will provide guidance and independent analysis to develop a robust methodology based on best-in-class methods and data to evaluate the electric ratepayer benefits attributable to EPIC-funded projects. This methodology will better allow the Energy Commission to understand how well the EPIC program is meeting its goals, or removing barriers to further implementation of technologies or policy goals. Furthermore, this methodology will help the Energy Commission make more efficient and effective use of future EPIC funds.

C. Goals and Objectives of the Agreement

Agreement Goals

The goal of this Agreement is to develop a benefits methodology that enables the Energy Commission to:

- (1) Disseminate the benefits to ratepayers of EPIC-funded projects and initiatives
- (2) Ensure funded projects benefit California IOU ratepayers by increasing reliability, lowering costs, and/or increasing safety
- (3) Ensure funded projects lead to technological advancement and breakthroughs to overcome barriers to achieving the state's statutory energy goals.

Ratepayer Benefits:² This Agreement will result in ratepayer benefits by enabling the Energy Commission to better understand the benefits to ratepayers resulting from projects funded by EPIC and helping the Energy Commission make more efficient and effective use of future EPIC funds.

Technological Advancement and Breakthroughs:³ This Agreement will lead to technological advancement and breakthroughs to overcome barriers to the achievement of the State of California's statutory energy goals by standardizing the assessment of benefits to ratepayers of EPIC-funded projects.

Agreement Objectives

The objective of this Agreement is to develop and enhance methodologies used by Energy Commission staff to evaluate the electric ratepayer benefits of projects funded through the EPIC Program.

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).

³ California Public Resources Code, Section 25711.5(a) also requires EPIC-funded projects to lead to technological advancement and breakthroughs to overcome barriers that prevent the achievement of the state's statutory and energy goals.

EXHIBIT A SCOPE OF WORK

III. TASK 1 GENERAL PROJECT TASKS

Subtask 1.1 Deliverables

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

The Contractor shall:

For deliverables that require a draft version, including the Final Report Outline and Final Report

- Submit all draft deliverables to the CAM for review and comment in accordance with the Schedule of Deliverables (Part V). The CAM will provide written comments to the Contractor on the draft deliverable within 15 days of receipt, unless otherwise specified in the task/subtask for which the deliverable is required.
- Consider incorporating all CAM comments into the final product. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final deliverable.
- Submit the revised deliverable with responses and comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period, or approves a request for additional time.

For deliverables that require a final version only

- Submit the deliverable to the CAM for acceptance. The CAM may request minor revisions or explanations prior to acceptance.

For all deliverables

- Submit all data and documents required as deliverables in accordance with the following:

Instructions for Submitting Electronic Files and Developing Software:

○ **Electronic File Format**

Submit all data and documents required as deliverables 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.

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

- 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 Contractor must also provide the native Microsoft file format.

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- 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.

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 meeting will be held in Sacramento, CA and the CAM will designate the specific location, or via Web-Ex or teleconference. The administrative and technical aspects of this Agreement will be discussed at the meeting.

The Contractor shall:

- Attend a "kick-off" meeting with the CAM, the Contracts Officer, and a representative of the Accounting Office. The meeting will be held via Web-Ex or teleconference. The Contractor shall include their Project Manager, Contracts Administrator, Accounting Officer, and others designated by the CAM in this meeting. The administrative and technical aspects of this Agreement will be discussed at the meeting.

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

- Terms and conditions of the Agreement;
- Administrative deliverables (subtask 1.1);
- Project meetings and briefings (subtasks 1.6, 1.10, and 1.13);
- Match fund documentation (subtask 1.11);
- Subcontracts (subtask 1.5); 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 deliverables (subtask 1.1);
- Progress reports and invoices (subtasks 1.3, and 1.4);
- Final Report (subtask 1.6);
- Technical Advisory Committee meetings (subtasks 1.7, and 1.8); and

EXHIBIT A SCOPE OF WORK

- Any other relevant topics.
- Provide an *Updated Schedule of Deliverables*, and *List of Match Funds* as needed to reflect any changes in the documents.

