

**CONTRACT REQUEST FORM (CRF)**

CEC-94 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

A) New Agreement 400-15-012 (To be completed by CGL Office)

B) Division	Agreement Manager:	MS-	Phone
400 Efficiency Division	David Ismailyan	26	916-654-4045

C) Contractor's Legal Name	Federal ID Number
NORESCO, LLC	90-0453168

D) Title of Project
Technical Support for Increasing Energy Efficiency in Existing Buildings

E) Term and Amount	Start Date	End Date	Amount
	6/30/2016	6/30/2018	\$ 933,711

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 under \$75K delegated to Executive Director.			
Proposed Business Meeting Date	6/14/2016	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	David Ismailyan	Time Needed:	5 minutes
Please select one list serve. Efficiency			

Agenda Item Subject and Description
Proposed resolution approving Agreement 400-15-012 with NORESKO, LLC for a \$933,711 contract to perform technical support services for increasing energy efficiency in existing buildings, including: building energy-use benchmarking; building energy science and energy modeling; measurement and verification of energy efficiency savings; energy consumption forecasts and demand analysis; Building Energy Efficiency Standards and energy-related installation practices; data standardization, security and accessibility. (ERPA funding) Contact: David Ismailyan (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 it includes data collection, building science modeling and best practices characterization for existing buildings and similar technical support.
2. If Agreement is considered a "Project" under CEQA: <input type="checkbox"/> a) Agreement <b>IS</b> 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 <b>IS NOT</b> exempt. (Consult with the legal office to determine next steps.) Check all that apply <input type="checkbox"/> Initial Study <input type="checkbox"/> Environmental Impact Report <input type="checkbox"/> Negative Declaration <input type="checkbox"/> Statement of Overriding Considerations <input type="checkbox"/> Mitigated Negative Declaration



<b>H) List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)</b>				
Legal Company Name:	Budget	SB	MB	DVBE
ARX Energy	\$ 46,948	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bluepoint Planning	\$ 24,364	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calthorpe Associates	\$ 24,364	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Center for Sustainable Energy (CSE)	\$ 63,025	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hitchcock Consulting	\$ 14,006	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kilowatt (KW) Engineering	\$ 114,700	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L'Monte Information Services	\$ 91,037	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Institute for Market Transformation (IMT)	\$ 52,521	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open Energy Efficiency	\$ 26,261	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TRC Energy Services	\$ 133,054	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vistar Energy Consulting	\$ 24,364	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lawrence Berkeley National Laboratory (LBNL)	\$ 45,518	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**I) List all key partners: (attach additional sheets as necessary)**

Legal Company Name:

**J) Budget Information**

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
State – ERPA	FY 15/16	400.003	\$500,000
State – ERPA	FY 16/17	400.003	\$433,711
R&D Program Area: Energy Efficiency	TOTAL:		\$933,711
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

<b>k) Contractor's Administrator/ Officer</b>				<b>Contractor's Project Manager</b>			
Name:	Nikhil Kapur			Name:	Dimitri Contoyannis		
Address:	475 Sansome Street, Suite 500			Address:	475 Sansome Street, Suite 500		
City, State, Zip:	San Francisco, CA 94111			City, State, Zip:	San Francisco, CA 94111		
Phone:	415-957-1977	Fax:	- -	Phone:	415-970-6521	Fax:	- -
E-Mail:	nkapur@noresco.com			E-Mail:	dcontoyannis@noresco.com		

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

Solicitation RFP      Solicitation #: RFP-15-402    # of Bids: 6    Low Bid?     No     Yes

Non Competitive Bid (Attach CEC 96)

Exempt

**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:**

California's policy goal directs the Energy Commission to double energy efficiency in existing California buildings, by implementing energy efficiency strategies tailored for existing buildings. This direction is given by Assembly Bill 758 (Skinner, 2008), Senate Bill 350 (de Leon, 2015), and Assembly Bill 802 (Williams, 2015).

The Existing Buildings Energy Efficiency Action Plan (Action Plan) provides a high-level roadmap with sector-specific strategies to achieve the policy goal. The proposed strategies contain work of such a highly specialized or technical nature such that the combination of knowledge, expertise, and ability to carry out the range of complex components, is not available through the civil service system. The strategies and associated work requires skills and expertise in building science, data analytics, real estate and finance.

