STATE OF CALIFORNIA

CONTRACT AMENDMENT REQUEST FORM (CARF)

CEC-276 (Revised 02/13) CALIFORNIA ENERGY COMMISSION

Original Agreement #	500-11-025	Amendment #	2

Division	Agreement Manager:	MS-	Phone
ERDD	Kiel Pratt	43	916-327-1412

Contractor's Legal Name	Federal ID Number
DOE- Lawrence Berkeley National Laboratory	94-2951741

Revisions: (check all that apply)

☒ Term Extension	New End Date: 9/30/2017	Include revised schedule and complete items A, B, C, D, & H below.
☒ Budget Augmentation	Amendment Amount: $ 500,000	Include revised budget and complete items A, B, C, D, E, F, & H below.
☒ Budget Reallocation		Include revised budget and complete items A, B, C, D, & H below.
☒ Scope of Work Revision		Include revised scope of work and complete items A, B, C, D, & H below.
☐ Change in Project Location or Demonstration Site		Include revised scope of work and complete items A, B, C, D, G, & H below.
☐ DVBE Replacement		Include revised scope of work and complete items A, B, C, D, F, & H below.
☐ Novation/Name Change of Prime Contractor/Recipient		Include novation documentation and complete items A, C, D, & H below.
☐ Terms and Conditions Modification		Include applicable exhibits with bold/underline/ strikeout and complete items A, B, C, D, & H below.

A) Business Meeting Information

Business Meeting approval is not required for the following types of Agreements:

☐ Operational agreement (see CAM Manual for list) to be approved by Executive Director

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

Proposed Business Meeting Date	11/12/2015	☐ Consent	☒ Discussion
Business Meeting Presenter	Kiel Pratt	Time Needed:	5 minutes

Please select one list serve. Select

Agenda Item Subject and Description

LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Amendment 2 to Contract 500-11-025 with the Department of Energy's Lawrence Berkeley National Laboratory to extend the term by 18 months to September 2017 to provide the full duration for data collection and analysis, to augment the budget by $500,000 for a total project budget of $1,500,000, and to modify the scope to add activities and deliverables commensurate with the added funding and time. This amendment will provide the vehicle-to-grid demonstration sufficient time and resources to collect all necessary data and complete the originally-planned full analysis. (ARFVTP funding) Contact: Kiel Pratt. (Staff presentation: 5 minutes)

B) Amendment Justification (For contract amendments only)

☐ Non Competitive Bid *(Attach CEC 96)*

☒ Exempt Other Governmental Entity

C) List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)

Legal Company Name:	Budget	SB	MB	DVBE
American Building Automation, Inc.	$ 50,000	☐	☐	☐
Kisensum Inc.	$ 100,000	☐	☐	☐

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

Legal Company Name:

E) Budget Information

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
ARFVT	14-15	601.118G	$500,000
			$
R&D Program Area: ESRO: ETSI		TOTAL:	$500,000
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

F) Disabled Veteran Business Enterprise Program (DVBE)

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

G) California Environmental Quality Act (CEQA) Compliance

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: 14 CCR 15301
   - ☒ Common Sense Exemption. 14 CCR 15061 (b) (3)

   Explain reason why Agreement is exempt under the above section:
   14 CCR 15301 Existing Facilities:
   This class includes minor alteration of existing public or private structures, facilities, or mechanical equipment, provided the minor alterations involve negligible or no expansion of use. The pilot demonstration site is a US Air Force base in urban Los Angeles. This Air Force has no airstrip and consists of several office buildings, parking structures, lawns, and paved areas. This proposed project is for the procurement of electric vehicles, software development, interconnection agreement negotiation, data collection, and reporting. The existing parking lot has already served as a parking lot for the base's vehicle fleet. The integration of electric vehicles will replace fossil-fueled vehicles in the fleet, rather than expand the fleet. Thus, there is no expansion of capacity associated with the proposed project. For these reasons, the proposed project falls within Section 15301.

