

CONTRACT REQUEST FORM (CRF)

CEC-94 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

A) New Agreement 400-18-003 (To be completed by CGL Office)

B) Division	Agreement Manager:	MS-	Phone
400 Efficiency Division	Adrian Ownby	37	916-651-3008

C) Contractor's Legal Name	Federal ID Number
Bruce A. Wilcox, P.E.	94-3394591

D) Title of Project
California Building Energy Code Compliance

E) Term and Amount	Start Date	End Date	Amount
	6 / 28 / 2019	12 / 31 / 2021	\$ 4,500,000

F) Business Meeting Information			
<input type="checkbox"/> Operational agreement (see CAM Manual for list) to be approved by Executive Director <input type="checkbox"/> ARFVTP agreements \$75K and under delegated to Executive Director.			
Proposed Business Meeting Date	6 / 12 / 2019	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Adrian Ownby	Time Needed:	5 minutes
Please select one list serve. BuildingStandards			

Agenda Item Subject and Description
BRUCE A. WILCOX, P.E. Proposed resolution approving Agreement 400-18-003 with Bruce A. Wilcox, P.E. for \$4,500,000 to provide technical support and implementation for the open source California Building Energy Code Compliance (CBECC) software for both nonresidential (CBECC-Com) and residential (CBECC-Res) buildings. (COIA Funding) Contact: Adrian Ownby. (Staff presentation: 5 minutes)

G) California Environmental Quality Act (CEQA) Compliance
1. Is Agreement considered a "Project" under CEQA? <input type="checkbox"/> Yes (skip to question 2) <input checked="" type="checkbox"/> No (complete the following (PRC 21065 and 14 CCR 15378)): Explain why Agreement is not considered a "Project": Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because contract mostly involves engineering analysis and software development.
2. If Agreement is considered a "Project" under CEQA: <input type="checkbox"/> a) Agreement IS exempt. (Attach draft NOE) <input type="checkbox"/> Statutory Exemption. List PRC and/or CCR section number: _____ <input type="checkbox"/> Categorical Exemption. List CCR section number: _____ <input type="checkbox"/> Common Sense Exemption. 14 CCR 15061 (b) (3) Explain reason why Agreement is exempt under the above section: _____
<input type="checkbox"/> b) Agreement IS NOT exempt. (Consult with the legal office to determine next steps.) Check all that apply <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Initial Study <input type="checkbox"/> Negative Declaration <input type="checkbox"/> Mitigated Negative Declaration </div> <div> <input type="checkbox"/> Environmental Impact Report <input type="checkbox"/> Statement of Overriding Considerations </div> </div>

H) List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)				
Legal Company Name:	Budget	SB	MB	DVBE
DHS Associates	\$ 0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
See attached list of all contractors	\$ 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	\$ 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I) List all key partners: (attach additional sheets as necessary)
Legal Company Name:

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CALIFORNIA ENERGY COMMISSION

**J) Budget Information**

Funding Source		Funding Year of Appropriation	Budget List No.	Amount
Other		2018-19	400.01	\$75,000
Other		2019-20	400.01	\$1,500,000
Other		2020-21	400.01	\$1,500,000
Other		2021-22		\$1,425,000
Funding Source				\$
R&D Program Area:	Select Program Area		TOTAL:	\$4,500,000
Explanation for "Other" selection		COIA		
Reimbursement Contract #:			Federal Agreement #:	

K) Contractor's Administrator/ Officer

Name:	Bruce Wilcox	Name:	Bruce Wilcox
Address:	1110 Monterey Avenue	Address:	1110 Monterey Avenue
City, State, Zip:	Berkeley, CA 94707	City, State, Zip:	Berkeley, CA 94707
Phone:	510-528-4406	Fax:	510-588-4678
E-Mail:	bwilcox@lmi.net		

Contractor's Project Manager**L) Selection Process Used** (For amendments, address amendment exemption or NCB, do not identify solicitation type of original agreement.)

- ☒ Solicitation RFQ Solicitation #: RFQ-18-401 # of Bids: 1 Low Bid? ☐ No ☐ Yes
☐ Non Competitive Bid (Attach CEC 96)
☐ Exempt Select Exemption (see instructions)

M) Contractor Entity Type

- ☒ Private Company (including non-profits)
☐ CA State Agency (including UC and CSU)
☐ Government Entity (i.e. city, county, federal government, air/water/school district, joint power authorities, university from another state)

N) Is Contractor a certified Small Business (SB), Micro Business (MB) or DVBE?