The CAM shall:

- Arrange the meeting including scheduling the date and time.
- Provide an agenda to all potential meeting participants prior to the kick-off meeting.

Contractor Deliverables:

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

CAM Deliverable:

- Kick-off Meeting Agenda

Subtask 1.3 Invoices

The goal of this subtask is to ensure that invoices contain all required information and are submitted in the appropriate format.

The Contractor shall:

- Prepare *Monthly Invoices* for all reimbursable expenses incurred performing work under this Agreement in compliance with the Exhibit B of the Terms and Conditions of the Agreement and in the format provided by the CAM. In addition, each invoice must document and verify:
 - Energy Commission funds received by California-based entities
 - Energy Commission funds spent in California (if applicable)
 - Match fund expenditures (if applicable)
- Invoices shall be submitted quarterly together with progress reports (task 1.4). Invoices must be submitted to the Energy Commission's Accounting Office.

Deliverables:

- Monthly Invoices

Subtask 1.4 Progress Reports

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

The Contractor shall:

- Prepare *Progress Reports* that summarize all Agreement activities conducted by the Contractor and any subcontractors 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 within 10 calendar days after the end of the reporting period. The CAM will provide the format for the progress reports.

Deliverables:

- Progress Reports

Subtask 1.5 Manage Subcontractors

The goal of this task is to ensure quality products, to enforce subcontractor Agreement provisions, and in the event of failure of the subcontractor to satisfactorily perform services,

EXHIBIT A SCOPE OF WORK

recommend solutions to resolve the problem.

The Contractor shall:

- Manage and coordinate subcontractor activities. The Contractor is responsible for the quality of all subcontractor work and the Energy Commission will assign all work to the Contractor. If the Contractor decides to add new subcontractors, they shall 1) comply with the Terms and Conditions of the Agreement, and 2) notify the CAM who will follow the Energy Commission's process for adding or replacing subcontractors.

Deliverables:

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

Subtask 1.6 Project Meetings and Briefings

The goal of this subtask is to determine whether any modifications must be made to the tasks, products, schedule, or budget. Project meetings provide the opportunity for frank discussions between the Energy Commission and the Contractor. As determined by the CAM, discussions may include project status, challenges, successes, findings, project goals and benefits, recommendations, and final report preparation. Participants will include the CAM and the Contractor, and may include the Commission Agreement Officer (CAO) and any other individuals selected by the CAM to provide support to the Energy Commission.

The Contractor shall:

- Attend or participate in program support and project-related meetings or discussions in person or via WebEx or conference call, as requested by the CAM.
- Respond to e-mails or other written communication requests regarding project management status and issues, as requested by the CAM.
- Prepare meeting notes for each formal 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, as requested by the CAM.
- Submit the meeting notes to the CAM for review and approval.

Contractor Deliverables:

- Responses to written requests on project status.
- Meeting notes for each formal meeting.

Subtask 1.7 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.

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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);
- 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;
- Utility representatives; and
- Members of relevant technical society committees.

The Contractor 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 1.8.
- 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 to the CAM.

Deliverables:

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

Subtask 1.8 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 Contractor 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.

Deliverables:

- TAC Meeting Schedule (draft and final)
- TAC Meeting Agendas (draft and final)

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- TAC Meeting Back-up Materials
- TAC Meeting Summaries

Subtask 1.9 Final Report

The goal of this subtask is to prepare a written Final Report that incorporates a comprehensive description of the project and approach, and presents detailed findings and results of the work completed under this Agreement. It must also include a summary of all data collected, technology transfer activities performed during the project, and how the data may be accessed.

The Final Report shall be prepared in language easily understood by the public or layperson with a limited technical background.

The Final Report must be completed before the termination date of the Agreement in accordance with the Schedule of Deliverables.

The Final Report shall be a public document. If the Contractor's work on all or part of this project has obtained confidential status from the Energy Commission, then the Contractor must prepare both a public and a confidential version of the Final Report, and the Contractor shall perform the following subtasks for both the public and confidential versions of the Final Report.

