STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 10/2015) CALIFORNIA ENERGY COMMISSION

New Agreement EPC-17-044 (To be completed by CGL Office)

ERDD	Joseph Sit		916-327-1551

InTech Energy, Inc.	46-4353311

Researching, Developing, Demonstrating the Commoditization of Building Energy Efficiency Retrofits in Southern

	6/13/2018	3/31/2022	$ 7,199,315

☐ ARFVTP agreements under $75K delegated to Executive Director.

Proposed Business Meeting Date	6/13/2018	☐ Consent	☒ 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

INTECH ENERGY, INC. Proposed resolution approving Agreement EPC-17-044 with InTech Energy, Inc., for a $7,199,315 grant to develop and demonstrate the effectiveness of a market-driven building energy efficiency delivery process that aims to increase the deployment of advanced energy efficiency retrofits in commercial buildings at a reduced cost. This delivery process will be demonstrated in Southern California using advanced technologies and innovative retrofit approaches.

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
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: Cal. Code Regs., tit 14, § 15301
   - ☐ Common Sense Exemption. 14 CCR 15061 (b) (3)

   Explain reason why Agreement is exempt under the above section:
   Cal. Code Regs., tit. 14, sec. 15301 provides that projects which consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, and which involve negligible or no expansion of existing uses are categorically exempt from CEQA. This project involves minor alterations of existing commercial buildings through the installation of monitoring and control technologies, such as advanced HVAC rooftops systems and adaptive lighting controls, to manage and reduce energy consumption. The project will also include data collection from those monitoring and control technologies to understand if it is possible to create a system, or framework for utilities to buy energy savings at a specific time and location. This project will not result in an expansion of existing uses. Furthermore, this project will install more efficient equipment that operates more efficiently than current equipment. This project wil not cause any cumulative impacts or significant effects due to unusual circumstances or other exception listed under Cal. Code Regs., tit. 14, sec. 15300.2.

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

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Legal Company Name:	Budget
Electric Power Research Institute, Inc.	$ 1,911,015
ASWB Engineering	$ 249,985
TBD - Installation Contractor	$ 325,000
Leed By Me, INC. (Green EconoME)	$ 75,000
Cascade Clean Energy, Inc.	$ 254,923
TBD #4 - Installation Contractor (Sub of Cascade)	$ 200,000
TBD - Installation Contractor #2	$ 200,000
Open Energy Efficiency, Inc.	$ 275,000
San Joaquin Valley Clean Energy Organization	$ 95,000
SwarmSales, Inc.	$ 75,000
Riptide IO, Inc.	$ 50,000
EMCOR, Inc.	$ 50,000
TBD #3 - Electrical	$ 62,500
Wedgewood, LLC	$ 99,000
American Glass Coating Industries, Inc.	$ 95,000
Jones Lang LaSalle - West Advisory, Inc.	$ 95,000
Faith Com Inc.	$ 50,000

Legal Company Name:

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
EPIC	16-17	301.001D	$7,199,315
			$
			$
R&D Program Area: EERO: Buildings			$7,199,315
Explanation for “Other” selection			
Reimbursement Contract #:		Federal Agreement #:	

Name:	Ben Bradford	Name:	Richard Fox
Address:	450 N Brand Blvd Ste 600	Address:	450 N Brand Blvd Ste 600
City, State, Zip:	Glendale, CA 91203-2349	City, State, Zip:	Glendale, CA 91203-2349
Phone:	925-548-4874 / Fax: - -	Phone:	925-989-1980 / Fax: - -
E-Mail:	bbradford@intechenergy.net	E-Mail:	rfox@intechenergy.net

☒ Competitive Solicitation Solicitation #: GFO-17-304
☐ First Come First Served Solicitation

1. Exhibit A, Scope of Work		☒ Attached
2. Exhibit B, Budget Detail		☒ Attached
3. CEC 105, Questionnaire for Identifying Conflicts		☒ Attached
4. Recipient Resolution	☒ N/A	☐ Attached
5. CEQA Documentation	☐ N/A	☒ Attached

