

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

New Agreement EPC-17-026 (To be completed by CGL Office)

ERDD	Bethany Brown	43	916-327-3315
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Lawrence Berkeley National Laboratory	94-2951741
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Accelerating the Adoption of EVs as DERs through Fleet Procurement

4/16/2018	12/31/2021	\$ 1,000,000
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☐ ARFVTP agreements under \$75K delegated to Executive Director.Proposed Business Meeting Date 3/21/2018 ☐ Consent ☒ Discussion

Business Meeting Presenter Nicholas Blair Time Needed: 5 minutes

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

**Agenda Item Subject and Description**

LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving agreement EPC-17-026 with the U.S. Department of Energy's Lawrence Berkeley National Laboratory for a \$1,000,000 grant to adapt LBNL's MyGreenCar technology to create and launch the MyFleetBuy fleet procurement system. MyFleetBuy will help reduce the risks and uncertainties for fleet managers in procuring electric vehicles and smart charging infrastructure. As part of this project, the recipient will conduct a large-scale pilot of the MyFleetBuy platform with several city, county and state fleets. LBNL will incorporate feedback from the pilot fleet managers in preparation for the platform's full-scale launch in California.

1. Is Agreement considered a "Project" under CEQA?

☒ Yes (skip to question 2)☐ No (complete the following (PRC 21065 and 14 CCR 15378)):

Explain why Agreement is not considered a "Project":

Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because

2. If Agreement is considered a "Project" under CEQA:

☒ a) Agreement **IS** exempt. (Attach draft NOE)☐ Statutory Exemption. List PRC and/or CCR section number: \_\_\_\_\_☒ Categorical Exemption. List CCR section number: Cal. Code Regs., tit 14, § 15306☐ Common Sense Exemption. 14 CCR 15061 (b) (3)

Explain reason why Agreement is exempt under the above section:

Cal. Code Regs., tit. 14, sec. 15306 applies to projects which consist of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. In this project, fleet telematics data will be collected by small, temporary, devices approximately the size of a hockey puck that would be placed on the dashboards of existing vehicles. All other project activities are strictly related to data analysis and software development, and will involve no physical construction. After the research is completed, the devices will either continue to be used by local entities or be retrieved. Therefore, the project will not have a significant effect on the environment and falls within section 15306.

☐ 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

[illegible]

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

Legal Company Name:

**Budget Information**

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

**Recipient's Administrator/ Officer**

Name:	Betsy Quayle	Name:	Samveg Saxena
Address:	1 Cyclotron Rd MS 56A-0120	Address:	1 Cyclotron Rd MS 56A-0120
City, State, Zip:	Berkeley, CA 94720-0001	City, State, Zip:	Berkeley, CA 94720-0001
Phone:	510-486-7391 /	Fax:	- -
E-Mail:	BEQuayle@lbl.gov	E-Mail:	ssaxena@lbl.gov

**Selection Process Used**

- ☒ Competitive Solicitation      Solicitation #: GFO-17-301  
☐ First Come First Served Solicitation

**The following items should be attached to this GRF**

- |   |   |                                   |
|---|---|-----------------------------------|
| 1. Exhibit A, Scope of Work                         | <input checked="" type="checkbox"/>     | Attached                          |
| 2. Exhibit B, Budget Detail                         | <input checked="" type="checkbox"/>     | Attached                          |
| 3. CEC 105, Questionnaire for Identifying Conflicts | <input checked="" type="checkbox"/>     | Attached                          |
| 4. Recipient Resolution                             | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 5. CEQA Documentation                               | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |

Agreement Manager

Date

Office Manager

Date

Deputy Director

Date

**Exhibit A**  
**Scope of Work**  
**Lawrence Berkeley National Laboratory**

**I. TASK ACRONYM/TERM LISTS**

**A. Task List**

<b>Task #</b>	<b>CPR<sup>1</sup></b>	<b>Task Name</b>
1		General Project Tasks
2	X	Fleet Data Analytics
3		Data Logger Systems Development
4	X	MyFleetBuy Software Systems Development and Integration
5		Case Study with Fleet Pilot Testing, Feedback, and Troubleshooting
6		Evaluation of Project Benefits
7		Technology/Knowledge Transfer Activities
8		Production Readiness Plan

**B. Acronym/Term List**

<b>Acronym/Term</b>	<b>Meaning</b>
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CPR	Critical Project Review
EO	Executive Order
EPIC	Electric Program Investment Charge
EV	Electric Vehicle
GHG	Greenhouse Gas
Recipient	Lawrence Berkeley National Laboratory
SB	Senate Bill
TAC	Technical Advisory Committee
ZEV	Zero Emissions Vehicle

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

**A. Purpose of Agreement**

The purpose of this Agreement is to fund the creation and launch of MyFleetBuy, a fleet procurement system and online portal, to help accelerate the adoption of Electric Vehicles (EVs) and smart charging through procurement at corporate and government fleets across California. This project advances the goals of the Electric Program Investment Charge (EPIC) Strategic Objective S19 and Funding Initiatives 19.1 and 19.2 of the EPIC 2015-2017 Triennial Investment Plan by giving fleet buyers a tool to reduce the risk and uncertainty of procuring EVs and smart charging. For fleet managers, MyFleetBuy will provide clarity on the cost savings

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<sup>1</sup> Please see subtask 1.3 in Part III of the Scope of Work (General Project Tasks) for a description of Critical Project Review (CPR) Meetings.

## **Exhibit A**

### **Scope of Work**

#### **Lawrence Berkeley National Laboratory**

offered by EVs and smart charging, and verify the range viability of EVs for the fleets' duty cycles.

#### **B. Problem/ Solution Statement**

##### **Problem**

Corporate and government fleets across California operate hundreds of thousands of vehicles. Fleet managers face a dilemma—is it worth it or even practical to buy EVs? Fleet managers need to know: How long will it take to pay off the higher upfront costs from the energy savings? What will our fleets' operating costs be with EVs versus other cars? Will range and longer recharge time be a problem for our fleet duty cycles? How many chargers do we need to buy, of what kind, and where should they be installed? How much will we save with smart charging stations rather than uncontrolled chargers? What incentives are available?