When creating the Final Report, the Contractor must use the Style Manual and Final Report Template provided by the CAM.

Subtask 1.9.1 Final Report Outline

The Contractor shall:

- Prepare and submit a draft *outline of the Final Report*.
- Submit the draft *outline of the Final Report* to the CAM for review and approval. The CAM will provide written comments to the Contractor on the draft outline. The Contractor shall review the comments and discuss any concerns regarding the recommended changes with the CAM.
- Prepare and submit the final *outline of the Final Report*, incorporating the CAM's comments.

Contractor Deliverables:

- Final Report Outline (draft and final)

CAM Deliverables:

- Comments on Draft Final Report Outline
- Style Manual
- Final Report Template
- Approval of Final Report Outline

Subtask 1.6.2 Final Report

The Contractor shall:

- Prepare a *Final Report* for this Agreement in accordance with the approved Final Report Outline, Style Manual, and Final Report Template provided by the CAM.
- Submit the draft *Final Report* for review and comment. The CAM will provide written comments to the Contractor. The Contractor shall review the comments and discuss any issues with the recommended changes with the CAM.

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- Prepare and submit the *Final Report*, incorporating CAM comments.

Deliverables:

- Final Report (draft and final)
- Written Responses to Comments on the Draft Final Report

CAM Deliverable:

- Written Comments on the Draft Final Report

Subtask 1.10 Final Meeting

The goal of this subtask is to discuss closeout of this Agreement and review the project. The meeting will be held in Sacramento, CA and the CAM will designate the specific location, or via Web-Ex or teleconference. The administrative and technical aspects of Contract closeout will be discussed at the meeting.

The Contractor shall:

- Meet with Energy Commission staff prior to the term end-date of this Contract. This meeting will be attended by the Contractor Project Manager and the CAM. The CAM will determine any additional appropriate meeting participants. Present findings, conclusions, and recommended next steps (if any) for the Agreement, based on the information included in the Final Report.
- Prepare a written document of meeting agreements and unresolved activities.
- Prepare a schedule for completing the closeout activities for this Agreement, based on determinations made during the meeting.
- Provide ALL Draft and Final written deliverables provided under this Contract on a CD-ROM or USB memory stick, organized by the tasks in the Contract.

Deliverables:

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

Subtask 1.11 Match Funds (if applicable)

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

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

The Contractor shall:

- If match funds were a part of the proposal that led to the Energy Commission awarding this Contract, prepare a *Match Funds Status Letter* that documents the match funds committed to this Contract and includes:
 - 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.

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- 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 Contractor 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 project meetings and briefings.
- Provide a *Supplemental Match Funds Notification Letter* to the CAM if receipt of additional match funds is obtained.
- Provide a *Match Funds Reduction Notification Letter* to the CAM if existing match funds are reduced during the course of the Contractor. Reduction of match funds may trigger a project meeting.

Deliverables:

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

Subtask 1.12 Evaluation of Project Benefits

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

The Contractor 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, 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 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 has 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.
 - A discussion of project product downloads from websites, and publications in technical journals.

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- 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.

Deliverables:

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

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IV. TECHNICAL TASKS

*Deliverables that require a draft version are indicated by marking “(draft and final)” after the deliverable name in the “Deliverables” section of the task/subtask. If “(draft and final)” does not appear after the deliverable name, only a final version of the deliverable is required. **Subtask 1.1 (Deliverables)** describes the procedure for submitting deliverables to the CAM.*

TASK 2: BENEFITS METHODOLOGY REVIEW

The goal of this task is to review existing methodologies used by the Energy Commission to assess the benefits of projects funded through the EPIC Program, to research methodologies used by other research institutions, and to recommend improvements to the Energy Commission’s benefits methodology.