- ☒ No ☐ Yes
 If yes, check appropriate box: ☐ SB ☐ MB ☐ DVBE

O) Civil Service Considerations

- ☐ 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:

This architectural and engineering professional services technical support contract will provide the Energy Commission access to residential building energy science experts that are not available within state service. The Contractor will work under the direction of the Energy Commission to complete software tool development and implementation.

P) Payment Method

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

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**Q) Retention**

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

R) Justification of Rates

Rates were negotiated under the RFQ process based on a salary survey of comparable entities for like work

S) Disabled Veteran Business Enterprise Program (DVBE)

1. ☐ Exempt (Interagency/Other Government Entity)
 2. ☐ Meets DVBE Requirements DVBE Amount:\$ 0 DVBE %: 3%
 ☐ Contractor is Certified DVBE
 ☒ Contractor is Subcontracting with a DVBE: DHS Associates
 3. ☐ Contractor selected through CMAS or MSA with no DVBE participation.
 4. ☐ Requesting DVBE Exemption (attach CEC 95)

T) Miscellaneous Agreement Information

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 ☐ Other...
 5. Will a final report be required? ☐ No ☒ Yes
 6. Is the Agreement, with amendments, longer than a year? If yes, why? ☐ No ☒ Yes
 A multi-year contract is necessary to complete the software development, testing and deployment.

U) The following items should be attached to this CRF (as applicable)

- | | | |
|---|---|--|
| 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 95, DVBE Exemption Request | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 5. CEQA Documentation | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 6. Resumes | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 7. CEC 105, Questionnaire for Identifying Conflicts | | <input checked="" type="checkbox"/> Attached |

Agreement Manager

Date

Office Manager

Date

Deputy Director

Date

Wilcox Subcontractor List

Subcontractor	Expertise
ARUP	Energy Code Development and Implementation
Bentley Systems Inc.	Climate Data
Big Ladder Software	EnergyPlus, Open Source Software Development
CalCERTS	Home Energy Rating System Provider
Charles S. Barnaby	CBECC-Res California Simulation Engine
CHEERS/ConSol	Home Energy Rating System Provider
Chitwood Energy Management	Building Envelopes, HVAC Systems and Field Verification
Danny S. Parker	Monitored Data, Building Simulation
DHL Consulting, LLC	Climate Data
DHS Associates	Accounting and Financial Management
Ecotope Inc.	Heat Pumps, Building Simulation
Enercomp, Inc.	Parametric Measure Analysis, Compliance Software Development and Implementation
Energy and Environmental Economics, Inc. (E3)	Time Dependent Valuation of Energy and Life Cycle Cost Methodology
Energy Docs Home Performance	Field Testing, Installation, Commissioning
Energy Solutions	Codes and Standards Development, Measure Development and Analysis
Frank A. Bergamaschi, Architect	Architecture
Frontier Energy (formerly Davis Energy Group)	New and Emerging Technologies, Technology Applications, Building Practices
Hitchcock Consulting	CBECC Standards Data Dictionary
James D. Lutz	Residential Hot Water Systems
Jennifer Roberts	Contract Administration
Klimaat Consulting and Innovation Inc.	Climate Data
Kolderup Consulting	Building Design, Construction and Operation
L'Monte Information Services	CBECC Standards Data Dictionary and XML Schema
Model Efficiency	CBECC-Com
National Renewable Energy Lab	EnergyPlus
NORESCO, LLC	CBECC-Com
O'Brien & Company, LLC	CBECC Standards Data Dictionary, Rules Syntax and Functions
Paul Francisco	HVAC, Indoor Air Quality, Ventilation, Moisture
Proctor Engineering Group	Energy Efficiency Research Development and Implementation
RASENT Solutions LLC	CBECC Report Generator and Support Tools
SAC Software Solutions, LLC	CBECC Batch and Parametric Run System Development
Selby Energy	Energy Modeling (Nonresidential)
Stone Energy Associates	Multifamily Buildings
TRC Energy Services	Energy Code Development and Implementation
VaCom Technologies	Commercial Refrigeration
White Box Technologies	Building Energy Simulations, Climate Data

EXHIBIT A

SCOPE OF WORK

Purpose

The purpose of this agreement is to contract with a team of consultants for technical support to:

- Develop and maintain compliance and performance tools and related materials to the California Energy Code.

