



GRANT REQUEST FORM (GRF)

A) New Agreement # EPC-21-006 (to be completed by CGL office)

B) Division	Agreement Manager:	MS-	Phone
ERDD	Liet Le		916-776-0785

C) Recipient's Legal Name	Federal ID Number
WattEV, Inc.	85262118

D) Title of Project
21st Century Truck Stop: 1st MD/HD eTruckStop in California

E) Term and Amount

Start Date	End Date	Amount
10/1/2021	3/31/2025	\$ 4,000,000

F) Business Meeting Information

ARFVTP agreements \$75K and under delegated to Executive Director

Proposed Business Meeting Date 9/8/2021 Consent Discussion

Business Meeting Presenter Elise Ersoy Time Needed: 5 minutes

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

Agenda Item Subject and Description:

Proposed resolution approving agreement EPC-21-006 with WattEV, Inc. for a \$4,000,000 grant to fund the design, construction, and commissioning of a modular distributed energy resource (DER) package composed of solar photovoltaics, second life battery storage, and an AC/DC distribution control system at a public access electric truck stop, and adopting staff's determination that this action is exempt from CEQA. The scalable DER package is intended to provide reliable low-cost renewable energy for a dedicated fleet of ten Class 8 battery electric trucks and to support broader public access to MD/HD Plug-in EV charging for fleets in a burgeoning trade corridor. (EPIC funding) Contact: Elise Ersoy.

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":

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

a) Agreement **IS** exempt.

Statutory Exemption. List PRC and/or CCR section number:

Categorical Exemption. List CCR section number: Cal. Code Regs., tit. 14, § 15183

Common Sense Exemption. 14 CCR 15061 (b) (3)

Explain reason why Agreement is exempt under the above section: This project is sited within the jurisdiction of Kern County. Kern County, the lead agency, made the determination that this



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project is exemption from CEQA under Cal. Code Regs., tit. 14, § 15183 and the CEC is adopting those findings.

Specifically, on June 17, 2021, a public hearing was held in the Office of the Kern County Planning and Natural Resources Department to consider approval of the project. The Staff Report states that staff considered the applicable provisions of CEQA and State CEQA Guidelines. This included Section 15183, which “mandates that projects that are consistent with the development established by existing zoning, community plan, or General Plan policies for which an Environmental Impact Report was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific effects which are peculiar to the project or its Site.”

Staff then considered the Metropolitan Bakersfield General Plan (Plan), which was adopted along with a certified Environmental Impact Report by the County Board of Supervisors on December 3, 2002 (since amended). Staff concluded that this project is consistent with the goals and policies of the Plan and does not propose any changes to the map code designations established by the Plan. The Plan policies supported by the proposed industrial electric truck charging and solar energy development include Policy No. 31 (industrial development that allows for a variety of industrial uses including R&D and transportation-related use), Policy No. 32 (industrial development and protecting industrial designations from incompatible land use), and Policy No. 34 (industrial development to provide for clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors). The project implements the site’s existing map code designations of “Service Industrial” and “Solid Waste Facility Site.”

Ultimately, in Notice of Decision 15-21, dated June 17, 2021, the Hearing Officer of the Kern County Planning and Natural Resources Department conditionally approved the project. The findings of the Hearing Officer included that the project was to be categorically exempt from the requirements for preparation of environmental documents pursuant to Cal. Code Regs., tit. 14, § 15183. Since the project was found to be consistent with the goals and policies of the Metropolitan Bakersfield General Plan and does not present any unusual circumstances, CEC is adopting the CEQA findings of the lead agency.

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

Legal Company Name:	Budget
CALIFORNIA COMMERCIAL SOLAR, INC., dba CalCom Energy	\$ 2,650,694
Gladstein, Neandross & Associates LLC	\$ 234,024



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Legal Company Name:	Budget
VLI-EV dba VLI-EV Partners	\$ 444,263
Mightycomm	\$ 36,403
Central California Asthma Collaborative	\$ 94,588
Power Electronics USA, Inc.	\$ 0
Enerlytic Engineering LLC	\$ 0
Windmill Capital (CA), Inc.	\$ 0
Zeco Systems, Inc. DBA Greenlots	\$ 0
TBD - General Contractor	\$ 149,119

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

Legal Company Name:

J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
EPIC	20-21	301.001H	\$4,000,000
			\$
			\$
			\$
			\$
			\$

R&D Program Area: EGRO: Transportation

TOTAL: \$ 4,000,000

Explanation for "Other" selection

Reimbursement Contract #: Federal Agreement #:

K) Recipient's Contact Information

1. Recipient's Administrator/Officer

Name:

Address:

City, State, Zip: ,

Phone:

E-Mail:

2. Recipient's Project Manager

Name: Salim Youssefzadeh

Address: 222 N Pacific Coast Hwy
Ste 1785

City, State, Zip: El Segundo, CA
90245-5648

Phone: 310-918-0801

E-Mail:
Syoussefzadeh@wattev.com

L) Selection Process Used

Competitive Solicitation Solicitation #: GFO-20-304



STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

First Come First Served Solicitation Solicitation #:

Non-Competitive Bid Follow-on Funding (SB 115)

M) The following items should be attached to this GRF

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

Agreement Manager

Date

Office Manager

Date

Deputy Director

Date

Attachment

H) List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)	
Legal Company Name:	Budget
TBD - Design Contractor	\$157,073
TBD - Civil	\$141,043
TBD - Mechanical Contractor	\$46,194
TBD - Contractor	\$0
McIntosh & Associates	\$0