This contract intends to implement the strategies identified in the Action Plan to achieve the policy goals of AB 758, SB 350, AB 802, and other complementary laws or executive orders. NORESKO LLC., the proposed contractor, has the experience, expertise, knowledge and skills across several areas to provide the needed technical support services.

**p) Payment Method**

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

**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**

This contractor was selected through a competitive solicitation process. As part of this competitive solicitation process, 30 percent of the total score is based on the total expected labor cost and other direct costs mark up. The score for the total expected labor cost is derived from a mathematical cost formula which compares the labor cost of the bidder, against the labor cost listed in the lowest proposal total expected labor cost.

**s) Disabled Veteran Business Enterprise Program (DVBE)**

1.  Exempt (Interagency/Other Government Entity)
2.  Meets DVBE Requirements DVBE Amount:\$ 46,948 DVBE %: 5
  - Contractor is Certified DVBE
  - Contractor is Subcontracting with a DVBE: ARX Energy
3.  Contractor selected through CMAS or MSA with no DVBE participation.
4.  Requesting DVBE Exemption (attach CEC 95)

**T) Miscellaneous Contract Information**

- |  |  |   |
|--|--|---|
| 1. Will there be Work Authorizations?                                  | <input type="checkbox"/> No            | <input checked="" type="checkbox"/> Yes |
| 2. Is the Contractor providing confidential information?               | <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes            |
| 3. Is the Contractor going to purchase equipment?                      | <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes            |
| 4. Check frequency of progress reports                                 |  |   |
| <input checked="" type="checkbox"/> Monthly                            | <input type="checkbox"/> Quarterly     | <input type="checkbox"/>                |
| 5. Will a final report be required?                                    | <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes            |
| 6. Is the agreement, with amendments, longer than a year? If yes, why? | <input type="checkbox"/> No            | <input checked="" type="checkbox"/> Yes |

A two-year contract is necessary for two important reasons:

- 1) Developing new tools and program models requiring significant stakeholder collaboration
- 2) Evaluating energy performance inherently requires significant effort

The current energy efficiency program model involves several stakeholders including: state regulatory agencies, publicly and investor owned utilities, program implementers, contractors, external energy consultants, environmental advocates and program participants. Collaborating with and informing such a large group of stakeholders will require time. The Commission also plans to collaborate with industries outside of the current model but can potentially have a large impact on existing buildings energy efficiency. An example is compelling the real estate purchase and sales transactions to include energy asset information.

The contractor's work requires planning, primary data collection and proofing concepts before full execution. Obtaining pre- and post- energy consumption data is a significant barrier to performing analysis on any efficiency measure. Currently, a standard data exchange protocol does not exist. Creating a solution and/or standard for collecting data is an area for which the Commission will obtain technical support. To effectively evaluate the performance outcome of any project, using metered energy data, requires measure(s) installation and data collection for one year to be analyzed against the prior year energy consumption baseline. Such a dataset will be very large and require significant effort to analyze.

**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 type="checkbox"/> N/A            | <input checked="" type="checkbox"/> Attached |
| 7. CEC 105, Questionnaire for Identifying Conflicts |   | <input checked="" type="checkbox"/> Attached |

\_\_\_\_\_  
Agreement Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Office Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Deputy Director

\_\_\_\_\_  
Date

## **Exhibit A Scope of Work**

### **BACKGROUND**

AB 758 directed the Energy Commission to create a statewide roadmap to achieve significantly greater energy efficiency in existing buildings. This roadmap is now a comprehensive statewide planning document approved by the Energy Commission in August 2015, known as The Existing Buildings Energy Efficiency Action Plan, which is available at: [http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-05/TN206015\\_20150904T153548\\_Existing\\_Buildings\\_Energy\\_Efficiency\\_Action\\_Plan.pdf](http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-05/TN206015_20150904T153548_Existing_Buildings_Energy_Efficiency_Action_Plan.pdf).

The Action Plan provides a 10-year roadmap to activate market forces and transform California's existing residential, commercial, and public building stock into high performing and energy efficient buildings. The results of this effort are projected to include accelerated growth of energy efficiency markets with associated job creation, more effective targeting and delivery of building upgrade services, improved quality of occupant and investor decisions, and vastly improved performance of California's buildings in service of those who own and occupy them. Equally important, this effort will deliver substantial energy savings and greenhouse gas emissions reductions, contributing to the collective goal of reducing the impacts of climate change while improving the resilience of the State's built environment and economy.