Work on this contract will focus on the 2019 and 2022 Energy Code updates but may also involve implementation of the 2016 Energy Code update or preliminary work on later Energy Code updates (2025 and beyond).

ACRONYMS/GLOSSARY

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

ACRONYMS & TERMS	DEFINITION
ASHRAE	American Society of Heating, Refrigeration and Air-conditioning Engineers
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CBECC	California Building Energy Code Compliance application; used to collectively refer to CBECC-Com and CBECC-Res
CBECC-Com	California Building Energy Code Compliance application for high-rise residential and nonresidential buildings
CBECC-Res	California Building Energy Code Compliance application for low-rise residential buildings
CO ₂ e	Carbon Dioxide equivalent
Compliance Document	Any of the documents specified in Section 10-103(a) of the 2016 Standards that are used to demonstrate compliance with California Code of Regulations, Title 24, Part 6 (i.e., Certificate of Compliance, Certificate of Installation, Certificate of Acceptance, and Certificate of Verification).
Compliance Manual	The Residential Compliance Manual developed by the Energy Commission, under Public Resources Code, Section 25402.1(e), to aid designers, builders, and contractors in meeting the energy efficiency requirements for residential buildings.
CPUC	California Public Utilities Commission
CSE	California Simulation Engine
Energy Commission	California State Energy Resources Conservation and Development Commission.
HERS	Home Energy Rating System, used in California Code of Regulations, Title 20, Section 1670 et seq.
HVAC	Heating, Ventilating and Air Conditioning

EXHIBIT A

SCOPE OF WORK

ACRONYMS & TERMS	DEFINITION
Nonresidential Compliance Manual	The Nonresidential Compliance Manual developed by the Energy Commission, under Public Resources Code, Section 25402.1(e), to aid designers, builders, and contractors in meeting the energy efficiency requirements for nonresidential buildings.
Residential Compliance Manual	The Residential Compliance Manual developed by the Energy Commission, under Public Resources Code, Section 25402.1(e), to aid designers, builders, and contractors in meeting the energy efficiency requirements for residential buildings.
State	State of California
WAM	Work Authorization Manager

WORK AUTHORIZATIONS

This Agreement shall be conducted as a “Work Authorization” Agreement. No work shall be undertaken unless authorized by the CAM through a specific written document called a “work authorization.”

The CAM will prepare and issue the written work authorizations and shall set a maximum price, budget, and schedule for the work to be performed. The CAM will work, in consultation with the Contractor, to assign work to either the Contractor or a subcontractor.

Quality control activities:

- In work authorization budgets, all quality control work must be specified by line item; and
- Review of subcontractor work shall be billed to the individual technical work authorizations.

NO WORK GUARANTEE

The Energy Commission does not guarantee any minimum or maximum amount of work to the prime Contractor or any Subcontractor under the Agreement.

WORKSHOPS & HEARINGS

All workshops and hearings are sponsored, organized, and facilitated by the Energy Commission. The Energy Commission is responsible for any costs associated with a workshop or hearing. Contractor will provide labor only.

Incidental Services

Contractor shall provide incidental services to support the technical tasks that the Energy Commission will undertake to update, develop, and implement the Standards in the general topic areas listed below. Technical Tasks 2-5 provide more detailed task activities for these areas:

- Graphic Design/Document Support for reports and other deliverables

EXHIBIT A

SCOPE OF WORK

- Public Outreach & Communication/ Marketing/ Public Relations/ Program Development necessary to complete the goals of this agreement

Application Use & Development

All applications developed under this contract will be subject to open source licensing requirements, as described in Exhibit D, paragraph 8, unless the Energy Commission directs different ownership and licensing requirements in a work authorization. No pre-existing proprietary applications will need to be modified in order to perform the tasks outlined in this Agreement. The Energy Commission owns or has open source license access to any application that the Contractor will modify under the terms of this Agreement.

Draft and Final Deliverables/Reports

The Contractor may be required to produce several iterations of draft deliverables in order to incorporate Energy Commission's comments and edits. A deliverable is considered final when the CAM indicates in writing that the deliverable is considered final. When creating reports, the Contractor shall use and follow, unless otherwise instructed in writing by the CAM, the latest version of the Style Manual for Preparing Contract and Consultant Reports for the Energy Commission, which is published on the Energy Commission's website at the following link:

http://www.energy.ca.gov/contracts/consultant_reports/index.html

Each final hard copy deliverable shall be delivered as one original, reproducible, 8 ½" by 11", camera-ready master in black ink, unless otherwise directed. Illustrations and graphs shall be sized to fit an 8 ½" by 11" page and readable if printed in black and white.