EXHIBIT A

Scope of Work

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I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR ¹	Task Name
1		General Project Tasks
2	X	Site Plan Engineering Design
3	X	DER System Design, and System Integration
4		DER System Procurement, System Deployment, and Commissioning
5		Operations, Data Collection, Measurement and Verification Plan
6		Community Outreach and Education
7		Evaluation of Project Benefits
8		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
AC	Alternating Current
BESS	Battery Energy Stationary Storage
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CPR	Critical Project Review
DC	Direct Current
DER	Distributed Energy Resource
MDHD PEV	Medium-Duty Heavy-Duty Plug-in Electric Vehicle
TAC	Technical Advisory Committee

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

A. Purpose of Agreement

The purpose of this Agreement is to fund the design, construction, and commissioning of a modular Distributed Energy Resource (DER) package composed of solar photovoltaics, second life battery storage, and an AC/DC distribution control system at a public access electric truck stop. The scalable DER package is intended to provide reliable low-cost renewable energy for a dedicated fleet of ten Class 8 battery electric trucks as well as to support broader public access to Medium-Duty Heavy-Duty Plug-in Electric Vehicle (MDHD PEV) charging for fleets in a burgeoning trade corridor.

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

EXHIBIT A

Scope of Work

B. Problem/ Solution Statement

Problem

Medium- and heavy-duty vehicle electrification is beginning to accelerate but lacks the necessary infrastructure to support widespread adoption. Currently, adoption of MDHD PEVs has been limited to short-range and return-to-base operations. To increase adoption to longer-range vehicles and ensure equity among fleets that lack the physical and financial resources for onsite charging infrastructure, public charging options need to exist. As fueling is the largest component of a fleet's operational cost, certainty around fueling is essential for a fleet to remain successful. Any uncertainty surrounding fuel availability or cost will result in lower market penetration of MDHD PEVs in California. Further, infrastructure is a significant investment because of not only the initial upfront capital cost but also its inherently long useful life. The high upfront capital costs combined with long useful lives often result in projects that are under or overbuilt, negatively impacting the projects' financial viability. These problems have not been solved in part due to the infant nature of the market but also because of the significant investment required to demonstrate a scalable DER package specifically designed to provide low-cost energy to MDHD PEV fleets.

Deployment of public charging options for MDHD PEVs has not taken place due in large part to the lack of market penetration in electric vehicles. With manufacturers rapidly increasing new product offerings, investment needs to occur now to ensure widespread fleet adoption. California is at a precipice of a market shift, and investment in public charging, especially along a critical trade corridor, will provide fleets and the overall industry with more market certainty. Increasing the availability of public charging will stimulate MDHD PEV adoption and equity in adoption of these vehicles for the commercial sector.

Solution

Through a combination of significant private cash investment and funding from the California Energy Commission (CEC), this project is intended to bring forth an electric truck stop that can quickly support public charging and encourage future MDHD PEV adoption. This project combines off-the-shelf technologies into an integrated package that can be scaled and adopted from other fleets and infrastructure providers to enable wider technology transfer. By providing public access charging, the state is able to ensure fleets of all sizes and financial status have equitable access to charge the soon-to-be ubiquitous MDHD PEVs in the San Joaquin Valley.

The project will demonstrate the ability to provide low-cost, reliable energy to MDHD PEV fleets while minimizing the impact on the electricity grid. Minimizing the impact on the grid results in less extensive utility upgrades and avoids the cost (both soft and hard costs) associated with such upgrades. With solar energy generation integrated with battery energy stationary storage and managed charging, the DER package will provide certainty to fleets transitioning to MDHD PEVs that low-cost energy will be provided. Further, the battery energy stationary storage subsystem is intended to assure fleets that energy will be available even during outages. Reliable fuel cost and uninterrupted supply provide the assurances necessary for fleets to transition to MDHD PEVs.

The project will also demonstrate the ability to scale the DER package with increasing market penetration of MDHD PEVs by incorporating a modular design. By using this type of design, the project will ensure that the equipment within the DER package remains in service and operational for its entire useful life while also being able to scale according to market conditions. This will result in a project that is sized to support the level of demand required by MDHD PEV population

EXHIBIT A

Scope of Work

1 at any given time. As MDHD PEV market penetration increases, the modular design of the DER
2 package will enable the project to scale cost-effectively and ensure low-cost energy is provided
3 to the MDHD PEV population.

4 5 **C. Goals and Objectives of the Agreement**

6 7 **Agreement Goals**

8 The goal of this Agreement is to:

- 9 • Demonstrate an integrated DER package with 4.5 MWh size for second-life batteries and
10 3.85 MW size for solar arrays as well as a solar inverter to integrate the transformer and
11 medium-voltage cells into the same equipment for charging MDHD PEV fleets at the
12 nation's first electric truck stop.
- 13 • Provide low-cost electricity (below utility rate) to 1) an in-house (Recipient owned) fleet of
14 10 Class 8 battery electric trucks that will be used for dedicated rental for trucking as a
15 service, and 2) public access charging for other MDHD PEV fleets near the project site or
16 traveling enroute.
- 17 • Provide resilient supply of electricity to MDHD PEVs during outages.
- 18 • Design and build a containerized modular BESS using second-life advanced electric
19 vehicle battery cells that will provide a low-cost solution to support the cost management
20 needs for energy arbitrage, peak shaving, and off-grid resiliency.
- 21 • Demonstrate a scalable DER package that can expand with increasing market penetration
22 of MDHD PEVs.
- 23 • Demonstrate a DER package capable of serving varying charging requirements of the
24 MDHD PEV population.
- 25 • Evaluate system costs and savings within comparison to baseline, MDHD PEV
26 performance and operational energy requirements and driver and fleet operator
27 satisfaction, MDHD PEV charging event metrics, and installed system performance and
28 point of coupling.
- 29 • Engage in marketing and outreach initiatives to ensure widespread fleet usage,
30 community awareness, and to stimulate further investment in electric truck stops within
31 California.
- 32 • Pursue site scaling and business expansion for additional electric stops by project
33 conclusion.