   14 CCR 15061 (b) (3) Common Sense Exemption:
   The pilot demonstration activity, which is replacing a fossil-fueled vehicle fleet with a fleet of grid-responsive electric vehicles, as well as the software development and data collection and reporting activity, is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. In this case, there will be no point-source pollution emitted by the electric vehicles. Other work done will involve no physical construction and will consist only of computer modeling and other electronic work. For this reason, the proposed project falls within Section 15061(b)(3).

   ☐ 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

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

1. Exhibit A, Scope of Work	☐ N/A	☒ Attached
2. Exhibit B, Budget Detail	☐ N/A	☒ Attached
3. CEC 96, NCB Request	☒ N/A	☐ Attached
4. CEC 95, DVBE Exemption Request	☒ N/A	☐ Attached
5. CEQA Documentation	☐ N/A	☒ Attached
6. Novation Documentation	☒ N/A	☐ Attached
7. CEC 105, Questionnaire for Identifying Conflicts		☒ Attached

Agreement Manager	Date	Office Manager	Date	Deputy Director	Date

Exhibit A
SCOPE OF WORK

Title of project
Los Angeles Air Force Base Vehicle-to-Grid Demonstration

Background

The U.S. Department of Energy (DOE) has directed the Regents of the University of California to perform the work stated in this Exhibit A for the Energy Commission. Ernest Orlando Lawrence Berkeley National Laboratory (LBNL), a laboratory owned by the Department of Energy, is located at 1 Cyclotron Rd, Berkeley, CA 94720. The Regents of the University of California, a not-for-profit corporation organized under the laws of the State of California, with its principal place of business at 1111 Franklin St., Oakland, CA 94607, manages and operates LBNL under DOE Contract No. DE-AC02-05CH11231.

The California Energy Resources Conservation and Development Commission (Energy Commission) is an agency organized under the laws of the State of California with a principal place of business at 1516 Ninth Street, Sacramento, California 95814.

Problem Statement

The U.S. Department of Defense's (DOD's) effort to introduce non-tactical electric vehicles has begun at the Los Angeles Air Force Base (LAAFB), which will be replacing almost all its fleet with plug-in electric vehicles (PEVs). The U.S. Air Force is focused on two major objectives: a) to demonstrate a 100% all-electric, mixed–duty, non-tactical fleet at a DOD base; and b) to explore the vehicle-to-grid (V2G) revenue generating capability of such a fleet by participating as fully as possible in the California Independent System Operator's (CAISO's) ancillary services (AS) markets, particularly frequency regulation.

DOD funding provided under the Environmental Security Technology Certification Program (ESTCP) extends the demonstration to the synergistic combination of three established capabilities. These will mesh into a base PEV fleet manager and optimizer by extending existing fleet management tools, installing demand response automation server (DRAS) hardware and software and an OpenADR client to provide communication with CAISO for AS market participation and with Southern California Edison (SCE) for demand response (DR) program participation. Additionally, a subcontractor will apply LBNL's Distributed Energy Resource Customer Adoption Model (DER-CAM) as the back room optimizer providing optimal operating schedules, bids, etc.

Assembly Bill (AB) 118 (Nùñez, Chapter 750, Statutes of 2007), created the Alternative and Renewable Fuel and Vehicle Technology Program (Program). The statute, subsequently amended by AB 109 (Nùñez, Chapter 313, Statutes of 2008), authorizes the Energy Commission to, among other things, provide financial support for projects that:

- Decrease, on a full fuel cycle basis, the overall impact and carbon footprint of alternative and renewable fuels and increase sustainability;
- Expand fuel infrastructure, fueling stations, and equipment;
- Improve light-, medium-, and heavy-duty vehicle technologies; and
- Expand infrastructure connected with existing fleets, public transit, and transportation corridors.

To be eligible for funding, projects must also be consistent with the Program Investment Plan, updated annually.

Energy Commission Program funds, provided under the 2010-2011 Investment Plan category for Innovative Technologies, will support the overall LAAFB project in three major ways:

1. Energy Commission funds will finance the acquisition of at least four PEVs for use at the base.
2. These vehicles will be enhanced to provide two-way power flow for increased V2G capability.
3. The DR capabilities of the base's nearby buildings will be incorporated into the V2G demonstration, and the potential of wider base participation will be studied, and executed if feasible.