These uncertainties create formidable barriers for fleet managers making purchasing decisions and inhibit market pull of EVs. Too often fleet managers stay with conventional vehicles, the familiar choice. The tailpipe emissions from these conventional vehicles is especially impactful on disadvantaged communities, as corporate and government fleets across California operate vast numbers of vehicles across Senate Bill (SB) 535 disadvantaged communities. The longer these uncertainty barriers to EV adoption remain, the less likely California will be to achieve the Governor's Zero Emissions Vehicle (ZEV) Mandate and the fleet procurement targets set forth under Governor's Executive Order (EO) B-16-12.

##### **Solution**

MyFleetBuy will mitigate the risks and uncertainties for fleet managers to increase adoption of EVs and smart charging. This will bring economic benefits to corporate and government fleets, increased grid reliability, and decreased greenhouse gas (GHG) emissions for California overall.

Consistent with EPIC Strategic Objective S19 and Funding Initiatives 19.1 and 19.2, this project will give fleet buyers a tool to reduce the risk and uncertainty of procuring EVs and smart charging. For fleet managers, MyFleetBuy will provide clarity on the cost savings offered by EVs and smart charging, and verify the range viability of EVs for the fleets' own duty cycles. High resolution data on individual fleet vehicle duty cycles will be collected with low-cost stick-on in-vehicle data loggers. These data loggers will measure driving distances, traffic, terrain, driving style, and more, of existing fleet vehicles. The vehicle duty cycles will be fed through sophisticated vehicle physics models to allow fleet managers to compare current fuel costs against those in any conventional, hybrid, or EV being considered for their fleet. The cost savings of EVs and smart charging will be highlighted through a web portal that allows fleet managers to think through the implications of any vehicle being deployed within their fleet. The government fleet pilot partners in this project collectively operate over 3,500 vehicles in or near SB 535 disadvantaged communities. By alleviating the fleet managers' procurement dilemma and increasing EV adoption, this project will lead to substantial benefits for disadvantaged communities through lower vehicle tailpipe emissions.

## Exhibit A Scope of Work Lawrence Berkeley National Laboratory

### C. Goals and Objectives of the Agreement

#### Agreement Goals

The goal of this Agreement, consistent with the goals of EPIC Objective S19 and Initiatives 19.1-19.2, is to develop a scalable procurement-analytics system and online portal, called MyFleetBuy, that can substantially increase the adoption of EVs and smart charging through increased use of EVs in fleet procurement across California.

#### Ratepayer Benefits:<sup>2</sup>

This Agreement will result in the ratepayer benefits of greater electricity reliability, increased safety, and lower costs. **Greater reliability** of utility distribution systems will be achieved by encouraging fleet procurement of EVs with smart charging instead of uncontrolled charging. The shift toward EVs with smart charging will help to mitigate excessive demands at fleet charging hubs, thereby avoiding local grid faults, transformer overloading, and excessive voltage deviations. **Increased safety** will be achieved by guiding fleet managers towards vehicle procurements that truly meet their fleet's needs, thereby avoiding situations where drivers become stranded from running out of charge in EVs. **Lower costs** will be achieved for business customers and for ratepayers overall. By encouraging fleet procurement of EVs with smart charging, fleet entities will minimize expensive demand charges and maximize charging during periods where time-of-use rates are lower. The operating costs for fleet entities will also be substantially lower given that typical EV fueling costs are  $\frac{1}{4}$  to  $\frac{1}{2}$  of comparable conventional cars. With increasing EV adoption, there is potential to lower costs for ratepayers overall, as off-peak charging allows the fixed costs of maintaining reliability of utility distribution systems to be spread over more units of output.

The project includes match contributions equivalent to nearly \$1.78M from partners Caltrans, Alameda County, and the City of Oakland, who collectively operate over 3,500 vehicles within or near SB 535 disadvantaged communities. These three pilot partners will see estimated direct benefits from this project of nearly 1,000 additional EVs deployed in their fleets, resulting in nearly 30 million pounds of avoided CO<sub>2</sub> emissions, and cumulative cost savings of over \$1.1M, while facilitating the partner fleets' ability to meet the procurement targets set forth within the Governor's Executive Order (EO) B-16-12. When scaled to corporate and government fleets across California this project paves the way for nearly 5 billion pounds of avoided CO<sub>2</sub> emissions and cost savings of over \$200M. By promulgating the use of smart charging versus uncontrolled charging by fleets across California, this project will preserve greater reliability of grid systems by helping avoid as much as 1.1 gigawatts (GW) of electricity demand during peak hours.

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<sup>2</sup> California Public Resources Code, Section 25711.5(a) requires projects funded by EPIC to result in ratepayer benefits. The California Public Utilities Commission, which established the EPIC in 2011, defines ratepayer benefits as greater reliability, lower costs, and increased safety (See CPUC "Phase 2" Decision 12-05-037 at page 19, May 24, 2012, [http://docs.cpuc.ca.gov/PublishedDocs/WORD\\_PDF/FINAL\\_DECISION/167664.PDF](http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF)).

## **Exhibit A**

### **Scope of Work**

#### **Lawrence Berkeley National Laboratory**

Technological Advancement and Breakthroughs:<sup>3</sup> This Agreement will lead to technological advancement and breakthroughs to overcome barriers to the achievement of the State of California's statutory energy goals. As fleet managers make procurement decisions, the current perceived risks and uncertainties associated with EVs often lead them to stick with conventional vehicles, increasing operating costs and tailpipe emissions. By developing and launching a scalable procurement-analytics system, called MyFleetBuy, this Agreement will substantially increase the adoption of EVs and smart charging through fleet procurement across California.