34
35 **Ratepayer Benefits:**² This Agreement will result in the ratepayer benefits of greater electricity
36 reliability and lower costs by combining the integrated DER package with managed charging.

37
38 The integrated DER package is designed to have minimal negative impact on the grid since, with
39 on-site energy storage and managed charging, it is scaled to provide energy to customers as
40 needed. The DER (paired with managed charging) is planned to produce all of the power needed
41 for customer charging, mitigating impact of time-of-use rate changes and potential public safety
42 power shutoffs. This will lead to lower costs for the end user fleets and more reliable charging.
43 Because it will be grid-connected, the DER will be capable of both supplying excess power to the

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

EXHIBIT A Scope of Work

1 grid and drawing from the grid when weather conditions negatively impact electricity production
2 from the solar field. This added capacity should help stabilize grid reliability in the region.
3

4 Technological Advancement and Breakthroughs:³ This Agreement will lead to technological
5 advancement and breakthroughs to overcome barriers to the achievement of the State of
6 California's energy goals by:

- 7
- 8 • The use of innovative design and DER integration as one of the first demonstrations of
9 centralized power inversion and power level distribution, reducing the footprint of charging
10 and onsite power needed
- 11 • Providing site flexibility for future expansion and enabling increased throughput as demand
12 increases
- 13 • Providing a solar inverter that integrates the transformer and medium-voltage cells into the
14 same set of equipment, reducing installation costs and enabling the future expansion
- 15 • Providing public-access low-cost charging to MDHD PEVs to facilitate increased market
16 penetration
- 17 • Providing at least 12 high power chargers ranging in power levels from 250 kilowatts (kW)
18 to over 1 megawatt (MW) Combining second-life PEV batteries, managed charging, and
19 renewable energy generation to minimize impacts on the grid and for greater efficiency
- 20 • Lowering the cost of the energy management platform by combining three applications of
21 charging management, DER management, and resiliency
- 22 • Creating and demonstrating a scalable DER package that can expand with increasing
23 MDHD PEV market penetration
- 24 • Using commercially available technologies that allow the project to be replicated throughout
25 California
- 26 • Integrating technologies with high-powered charging for public access
- 27 • Conducting marketing and outreach to ensure others know about the project and can
28 replicate its successes
- 29

30 Agreement Objectives

31 The objectives of this Agreement are to:

- 32 • Develop the first dedicated, public access truck stop for electric vehicles.
- 33 • Deploy 1.13 MWh DC generation from DER with solar, battery storage, inverters, and load
34 management, supporting 14,300 kWh per day in charging by 2025.
- 35 • Provide low-cost and reliable charging at an average fleet price less than the PG&E rates
36 to 1) an in-house (Recipient-owned) fleet of 10 Class 8 battery electric trucks that will be
37 utilized for dedicated rental for trucking as a service, and 2) public access charging for
38 other medium and heavy-duty fleets near the project site or traveling enroute. The project
39 team will secure ten (10) fleet offtake agreements throughout the course of the project.
- 40 • Evaluate the benefits and tradeoffs of the use cases - cost management, renewable
41 integration/GHG management, and resilience and also comparing to the assumptions that
42 were used in the development.
- 43 • Engage in marketing and outreach efforts to ensure widespread fleet usage and community
44 awareness, in partnership with our community-based organization, aiming to present at five

³ 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

- 1 events, launch a comprehensive website with 1,000 unique views per month, achieve 100
- 2 news mentions, and reach 5,000 people in a contact database.
- 3 • Pursue site scaling and business expansion by project conclusion.
- 4
- 5
- 6
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EXHIBIT A

Scope of Work

III. TASK 1 GENERAL PROJECT TASKS

PRODUCTS

Subtask 1.1 Products

The goal of this subtask is to establish the requirements for submitting project products (e.g., reports, summaries, plans, and presentation materials). Unless otherwise specified by the Commission Agreement Manager (CAM), the Recipient must deliver products as required below by the dates listed in the **Project Schedule (Part V)**. All products submitted which will be viewed by the public, must comply with the accessibility requirements of Section 508 of the federal Rehabilitation Act of 1973, as amended (29 U.S.C. Sec. 794d), and regulations implementing that act as set forth in Part 1194 of Title 36 of the Federal Code of Regulations. All technical tasks should include product(s). 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 California Energy Commission’s (CEC) 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.

EXHIBIT A

Scope of Work

The following describes the accepted formats for electronic data and documents provided to the CEC 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.
- 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 CEC'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 CEC 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;
- Invoicing and auditing procedures;

EXHIBIT A Scope of Work

- 1 ○ Administrative products (subtask 1.1);
- 2 ○ CPR meetings (subtask 1.3);
- 3 ○ Match fund documentation (subtask 1.7);
- 4 ○ Permit documentation (subtask 1.8);
- 5 ○ Subcontracts (subtask 1.9); and
- 6 ○ Any other relevant topics.