These additional elements will significantly add to the V2G potential of the test fleet, and will demonstrate that controlled vehicle charging can be integrated with local building loads to provide controlled DR services to the grid. The charge-discharge control system for the PEVs will be interfaced with the building energy management and control system (EMCS). Subsequent analysis will estimate the benefits of such a system, and the project will provide the necessary software capabilities for DOD to deploy grid-friendly PEV fleets integrated with nearby buildings at its other California installations.

Technical and economic/cost performance objectives

A. The overall technical goal of this project is to provide additional V2G capable vehicles to the LAAFB demonstration, and to establish an integrated PEV-building capability able to jointly participate in SCE and CAISO AS markets and programs.

   The specific, technical objectives upon which this project's success will be evaluated are:

   - At least four PEVs will be procured
   - These vehicles will be retrofitted with bidirectional charge-discharge capability
   - All these vehicles will be integrated into the LAAFB test fleet

- An interface between the fleet management software and the building EMCS will be built and implemented
- The capabilities of enabled buildings will be added to the optimization algorithms controlling the charging and discharging of vehicles, as well as to the selection of program participation and bidding
- The integrated system will be run for at least 6 months for data collection
- Results will be analyzed, reported, and published in the open literature

B. The overall economic/cost goal of this project is to maximize the revenue stream possible by integrating the PEV fleet with nearby building EMCS.

The specific, economic/cost objectives upon which project's success will be evaluated are:

- Maximizing revenue from participation in AS markets
- Approaching cost parity between PEV and traditional fleets

1.0 Preliminary Activities

1.1 Attend Kick off Meeting

The Facility Operator's Project Manager (Principal Investigator) shall attend a "kick off" meeting with the Commission Contract Manager to review the Energy Commission's expectations for: accomplishing tasks described in the work statement; administrative requirements in the terms and conditions of the contract (e.g., invoicing, statements vesting title, prior approvals, data disclosure limitations, quarterly progress reporting format and content, etc.); and the Energy Commission's roles and responsibilities. The location of this meeting shall be designated by the Commission Contract Manager.

1.2 Describe Synergistic Projects

Documentation of synergistic project value assessments will be received, reviewed and approved in writing by the Commission Contract Manager before: 1) any Program funds under this contract are disbursed, and 2) Program-funded work on Technical Tasks may begin.

Provide the following information about the synergistic projects that will enhance information and technology exchanges with this project:

- Assessed value of each synergistic project.

- Title, contact name, address and telephone number for each identified synergistic project.

- Written concurrence from each technical manager of the identified synergistic projects that information and technology derived from the

synergistic project is unrestricted and available for exchange and collaboration in conjunction with this project.

1.3 Identify Required Permits

Prepare and submit to the Commission Contract Manager a list of all permits required for construction and/or operation of equipment or the project facility, the name, address and telephone number of the permitting agencies, and the schedule the Facility Operator will follow in applying for and obtaining these permits.

If no permits are required to conduct this project, state this finding.

1.4 Obtain Required Permits

Facility Operator will supply written certification that Facility Operator has received all necessary and required permits to construct, operate, or test the proposed equipment or facility as soon as they are received. During this project, the Facility Operator shall comply with all applicable laws, ordinances, regulations and standards. If the Facility Operator is required to obtain permits specifically for performance of this Agreement, and such permit expenses are not being reimbursed through another Agreement, such permit expenses shall be separately identified as a cost and shall be reimbursable by the Energy Commission.

1.5 Prepare Production Readiness Plan

A Production Readiness Plan is not applicable to this project.