The Contractor shall:

- Review CPUC requirements surrounding the measurement and reporting of electricity ratepayer benefits from EPIC projects.
- Review current and past EPIC Triennial Investment Plans to be familiar with the EPIC portfolio, strategic objectives, and funding initiatives.
- As directed by the CAM in writing, review current methodologies and practices used by Energy Commission staff for estimating the electric ratepayer benefits of EPIC-funded projects, as well as accompanying resources such as benefits questionnaires, data, and calculators.
- Research methodologies used by other organizations (e.g., DOE, other state or federal agencies, public or private research institutions) to estimate the benefits of energy RD&D. This can include, but is not limited to, conducting a literature review and consulting outside experts.
- Prepare and submit the draft *Outline of the EPIC Benefits Methodology Review*. The EPIC Benefits Methodology Review must, at a minimum:
 - Evaluate the overall benefits framework through the life of an EPIC project, from the conceptualization and development of solicitations, to post-project retrospective analysis.
 - Identify gaps in the Energy Commission’s current benefits methodology.
 - Recommend approaches the Contractor could use to fill those gaps.
 - Provide specific recommendations to improve the Energy Commission’s current benefits methodologies.
 - Identify and recommend existing data sources, analytical tools, and research results that can be used in the benefits analysis. The recommendations should take into consideration key criteria such as quality, cost, ease of use, update cycles, and independence of the provider.
 - Identify areas where the Contractor could provide analytical tools that would significantly enhance the Energy Commission’s ability to analyze electric ratepayer benefits for the EPIC benefits methodology.
 - Identify strategies and metrics to evaluate benefits in disadvantaged communities.
 - Identify additional metrics not listed in CPUC Decision 13-11-025 that would significantly enhance the Energy Commission’s benefits methodology and can feasibly be evaluated by Energy Commission staff.
 - Review and recommend survey instruments to collect data and information from EPIC grant and contract recipients for use in the benefits methodologies.
 - Review and recommend processes for organizing and storing benefits data and materials
 - Review and recommend strategies to assess technical or market success probabilities in various EPIC program areas.

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- Review and recommend processes to collect and periodically update reliable industry performance standards, market size, and market penetration assumptions and estimates in various program areas.
- Prepare and submit the final *Outline of the EPIC Benefits Methodology Review*, incorporating the CAM's comments.
- Prepare a draft *EPIC Benefits Methodology Review* in accordance with the approved outline
- Present the draft *EPIC Benefits Methodology Review* to the TAC and solicit input and recommendations.
- Prepare and submit the final EPIC Benefits Methodology Review, incorporating the CAM's comments and feedback from the TAC.
- Prepare a *CPR Report #1* and participate in a CPR Meeting as described in subtask 1.13

Deliverables:

- Outline of the EPIC Benefits Methodology Review (Draft and Final)
- EPIC Benefits Methodology Review (Draft and Final)
- CPR Report #1

TASK 3: BENEFITS METHODOLOGY ENHANCEMENT AND DEVELOPMENT

The goal of this task is to execute the approaches and recommendations provided by the Contractor in the *EPIC Benefits Methodology Review*.

The Contractor shall:

- At the direction of the CAM in the *Benefits Methodology Prioritization Plan*, carry out the approaches to filling the gaps and improving the Energy Commission's current benefits methodologies as recommended in the *EPIC Benefits Methodology Review*.
- Prepare and submit the *Outline of the EPIC Benefits Methodology Development Report*. The *EPIC Benefits Methodology Development Report* must discuss, at a minimum:
 - The models, tools, methods, data, and research results that will be incorporated into the Energy Commission's benefits methodologies. Include the analytical tools developed in Task 4.
 - A comprehensive, in-depth review of the newly conceptualized EPIC benefits methodology and framework.
- Prepare a draft *EPIC Benefits Methodology Development Report* in accordance with the approved outline. The *EPIC Benefits Methodology Development Report* must include appendices that contain all corresponding source materials and resources, including, but not limited to, works cited, data, inputs, assumptions, estimates, calculations, models, spreadsheets, survey designs, and databases. Appendices should also contain any updated benefits resources and materials, except for those provided in Task 4.
- Present the draft *EPIC Benefits Methodology Development Report* to the TAC and solicit input and recommendations.
- Prepare and submit the final *EPIC Benefits Methodology Development Report*, incorporating the CAM's comments and feedback from the TAC.
- Prepare a *CPR Report #2* and participate in a CPR Meeting as described in subtask 1.13

The CAM shall:

- Prepare the *Benefits Methodology Prioritization Plan* that establishes which recommendations from the final EPIC Benefits Methodology Review that the Energy Commission would like the Contractor to prioritize and pursue.