7
8 The technical portion of the meeting will include discussion of the following:

- 9 ○ The CAM's expectations for accomplishing tasks described in the Scope of Work;
 - 10 ○ An updated Project Schedule;
 - 11 ○ Technical products (subtask 1.1);
 - 12 ○ Progress reports (subtask 1.5);
 - 13 ○ Final Report (subtask 1.6);
 - 14 ○ Technical Advisory Committee meetings (subtasks 1.10 and 1.11); and
 - 15 ○ Any other relevant topics.
- 16
 - 17 ● Provide *Kick-off Meeting Presentation* to include but not limited to:
 - 18 ○ Project overview (i.e. project description, goals and objectives, technical tasks,
 - 19 ○ expected benefits, etc.)
 - 20 ○ Project schedule that identifies milestones
 - 21 ○ List of potential risk factors and hurdles, and mitigation strategy
 - 22
 - 23 ● Provide an *Updated Project Schedule, Match Funds Status Letter, and Permit Status*
 - 24 *Letter*, as needed to reflect any changes in the documents.
 - 25

26 **The CAM shall:**

- 27 ● Designate the date and location of the meeting.
- 28 ● Send the Recipient a *Kick-off Meeting Agenda*.
- 29

30 **Recipient Products:**

- 31 ● Kick-off Meeting Presentation
- 32 ● Updated Project Schedule (*if applicable*)
- 33 ● Match Funds Status Letter (subtask 1.7) (*if applicable*)
- 34 ● Permit Status Letter (subtask 1.8) (*if applicable*)
- 35

36 **CAM Product:**

- 37 ● Kick-off Meeting Agenda
- 38

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

40 The goal of this subtask is to determine if the project should continue to receive CEC funding, and
41 if so whether any modifications must be made to the tasks, products, schedule, or budget. CPR
42 meetings provide the opportunity for frank discussions between the CEC and the Recipient. As
43 determined by the CAM, discussions may include project status, challenges, successes, advisory
44 group findings and recommendations, final report preparation, and progress on technical transfer
45 and production readiness activities (if applicable). Participants will include the CAM and the
46 Recipient and may include the CAO and any other individuals selected by the CAM to provide
47 support to the CEC.
48

EXHIBIT A Scope of Work

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

7 8 **The Recipient shall:**

- 9 • Prepare and submit a *CPR Report* for each CPR meeting that: (1) discusses the progress
10 of the Agreement toward achieving its goals and objectives; and (2) includes
11 recommendations and conclusions regarding continued work on the project.
- 12 • Attend the CPR meeting.
- 13 • Present the CPR Report and any other required information at each CPR meeting.

14 15 **The CAM shall:**

- 16 • Determine the location, date, and time of each CPR meeting with the Recipient's input.
- 17 • Send the Recipient a *CPR Agenda* with a list of expected CPR participants in advance of
18 the CPR meeting. If applicable, the agenda will include a discussion of match funding and
19 permits.
- 20 • Conduct and make a record of each CPR meeting. Provide the Recipient with a schedule
21 for providing a Progress Determination on continuation of the project.
- 22 • Determine whether to continue the project, and if so whether modifications are needed to
23 the tasks, schedule, products, or budget for the remainder of the Agreement. If the CAM
24 concludes that satisfactory progress is not being made, this conclusion will be referred to
25 the Deputy Director of the Energy Research and Development Division.
- 26 • Provide the Recipient with a *Progress Determination* on continuation of the project, in
27 accordance with the schedule. The Progress Determination may include a requirement
28 that the Recipient revise one or more products.

29 30 **Recipient Products:**

- 31 • CPR Report(s)

32 33 **CAM Products:**

- 34 • CPR Agenda
- 35 • Progress Determination

36 37 **Subtask 1.4 Final Meeting**

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

39 40 41 **The Recipient shall:**

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

EXHIBIT A

Scope of Work

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

- 4 ○ The technical portion of the meeting will involve the presentation of findings,
5 conclusions, and recommended next steps (if any) for the Agreement. The CAM will
6 determine the appropriate meeting participants.
- 7 ○ The administrative portion of the meeting will involve a discussion with the CAM and
8 the CAO of the following Agreement closeout items:
- 9 ▪ Disposition of any procured equipment.
 - 10 ▪ The CEC's request for specific "generated" data (not already provided in
11 Agreement products).
 - 12 ▪ Need to document the Recipient's disclosure of "subject inventions" developed
13 under the Agreement.
 - 14 ▪ "Surviving" Agreement provisions such as repayment provisions and
15 confidential products.
 - 16 ▪ Final invoicing and release of retention.
- 17 ● Prepare a *Final Meeting Agreement Summary* that documents any agreement made
18 between the Recipient and Commission staff during the meeting.
 - 19 ● Prepare a *Schedule for Completing Agreement Closeout Activities*.
 - 20 ● Provide copies of *All Final Products* on a USB memory stick, organized by the tasks in the
21 Agreement.
- 22

23 **Products:**

- 24 ● Final Meeting Agreement Summary (*if applicable*)
 - 25 ● Schedule for Completing Agreement Closeout Activities
 - 26 ● All Final Products
- 27

28 **REPORTS AND INVOICES**

29 **Subtask 1.5 Progress Reports and Invoices**

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

33

34

35 **The Recipient shall:**

- 36 ● Submit a monthly *Progress Report* to the CAM. Each progress report must:
 - 37 ○ Summarize progress made on all Agreement activities as specified in the scope of
38 work for the preceding month, including accomplishments, problems, milestones,
39 products, schedule, fiscal status, and an assessment of the ability to complete the
40 Agreement within the current budget and any anticipated cost overruns. See the
41 Progress Report Format Attachment for the recommended specifications.
 - 42 ● Submit a monthly or quarterly *Invoice* that follows the instructions in the "Payment of Funds"
43 section of the terms and conditions, including a financial report on Match Funds and in-state
44 expenditures.
- 45

46 **Products:**

- 47 ● Progress Reports
 - 48 ● Invoices
- 49

EXHIBIT A

Scope of Work

1 Subtask 1.6 Final Report

2 The goal of this subtask is to prepare a comprehensive Final Report that describes the original
3 purpose, approach, results, and conclusions of the work performed under this Agreement. When
4 creating the Final Report Outline and the Final Report, the Recipient must use the CEC Style
5 Manual provided by the CAM.

6 Subtask 1.6.1 Final Report Outline

7 The Recipient shall:

- 8 • Prepare a *Final Report Outline* in accordance with the *Energy Commission Style Manual*
9 provided by the CAM.