TECHNICAL TASKS

GLOSSARY

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

AS	ancillary services
CAISO	California Independent System Operator
CERTS	Consortium for Electric Reliability Solutions
CPR	Critical Project Review
DER-CAM	Distributed Energy Resources Customer Adoption Model
DOD	Department of Defense

DOE	Department of Energy
DR	demand response
DRAS	demand response automated server
DR+AS	demand response + ancillary services
EMCS	energy management and control system
Energy Commission	California Energy Resources Conservation and Development Commission
ESTCP	Environmental Security Technology Certification Program
LAAFB	Los Angeles Air Force Base
LBNL	Ernest Orlando Lawrence Berkeley National Laboratory
OE	DOE's Office of Electricity Delivery and Energy Reliability
PEV	plug-in electric vehicle
PIER	Public Interest Energy Research
Program	Alternative and Renewable Fuel and Vehicle Technology Program
SCE	Southern California Edison
V2G	"Vehicle-to-grid," general term for direct interactions between PEVs and the grid, i.e., not via buildings or a microgrid.

SCOPE OF WORK

This agreement includes a set of administrative tasks and a set of Technical Tasks. The remainder of this work statement defines these Technical Tasks. Task descriptions include goals, Contractor activities, and deliverables. The deliverables, such as test plans, technical reports and other interim deliverables, for each task are defined to the extent possible, but are subject to change based on recommendations from the Project Manager and the approval of the Commission Contract Manager. The Contractor shall submit a draft of each deliverable, unless described differently in the Technical Tasks, to the Commission Contract Manager for review and comment in accordance with the approved Schedule of Deliverables. Deliverables not requiring a draft version are indicated by marking "(no draft)" after the deliverable name.

The Commission Contract Manager will provide written comments back to the Contractor on the draft deliverable within 10 working days of receipt. Once agreement has been reached on the draft, the Contractor shall submit the final deliverable to the Commission Contract Manager. The Commission Contract Manager shall provide written approval of the final deliverable within 5 working days of receipt. Key elements from this deliverable shall be included in the Final Report for this project.

When creating technical deliverables, the Facility Operator shall use and follow, unless otherwise instructed in writing by the Commission Contract Manager, the latest version

of the Public Interest Energy Research (PIER) Style Manual published on the Energy Commission's web site:

http://www.energy.ca.gov/contracts/pier/contractors/index.html

Technical Task List

Task 2.1	Project Coordination and PEV Procurement
Task 2.2	PEV Bidirectional Upgrade
Task 2.3	EMCS Upgrade & Analysis
Task 2.4	Fleet Management Software to EMCS Interface
Task 2.5	DER-CAM Enhancement
Task 2.6	Benefits Analysis

Task 2.1 Project Coordination and PEV Procurement
The goals of this task are to manage the project within the tight timeline imposed by the interrelation of this project and the ESTCP-funded and DOD efforts, and to procure at least four PEVs for the project.

The Contractor shall:

- Manage subcontractors to ensure timely completion of project deliverables
- Schedule and attend weekly meetings at LBNL with project partners to discuss ongoing progress and resolve any issues that come up in a timely manner
- Act as liaison to the LAAFB and other ESTCP partners, Bosch and Akuacom, and subcontractors, e.g. buildings data monitoring equipment installers
- Supervise development of a detailed work plan and budgets
- Coordinate with LAAFB and ESTCP projects, e.g. participate in weekly DOD conference calls covering the entire project
- Prepare and submit a lease/purchase analysis for the procurement of PEVs, following the requirements of sections 3700 et seq. of the California State Administrative Manual.
- Identify a lessor or seller for the necessary vehicles
- Procure at least four PEVs, using a procurement method justified under the lease/purchase analysis
- Supervise project reporting

Deliverables:

- Periodic reporting as required by Energy Commission staff (no draft)
- Lease/purchase analysis

Task 2.2 PEV Bidirectional Upgrade
The goal of this task is to retrofit the procured vehicles with the ability to discharge according to commands from the fleet management software as well as to charge.

The Contractor shall:

- Retrofit as many of the acquired vehicles as feasible, based on time and budget constraints, with bidirectional power flow capability
- Deliver the V2G capable vehicles to LAAFB
- Prepare a Task 2.2 Report describing and confirming work done under this task
- Present a summary of work performed in this task to Energy Commission staff
- Participate in a CPR

Deliverables:

- Task 2.2 Report
- Copy of presentation to Energy Commission staff (no draft)
- CPR Report

Task 2.3 EMCS Upgrade and Analysis

The goals of this task are to upgrade the EMCS and deploy DR capability in LAAFB buildings as feasible, and to assist with a wider analysis of LAAFBs DR capability.