Agreement Manager	Date	Office Manager	Date	Deputy Director	Date

EXHIBIT A
Scope of Work

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR[1]	Task Name
1		General Project Tasks
2	X	Research Programmatic Issues to Energy Efficiency Delivery
3	X	Develop Programmatic Energy Efficiency Delivery Test Pilots
4		Deploy Programmatic Energy Efficiency Delivery Test Pilots
5		Analyze Programmatic Energy Efficiency Results
6		Evaluation of Project Benefits
7		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
CalTRACK 2.0	Open-source methodology and software code to calculate site-based, weather-normalized, metered energy savings from an existing conditions baseline using data from utility meters. Developed by consortium of industry, utility, and regulatory stakeholders.
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CPR	Critical Project Review
EE	Energy Efficiency
EMS	Energy Management System
Energy360®	InTech Energy's existing proprietary energy management technology for monitoring and control in commercial facilities. Used for data collection, data aggregation, data analytics, automation and controls, scheduling, measurement and verification, and reporting.
ICP	Investor Confidence Project
IPMVP	International Performance Measurement and Verification Protocol
IPMVP Option B	Measurement and verification process to assess energy impacts for isolated retrofits using full parameter data such as energy data.
IPMVP Option C	Measurement and verification process to assess energy impacts for whole-building projects using full parameter data such as energy data.
M&V	Measurement and Verification
P4P	Pay-for-Performance
OpenEEmeter	Open source software tool for standardized measurement and verification of energy savings.
SaaSM	Sales-as-a-Service Marketplace
SEM	Strategic Energy Management
TAC	Technical Advisory Committee

[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

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

A. Purpose of Agreement

The purpose of this Agreement is to develop, test, demonstrate and evaluate a market-driven delivery processes to improve the energy efficiency (EE) adoption rate for retrofits in commercial buildings located in Southern California (Southern California being defined as test, demonstration, and deployment sites located within the San Diego Gas and Electric, Southern California Edison, or Pacific Gas and Electric Investor Owned Utility electric service territories in the following counties: Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, Ventura, Kern and San Luis Obispo).

EXHIBIT A
Scope of Work

B. Problem/ Solution Statement

Problem

Wide-scale adoption of EE by end use customers significantly lags technical and market potential, resulting in continued waste and untapped economic benefits for ratepayers and the State's economy. Current delivery mechanisms are costly and time-consuming. Improving the EE adoption rate ultimately hinges on customer engagement and education, as well as program delivery cost effectiveness, and use of advanced technologies to drive down implementation costs.

Solution

Commercial customers procure supplies and materials for their business operations, where purchased commodities have an agreed-upon value, resulting in a clearly defined transaction process. One potential solution is for EE to become a transactional process in which EE is treated as a commodity with agreed-upon values. This commoditization of EE has the potential to simplify the process. To achieve this goal, this project will develop, test, implement and evaluate an accessible, Sales-as-a-Service marketplace (SaaSM) for transactions and a valuation process with open-standards technologies used to evaluate EE project values. The SaaSM is an online, one-stop-shop platform (website) where:

- Advanced EE products and technology providers can connect with top-tier sales professionals to reduce the customer acquisition costs for EE programs run by utilities and their implementers;
- Technology and solution providers can connect with implementers and end-use customers to facilitate the adoption of new technology; and
- Financial resource providers can connect with implementers, technology providers, and end use customers with transparent and trusted project financials, including workflow processes such as the Investor Confidence Project (ICP) to improve financing support.[2]

The solution described above has the potential to facilitate an expansion of EE retrofit activity by increasing collaboration between:

1. Facility managers, owners, and end users;
2. Technology manufacturers, providers, and implementers, and
3. Financing or funding entities.

To facilitate maximum connectivity between implementers, energy management technology providers, measurement and verification providers, financial lenders, and insurers, open-standards technologies will be promoted to:

- Provide transparency to the evaluation and valuation processes;
- Facilitate integration with new technologies and partners; and
- Enable maximum use of SaaSM.