10 Recipient Products:

- 11 • Final Report Outline (draft and final)

12 CAM Product:

- 13 • Energy Commission Style Manual
- 14 • Comments on Draft Final Report Outline
- 15 • Acceptance of Final Report Outline

16 Subtask 1.6.2 Final Report

17 The Recipient shall:

- 18 • Prepare a *Final Report* for this Agreement in accordance with the approved Final Report
19 Outline, Energy Commission Style Manual, and Final Report Template provided by the
20 CAM with the following considerations:
 - 21 ○ Ensure that the report includes the following items, in the following order:
 - 22 ▪ Cover page (**required**)
 - 23 ▪ Credits page on the reverse side of cover with legal disclaimer (**required**)
 - 24 ▪ Acknowledgements page (optional)
 - 25 ▪ Preface (**required**)
 - 26 ▪ Abstract, keywords, and citation page (**required**)
 - 27 ▪ Table of Contents (**required**, followed by List of Figures and List of Tables,
28 if needed)
 - 29 ▪ Executive summary (**required**)
 - 30 ▪ Body of the report (**required**)
 - 31 ▪ References (if applicable)
 - 32 ▪ Glossary/Acronyms (If more than 10 acronyms or abbreviations are used,
33 it is required.)
 - 34 ▪ Bibliography (if applicable)
 - 35 ▪ Appendices (if applicable) (Create a separate volume if very large.)
 - 36 ▪ Attachments (if applicable)
- 37 • Submit a draft of the Executive Summary to the TAC for review and comment.
- 38 • Develop and submit a *Summary of TAC Comments* received on the Executive Summary.
39 For each comment received, the recipient will identify in the summary the following:
 - 40 ○ Comments the recipient proposes to incorporate.
 - 41 ○ Comments the recipient does propose to incorporate and an explanation for
42 why.

EXHIBIT A

Scope of Work

- 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.
- Incorporate all CAM comments into the *Final Report*. If the Recipient disagrees with any comment, provide a *Written Responses to Comments* explaining why the comments were not incorporated into the final product.
- Submit the revised *Final Report* electronically with any Written Responses to Comments within 10 days of receipt of CAM's Written Comments on the Draft Final Report, unless the CAM specifies a longer time period or approves a request for additional time.

Products:

- Summary of TAC Comments
- Draft Final Report
- Written Responses to Comments (*if applicable*)
- 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 CEC funds. Match funds must be identified in writing, and the Recipient must obtain any associated commitments before incurring any costs for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a *Match Funds Status Letter* that documents the match funds committed to this Agreement. If no match funds were part of the proposal that led to the CEC 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 CEC 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.

EXHIBIT A

Scope of Work

- 1 ▪ If different from the solicitation application, provide a letter of commitment from
- 2 an authorized representative of each source of match funding that the funds or
- 3 contributions have been secured.
- 4 • At the Kick-off meeting, discuss match funds and the impact on the project if they are
- 5 significantly reduced or not obtained as committed. If applicable, match funds will be
- 6 included as a line item in the progress reports and will be a topic at CPR meetings.
- 7 • Provide a *Supplemental Match Funds Notification Letter* to the CAM of receipt of additional
- 8 match funds.
- 9 • Provide a *Match Funds Reduction Notification Letter* to the CAM if existing match funds
- 10 are reduced during the course of the Agreement. Reduction of match funds may trigger a
- 11 CPR meeting.

13 **Products:**

- 14 • Match Funds Status Letter
- 15 • Supplemental Match Funds Notification Letter (*if applicable*)
- 16 • Match Funds Reduction Notification Letter (*if applicable*)

18 **Subtask 1.8 Permits**

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

26 **The Recipient shall:**

- 27 • Prepare a *Permit Status Letter* that documents the permits required to conduct this
- 28 Agreement. If no permits are required at the start of this Agreement, then state this in the
- 29 letter. If permits will be required during the course of the Agreement, provide in the letter:
 - 30 ○ A list of the permits that identifies: (1) the type of permit; and (2) the name, address,
 - 31 and telephone number of the permitting jurisdictions or lead agencies.
 - 32 ○ The schedule the Recipient will follow in applying for and obtaining the permits.

33
34 The list of permits and the schedule for obtaining them will be discussed at the Kick-off
35 meeting (subtask 1.2), and a timetable for submitting the updated list, schedule, and
36 copies of the permits will be developed. The impact on the project if the permits are not
37 obtained in a timely fashion or are denied will also be discussed. If applicable, permits will
38 be included as a line item in progress reports and will be a topic at CPR meetings.

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

46 **Products:**

- 47 • Permit Status Letter
- 48 • Updated List of Permits (*if applicable*)
- 49 • Updated Schedule for Acquiring Permits (*if applicable*)

EXHIBIT A Scope of Work

- 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 each executed subcontract.
- Notify and receive written approval from the CAM prior to adding any new subcontractors (see the discussion of subcontractor additions in the terms and conditions).

Products:

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

TECHNICAL ADVISORY COMMITTEE

Subtask 1.10 Technical Advisory Committee (TAC)

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

- Provide guidance in project direction. The guidance may include scope and methodologies, timing, and coordination with other projects. The guidance may be based on:
 - Technical area expertise;
 - Knowledge of market applications; or
 - Linkages between the agreement work and other past, present, or future projects (both public and private sectors) that TAC members are aware of in a particular area.
- Review products and provide recommendations for needed product adjustments, refinements, or enhancements.
- Evaluate the tangible benefits of the project to the state of California, and provide recommendations as needed to enhance the benefits.
- Provide recommendations regarding information dissemination, market pathways, or commercialization strategies relevant to the project products.
- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.

EXHIBIT A

Scope of Work

- 1 • Advocate, to the extent the TAC members feel is appropriate, on behalf of the project in
2 its effort to build partnerships, governmental support and relationships with a national
3 spectrum of influential leaders.
- 4 • Ask probing questions that insure a long-term perspective on decision-making and
5 progress toward the project's strategic goals.