The Contractor shall:

- Analyze the DR potential and deploy DR capability in LA AFB buildings.
- Prepare a Task 2.3 Report identifying buildings with DR capability and confirming upgrade of EMCS
- Present a summary of the Task 2.3 Report to Energy Commission staff
- Support the EMCS throughout the demonstration and data collection period
- Participate in a CPR

Deliverables:

- Task 2.3 Report
- Copy of presentation to Energy Commission staff (no draft)
- CPR Report

Task 2.4 Fleet Management Software to EMCS Interface

The goal of this task is to establish interfaces between the PEV fleet management software suite and the EMCS platforms currently installed at LAAFB.

The Contractor shall:

- Develop interface capability between the fleet management software and the EMCS
- Send operating schedules to the EMCS for building load control
- Operate the integrated fleet management software-EMCS system for the duration of the project
- Extend the system to include other buildings as needed, and to the extent practical, based on time and budget constraints
- Prepare a Task 2.4 Report on the work done to establish interface capability, issues encountered, and how they were resolved.

- Present a summary of the Task 2.4 Report to Energy Commission staff

Deliverables:
- Task 2.4 Report
- Copy of presentation to Energy Commission staff (no draft)

Task 2.5 DER-CAM Enhancement
The goal of this task is to extend the capabilities of the DER-CAM to enable scheduling of DR resources and their integration into AS+DR program choice and bidding.

The Contractor shall:
- Analyze the historic data for DR-capable LAAFB buildings
- Extend DER-CAM to schedule DR resources
- Implement capability for as many buildings as is practical, based on time and budget constraints
- Run integrated optimizations including the PEV fleet and DR resources
- Participate in AS+DR markets to achieve maximum base revenue
- Operate the optimization scheme for the duration of the project
- Prepare DER-CAM software capabilities for wider DOD deployment
- Prepare a Task 2.5 Report on the extension of capabilities of the DER-CAM
- Present a summary of the Task 2.5 Report to Energy Commission staff
- **Analyze uncertainty of DER-CAM input variables and impact on outputs**
- **Use uncertainty analysis to improve DER-CAM optimization and control algorithms**

Deliverables:
- Task 2.5 Report **including uncertainty analysis and DER-CAM enhancements**
- Copy of presentation to Energy Commission staff (no draft)

Task 2.6 Benefits Analysis
The goal of this task is to evaluate the overall benefits of the PEV project to the LAAFB and the wider military sector.

The Contractor shall:
- Collect data for a minimum of ~~six~~ **12** months on:
  - the performance of the modified PEVs
  - the performance of the combined PEV-DR grid participation
  - benefits from AS+DR in California
  - **impacts of AS participation on battery capacity**
- Analyze the performance of the modified PEVs
- Evaluate the performance of the combined PEV-DR grid participation
- Provide estimates on potential job creation, economic development, and increased state and DOD revenue as a result of the project and of broader PEV deployment with DR integration.

- Provide a quantified estimate of the project's carbon intensity values for life-cycle greenhouse gas emissions.
- To the extent possible, describe how the project provided a measurable transition from the nearly exclusive use of petroleum fuels to a diverse portfolio of viable alternative fuels that meets California's petroleum reduction and alternative fuel use goals.
- Describe how the project incorporated and achieved the Program's sustainability goals (20 CCR 3101.5).
- Compare any project performance and expectations anticipated at the beginning of the agreement with actual project performance and accomplishments.
- Provide DOD recommendations for PEV deployment with DR integration
- Include all of the above information in a comprehensive Benefits Report for the project.