The Action Plan provides a comprehensive framework centered on five goals, each with an objective and a series of strategies to achieve it. Each strategy includes industry and/or government implementation partners.

The Action Plan begins with strategies to enhance government leadership in energy and water efficiency. Public buildings leading by example, a new statewide large commercial benchmarking and disclosure program, local government innovations, grants and loans for school energy system upgrades, clarifying the Building Energy Efficiency Standards for existing buildings, evaluating compliance rates, identifying barriers, and incorporating findings into solutions are examples of these leadership strategies. The Action Plan then focuses on enabling improved decision making, high quality building upgrades, and increased financing options through access to reliable and actionable information. Easy, regular access to energy use data for building owners and their agents is a key tenet of this plan. Making efficiency project costs and savings information available to all market actors is another principal strategy. This roadmap articulates strategies to help consumers recognize the benefits and value of efficiency, supported by strategies that ensure the real estate and financial industries incorporate energy efficiency into property valuations. The Action Plan also proposes strategies to ready the workforce to deliver high quality efficiency solutions on a larger scale.

SB 350 continues, enhances and expands the existing building energy efficiency program established by AB 758, providing new direction including periodic updating of the program to achieve the governor's and legislature's energy efficiency savings doubling goal. The following are some of the more significant energy efficiency mandates of SB 350:

- Added Public Resources Code (PRC) section 25943(f)(2) to require the Energy Commission, on or before January 1, 2017, and at least every three years thereafter to update the AB 758 program in furtherance of achieving a cumulative doubling of statewide energy efficiency savings by 2030.
- Directs the Energy Commission, in collaboration with the California Public Utilities Commission (CPUC) and local publicly owned utilities, to establish annual targets for statewide energy efficiency and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030

## **Exhibit A Scope of Work**

- Requires the Energy Commission to adopt, implement and enforce responsible contractor policies to ensure that retrofits meet high-quality performance standards and reduce energy savings lost or forgone due to poor-quality workmanship, and to establish consumer protection guidelines for energy efficiency products and services.
- Requires the Energy Commission by January 1, 2017, to develop and publish a study on barriers for low-income customers to energy efficiency and weatherization investments, including those in disadvantaged communities, and recommendations on how to increase access to these investments

SB 350 requires that the Action Plan itself be updated periodically to account for market changes. So while the Action Plan is a pertinent supplemental document to understand this contract's scope of work and skills needed, the actual work performed over the duration of the contract may need to be beyond the Action Plan.

AB 802 addresses the need to establish a building energy use benchmarking and public disclosure program for nonresidential and multifamily buildings. Providing building owners with the knowledge of their energy use to enable actions for improving a building's energy performance was established in 2007 by the passage of Assembly Bill 1103 (Saldana, Chapter 533, Statutes of 2007). AB 802 also provides the Energy Commission with clarified data collection authority to implement energy policy, most importantly long term demand forecasting for statewide resource planning.

The scope of work in this contract is anticipated to fulfill the legislature's intent for the aforementioned laws as well as any subsequent complementary laws or executive orders calling for the Energy Commission to develop or implement policies and programs to increase energy efficiency of California's existing buildings stock.

### **TECHNICAL AREAS**

The contractor staff and proposed team of subcontractors will be expected to produce work in the areas outlined below:

- Building energy use benchmarking and public disclosure programs
- Residential and nonresidential real estate purchase and sale requirements
- Residential building energy science and related energy modeling;
- Nonresidential building energy science and related energy modeling;
- Business and industry needs related to building energy use and efficiency savings;
- Building energy efficiency savings measurement and verification approaches using metered energy consumption data;
- Methods, best practices and limitations for developing calculated energy savings
- Behavior and comfort preferences that affect energy savings in electricity and gas retail end uses
- Building Energy Efficiency Standards and energy-related installation practices relevant to existing buildings;
- Utility and other ratepayer funded energy efficiency programs for residential and nonresidential buildings;
- Data analysis approaches that leverage and build upon available solutions.