6
7 The TAC may be composed of qualified professionals spanning the following types of disciplines:

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

19 20 **The Recipient shall:**

- 21 • Prepare a *List of Potential TAC Members* that includes the names, companies, physical
22 and electronic addresses, and phone numbers of potential members. The list will be
23 discussed at the Kick-off meeting, and a schedule for recruiting members and holding the
24 first TAC meeting will be developed.
- 25 • Recruit TAC members. Ensure that each individual understands member obligations and
26 the TAC meeting schedule developed in subtask 1.11.
- 27 • Prepare a *List of TAC Members* once all TAC members have committed to serving on the
28 TAC.
- 29 • Submit *Documentation of TAC Member Commitment* (such as Letters of Acceptance) from
30 each TAC member.

31 32 **Products:**

- 33 • List of Potential TAC Members
- 34 • List of TAC Members
- 35 • Documentation of TAC Member Commitment

36 37 **Subtask 1.11 TAC Meetings**

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

Scope of Work

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.

The TAC shall:

- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.
- Advocate on behalf of the project in its effort to build partnerships, governmental support and relationships with a national spectrum of influential leaders.
- Ask probing questions that insure a long-term perspective on decision-making and progress toward the project's strategic goals.
- Review and provide comments to proposed project performance metrics.
- Review and provide comments to proposed project Draft Technology Transfer Plan.

Products:

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

Subtask 1.12 Project Performance Metrics

The goal of this subtask is to finalize key performance targets for the project based on feedback from the TAC and report on final results in achieving those targets. The performance targets should be a combination of scientific, engineering, techno-economic, and/or programmatic metrics that provide the most significant indicator of the research or technology's potential success.

The Recipient shall:

- Complete and submit the project performance metrics from the *Initial Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task, to the CAM.
- Present the draft project performance metrics at the first TAC meeting to solicit input and comments from the TAC members.

EXHIBIT A

Scope of Work

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- Develop and submit a *TAC Performance Metrics Summary* that summarizes comments received from the TAC members on the proposed project performance metrics. The *TAC Performance Metrics Summary* will identify:
 - TAC comments the Recipient proposes to incorporate into the *Initial Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task.
 - TAC comments the Recipient does not propose to incorporate with and explanation why.
 - Develop and submit a *Project Performance Metrics Results* document describing the extent to which the Recipient met each of the performance metrics in the *Final Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task.
 - Discuss the *Project Performance Metrics Results* at the Final Meeting.
- Products:
- TAC Performance Metrics Summary
 - Project Performance Metrics Results

EXHIBIT A

Scope of Work

IV. TECHNICAL TASKS

TASK 2: SITE PLAN ENGINEERING DESIGN

The goals of this task are to perform the engineering analysis as well as the design of the architectural and civil work necessary to install the subsystems that comprise the integrated DER package.

The Recipient shall:

- Develop architectural concept plans.
- Conduct analysis on distribution feeder, power generation, and load.
- Coordinate with utility power line, interconnection process and requirements.
- Develop and prepare a *Preliminary Site Plan* to include equipment and site layout for a 116-acre plot.
- Prepare a *Power System Engineering Analysis and Report* and submit to utility for review, determination of potential capacity constraints, and any potential upgrades and associated costs.
- Prepare *Engineering Site Plan Drawings for Permit* and submit to the authority having jurisdiction for permit.
- Obtain all required permits in a timely manner.
- Prepare *CPR Report #1*.

Products:

- Preliminary Site Plan
- Power System Engineering Analysis and Report
- Engineering Site Plan Drawings for Permit (draft and final)
- CPR Report #1

TASK 3: DER SYSTEM DESIGN AND SYSTEM INTEGRATION

The goals of this task are to define requirements and perform engineering design of the DER system comprising the BESS, solar power, and AC/DC distribution subsystem and to simulate, integrate, and optimize the DER system with the site.

The Recipient shall:

- Complete the requirements specification and engineering design of the BESS subsystem by
 - Defining technical requirements such as charging and discharging power, useable energy capacity, response time.
 - Defining physical requirements such as operating temperatures, humidity, dimensional restrictions.
 - Defining safety and security requirements.
 - Completing the engineering design of the 4.5 MWh BESS subsystem.
- Complete the requirements specification and engineering design of the solar power subsystem.
- Complete the requirements specification and engineering design of the AC/DC distribution control subsystem.

EXHIBIT A

Scope of Work

- 1 • Complete the integration of each of the individual subsystems with the MDHD PEV
2 charging infrastructure.
- 3 • Develop configurations, settings, parameters, and controls required for system
4 operability.
- 5 • Implement baseline configurations, settings, parameters, and controls.
- 6 • Perform MDHD PEV charging events to test functionality to identify any potential issues.
- 7 • Model, simulate, and optimize configurations, settings, parameters, and controls.
- 8 • Perform MDHD PEV charging events and simulated grid outages to evaluate the cost
9 management, renewable integration/GHG reduction, and resilience use cases and to
10 verify all metrics contained in Task 5 can be collected and reported.
- 11 • Prepare and provide a *Validation of Required Data Collection Metrics Report*.
- 12 • Prepare a *DER System Design/Optimization Report* that includes the development of
13 optimization-based approaches to derive the optimal configuration considering the travel
14 usage patterns, the onsite renewable generation profiles, simulation studies, cost
15 management use cases of the DER package to reduce the cost of charging, and value
16 of lost load (VOLL) methodology and approach.
- 17 • Prepare *CPR Report #2*.