C. Goals and Objectives of the Agreement

[2] The Investor Confidence Project defines a clear road-map from retrofit opportunity to reliable Investor Ready Energy Efficiency™. With a suite of Commercial and Multifamily Energy Performance Protocols in place, ICP reduces transaction costs by assembling existing standards and practices into a consistent and transparent process that promotes efficient markets by increasing confidence in energy efficiency as a demand-side resource.

EXHIBIT A
Scope of Work

Agreement Goals

The goals of this Agreement are to:

- Research, test, iterate, demonstrate and deploy advanced EE retrofit solutions and delivery mechanisms to help achieve the goal of doubling EE by 2030 in the State of California.
- Develop an approach for scaling EE retrofits in the commercial segment, by advancing the pay-for-performance (P4P) concept using metered energy savings as an alternative to prior practices of deemed savings, engineering calculations, and building simulations.
- Create a standardized approach to measurement and verification by demonstrating advanced metering technologies with immediate feedback through dashboards such as InTech's Energy360 integrated with OpenEE.
- Demonstrate advanced, cost-effective, energy-efficient solutions in a timely fashion.
- Deploy retrofits at demonstration sites (commercial buildings/facilities), totaling at least 300,000 square feet
- Achieve at least a 20 percent average reduction in on-site electricity use across the portfolio of demonstration sites through EE and other advanced energy management technologies

Ratepayer Benefits:[3]

This Agreement will result in the ratepayer benefits of:

- Greater electricity reliability through deployment of advanced EE technologies, and/or demand response capabilities to both reduce energy procurement needs and reduce the time critical load on the electric delivery infrastructure; and
- Lower costs by reducing energy waste, resulting in reduced utility bill costs.

Technological Advancement and Breakthroughs:[4]

This Agreement will lead to technological advancement and breakthroughs to overcome barriers to achieve the State of California's statutory energy goals by equipping the California EE industry with a new paradigm of EE delivery. This system will allow new, advanced technologies to be vetted in a transparent, public marketplace and energy impacts to be validated with an open-standards process similar to other financial transactions,[5] such as financing of business or real estate assets. By utilizing measurement-based savings validated via a software-based assessment process such as InTech's Energy360 and OpenEEmeter, new, advanced technologies will have early market exposure leading to expedited success/acceptance or failure/rejection. This will reduce or remove the timeline barrier of vetting new technologies within the utilities, resulting in more rapid market uptake of emerging EE technologies, and will also

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[3] 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).

[4] 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.

[5] The concept is for Intech to provide the simplicity of a residential home upgrade loan for commercial projects. Traditional loan options available for the commercial sector include performance contracting (but this process lacks transparency) and newer options such as Property Assessed Clean Energy (PACE) financing (which leads to increased tax liability).

shorten or eliminate time spent on extensive Measurement and Verification (M&V) and the ensuing uncertainty over program continuity.

Agreement Objectives
The objective of this Agreement is to develop and demonstrate the viability of an open-standard-based financial market for advanced EE through the following:

- Evaluate and demonstrate the SaaSM to reduce transactional costs for building retrofits.
- Structure a P4P mechanism combined with standardized M&V to create new mechanisms for financing retrofits, encouraging third-party investment in demand side resources.
- Leverage the ICP for financing and insurance to engage financiers while reducing technical and financial risk.
- Demonstrate new advanced technologies and retrofit approaches in commercial buildings.

III. 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, including the Final Report Outline and Final Report
- 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.
- 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 product.
- Submit the revised product and responses to 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 products that require a final version only
- Submit the product to the CAM for acceptance. The CAM may request minor revisions or explanations prior to acceptance.

<u>For all products</u>

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

<u>Instructions for Submitting Electronic Files and Developing Software</u>:

- **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.

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

  The <u>administrative portion</u> 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 <u>technical portion</u> 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.

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 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 progress made on all Agreement activities as specified in the scope of work for the preceding month, including accomplishments, problems, milestones,

products, schedule, fiscal status, and 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.