Building on Lawrence Berkeley National Laboratory's MyGreenCar technology, the project team will develop and launch the MyFleetBuy procurement analytics system to accelerate fleet procurement of EVs and smart charging. MyFleetBuy will raise fleet managers' awareness of EVs while mitigating the risks and uncertainties that inhibit their adoption of EVs. MyFleetBuy will (1) collect high-resolution data on individual fleet vehicles, including driving distances, traffic, terrain, and driving style, using low-cost data loggers, (2) analyze these data using sophisticated vehicle physics models, and (3) provide fleet managers with a decision-support tool to compare fuel costs of conventional, hybrid, or electric vehicles; compare overall operating costs for all vehicles; and, for EVs, calculate the difference in costs of uncontrolled vs. smart charging.

#### **Agreement Objectives**

The objectives of this Agreement are to:

- Adapt MyGreenCar's consumer-facing systems to create the MyFleetBuy fleet procurement system;
- Conduct pilot testing with several city, county, and state fleets, involving thousands of vehicles and data analysis of tens of millions of miles of travel;
- Refine MyFleetBuy based on feedback from pilot fleet managers;
- Conduct case studies to quantify MyFleetBuy's impact on accelerating procurement of EVs and smart charging;
- Launch and scale-out MyFleetBuy for use by all corporate and government fleets across California, to capture broader statewide benefits in terms of energy savings and GHG reductions, increased grid reliability, and lower costs for fleet entities and ratepayers overall.

### **III. TASK 1 GENERAL PROJECT TASKS**

#### **PRODUCTS**

##### **Subtask 1.1 Products**

The goal of this subtask is to establish the requirements for submitting project products (e.g., reports, summaries, plans, and presentation materials). Unless otherwise specified by the Commission Agreement Manager (CAM), the Recipient must deliver products as required below

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

## **Exhibit A**

### **Scope of Work**

#### **Lawrence Berkeley National Laboratory**

by the dates listed in the **Project Schedule (Part V)**. Products that require a draft version are indicated by marking “**(draft and final)**” after the product name in the “Products” section of the task/subtask. If “(draft and final)” does not appear after the product name, only a final version of the product is required. With respect to due dates within this Scope of Work, “**days**” means working days.

#### **The Recipient shall:**

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

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

##### For products that require a final version only

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

##### For all products

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

##### Instructions for Submitting Electronic Files and Developing Software:

###### ○ **Electronic File Format**

- Submit all data and documents required as products under this Agreement in an electronic file format that is fully editable and compatible with the Energy Commission’s software and Microsoft (MS)-operating computing platforms, or with any other format approved by the CAM. Deliver an electronic copy of the full text of any Agreement data and documents in a format specified by the CAM, such as memory stick or CD-ROM.

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

- Data sets will be in MS Access or MS Excel file format (version 2007 or later), or any other format approved by the CAM.
- Text documents will be in MS Word file format, version 2007 or later.
- Documents intended for public distribution will be in PDF file format.
- The Recipient must also provide the native Microsoft file format.

## **Exhibit A**

### **Scope of Work**

#### **Lawrence Berkeley National Laboratory**

- Project management documents will be in Microsoft Project file format, version 2007 or later.
- **Software Application Development**

Use the following standard Application Architecture components in compatible versions for any software application development required by this Agreement (e.g., databases, models, modeling tools), unless the CAM approves other software applications such as open source programs:

  - Microsoft ASP.NET framework (version 3.5 and up). Recommend 4.0.
  - Microsoft Internet Information Services (IIS), (version 6 and up) Recommend 7.5.
  - Visual Studio.NET (version 2008 and up). Recommend 2010.
  - C# Programming Language with Presentation (UI), Business Object and Data Layers.
  - SQL (Structured Query Language).
  - Microsoft SQL Server 2008, Stored Procedures. Recommend 2008 R2.
  - Microsoft SQL Reporting Services. Recommend 2008 R2.
  - XML (external interfaces).

Any exceptions to the Electronic File Format requirements above must be approved in writing by the CAM. The CAM will consult with the Energy Commission's Information Technology Services Branch to determine whether the exceptions are allowable.

#### **MEETINGS**

##### **Subtask 1.2 Kick-off Meeting**

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

##### **The Recipient shall:**

- Attend a "Kick-off" meeting with the CAM, the Commission Agreement Officer (CAO), and any other Energy Commission staff relevant to the Agreement. The Recipient will bring its Project Manager and any other individuals designated by the CAM to this meeting. The administrative and technical aspects of the Agreement will be discussed at the meeting. Prior to the meeting, the CAM will provide an agenda to all potential meeting participants. The meeting may take place in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

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

- Terms and conditions of the Agreement;
- Administrative products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Match fund documentation (subtask 1.7);
- Permit documentation (subtask 1.8);
- Subcontracts (subtask 1.9); and
- Any other relevant topics.

## **Exhibit A**

### **Scope of Work**

#### **Lawrence Berkeley National Laboratory**

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

- The CAM's expectations for accomplishing tasks described in the Scope of Work;
  - An updated Project Schedule;
  - Technical products (subtask 1.1);
  - Progress reports and invoices (subtask 1.5);
  - Final Report (subtask 1.6);
  - Technical Advisory Committee meetings (subtasks 1.10 and 1.11); and
  - Any other relevant topics.
- Provide an *Updated Project Schedule*, *List of Match Funds*, and *List of Permits*, as needed to reflect any changes in the documents.

#### **The CAM shall:**

- Designate the date and location of the meeting.
- Send the Recipient a *Kick-off Meeting Agenda*.

#### **Recipient Products:**

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

#### **CAM Product:**

- Kick-off Meeting Agenda

#### **Subtask 1.3 Critical Project Review (CPR) Meetings**

The goal of this subtask is to determine if the project should continue to receive Energy Commission funding, and if so whether any modifications must be made to the tasks, products, schedule, or budget. CPR meetings provide the opportunity for frank discussions between the Energy Commission and the Recipient. As determined by the CAM, discussions may include project status, challenges, successes, advisory group findings and recommendations, final report preparation, and progress on technical transfer and production readiness activities (if applicable). Participants will include the CAM and the Recipient, and may include the CAO and any other individuals selected by the CAM to provide support to the Energy Commission.