18 19 **Products:**

- 20 • Validation of Required Data Collection Metrics Report (draft and final)
- 21 • DER System Design/Optimization Report (draft and final)
- 22 • CPR Report #2

23 24 25 **TASK 4: DER SYSTEM PROCUREMENT, SYSTEM DEPLOYMENT, AND COMMISSIONING**

26 The goals of this task are equipment procurement, installation, complete construction and
27 commissioning of the architectural and civil work necessary to install the subsystems that
28 comprise the integrated DER package.

29 30 **The Recipient shall:**

- 31 • Start the process of identifying and selecting subcontractor(s) for the installation and
32 construction.
- 33 • Prepare a *Construction Schedule and Planning Report* which will include but is not lim-
34 ited to equipment procurement and construction schedule.
- 35 • Procure equipment by obtaining and reviewing quotes for each subsystem.
 - 36 ○ Selecting vendors and placing equipment orders for battery energy stationary
37 storage, DC/DC converters, DC cables and accessories, and battery
38 management system.
 - 39 ○ Selecting vendors and placing equipment orders for solar panels, tracking
40 mounts, drives, controllers, DC cables, and HEM solar string inverter and DC/AC
41 conversion.
 - 42 ○ Selecting vendors and placing equipment orders for power plant controller,
43 medium voltage AC cables and energy management system software.
- 44 • Install, test, and verify the DER subsystem.
- 45 • Complete construction of all general site upgrades required to integrate the DER
46 package.
- 47 • Prepare *Engineer Site Construction Report* that shall include but not be limited to:
 - 48 ○ Summary of steps necessary to prepare the site

EXHIBIT A Scope of Work

- Summary of any special accommodations that were required in the site plan for integration of the DER package
 - Identification of any barriers encountered during installation and the steps taken to overcome the barriers
 - Summary of bids received for each vendor, if applicable
 - Copies of final procurement documents and purchase orders
 - Summary of equipment installation requirements
 - Results of any impact studies that were performed in conjunction with preparing the site for installation of the DER package
- Commissioning and conformance testing of each subsystem and the integrate DER package.
 - Prepare and provide a *DER System Commissioning Report* that shall include, but not be limited to:
 - Copies of performance specifications of each system purchased by the agreement.
 - Identification of any barriers encountered during installation and the steps taken to overcome the barriers
 - Discussion of the results of each subsystem commissioning and whether the subsystem meets the performance specifications.
 - Discussion of the results of DER system commissioning and whether the DER system meets the performance specifications.

Products:

- Construction Schedule and Planning Report (draft and final)
- Engineer Site Construction Report (draft and final)
- DER System Commissioning Report (draft and final)

TASK 5: OPERATIONS, DATA COLLECTION, MEASUREMENT AND VERIFICATION PLAN

The goals of this task are measure, record, and report vehicle and charging event data from both a fleet of 10 MDHD PEVs and fleets utilizing the public-access charging to validate the economic and environmental benefits that are provided by the integrated DER package.

The Recipient shall:

- Collect and prepare *Baseline Characterization Report*, which includes information and data on customer base projection, methodology of analyzing vehicle utilization, charging energy, vehicle routes and operation, charging schedules, charging power profile, operational cost, energy cost and consumption, vehicle models, vehicle battery capacity, PV generation, electric utility tariff, and time-of-use (TOU) pricing.
- Prepare *Trucking as a Service Plan*, which includes rentals taking place through a membership-based platform and details information on providing low-cost and reliable charging at an average fleet price less than the PG&E rates to the fleet of 10 Class 8 battery electric trucks that will be used for dedicated rental, cost.
- Prepare the *Measurement and Verification Plan* that includes a description of the monitoring equipment and instrumentation that will be used for vehicles and equipment that outlines the following performance indicators and metrics will be quantified and reported, at a minimum:
 - Installed system costs and savings in comparison to baseline
 - Equipment and installation costs for each individual subsystem

EXHIBIT A

Scope of Work

- 1 ▪ Monthly operation and maintenance costs including fuel and electricity
- 2 ▪ Avoided costs of facility or distribution upgrades
- 3 ▪ Avoided costs of electricity
- 4 ○ MDHD PEV performance and operational energy requirements and driver and fleet
- 5 operator satisfaction
- 6 ▪ Time step of each data set (e.g. one minute, ten minute, hourly)
- 7 ▪ Trip distance (miles)
- 8 ▪ GPS and location data
- 9 ▪ Idling time and locations
- 10 ▪ Energy consumption (kWh)
- 11 ▪ Energy efficiency (kWh/mi)
- 12 ▪ PEV battery state of charge
- 13 ▪ Planned and unplanned downtime (hours)
- 14 ○ MDHD PEV charging event metrics
- 15 ▪ Time step of each data set (e.g. one minute, ten minute, hourly)
- 16 ▪ Charge session duration and location
- 17 ▪ Energy delivered to vehicle (kWh) and power level (kW)
- 18 ▪ Cost of electricity during charge session (\$/kWh)
- 19 ▪ PEV battery degradation over time
- 20 ▪ Energy delivered to facility circuits, the grid, and other end loads (kWh) and
- 21 power level (kW)
- 22 ○ Installed system performance and point of coupling
- 23 ▪ Evaluation of how well the installed system met the operational needs of
- 24 the fleet
- 25 ▪ Performance evaluation during real or simulated grid outages
- 26 ▪ Time step of each data set (e.g. one minute, ten minute, hourly)
- 27 ▪ Energy produced by distributed energy generation (kWh)
- 28 ▪ Energy delivered to and from stationary storage system (kWh) and power
- 29 level (kW)
- 30 ▪ Energy produced by distributed generation system delivered to MDHD
- 31 PEVs, facility, other end loads, or the grid (kWh)
- 32 ▪ Cost of electricity used (\$/kWh) of offset
- 33 ● Collect a minimum of 12 months of data based on the use cases and demonstrations
- 34 consistent with Measurement and Verification Plan.
- 35 ● Provide a *Performance Data Report* for all performance data collected.
- 36 ● Prepare and provide a *Measurement and Verification Report* that analyzes the metrics
- 37 collected, evaluate system costs and savings within comparison to baseline, MDHD PEV
- 38 performance and operational energy requirements, MDHD PEV charging event metrics,
- 39 installed system performance and point of coupling, discusses the results, and provides
- 40 insight on how the integrated DER package can be further optimized.