Electronic File Format

The Contractor shall deliver an electronic copy (CD ROM or memory stick or as otherwise specified by the CAM) of the full text in a compatible version of Microsoft Word (.doc or .docx).

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

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

EXHIBIT A

SCOPE OF WORK

Primary Tasks

The major categories of work are divided into the following tasks:

TASK #	DESCRIPTION OF TASK
1	Agreement Management
2	Standards Public Domain Compliance Application Development and Maintenance
3	Enhance and Support Data Exchange Infrastructure for HERS Provider Data Registries
4	Public Domain Compliance Application Deployment
5	Contingencies and Additional Topic Areas

TASK 1 – AGREEMENT MANAGEMENT

Each Work Authorization will reflect the maximum that can be spent for Agreement Management for each fiscal year. A maximum of 10% of the total Agreement budget will be allocated for this task. The Contractor will be required to perform contract management and administrative duties to manage the Agreement. At the discretion of the CAM, meetings, briefings and discussions may be held via conference call or WebEx.

The Contractor's responsibilities under this task include, but are not limited to the following:

Task 1.1 Kick-off Meeting

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

The Contractor shall:

- Attend a "kick-off" meeting with the CAM, the Contracts Agreement Officer, and a representative of the Accounting Office. The meeting will be held in Sacramento, CA and the CAM will designate the specific location. 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.
- If necessary, prepare an updated Schedule of Deliverables based on the decisions made in the kick-off meeting.

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.

Deliverables:

- An Updated Schedule of Deliverables (if applicable)

EXHIBIT A

SCOPE OF WORK

Task 1.2 Program Meetings and Briefings

The Contractor and subcontractor shall:

- At the request of the Energy Commission's CAM, be available for meetings or to provide written or verbal program briefings to the Energy Commission's staff or others. The cost of meetings with local governments and public institutions will be included in each Work Authorization. The cost of meetings requested specifically by the Contractor shall be borne solely by the Contractor. The Energy Commission expects to hold no more than one (1) program briefing meeting per quarter.

Task 1.3 Invoices

The Contractor shall:

- Prepare 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. Invoices shall be submitted with the same frequency as progress reports (task 1.4). Invoices must be submitted to the Energy Commission's Accounting Office.

Deliverables:

- Invoices

Task 1.4 Manage Subcontractors:

The goal of this task is to manage subcontractors' quality control activities. Review of subcontractor work shall be billed to the individual Work Authorizations.

The Contractor shall:

- At the direction of the CAM, review and prepare work authorization scopes and budgets
- Enter into subcontracts.
- Enforce subcontract provisions.
- In the event of subcontractor failure to perform, recommend solutions to resolve the problem.
- When new subcontractors are added, the contractor shall ensure that: 1) the new subcontractors 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.

Task 1.5 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 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 no later than 15 calendar days after the end of the reporting period. The CAM will provide the format for the progress reports.

EXHIBIT A

SCOPE OF WORK

Deliverables:

- Monthly Progress Reports

Task 1.6 Final Meeting

The goal of this task is to discuss closeout of this Agreement and review the project.

The Contractor shall:

- Meet with Energy Commission staff prior to the term end date of this Agreement. The meeting will be held in Sacramento, CA, and the CAM will designate the specific location. This meeting will be attended by the Contractor Project Manager and the CAM. The CAM will determine any additional appropriate meeting participants. The administrative and technical aspects of Agreement closeout will be discussed at the meeting.
- Present findings, conclusions, and recommended next steps (if any) for the Agreement.
- 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 within the meeting.