CPR meetings generally take place at key, predetermined points in the Agreement, as determined by the CAM and as shown in the Task List on page 1 of this Exhibit. However, the CAM may schedule additional CPR meetings as necessary. The budget will be reallocated to cover the additional costs borne by the Recipient, but the overall Agreement amount will not increase. CPR meetings generally take place at the Energy Commission, but they may take place at another location, or may be conducted via electronic conferencing (e.g., WebEx) as determined by the CAM.

## **Exhibit A**

### **Scope of Work**

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##### **The Recipient shall:**

- Prepare a *CPR Report* for each CPR meeting that: (1) discusses the progress of the Agreement toward achieving its goals and objectives; and (2) includes recommendations and conclusions regarding continued work on the project.
- Submit the CPR Report along with any other *Task Products* that correspond to the technical task for which the CPR meeting is required (i.e., if a CPR meeting is required for Task 2, submit the Task 2 products along with the CPR Report).
- Attend the CPR meeting.
- Present the CPR Report and any other required information at each CPR meeting.

##### **The CAM shall:**

- Determine the location, date, and time of each CPR meeting with the Recipient's input.
- Send the Recipient a *CPR Agenda* and a *List of Expected CPR Participants* in advance of the CPR meeting. If applicable, the agenda will include a discussion of match funding and permits.
- Conduct and make a record of each CPR meeting. Provide the Recipient with a *Schedule for Providing a Progress Determination* on continuation of the project.
- Determine whether to continue the project, and if so whether modifications are needed to the tasks, schedule, products, or budget for the remainder of the Agreement. If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Deputy Director of the Energy Research and Development Division.
- Provide the Recipient with a *Progress Determination* on continuation of the project, in accordance with the schedule. The Progress Determination may include a requirement that the Recipient revise one or more products.

##### **Recipient Products:**

- CPR Report(s)
- Task Products (draft and/or final as specified in the task)

##### **CAM Products:**

- CPR Agenda
- List of Expected CPR Participants
- Schedule for Providing a Progress Determination
- Progress Determination

##### **Subtask 1.4 Final Meeting**

The goal of this subtask is to complete the closeout of this Agreement.

##### **The Recipient shall:**

- Meet with Energy Commission staff to present project findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement. This meeting will be attended by the Recipient and CAM, at a minimum. The meeting may occur in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

## **Exhibit A**

### **Scope of Work**

#### **Lawrence Berkeley National Laboratory**

The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be divided into two separate meetings at the CAM's discretion.

- The technical portion of the meeting will involve the presentation of findings, conclusions, and recommended next steps (if any) for the Agreement. The CAM will determine the appropriate meeting participants.
- The administrative portion of the meeting will involve a discussion with the CAM and the CAO of the following Agreement closeout items:
  - Disposition of any state-owned equipment.
  - Need to file a Uniform Commercial Code Financing Statement (Form UCC-1) regarding the Energy Commission's interest in patented technology.
  - The Energy Commission's request for specific "generated" data (not already provided in Agreement products).
  - Need to document the Recipient's disclosure of "subject inventions" developed under the Agreement.
  - "Surviving" Agreement provisions such as repayment provisions and confidential products.
  - Final invoicing and release of retention.
- Prepare a *Final Meeting Agreement Summary* that documents any agreement made between the Recipient and Commission staff during the meeting.
- Prepare a *Schedule for Completing Agreement Closeout Activities*.
- Provide *All Draft and Final Written Products* on a CD-ROM or USB memory stick, organized by the tasks in the Agreement.

#### **Products:**

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

### **REPORTS AND INVOICES**

#### **Subtask 1.5 Progress Reports and Invoices**

The goals of this subtask are to: (1) periodically verify that satisfactory and continued progress is made towards achieving the project objectives of this Agreement; and (2) ensure that invoices contain all required information and are submitted in the appropriate format.

#### **The Recipient shall:**

- Submit a monthly *Progress Report* to the CAM. Each progress report must:
  - Summarize progress made on all Agreement activities as specified in the scope of work for the preceding month, including accomplishments, problems, milestones, products, schedule, fiscal status, and an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. See the Progress Report Format Attachment for the recommended specifications.
- Submit a monthly or quarterly *Invoice* that follows the instructions in the "Payment of Funds" section of the terms and conditions, including a financial report on Match Fund and in-state expenditures.

# Exhibit A

## Scope of Work

### Lawrence Berkeley National Laboratory

#### Products:

- Progress Reports
- Invoices

#### Subtask 1.6 Final Report

The goal of this subtask is to prepare a comprehensive Final Report that describes the original purpose, approach, results, and conclusions of the work performed under this Agreement. The CAM will review the Final Report, which will be due at least **two months** before the Agreement end date. When creating the Final Report Outline and the Final Report, the Recipient must use the Style Manual provided by the CAM.

##### Subtask 1.6.1 Final Report Outline

#### The Recipient shall:

- Prepare a *Final Report Outline* in accordance with the *Style Manual* provided by the CAM. (See Task 1.1 for requirements for draft and final products.)

#### Recipient Products:

- Final Report Outline (draft and final)

#### CAM Product:

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

##### Subtask 1.6.2 Final Report

#### The Recipient shall:

- Prepare a *Final Report* for this Agreement in accordance with the approved Final Report Outline, Style Manual, and Final Report Template provided by the CAM with the following considerations:
  - Ensure that the report includes the following items, in the following order:
    - Cover page (**required**)
    - Credits page on the reverse side of cover with legal disclaimer (**required**)
    - Acknowledgements page (optional)
    - Preface (**required**)
    - Abstract, keywords, and citation page (**required**)
    - Table of Contents (**required**, followed by List of Figures and List of Tables, if needed)
    - Executive summary (**required**)
    - Body of the report (**required**)
    - References (if applicable)
    - Glossary/Acronyms (If more than 10 acronyms or abbreviations are used, it is required.)
    - Bibliography (if applicable)
    - Appendices (if applicable) (Create a separate volume if very large.)
    - Attachments (if applicable)
  - Ensure that the document is written in the third person.