## Exhibit A Scope of Work

- Best practices for data standardization and public accessibility in governmental and private agencies.
- Energy consumption forecasts and demand analysis

### ACRONYMS/GLOSSARY

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

<b>Acronym</b>	<b>Definition</b>
<i>AB 802</i>	<i>Assembly Bill 802</i>
<i>Action Plan</i>	<i>Existing Buildings Energy Efficiency Action Plan, a statewide 'roadmap' developed by the Energy Commission to achieve the doubling of energy efficiency in existing buildings by 2030.</i>
<i>CAM</i>	<i>Commission Agreement Manager</i>
<i>IEPR</i>	<i>Integrated Energy Policy Report.</i>
<i>SB 350</i>	<i>Senate Bill 350</i>

### FORMAT/REPORTING REQUIREMENTS

#### Deliverables

When deliverables are in the form of reports, the Contractor shall use and follow, unless otherwise instructed in writing by the Commission Agreement Manager (CAM), the latest version of the Consultant Reports Style Manual published on the Energy Commission's web site:

[http://www.energy.ca.gov/contracts/consultant\\_reports/index.html](http://www.energy.ca.gov/contracts/consultant_reports/index.html)

Each final deliverable shall be delivered as one original, reproducible, 8 ½" by 11", camera-ready master in black ink. 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 deliverables in the format specified by the CAM within the Work Authorizations.

The format for deliverables will be decided based on the analysis methods and purpose of individual work authorizations. These formats may include but are not limited to:

- Scripts such as Python, Perl, Ruby, Java, Javascripts
- Data exchange file formats such as Microsoft (MS) Access, MS Excel, 'comma separated values' file, XML, JSON, RDF.
- PC-based text documents in MS Word file format.
- Documents intended for public distribution in PDF file format, with the native file format provided as well.
- Project management documents in MS Project file format
- Original file format of the software in which the deliverable was created (for e.g., .psd file for Adobe Photoshop)

## **Exhibit A Scope of Work**

### **GOALS AND OBJECTIVES**

The goal of this Agreement is to implement activities mandated under existing laws and any other complementary laws or executive orders calling for the Energy Commission to develop or implement policies and programs to increase energy efficiency of California's existing buildings stock. The Action Plan will be used as a guidance document and roadmap to achieve these mandates. Per the Action Plan, certain strategies must be implemented by the Energy Commission as the primary implementer. For other strategies the Energy Commission is identified as a partner to other California and national agencies and is anticipated to have a smaller, supportive role.

In addition, SB 350 requires that the Action Plan itself be updated periodically to account for market changes. This scope of work is intended to implement the strategies identified in the Action Plan, as it may be updated, in order to achieve the policy goals identified in AB 758, SB 350, AB 802, and other complementary laws or executive orders

The following tasks will be performed under this contract towards increasing energy efficiency in existing buildings:

- 1) Agreement Management
- 2) Market Analyses and Technical Studies
- 3) Existing Buildings Energy Savings Metrics and Analytics

### **WORK AUTHORIZATIONS**

The Agreement shall be conducted as a "work authorization" Agreement. No work for tasks 2-4 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.

### **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 shall be 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. The Energy Commission shall provide meeting rooms (both virtual and physical), communication equipment, print-outs, and any other supporting material.

### **TASK 1- AGREEMENT MANAGEMENT**

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

#### **Task 1.1 Kick-off Meeting**

**(Expected Total Hours: 10; Expected General Classifications: Analyst, Scientist, Engineer, Project Manager, Director)**

The Contractor will be expected to:

## **Exhibit A Scope of Work**

- Attend a kick-off meeting with the CAM, the Contracts Officer, and a representative of the Accounting Office. The meeting will be held via Web-Ex or teleconference. The Contractor shall include their Project Manager, Contracts Administrator, Accounting Officer, and others designated by the CAM in this meeting. The administrative and technical aspects of this Agreement will be discussed at the meeting.
- If necessary, prepare an updated Schedule of Deliverables based on the decisions made in the kick-off meeting.

The CAM will be expected to:

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

### **Deliverables:**

- Kickoff Meeting, including meeting notes and next steps summary

### **Task 1.2 Prepare Invoices**

**(Expected Total Hours: 55; Expected General Classifications: Scientist, Engineer, Administrative Manager, Administrative Assistant)**

**The Contractor will be expected to:**

- 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 1.3 Manage Subcontractors**

**(Expected Total Hours: 675; Expected General Classifications: Analyst, Scientist, Engineer, Deputy Project Manager, Project Manager, Director, Principal)**

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

**The Contractor will be expected to:**

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

### **Task 1.4 Prepare Progress Reports**

**(Expected Total Hours: 100; Expected General Classifications: Analyst, Scientist, Engineer, Administrative Manager)**

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 will be expected to:**

## **Exhibit A Scope of Work**

- Prepare progress reports which 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 within 15 calendar days after the end of the reporting period. The CCM will provide the format for the progress reports.