Deliverables:

- Written documentation of meeting agreements
- Schedule for completing closeout activities
- Findings, conclusions, and recommendations

TASK 2 – CALIFORNIA BUILDING ENERGY CODE PUBLIC DOMAIN COMPLIANCE APPLICATION & MAINTENANCE

Update *CBECC* software (both nonresidential and residential) to assist in developing the Energy Code and add additional user interfaces as necessary to translate building energy performance data and energy related building operational characteristics into an application that applies the performance standards requirements under consideration for the Energy Code to nonresidential, single family residential, and multifamily building designs, calculating annual energy budgets, and providing comparative results. The work in this task is expected to include but not be limited to the following:

- Piloting and beta testing new versions of the *CBECC* software internally and with the Energy Commission and building industry stakeholders.
- Modeling building design scenarios appropriate for zero net electricity buildings to include at least the following systems and compliance options under the Energy Code:
 - Photovoltaic and fuel cell systems
 - Solar thermal systems
 - HVAC and water heating
 - Envelope modeling
 - Daylight modeling
 - Lighting

EXHIBIT A

SCOPE OF WORK

- Quality Insulation Installation.
- Preparing instructions for users that explain how the *CBECC* application should be used to demonstrate compliance with the Energy Code.
- Preparing documentation that explains all significant modifications made to the Standards Data Dictionary, the Standards compliance ruleset and the *CBECC* application.
- Providing support for the current *CBECC* application to ensure a successful transition to future versions of the *CBECC* application.
- Create or obtain for use a parametric run generator(s) that allows multiple *CBECC-Com* and/or *CBECC-Res* analyses to be launched and results summarized:
 - Evaluate whether there is already a parametric run generator developed and available.
 - If already available, obtain parametric run generator on an open source basis. If there is a cost to obtain this, the contract budget will allow for it.
 - If not already available, provide parametric run generator.
- Modify the *CBECC-Com* and/or *CBECC-Res* application as needed to work with a parametric run generator and to model existing and proposed efficiency technologies that need to be evaluated for the Nonresidential Building Energy Efficiency Standards updates
- Add or update modeling capabilities and compliance modeling rules for commercial refrigeration to *CBECC-Com* and/or *CBECC-Res*.
- Develop an Energy Design Rating(s) for newly constructed and existing nonresidential buildings.

Deliverables:

- Energy Code Development Analysis *CBECC* Application Functional Requirements
- Energy Code Development Analysis Application Specifications
- Energy Code Development Analysis Application
- Energy Code Development Analysis Application Documentation
- Updates to *CBECC* applications, as needed
- Other deliverables to be defined as needed through Work Authorizations

EXHIBIT A

SCOPE OF WORK

TASK 3 – ENHANCE AND SUPPORT DATA EXCHANGE INFRASTRUCTURE FOR PROVIDER DATA REGISTRIES AND ENERGY COMMISSION DOCUMENT REPOSITORY

Provide technical support for the data exchange protocols and data dictionary that together provide the necessary infrastructure on which private parties develop Residential and/or Nonresidential Provider Data Registries and which defines the data stored in the Energy Commission document repository. This task is identical to work authorized in previous contracts. This task will include reviewing Standards compliance documents and their related technical specifications, the current HERS Provider Data Registry technical and functional specifications, document repository database architectures, and existing data exchange schema used to communicate Standards-related building energy performance. The work in this task is expected to include, but not be limited to, the following:

- Enhancing the data dictionary and data exchange protocols;
- Updating the compliance document xml template infrastructure that is specified in the Energy Code;
- Developing an automated process for testing registry compliance forms;
- Piloting new data exchange protocols to/from registries;
- Reviewing and analyze the results of Energy Commission surveys of Compliance documents;
- Updating the Provider Data Registry Requirements Manual as needed; and
- Updating the Energy Commission data repository to add search features and reporting.

Deliverables:

- Updated Data Dictionary
- Updated Schema for Compliance Documents
- Updated Document Templates (.xslt)
- Updated Report Generator programming based on the above deliverables
- Updated Data Exchange Protocols
- Updated Data Registry Requirements Manual
- Data Exchange Pilot with Standards Data Registries
- Other deliverables to be defined as needed through Work Authorizations

TASK 4 – ENERGY CODE PUBLIC DOMAIN COMPLIANCE APPLICATION DEPLOYMENT

Support the Energy Commission's deployment of the *CBECC* Energy Code compliance application. The work in this task is expected to include, but not be limited to, the following:

EXHIBIT A

SCOPE OF WORK

- Identifying, updating, and tracking issues identified through project team and stakeholder reviews of the *CBECC* application.
- Testing the *CBECC* application internally, through third parties potentially including subcontractors (Energy Commission staff may conduct their own separate testing).
- Piloting and beta testing new versions of the *CBECC* application with building industry stakeholders to identify and improve issues prior to release.
- Providing technical support to third-party application vendors for their integration of the *CBECC* Application Programming Interface (API) into third-party application tools, including
 - Documenting all updates to the compliance application data model and rulesets, and
 - Developing solutions to vendor issues as directed.
- Establish, if necessary, and/or maintain a public website and host the *CBECC-Com* and *CBECC-Res* open source applications and include a bug reporting mechanism on this public website.
- Establishing procedures for the Energy Commission to assume responsibility for this public website(s) at the conclusion of the Agreement.