## **Exhibit A**

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

#### **Products:**

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

#### **CAM Product:**

- Written Comments on the Draft Final Report

### **MATCH FUNDS, PERMITS, AND SUBCONTRACTS**

#### **Subtask 1.7 Match Funds**

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

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

## **Exhibit A**

### **Scope of Work**

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##### **The Recipient shall:**

- Prepare a *Match Funds Status Letter* that documents the match funds committed to this Agreement. If no match funds were part of the proposal that led to the Energy Commission awarding this Agreement and none have been identified at the time this Agreement starts, then state this in the letter.

If match funds were a part of the proposal that led to the Energy Commission awarding this Agreement, then provide in the letter:

- A list of the match funds that identifies:
  - The amount of cash match funds, their source(s) (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied.
  - The amount of each in-kind contribution, a description of the contribution type (e.g., property, services), the documented market or book value, the source (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient must identify its owner and provide a contact name, address, telephone number, and the address where the property is located.
  - If different from the solicitation application, provide a letter of commitment from an authorized representative of each source of match funding that the funds or contributions have been secured.
- At the Kick-off meeting, discuss match funds and the impact on the project if they are significantly reduced or not obtained as committed. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide a *Supplemental Match Funds Notification Letter* to the CAM of receipt of additional match funds.
- Provide a *Match Funds Reduction Notification Letter* to the CAM if existing match funds are reduced during the course of the Agreement. Reduction of match funds may trigger a CPR meeting.

##### **Products:**

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

##### **Subtask 1.8 Permits**

The goal of this subtask is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track. Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement, with the exception of costs incurred by University of California recipients. Permits must be identified and obtained before the Recipient may incur any costs related to the use of the permit(s) for which the Recipient will request reimbursement.

##### **The Recipient shall:**

- Prepare a *Permit Status Letter* that documents the permits required to conduct this Agreement. If no permits are required at the start of this Agreement, then state this in the letter. If permits will be required during the course of the Agreement, provide in the letter:

## **Exhibit A**

### **Scope of Work**

#### **Lawrence Berkeley National Laboratory**

- A list of the permits that identifies: (1) the type of permit; and (2) the name, address, and telephone number of the permitting jurisdictions or lead agencies.
- The schedule the Recipient will follow in applying for and obtaining the permits.

The list of permits and the schedule for obtaining them will be discussed at the Kick-off meeting (subtask 1.2), and a timetable for submitting the updated list, schedule, and copies of the permits will be developed. The impact on the project if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in progress reports and will be a topic at CPR meetings.

- If during the course of the Agreement additional permits become necessary, then provide the CAM with an *Updated List of Permits* (including the appropriate information on each permit) and an *Updated Schedule for Acquiring Permits*.
- Send the CAM a *Copy of Each Approved Permit*.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 days. Either of these events may trigger a CPR meeting.

#### **Products:**

- Permit Status Letter
- Updated List of Permits (*if applicable*)
- Updated Schedule for Acquiring Permits (*if applicable*)
- Copy of Each Approved Permit (*if applicable*)

#### **Subtask 1.9 Subcontracts**

The goals of this subtask are to: (1) procure subcontracts required to carry out the tasks under this Agreement; and (2) ensure that the subcontracts are consistent with the terms and conditions of this Agreement.

#### **The Recipient shall:**

- Manage and coordinate subcontractor activities in accordance with the requirements of this Agreement.
- Incorporate this Agreement by reference into each subcontract.
- Include any required Energy Commission flow-down provisions in each subcontract, in addition to a statement that the terms of this Agreement will prevail if they conflict with the subcontract terms.
- If required by the CAM, submit a draft of each *Subcontract* required to conduct the work under this Agreement.
- Submit a final copy of the executed subcontract.
- Notify and receive written approval from the CAM prior to adding any new subcontractors (see the discussion of subcontractor additions in the terms and conditions).

#### **Products:**

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

## Exhibit A Scope of Work Lawrence Berkeley National Laboratory

### **TECHNICAL ADVISORY COMMITTEE**

#### **Subtask 1.10 Technical Advisory Committee (TAC)**

The goal of this subtask is to create an advisory committee for this Agreement. The TAC should be composed of diverse professionals. The composition will vary depending on interest, availability, and need. TAC members will serve at the CAM's discretion. The purpose of the TAC is to:

- Provide guidance in project direction. The guidance may include scope and methodologies, timing, and coordination with other projects. The guidance may be based on:
  - Technical area expertise;
  - Knowledge of market applications; or
  - Linkages between the agreement work and other past, present, or future projects (both public and private sectors) that TAC members are aware of in a particular area.
- Review products and provide recommendations for needed product adjustments, refinements, or enhancements.
- Evaluate the tangible benefits of the project to the state of California, and provide recommendations as needed to enhance the benefits.
- Provide recommendations regarding information dissemination, market pathways, or commercialization strategies relevant to the project products.

The TAC may be composed of qualified professionals spanning the following types of disciplines:

- Researchers knowledgeable about the project subject matter;
- Members of trades that will apply the results of the project (e.g., designers, engineers, architects, contractors, and trade representatives);
- Public interest market transformation implementers;
- Product developers relevant to the project;
- U.S. Department of Energy research managers, or experts from other federal or state agencies relevant to the project;
- Public interest environmental groups;
- Utility representatives;
- Air district staff; and
- Members of relevant technical society committees.