- Submit a monthly or quarterly *Invoice* that follows the instructions in the "Payment of Funds" section of the terms and conditions, including a financial report on Match Fund and in-state 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 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 the 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. *(See Task 1.1 for requirements for draft and final products.)*

Recipient Products:

- Final Report Outline (draft and final)

CAM Product:

- Style Manual
- Comments on Draft Final Report Outline
- Acceptance of Final Report Outline

Subtask 1.6.2 Final Report

The Recipient 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 with the following considerations:
  - Ensure that the report includes the following items, in the following order:
    - Cover page (**required**)
    - Credits page on the reverse side of cover with legal disclaimer (**required**)
    - Acknowledgements page (optional)
    - Preface (**required**)
    - Abstract, keywords, and citation page (**required**)
    - Table of Contents (**required**, followed by List of Figures and List of Tables, if needed)
    - Executive summary (**required**)
    - Body of the report (**required**)
    - References (if applicable)

        - Glossary/Acronyms (If more than 10 acronyms or abbreviations are used, it is required.)
        - Bibliography (if applicable)
        - Appendices (if applicable) (Create a separate volume if very large.)
        - Attachments (if applicable)
    - Ensure that the document is written in the third person.
    - Ensure that the Executive Summary is understandable to the lay public.
        - Briefly summarize the completed work. Succinctly describe the project results and whether or not the project goals were accomplished.
        - Identify which specific ratepayers can benefit from the project results and how they can achieve the benefits.
        - If it's necessary to use a technical term in the Executive Summary, provide a brief definition or explanation when the technical term is first used.
    - Follow the Style Guide format requirements for headings, figures/tables, citations, and acronyms/abbreviations.
    - Ensure that the document omits subjective comments and opinions. However, recommendations in the conclusion of the report are allowed.
    - Include a brief description of the project results in the Abstract.
- Submit a draft of the report to the CAM for review and comment. The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt
- Consider incorporating all CAM comments into the Final Report. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final product
- Submit the revised Final Report and responses to comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period or approves a request for additional time.
- Submit one bound copy of the *Final Report* to the CAM along with *Written Responses to Comments on the Draft Final Report*.

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

CAM Product:
- Written Comments on the Draft Final Report

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.
    - If different from the solicitation application, provide 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)*
- 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.
- 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.

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

IV. TECHNICAL TASKS

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.* ***Subtask 1.1 (Products)*** *describes the procedure for submitting products to the CAM.*

TASK 2: RESEARCH PROGRAMMATIC ISSUES TO ENERGY EFFICIENCY DELIVERY

The goal of this task is to develop a thorough understanding of barriers to commercial EE building retrofits.

The Recipient shall:

- Document the need for, viability of, and potential impacts of a SaaSM for sellers and buyers on the adoption rates for advanced EE retrofits. This task will look into the success and adoption of existing EE marketplaces operated by utilities and others, such as PG&E, SCE, and SDG&E and how they have driven adoption of EE technologies in commercial buildings.
- Assess how the adoption rate for advanced EE technologies will be affected by each of the following:
  - The need for, viability of, and potential impacts (including costs) of standardized M&V. Standardization options include CalTRACK 2.0 or other processes based on energy monitoring such as International Performance Measurement and Verification Protocol Options B (isolated retrofits) and C (whole building).
  - The need for, viability of, and potential impacts of financing P4P

  - The need for, viability of, and potential impacts of an insurance-based guarantee for performance results.
- Develop potential approaches to EE retrofit deployment with a combination of a SaaSM, standardized M&V, pay for performance financing, and performance guarantees.
- Prepare a *Needs and Impacts Research Report* to include:
  - Results of the activities required in this task, including the need for and potential impacts of an approach for EE deployment with a combination of a SaaSM, standardized M&V (as well as choice of standardized M&V and motivation for choice), pay for performance financing, and performance guarantees.
  - How such a platform could be supported beyond the grant term, including the costs, fees that will need to be charged, and the engagement and partnership strategy for consortiums, financing partners, energy service providers, manufacturers, utilities and others.
- Prepare *CPR Report #1* in accordance with subtask 1.3 (CPR Meetings).
- Participate in CPR meeting #1.