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Contractor Deliverables:

- Outline of the EPIC Benefits Methodology Development Report
- EPIC Benefits Methodology Development Report (Draft and Final)
- CPR Report #2

CAM Deliverables:

- Benefits Methodology Prioritization Plan

TASK 4: METHODOLOGY RESOURCE DEVELOPMENT

The goal of this task is to develop tools that are necessary for implementing the EPIC benefits methodology, and cannot be met by existing tools, as recommended by the Contractor in the *EPIC Benefits Methodology Review*.

The Contractor shall:

- At the direction of the CAM in the *Benefits Methodology Resource Plan*, create analytical tools and inputs intended to be used by Energy Commission staff as part of the EPIC benefits methodology (see Electronic File Format and Software Application Development requirements in Subtask 1.1). Each analytical tool must be formatted in such a way that Energy Commission staff could revise and update them as needed.
- Put together the *EPIC Benefits Methodology Resource Package*, which includes all analytical tools developed by the Contractor, and includes support documentation for each analytical tool, including, but not limited to:
 - User guides and documentation
 - Key inputs and assumptions
 - Source code (if applicable)
- Demonstrate the tools developed by the Contractor in the *EPIC Benefits Methodology Resource Package* to the appropriate Energy Commission staff.

The CAM shall:

- Prepare the *Benefits Methodology Resource Plan* that establishes the analytical tools the Energy Commission would like the Contractor to prioritize and pursue.

Contractor Deliverables:

- EPIC Benefits Methodology Resource Package

CAM Deliverables:

- Benefits Methodology Resource Plan

TASK 5: METHODOLOGY PILOT

The goal of this task is to apply and test the benefits methodology developed during this project on several EPIC projects that are representative of the larger EPIC portfolio.

The Contractor shall:

- Apply the deliverables from Tasks 3 and 4 to a sample of EPIC projects, as directed by the CAM.
- Evaluate benefits responses from the EPIC projects being case-studied and complete any corresponding benefits analysis.
- Prepare a *Benefits Methodology Implementation Report* that includes all corresponding benefits analysis, and assesses the results of the pilot, evaluates whether the

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deliverables from Tasks 3 and 4 achieved their desired results, and details any improvements needed to benefits resources based on pilot results.

- Present findings from the *Benefits Methodology Implementation Report* to the TAC and solicit feedback.
- At the direction of the CAM, make necessary revisions to benefits resources as recommended in the *Benefits Methodology Implementation Report*.

Contractor Deliverables:

- Benefits Methodology Implementation Report
- Revisions to Benefits Resources (if applicable)

TASK 6: METHODOLOGY RESOURCE DEVELOPMENT TRAINING

The goal of this task is to provide training to Energy Commission staff on how to use the tools developed in Task 4.

The Contractor shall:

- Ensure at least two persons are accessible for up to 100 hours each, for staff training and questions, including time dedicated to the tasks below.
- Develop *Training Materials* such as presentations (e.g., PowerPoint, Prezi), training manuals, or how-to guides related to the analytical tools developed in Task 4.
- If the CAM directs in writing, conduct trainings to ensure Energy Commission staff has the expertise needed to utilize the tools independently.

Contractor Deliverables:

- Training Materials

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: INDUSTRIAL ECONOMICS INCORPORATED

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

RESOLVED, that the Energy Commission approves Agreement 300-17-004 with Industrial Economics Incorporated for a \$3,000,000 contract to develop and pilot new methodologies that will be used to better evaluate the ratepayer benefits of projects funded through the Electric Program Investment Charge; 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 May 9, 2018.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Cody Goldthrite,
Secretariat