#### **The Recipient shall:**

- Prepare a *List of Potential TAC Members* that includes the names, companies, physical and electronic addresses, and phone numbers of potential members. The list will be discussed at the Kick-off meeting, and a schedule for recruiting members and holding the first TAC meeting will be developed.
- Recruit TAC members. Ensure that each individual understands member obligations and the TAC meeting schedule developed in subtask 1.11.
- Prepare a *List of TAC Members* once all TAC members have committed to serving on the TAC.

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- Submit *Documentation of TAC Member Commitment* (such as Letters of Acceptance) from each TAC member.

**Products:**

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

**Subtask 1.11 TAC Meetings**

The goal of this subtask is for the TAC to provide strategic guidance for the project by participating in regular meetings, which may be held via teleconference.

**The Recipient shall:**

- Discuss the TAC meeting schedule with the CAM at the Kick-off meeting. Determine the number and location of meetings (in-person and via teleconference) in consultation with the CAM.
- Prepare a *TAC Meeting Schedule* that will be presented to the TAC members during recruiting. Revise the schedule after the first TAC meeting to incorporate meeting comments.
- Prepare a *TAC Meeting Agenda* and *TAC Meeting Back-up Materials* for each TAC meeting.
- Organize and lead TAC meetings in accordance with the TAC Meeting Schedule. Changes to the schedule must be pre-approved in writing by the CAM.
- Prepare *TAC Meeting Summaries* that include any recommended resolutions of major TAC issues.

**Products:**

- TAC Meeting Schedule (draft and final)
- TAC Meeting Agendas (draft and final)
- TAC Meeting Back-up Materials
- TAC Meeting Summaries

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**IV. TECHNICAL TASKS**

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

**TASK 2 FLEET DATA ANALYTICS**

The goals of this task are to: (1) provide fleet partners with early insights on opportunities to deploy EVs and smart charging within their fleets by analyzing fleet duty cycle data from existing telematics systems already installed in fleet vehicles.

Efforts from this task will provide fleet partners with early feedback on opportunities to deploy EVs and smart charging in their fleets, allowing them to meet the procurement targets set forth in the Governor’s EO B-16-12 (25% ZEV annual procurement by 2020).

**The Recipient shall:**

- Gather available fleet telematics data from pilot fleet partners on an ongoing basis.
- Assess the quality of existing telematics data by inspecting data acquisition rates and acquired data channels. Determine whether the existing telematics data can be used as is, or requires pre-processing using routing and drive cycle generation algorithms.
- Apply, if required, routing and drive cycle generation algorithms so that existing fleet telematics data from pilot partners can be readily input into MyFleetBuy systems.
- Develop data processing algorithms to pre-process and cleanse the fleet telematics data and format it for streamlined input into the MyFleetBuy systems.
- Set up and launch MyFleetBuy analytics on fleet telematics data provided by pilot partners.
- Prepare a *Fleet Data Analytics Report (draft and final)* that includes, but is not limited to, the following:
  - A description of the size and characteristics of each fleet;
  - A description of the amount of telematics data being analyzed, including number of vehicles, duration of trips, and number of miles;
  - Whether fleet telematics data provided by pilot partners is readily fed into MyFleetBuy or if it requires substantial pre-processing;
  - Examples of the analytical outputs and insights provided by applying MyFleetBuy’s analytics methodology to existing fleet telematics data;
  - A synthesis of fleet managers’ feedback based on analytics results provided to them, and a description of how this fleet manager feedback guides the development of prototype and production-ready systems in Tasks 3 and 4.
- Prepare *CPR Report #1* in accordance with subtask 1.3 (CPR Meetings).
- Participate in a CPR meeting.

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##### **Products:**

- Fleet Data Analytics Report (draft and final)
- CPR Report #1

##### **TASK 3 DATA LOGGER SYSTEMS DEVELOPMENT**

The goal of this task is to develop and deploy a low-cost fleet telematics data logger that can be readily scaled out for large numbers of fleet managers to apply MyFleetBuy in their fleet procurement process. This task will lay the foundation to alleviate the data acquisition challenges that must be overcome to enable largescale market transformation of all corporate and government fleet procurements across California.

##### **The Recipient shall:**

- Survey fleet managers to confirm whether the feature set planned for MyFleetBuy data loggers is consistent with fleet managers' needs from fleet telematics systems.
- Synthesize fleet manager survey feedback into a *Fleet Manager Survey of Telematics Needs Report* that includes, but is not limited to, the following:
  - A list of capabilities and functionality that fleet managers value from fleet telematics systems;
  - Quantification of the value provided and acceptable price points for various levels of telematics capabilities that can be provided within fleet data loggers; and
  - Conclusions on the feature set to build for MyFleetBuy's data loggers.
- Design, develop, and produce hardware and accompanying software for a Prototype of MyFleetBuy Data Loggers for installation and testing in the pilot project.
- Prepare a *Prototype of MyFleetBuy Data Loggers Memorandum*, summarizing product specifications, projected costs, and any known limitations or constraints.
- Improve MyFleetBuy Data Loggers based on pilot testing and fleet feedback gathered in Task 5.
- Develop the Production-Ready MyFleetBuy Data Loggers that can be deployed for use by public and private fleet managers across California.
- Prepare a *Production-Ready MyFleetBuy Data Loggers Memorandum*, summarizing product specifications and improvements made since the prototype.

##### **Products:**

- Fleet Manager Survey of Telematics Needs Report
- Prototype of MyFleetBuy Data Loggers Memorandum
- Production-Ready MyFleetBuy Data Loggers Memorandum

##### **TASK 4 MYFLEETBUY SOFTWARE SYSTEMS DEVELOPMENT AND INTEGRATION**

The goal of this task is to develop and launch the software systems for MyFleetBuy to accelerate adoption of EVs and smart charging through vehicle procurements at corporate and government fleets across California.

##### **The Recipient shall:**

- Survey fleet managers to confirm whether the feature set planned for MyFleetBuy's analytics and fleet manager web interfaces are consistent with the insights they require at the time of their vehicle procurements.