Products:
- Needs and Impacts Research Report (Draft and Final)
- CPR Report #1

TASK 3: DEVELOP PROGRAMMATIC ENERGY EFFICIENCY DELIVERY TEST PILOTS
The goal of this task is to apply the research results from Task 2 and develop an enhanced approach for EE retrofits. This approach will develop separate components required for testing including the SaaSM, various approaches for M&V, the financial mechanisms that pay for EE performance, and an insurance mechanism to backstop savings shortfalls in specific cases. Once these components are developed and integrated, the end-to-end process will be tested as a proof-of-concept. The research findings on the process will be used to modify and refine the individual components as well as the overall process both for execution and implementation.

The Recipient shall:
- Develop a SaaSM for sellers and buyers of EE services.
  - Design and build website landing page to help demonstrate the programmatic approach for EE delivery.
  - Provide links to data and analysis tools for buyers of EE products.
  - Provide navigation (links) to technology, financial, and implementation providers.
- Develop a standardized M&V approach for EE.
  - Integrate with data sources which may include the following:
    - GreenButton energy data.
    - Energy360 Energy Management Technology.
    - Enhanced control system (ex. RipTide EMS).
  - Integrate with OpenEE, incorporating:
    - AB793 meter-based savings processes.
    - Normalized Metered Energy Consumption savings analytical processes.
- Develop a financial marketplace for P4P EE.
  - Connect platform with ICP.
- Develop a standardized insurance-based guarantee for EE performance results.
  - Incorporate into platform via connection with ICP.

- Develop a programmatic approach for EE deployment with a combination of a SaaSM, standardized M&V, P4P financing, and performance guarantees.
  - o Create a project workflow based on the programmatic approach.
  - o Estimate the added cost of these services (SaaSM, standardized M&V, P4P financing, etc. to EE building retrofits.
- Initiate planning with utilities and industry partners to identify mechanisms to host, maintain, and support SaaSM beyond the grant term.
- Prepare *SaaSM Presentation* to include the following:
  - o Documentation of the programmatic approach for EE deployment with a combination of a SaaSM, standardized M&V, pay for performance financing, and performance guarantees
  - o Results of the activities required in this task, such as links to tools, and added costs for all these services
  - o Update on the status of creating a sustainable platform post EPIC funding.
- Prepare a *CPR Report #2* in accordance with subtask 1.3 (CPR Meetings).
- Participate in CPR #2 meeting.

Products:

- SaaSM Presentation*.*
- CPR Report #2

TASK 4: DEPLOY ENERGY EFFICIENCY DELIVERY TEST PILOTS

The goal of this task is to apply the research in Task 2 and the design in Task 3 for test pilot deployments of EE. A cross section of customers and building types will be engaged in the deployment and testing of the end-to-end process from initial sales engagement to M&V.

The Recipient shall:

- Deploy a programmatic approach for EE deployment with a combination of a SaaSM, standardized M&V, pay for performance financing, and performance guarantees.
  - o Deploy a SaaSM for sellers and buyers of EE services.
  - o Deploy a standardized M&V approach for EE.
  - o Deploy a financial marketplace for P4P EE.
  - o Deploy EE retrofits in at least 300,000 square feet of floor area in multiple commercial building types in Southern California using approaches developed in Tasks 2 and 3.
  - o Deploy an online forum where insurance companies can provide information regarding guarantees for EE performance results to implementers or financing entities.
- Engage TAC members, including utilities and industry partners, to initiate mechanisms to host, maintain, and support SaaSM beyond the grant term.
- Prepare a *Pilot Deployment Presentation* that includes:
  - o Documentation of the deployment and implementation process of the EE retrofits including information and criteria used in the recruitment process, copies of any energy audits completed on the buildings showing baseline energy use and equipment and EE retrofits installed.
  - o Results of each deployment SaaSM, standardized M&V, pay for performance financing, and performance guarantees including customer feedback, initial sales and changes to the platform design to achieve sustainability
  - o Discussion of initial findings and lessons learned

- Update on the status of creating a sustainable platform post EPIC funding.