### **Deliverables:**

- Monthly Progress Reports, or at a frequency specified by CAM

### **Task 2: Market Analyses and Technical Support**

**(Expected Total Hours: 2480; Expected General Classifications: Analyst, Scientist, Engineer, Deputy Project Manager, Project Manager, Director, Principal)**

The goal of this task is to provide technical support and perform market analyses needed to facilitate increased energy efficiency in existing buildings. Specific topics will be identified by the CAM and will be consistent with the goals and strategies of the Action Plan.

The Contractor will be expected to conduct studies and perform activities such as listed below:

- **Building Benchmarking:** Assist in development of the statewide building benchmarking program mandated under AB 802. Identify best practices in data collection, public reporting, metrics development and outreach. Develop methods to measure compliance with statewide building energy benchmarking regulations and conduct studies to determine the most effective program interventions to scale energy efficiency using building benchmarking as a component. Provide technical assistance, as needed, in development and implementation of the program.
- **Existing buildings evaluation and development of energy efficiency metrics:** Complete studies to characterize the existing building stock, including establishing baseline conditions and industry standard practices to determine and report efficiency potential for specific building types and assets. Identify, test, and document the most influential building characteristics and energy-related metrics to inform consumers about the relative performance of residential and nonresidential building energy use. Develop metrics and methods specific to distinct building sectors (e.g., educational facilities, retail, office, multifamily) and appropriate for multiple end users (e.g., public, program implementers, contractors, policy makers, forecasters). Methods developed and/or implemented should incorporate best practice statistical methods and building energy modeling approaches.
- **Data analysis to calculate meter-based energy savings:** Evaluate methodologies for collecting, analyzing and reporting meter based energy consumption and efficiency project savings. Use time series data analysis and other statistical methods to normalize energy consumption data, establish pre-upgrade baselines, identify baseline disturbances, and calculate savings from efficiency upgrades. Report on effectiveness and scalability of methods identified and/or developed, plus identify areas for improvement.
- **Existing Buildings Standards:** Conduct a study to identify barriers to compliance, evaluate compliance gaps and best practices, and provide recommendations for improving compliance. Based on findings develop recommendations including simplifying California's Building Energy Efficiency Standards (Standards) as they apply to existing residential and nonresidential buildings. The study may also include evaluating current compliance with the Standards and comparing methods across the U.S. applicable to existing buildings for potential simplifications.

## **Exhibit A Scope of Work**

- Enabling Investor confidence: Complete studies that document the financial risks associated with investing in energy efficiency projects; conduct gap analysis to determine barriers to private capital investments in energy efficiency.
- Existing building asset rating studies: Conduct studies to evaluate and identify California-appropriate asset rating and assessment methods, including key parameters to be included in low-touch, low-cost preliminary rating approaches.
- Valuing energy efficiency within the real estate market: Conduct literature reviews, market needs assessments and/or gap analyses to identify the most effective interventions needed to embed energy efficiency parameters within the real estate process. Evaluate and/or design training curriculums to value energy-related property assets within the real estate industry.
- Energy efficiency program assessment studies: Complete studies that review current energy efficiency programs to determine the most effective interventions for market transformation. Provide recommendations for program improvement and/or framework for new programs necessary for market transformation.

### **Deliverables:**

- The contractor will be expected to provide documentation of work carried out for the above task in the form of reports, spreadsheets, or other mediums as determined by the Contract Agreement Manager and specified in the appropriate Work Authorization.

### **Task 3: Existing Buildings Energy Savings Metrics and Analytics**

**(Expected Total Hours: 2480; Expected General Classifications: Analyst, Scientist, Engineer, Deputy Project Manager, Project Manager, Director, Principal)**

One goal of this task is to explore multiple options to communicate the effectiveness of existing buildings energy efficiency upgrade programs, and make recommendations for energy savings metrics for various building sectors and the analytical methods needed to compute these metrics.