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- Synthesize fleet manager survey feedback into a *Fleet Vehicle Procurement Needs and Uncertainties Report* that includes, but is not limited to, the following:
  - A review of fleet managers' uncertainties that inhibit their adoption of EVs and smart charging stations as part of their fleets and often cause them to continue using gasoline-powered vehicles; and
  - Conclusions on the feature set to build for MyFleetBuy analytics and fleet manager interface, to provide maximum impact on accelerating fleet procurement of EVs and smart charging.
- Design, develop, and launch a fully-functional prototype of the MyFleetBuy analytics and fleet manager interface. Design and development of MyFleetBuy will include the following efforts:
  - Adapt MyGreenCar software systems to interface with MyFleetBuy data loggers;
  - Architect data processing and database systems so that multiple data loggers can be grouped together under a single fleet account, accessible through a fleet manager's web interface;
  - Adapt and integrate into MyFleetBuy the methodologies from the Vehicle-to-Grid Simulator (V2G-Sim) for quantifying charging costs for uncontrolled versus smart charging scenarios;
  - Develop a fleet manager's interface to manage and track vehicles within the fleet;
  - Develop a fleet manager's interface for comparing the costs of integrating EVs and smart charging into fleet operations versus using conventional or hybrid vehicles; and
  - Develop a fleet manager's interface for confirming the range viability of EVs within the fleet's operations, and quantifying the required charging station installations to support EVs that the fleet purchases.
- Prepare a *Prototype of MyFleetBuy Analytics and Fleet Manager Interface Memorandum*, summarizing the key requirements and functionalities of the prototype.
- Prepare *CPR Report #2* in accordance with subtask 1.3 (CPR Meetings).
- Participate in a CPR meeting.
- Refine MyFleetBuy software systems based on pilot testing and fleet feedback gathered in Task 5.
- Develop and launch the production-ready MyFleetBuy system that can be scaled out for use by public and private fleet managers across California.
- Prepare a *Production-Ready MyFleetBuy System Memorandum*, summarizing the key refinements made, requirements addressed, and functionalities of the system.

#### **Products:**

- Fleet Vehicle Procurement Needs and Uncertainties Report
- Prototype of MyFleetBuy Analytics and Fleet Manager Interface Memorandum
- CPR Report #2
- Production-Ready MyFleetBuy System Memorandum

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**TASK 5 CASE STUDY WITH FLEET PILOT TESTING, FEEDBACK, AND TROUBLESHOOTING**

The goals of this task are to: (1) conduct pilot testing and gather feedback from fleet managers to maximize MyFleetBuy's effectiveness in accelerating adoption of EVs and smart charging through fleet procurement; and (2) gather data required to quantify the impact of MyFleetBuy on increasing fleet procurement of EVs and smart charging.

**The Recipient shall:**

- Design and conduct initial fleet operator interviews, prior to launching MyFleetBuy, to characterize, (A) existing vehicle procurement plans and practices, (B) Current experiences with and understanding of EVs, and (C) Barriers to increased adoption of EVs.
- Prepare a *Case Study and Pilot Testing Plan (draft and final)* that includes, but is not limited to, the following:
  - Identification of fleets that will be featured in the case study;
  - The number of vehicles in each fleet on which data loggers are to be deployed;
  - A description of data to be collected from test vehicles;
  - The duration of the case study.
- Install MyFleetBuy Data Loggers in fleet vehicles from each fleet pilot project partner.
- Survey fleet operators for feedback and experiences with the MyFleetBuy Data Loggers.
- Synthesize fleet manager experiences and feedback into a *Data Logger Installation Report* that includes, but is not limited to, the following:
  - The number of fleet vehicles on which data loggers were deployed;
  - A description of data that were collected from test vehicles;
  - Any difficulties encountered or areas for improvement that could hinder mass scale-out of MyFleetBuy data loggers upon conclusion of the pilot project; and
  - Fleet manager impressions to confirm whether the feature set offered within MyFleetBuy data loggers is consistent with their expectations.
- Operate MyFleetBuy system for pilot fleet partners (duration TBD in the Case Study and Pilot Testing Plan).
- Conduct follow-on fleet operator interviews after fleet operators have used MyFleetBuy and benefited from its insights. Follow-on interviews will characterize, (A) The evolution of vehicle procurement practices and plans as a result of MyFleetBuy insights, (B) The evolution of experiences with and understanding of EVs, and (C) The barriers to EV adoption that were mitigated by using MyFleetBuy and any barriers that still remain.
- Synthesize fleet managers' experiences and feedback into a *Case Study Report Detailing MyFleetBuy Pilot Testing* that includes, but is not limited to, the following:
  - An overview of the MyFleetBuy system and the problems it solves for fleet managers in their vehicle procurement process;
  - Fleet managers' experiences with the MyFleetBuy system;
  - Lessons learned through pilot testing;
  - Improvements made to the MyFleetBuy system because of pilot testing, feedback, and lessons learned;
  - A characterization of MyFleetBuy's impact through the initial and follow-on interviews, with particular emphasis on three focus areas: (A) Existing procurement practices and plans prior to using MyFleetBuy, and how practices and plans evolved as a result of MyFleetBuy, (B) Experiences and understanding of EVs and smart charging prior to using MyFleetBuy, and how understanding

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improved as a result of MyFleetBuy, and (C) Barriers to increased adoption of EVs and smart charging that were identified prior to using MyFleetBuy, the extent to which these barriers were mitigated with MyFleetBuy, and barriers, if any, that still remain.

- The readiness of MyFleetBuy for production-scale roll-out to fleet managers across the State of California.