Products:

- Pilot Deployment Presentation.

TASK 5: ANALYZE ENERGY EFFICIENCY TEST PILOT RESULTS

The primary goal of this task is to compare the impacts of the EE deployments in Task 4 to the estimated potential impacts identified in Task 2. Metrics will include cost, design and implementation time, energy savings, and time to market for new technologies. In addition, performance data, customer participation data, and implementer experience will be analyzed to inform recommendations for future implementation.

The Recipient shall:

- Analyze the impacts of the SaaSM for sellers and buyers of EE services deployed in Task 4.
- Analyze the impacts of the standardized M&V approach for EE deployed in Task 4.
- Analyze the impacts of the financial marketplace for P4P EE deployed in Task 4.
- Analyze the impacts of the standardized insurance-based guarantee for EE performance results deployed in Task 4.
- Analyze the impacts of the programmatic approach for EE deployment with a combination of a SaaSM, standardized M&V, pay for performance financing, and performance guarantees deployed in Task 4.
- Analyze cost benefits of the programmatic approach
    - Include total cost for equipment, labor, services, and other associated costs (e.g. SaaSM, M&V, etc.);
- Determine energy and cost savings. Compare and contrast this programmatic approach to current building programs (e.g. IOU offerings, ESCOs, etc.), including the following:
    - Analyze overall project economics, including costs and benefits, assumptions for each of the buildings retrofitted, simple payback or life cycle costs
    - Information on customer satisfaction versus other approaches
    - Determine whether the project meets the goals of doubling efficiency in demonstrated buildings
    - Determine overall electricity savings for each building, including assumptions, and across the portfolio and discuss whether the 20 percent average reduction was achieved
- Prepare *Enhanced Energy Efficiency Programmatic Approach Impacts Report* that includes:
    - Documentation of the impacts of the programmatic approach for EE deployment with a combination of an SaaSM, standardized M&V, pay for performance financing, and performance guarantees; include projected impacts for statewide deployment
    - Results of the activities required in this task, including:
        - Determination of energy and cost savings,
        - Discussion of project economics for each deployment, customer satisfaction, overall electricity savings for each building and whether 20 percent average reduction across the portfolio was achieved,
        - Discussion of whether the portfolio met the goal of doubling the efficiency in demonstrated buildings

    - Discussion of sales and changes to the platform design to achieve sustainability
  - Discussion of findings and lessons learned
  - Update on the status of .creating a sustainable platform post EPIC funding

Products:
- Enhanced Energy Efficiency Programmatic Approach Impacts Report (draft and final).

TASK 6: EVALUATION OF PROJECT BENEFITS
The goal of this task is to report the benefits resulting from this project.

EXHIBIT A
Scope of Work

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, 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 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.
        - 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 7: 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.
    - Based on guidance from TAC members and agreement with utilities and industry partners, launch mechanisms to host, maintain, and support SaaSM beyond the grant term.
- 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(s) on the project.
- When directed by the CAM, participate in annual EPIC symposium(s) sponsored by the

California Energy Commission.

- Provide at least (6) six *High Quality Digital Photographs* (minimum resolution of 1300x500 pixels in landscape ratio) of pre and post technology installation at the project sites or related project photographs.
- Prepare a *Technology/Knowledge Transfer Report* on technology transfer activities conducted during the project.

Products:

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

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.

RESOLUTION NO: 18-0613-14b

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: INTECH ENERGY, INC.

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 EPC-17-044 from GFO-17-304 with InTech Energy, Inc. for a $7,199,315 grant to develop and demonstrate the effectiveness of a market-driven building energy efficiency delivery process that aims to increase the deployment of advanced energy efficiency retrofits in commercial buildings at a reduced cost. This delivery process will be demonstrated in Southern California using advanced technologies and innovative retrofit approaches; 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 June 13, 2018.

AYE: [List of Commissioners]
NAY: [List of Commissioners]
ABSENT: [List of Commissioners]
ABSTAIN: [List of Commissioners]

Cody Goldthrite,
Secretariat