Deliverables:
- Benefits Report

Task 3.0 Reporting Tasks

All reports shall be delivered to:

Accounting Office, MS-2
California Energy Commission
1516 9th Street, 1st Floor
Sacramento, CA 95814

Task 3.1 Quarterly Progress Reports

The Contractor shall prepare written Quarterly Progress Reports to the Commission Contract Manager by the 30th of the following month, starting after the Department of General Service's contract approval date and shall continue each quarter until the Final Report has been accepted by the Commission Contract Manager. The progress report should 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.

Task 3.2 Final Report

The Final Report shall be a public document. If the Contractor will be preparing a confidential version of the final report as well, the Contractor shall perform the following tasks for both the public and confidential versions of the Final Report. When creating the Final Report, the Facility Operator shall use and follow, unless otherwise instructed in writing by the Commission Contract Manager, the latest version of the PIER Style Manual published on the Energy Commission's web site:

http://www.energy.ca.gov/contracts/pier/contractors/index.html

The Final Report must be submitted on or before the end date of this agreement.

The Final Report will include a stand-alone chapter presenting best practices that California military base fleet managers can use as a resource for implementing and operating V2G, smart charging, vehicle-to-building, and/or other capabilities at bases that are adopting PEVs.

Subtask 3.2.1 Final Report Outline

- Contractor shall prepare and submit to the Commission Contract Manager for review an outline of the Final Report describing the original purpose, approach and results of the project.

- The outline shall be submitted to the Commission Contract Manager for review. The Commission Contract Manager shall determine if the outline is satisfactory. If the Commission Contract Manager determines that the outline is unsatisfactory, he or she will, in a timely manner, provide to the Contractor written comments, which indicate how the outline can be improved. The Contractor shall revise the outline to meet the Commission Contract Manager's requirements. Upon finding the final report outline satisfactory, the Commission Contract Manager shall provide to the Contractor written approval of it.

Subtask 3.2.2 Draft Final Report for Comment

- The Contractor shall prepare and submit to the Commission Contract Manager a draft Final Report on the project. The format of the report shall follow the approved outline.
- The draft final report shall be submitted to the Commission Contract Manager for review and to determine, in a timely manner, if it is satisfactory. If the Commission Contract Manager determines that it is unsatisfactory, he or she will, provide to the Contractor written comments, which indicate how it can be improved. The Contractor shall revise the draft final report incorporating the Commission Contract Manager's corrections and required changes. Upon finding the revised draft to be satisfactory, the Commission Contract Manager shall provide to the Contractor written approval of it.

Subtask 3.2.3 Final Report

- The Contractor shall prepare Final Report and submit it to the Commission Contract Manager after receiving the Commission Contract Manager's written approval of the draft Final Report. This task shall be deemed complete and accepted by the Commission only when the Commission Contract Manager

approves the Final Report in writing. Upon approval, the Contractor shall submit two unbound copies of the Final Report to the Commission Contract Manager.

Task 3.3 Final Meeting

Contractor shall meet with the Commission Contract Manager to present findings, conclusions, and recommended next steps (if any) for the project. The Final Meeting shall be held on or before the end date of the agreement.

Contractor will also discuss with the Commission Contract Manager the following contract close-out items:

- What to do with any state-owned equipment (Options), if applicable
- Commission's request for specific "generated" data (not already provided in contract deliverables)
- Other "surviving" contracts provisions.

Critical Project Reviews

The Energy Commission will conduct critical project reviews at the conclusion of the following tasks:

- 2.2
- 2.3

Critical project reviews are meetings between the Facility Operator, the Energy Commission Contract Manager and other individuals selected by the Commission Contract Manager to provide objective, technical support to the Energy Commission. The purpose of these meetings to discuss with the Facility Operator the status of the project and its progress toward achieving its goals and objectives. These meetings may take place at the Energy Commission offices in Sacramento, or at another, reasonable location determined by the Commission Contract Manager.

Prior to the critical project review meeting, the Facility Operator will provide the task deliverable(s) to the Commission Contract Manager sufficiently in advance to allow the Contract Manager's review of the deliverable document(s) before the review meeting. If not already defined in the Work Statement, the Commission Contract Manager shall specify the contents of the deliverable document(s).

At the project review meeting, the Facility Operator shall present the required technical information and participate in a discussion about the project with the Commission Contract Manager and other meeting attendees, if any.