#### **Products:**

- Case Study and Pilot Testing Plan (draft and final)
- Data Logger Installation Report
- Case Study Report Detailing MyFleetBuy Pilot Testing

#### **TASK 6 EVALUATION OF PROJECT BENEFITS**

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

#### **The Recipient shall:**

- Complete three Project Benefits Questionnaires that correspond to three main intervals in the Agreement: (1) *Kick-off Meeting Benefits Questionnaire*; (2) *Mid-term Benefits Questionnaire*; and (3) *Final Meeting Benefits Questionnaire*.
- Provide all key assumptions used to estimate projected benefits, including targeted market sector (e.g., population and geographic location), projected market penetration, baseline and projected energy use and cost, operating conditions, and emission reduction calculations. Examples of information that may be requested in the questionnaires include:
  - For Product Development Projects and Project Demonstrations:
    - Published documents, including date, title, and periodical name.
    - Estimated or actual energy and cost savings, and estimated statewide energy savings once market potential has been realized. Identify all assumptions used in the estimates.
    - Greenhouse gas and criteria emissions reductions.
    - Other non-energy benefits such as reliability, public safety, lower operational cost, environmental improvement, indoor environmental quality, and societal benefits.
    - Data on potential job creation, market potential, economic development, and increased state revenue as a result of the project.
    - A discussion of project product downloads from websites, and publications in technical journals.
    - A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.
    - Additional Information for Product Development Projects:
      - Outcome of product development efforts, such copyrights and license agreements.
      - Units sold or projected to be sold in California and outside of California.
      - Total annual sales or projected annual sales (in dollars) of products developed under the Agreement.

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- Investment dollars/follow-on private funding as a result of Energy Commission funding.
- Patent numbers and applications, along with dates and brief descriptions.
- Additional Information for Product Demonstrations:
  - Outcome of demonstrations and status of technology.
  - Number of similar installations.
  - Jobs created/retained as a result of the Agreement.
- For Information/Tools and Other Research Studies:
  - Outcome of project.
  - Published documents, including date, title, and periodical name.
  - A discussion of policy development. State if the project has been cited in government policy publications or technical journals, or has been used to inform regulatory bodies.
  - The number of website downloads.
  - An estimate of how the project information has affected energy use and cost, or have resulted in other non-energy benefits.
  - An estimate of energy and non-energy benefits.
  - Data on potential job creation, market potential, economic development, and increased state revenue as a result of project.
  - A discussion of project product downloads from websites, and publications in technical journals.
  - A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.
- Respond to CAM questions regarding responses to the questionnaires.

The Energy Commission may send the Recipient similar questionnaires after the Agreement term ends. Responses to these questionnaires will be voluntary.

#### **Products:**

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

#### **TASK 7 TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES**

The goal of this task is to develop a plan to make the knowledge gained, experimental results, and lessons learned available to the public and key decision makers.

#### **The Recipient shall:**

- Prepare an *Initial Fact Sheet* at start of the project that describes the project. Use the format provided by the CAM.
- Prepare a *Final Project Fact Sheet* at the project's conclusion that discusses results. Use the format provided by the CAM.
- Prepare a *Technology/Knowledge Transfer Plan* that includes:
  - An explanation of how the knowledge gained from the project will be made available to the public, including the targeted market sector and potential outreach to end

## **Exhibit A**

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- users, utilities, regulatory agencies, and others.
- A description of the intended use(s) for and users of the project results.
- Published documents, including date, title, and periodical name.
- Copies of documents, fact sheets, journal articles, press releases, and other documents prepared for public dissemination. These documents must include the Legal Notice required in the terms and conditions. Indicate where and when the documents were disseminated.
- A discussion of policy development. State if project has been or will be cited in government policy publications, or used to inform regulatory bodies.
- The number of website downloads or public requests for project results.
- Additional areas as determined by the CAM.
- Conduct technology transfer activities in accordance with the Technology/Knowledge Transfer Plan. These activities will be reported in the Progress Reports.
- When directed by the CAM, develop *Presentation Materials* for an Energy Commission-sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in annual EPIC symposium(s) sponsored by the California Energy Commission.
- Provide at least (6) six *High Quality Digital Photographs* (minimum resolution of 1300x500 pixels in landscape ratio) of pre and post technology installation at the project sites or related project photographs.
- Prepare a *Technology/Knowledge Transfer Report* on technology transfer activities conducted during the project.

#### **Products:**

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

#### **TASK 8 PRODUCTION READINESS PLAN**

The goal of this task is to determine the steps that will lead to the manufacturing of technologies developed in this project or to the commercialization of the project's results.

#### **The Recipient shall:**

- Prepare a *Production Readiness Plan*. The degree of detail in the plan should be proportional to the complexity of producing or commercializing the proposed product, and to its state of development. As appropriate, the plan will discuss the following:
  - Critical production processes, equipment, facilities, personnel resources, and support systems needed to produce a commercially viable product.
  - Internal manufacturing facilities, supplier technologies, capacity constraints imposed by the design under consideration, design-critical elements, and the use of hazardous or non-recyclable materials. The product manufacturing effort may include "proof of production processes."
  - The estimated cost of production.
  - The expected investment threshold needed to launch the commercial product.

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- An implementation plan to ramp up to full production.
- The outcome of product development efforts, such as copyrights and license agreements.
- Patent numbers and applications, along with dates and brief descriptions.
- Other areas as determined by the CAM.

**Products:**

- Production Readiness Plan (draft and final)

**V. PROJECT SCHEDULE**

Please see the attached Excel spreadsheet.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: 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 Agreement EPC-17-026 from GFO-17-301 with the U.S. Department of Energy's Lawrence Berkeley National Laboratory for a \$1,000,000 grant to adapt LBNL's MyGreenCar technology to create and launch the MyFleetBuy fleet procurement system. MyFleetBuy will help reduce the risks and uncertainties for fleet managers in procuring electric vehicles and smart charging infrastructure. As part of this project, the recipient will conduct a large-scale pilot of the MyFleetBuy platform with several city, county and state fleets. LBNL will incorporate feedback from the pilot fleet managers in preparation for the platform's full-scale launch in California; 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 March 21, 2018.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

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Cody Goldthrite,  
Secretariat