The Action Plan places high importance on establishing effective, data-driven decision making. Consistent availability and access to the right kinds of information are foundational for market activation, monitoring progress, and determining the effectiveness of local, regional, and state initiatives. Property owners need access to data to manage their buildings from an informed position, and plan and scope improvements. Market agents must be able to leverage and analyze energy performance data to provide information to users and building owners about upgrade opportunities. The Energy Commission envisions its primary role to be a catalyst for a performance-driven market by enabling access to reliable, consistent data. The intent of this task is to exemplify these data-driven metrics, communications and information resources using data collected from other Energy Commission programs.

The Contractor will be expected to complete activities such as these listed below:

- Establish existing building energy use baselines for various building sectors:  
Establish building energy use baselines for California existing building stock at appropriate granular, geographic, building type, building sector, building vintage levels to track Action Plan and policy impacts.

## Exhibit A Scope of Work

Evaluate methodologies for collecting, analyzing and reporting meter based energy consumption to establish these baselines. Use time series data analysis and other statistical methods to normalize energy consumption data, establish pre-upgrade baselines, and identify baseline disturbances. Employ building science and building energy modeling as appropriate.

- Develop methods for energy use and efficiency savings analytics and visualizations:

Develop and standardize methodologies for analyzing energy consumption and other related data including, but not limited to, 1) methodologies for analyzing Advanced Meter Interval data, 2) building characteristics and building energy audit data; 3) evaluation of energy efficiency program data; 4) development of performance metrics. Utilize and leverage known methodologies for evaluation, measurement, and verification in the field of energy efficiency such as International Performance Measurement and Verification Protocols and weather normalization protocols.

Perform preliminary data analysis as needed to determine appropriate metrics to validate and communicate energy savings from K-12 school energy upgrade projects. Develop visualization approaches to demonstrate the energy saving and greenhouse gas reduction impacts of the Clean Energy Jobs Act.

- Identify and document data infrastructure needs for existing buildings programs, such as the Clean Energy Jobs Act for school energy use and efficiency savings analysis and reporting:

Work with the Energy Commission staff to establish the data infrastructure business needs of the Clean Energy Jobs Act program, and other existing buildings data infrastructure business needs, as needed. Focus the identification and documentation of business needs on the K-12 school energy use, efficiency project characterizations and energy savings components of the program.

### Deliverables:

- The contractor will be expected to provide documentation of work carried out for the above task in the form of reports, spreadsheets, or other mediums as determined by the Contract Agreement Manager and specified in the appropriate Work Authorization.

### SCHEDULE OF DELIVERABLES AND DUE DATES

Note: the deliverables listed for Task 2 and 3 are examples only. Actual deliverables will be specified in each Work Authorization.

Task Number	Deliverable	Due Date
<b>1</b>	<b>Agreement Management</b>	
1.1	Kickoff Meeting, including meeting notes and next steps summary	Summer 2016
1.2	Prepare Invoices	Monthly
1.3	Manage Subcontractors	Ongoing
1.4	Monthly Progress Reports	Monthly
<b>2</b>	<b>Market Analysis and Technical Support</b>	

**Exhibit A  
Scope of Work**

	Statewide Existing Building benchmarking compliance plan.	Spring 2017
	Home energy characteristics report.	Winter 2016
	Data analytics for calculating meter based savings.	Fall 2016
	Standards simplification for improved compliance report.	Summer 2017
	Energy asset rating options and metrics report.	Fall 2016
	Valuing EE in Real Estate analysis report.	Spring 2017
<b>3</b>	<b>Existing Buildings Energy Savings Metrics and Analytics</b>	
	Report on methods to establish K-12 school energy use baselines.	Fall 2016
	Report on methods for energy use and efficiency savings analytics and visualizations.	Winter 2016
	Needs assessment for program data infrastructure.	Fall 2016

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: NORESKO, LLC

**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 400-15-012 with NORESKO, LLC for a \$933,711 contract to perform technical support services for increasing energy efficiency in existing buildings, including building energy-use benchmarking; building energy science and energy modeling; measurement and verification of energy efficiency savings; energy consumption forecasts and demand analysis; the Building Energy Efficiency Standards and energy-related installation practices; and data standardization, security and accessibility; 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 14, 2016.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

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Cody Goldthrite,  
Secretariat