Following the project review meeting, the Energy Commission will determine whether the Facility Operator is complying satisfactorily with the Work Statement and whether the project is demonstrating sufficient progress toward achieving its goals and

objectives to warrant continued Program financial support for the project.

Sponsor's Key personnel and Agreement Management

A. The name and area code/phone number of the California Energy Commission's Contract Manager is listed on Exhibit F and is the official technical contact for the Energy Commission.

   The Sponsor's Contract Manager is responsible for the day to day project status, decisions and communications with the Facility Operator Project Manager (Principal Investigator). The Commission Contract Manager will review and approve all project deliverables, reports, and invoices.

   The Sponsor may change the Contract Manager by notice given to the Facility Operator at any time signed by the Contract Officer of the Energy Commission.

B. The name and area code/phone number of the California Energy Commission's Contract Officer is listed on Exhibit F and will be the Contract Officer for the Agreement and is the official administrative contact for the Energy Commission.

Facility Operator's Key Personnel and Agreement Administration

The Facility Operator is obligated to comply with the terms and conditions of its Management and Operating (M&O) Contract with the DOE when performing work under this agreement. The DOE may require substitution of the named "key personnel" under this agreement should the DOE determine that the services of the Project Manager (Principal Investigator) or other named key personnel are necessary to meet the Facility Operator's M&O Contract obligations to the DOE. Should the DOE direct the Facility Operator to substitute the named key personnel under this agreement, the Facility Operator shall inform the Energy Commission of the directed substitution in accordance with paragraphs A and B below. In the event that the Energy Commission does not concur with the substitution of named key personnel as directed by the DOE, this agreement shall be terminated in accordance with the Termination provision of the terms and conditions.

A. The name and area code/phone number of the National Laboratory's Project Manager (Principal Investigator) is on Exhibit F and will be the Project Manager (Principal Investigator) for this project and is the official technical contact for Ernest Orlando Lawrence Berkeley National Laboratory.

   The Facility Operator's Project Manager (Principal Investigator) is responsible for the day to day project status, decisions, and communications with the Sponsor's Contract Manager. The Facility Operator's Project Manager (Principal Investigator) will review and approve all project deliverables and reports.

   The Facility Operator's Project Manager (Principal Investigator) is designated as

"key personnel" under the Agreement. The Energy Commission reserves the right to prior written concurrence of any substitution of the Project Manager (Principal Investigator).

B. The key personnel are listed on Exhibit F in this agreement.

Facility Operator's key personnel may not be substituted without the Commission Contract Manager's prior written concurrence. Such concurrence shall not be unreasonably withheld. All other personnel may be substituted by Facility Operator, with written notification made to the Commission Contract Manager.

C. The name and area code/phone number of National Laboratory Agreement Administrator is on Exhibit F and will be the Agreement Administrator for this Agreement and is the official administrative contact for Ernest Orlando Lawrence Berkeley National Laboratory.

Facility Operator's key subcontractors

The Facility Operator's key subcontractors are listed on Exhibit F in this agreement.

Facility Operator's key subcontractors may not be substituted without the Commission Contract Manager's prior written concurrence. Such concurrence shall be timely provided and not unreasonably withheld. Delay in written concurrence may result in a work stoppage of subcontract work. All other subcontractors may be substituted by Facility Operator, with written notification made to the Commission Contract Manager.

RESOLUTION NO: 15-1112-10

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: DEPARTMENT OF ENERGY'S LAWRENCE BERKELEY NATIONAL LABORATORY

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 Amendment 2 to Contract 500-11-025 with Department of Energy's Lawrence Berkeley National Laboratory to extend the term by 18 months to September 2017 to provide the full duration for data collection and analysis, to augment the budget by $500,000 for a total project budget of $1,500,000, and to modify the scope to add activities and deliverables commensurate with the added funding and time. This amendment will provide the vehicle-to-grid demonstration sufficient time and resources to collect all necessary data and complete the originally-planned full analysis; 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 November 12, 2015.

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

Tiffani Winter,
Secretariat