Deliverables:

- Updated versions of the *CBECC application*, including updates to its documentation
- *CBECC* compliance application issue tracking reports
- *CBECC* compliance application source code posted to open source on-line repository
- Other deliverables to be defined as needed through work authorizations

TASK 5 – CONTINGENCIES AND ADDITIONAL TOPIC AREAS FOR BUILDING ENERGY CODE COMPLIANCE TECHNICAL SUPPORT

The Contract team shall assist with work to develop program components beyond what is specifically described in Tasks 2-4 related to *CBECC* technical support. The work in this task is expected to include, but not be limited to, the following:

- Providing technical expertise to conduct unexpected research and analysis needed to develop program components as they arise throughout the agreement period.
- Attending Workshops and Hearings that support the Energy Code update.

Deliverables:

- To be defined as needed through Work Authorizations

EXHIBIT A

SCOPE OF WORK

Deliverables

The following deliverables chart does not represent all deliverables necessary to complete the goals and objectives of this agreement. Additional deliverables will be outlined in work authorizations. For deliverables listed, work authorizations will specify exact due dates.

Task #	DELIVERABLES	TENTATIVE DUE DATES
1.1		
	Updated schedule of deliverables (if applicable)	3 rd quarter 2019
1.3		
	Invoices	Monthly
1.5		
	Monthly Progress Reports	Monthly
1.6		
	Written documentation of meeting agreements	4 th quarter 2021
	Schedule for completing closeout activities	4 th quarter 2021
	Findings, conclusions, and recommendations	4 th quarter 2021
2		
	Energy Code Development Analysis <i>CBECC-Com</i> and <i>CBECC-Res</i> Application Functional Requirements	1 st quarter 2021
	Energy Code Development Analysis Application Specifications	2 nd quarter 2020
	Energy Code Development Analysis Application	1 st quarter 2021
	Energy Code Development Analysis Application Documentation	1 st quarter 2021
	Updates to the <i>CBECC-Com</i> and <i>CBECC-Res</i> application, as needed	1 st quarter 2021

EXHIBIT A

SCOPE OF WORK

Task #	DELIVERABLES	TENTATIVE DUE DATES
	Other deliverables to be defined as needed through Work Authorizations	TBD per Work Authorization
3		
	Updated Data Dictionary	TBD per Work Authorization
	Updated Schema for Compliance Documents	TBD per Work Authorization
	Updated Document Templates (xslt)	TBD per Work Authorization
	Updated Report Generator programming based on the above deliverables	TBD per Work Authorization
	Updated Data Exchange Protocols	3 rd quarter 2021
	Updated Data Registry Requirements Manual	TBD per Work Authorization
	Data Exchange Pilot with Standards Data Registries	TBD per Work Authorization
	Other deliverables to be defined as needed through Work Authorizations	TBD per Work Authorization
4		
	Updated versions of the <i>CBECC</i> application, including updates to application documentation	TBD per Work Authorization
	<i>CBECC</i> application issue tracking reports	First update 3 rd quarter 2019. Future updates TBD per Work Authorization
	<i>CBECC</i> Compliance application source code posted to open source on-line repository	First update 3 rd quarter 2020. Future updates TBD per Work Authorization

EXHIBIT A
SCOPE OF WORK

<i>Task #</i>	<i>DELIVERABLES</i>	<i>TENTATIVE DUE DATES</i>
	Other deliverables to be defined as needed through Work Authorizations	TBD per Work Authorization
5		
	Other deliverables to be defined as needed through Work Authorizations	TBD per Work Authorization

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: BRUCE A. WILCOX, P.E.

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 400-18-003 with Bruce A. Wilcox, P.E. for \$4,500,000 to provide technical support and implementation for the open source California Building Energy Code Compliance (CBECC) software for both nonresidential (CBECC-Com) and residential (CBECC-Res) buildings; 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 12, 2019.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Cody Goldthrite,
Secretariat