Products:

- 43 ● Baseline Characterization Report
- 44 ● Trucking as a Service Plan (draft and final)
- 45 ● Measurement and Verification Plan (draft and final)
- 46 ● Performance Data Report
- 47 ● Measurement and Verification Report (draft and final)

EXHIBIT A Scope of Work

1 **TASK 6: COMMUNITY OUTREACH AND EDUCATION**

2 The goal of this task is to perform engagement, provide outreach, education and information to
3 community stakeholders with a mission to improve health and reduce regional environmental
4 impacts.

5 6 **The Recipient shall:**

- 7 • Conduct outreach to community stakeholders. The project team has two core aspects of
8 information dissemination and knowledge advancement: 1) community engagement, and
9 2) marketing and outreach.
- 10 • Implement an outreach plan that will engage local residents in the station development,
11 launch, and ongoing operations.
- 12 • Prepare a *Preliminary Community Outreach Plan* to include:
 - 13 ○ Development of culturally appropriate materials about the project.
 - 14 ○ A series of community-based meetings where residents can be introduced to the
15 21st Century Truck Stop concept and ask questions about the project.
 - 16 ○ Meetings with representatives of local trucking companies and/or OEMs to discuss
17 details of the electric trucks that will be entering the local community.
 - 18 ○ As appropriate and safe, inviting local community members to visit the site as dif-
19 ferent aspects of it are completed, such as the solar farm installation, battery stor-
20 age unit is installed and/or chargers are installed and commissioned.
- 21 • Prepare a *Community Outreach Report* that presents the results of the community-
22 based organization work performed including estimates of the number of people im-
23 pacted, and findings on the total cost of ownership impacts of electric trucks to confer-
24 ences for truckers such as the California Trucking Association's conference or to fleet
25 managers at the ACT Expo.

26 27 **Products:**

- 28 • Preliminary Community Outreach Plan
- 29 • Community Outreach Report (draft and final)

30 31 32 **TASK 7: EVALUATION OF PROJECT BENEFITS**

EXHIBIT A Scope of Work

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

2
3 The Recipient shall:

- 4 • Complete the *Initial Project Benefits Questionnaire*. The *Initial Project Benefits Questionnaire* shall be initially completed by the Recipient with 'Kick-off' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- 5
6 • Complete the *Annual Survey* by December 15th of each year. The Annual Survey includes but is not limited to the following information:
 - 7 ○ Technology commercialization progress
 - 8 ○ New media and publications
 - 9 ○ Company growth
 - 10 ○ Follow-on funding and awards received
- 11 • Complete the *Final Project Benefits Questionnaire*. The *Final Project Benefits Questionnaire* shall be completed by the Recipient with 'Final' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- 12 • Respond to CAM questions regarding the questionnaire drafts.
- 13 • Complete and update the project profile on the CEC's public online project and recipient directory on the [Energize Innovation website \(www.energizeinnovation.fund\)](http://www.energizeinnovation.fund), and provide *Documentation of Project Profile on EnergizeInnovation.fund*, including the profile link.
- 14 • If the Prime Recipient is an Innovation Partner on the project, complete and update the organizational profile on the CEC's public online project and recipient directory on the [Energize Innovation website \(www.energizeinnovation.fund\)](http://www.energizeinnovation.fund), and provide *Documentation of Organization Profile on EnergizeInnovation.fund*, including the profile link.

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26 Products:

- 27 • Initial Project Benefits Questionnaire
- 28 • Annual Survey(s)
- 29 • Final Project Benefits Questionnaire
- 30 • Documentation of Project Profile on EnergizeInnovation.fund
- 31 • Documentation of Organization Profile on EnergizeInnovation.fund

32 33 34 **TASK 8: TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES**

35 The goal of this task is to ensure the technological learning that resulted from the demonstration(s) is captured and disseminated to the range of professions that will be responsible for future deployments of this technology or similar technologies.

36
37
38 **The Recipient Shall:**

- 39 • Develop and submit a *Project Case Study Plan (Draft/Final)* that outlines how the Recipient will document the planning, construction, commissioning, and operation of the technology or system being demonstrated. The *Project Case Study Plan* should include:
 - 40 ○ An outline of the objectives, goals, and activities of the case study.
 - 41 ○ The organization that will be conducting the case study and the plan for conducting it.
 - 42 ○ A list of professions and practitioners involved in the technology's deployment.

EXHIBIT A Scope of Work

- Specific activities the recipient will take to ensure the learning that results from the project is disseminated to those professions and practitioners.
- Presentations/webinars/training events to disseminate the results of the case study.
- Present the *Draft Project Case Study Plan* to the TAC for review and comment.
- Develop and submit a *Summary of TAC Comments* that summarizes comments received from the TAC members on the *Draft Project Case Study Plan*. This document will identify:
 - TAC comments the recipient proposes to incorporate into the *Final Technology Transfer Plan*.
 - TAC comments the recipient does not propose to incorporate with and explanation why.
- Submit the *Final Project Case Study Plan* to the CAM for approval.
- Execute the *Final Project Case Study Plan* and develop and submit a *Project Case Study (Draft/Final)*
- When directed by the CAM, develop presentation materials for an CEC- sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in annual EPIC symposium(s) sponsored by the California CEC.
- 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.

Products:

- Project Case Study Plan (Draft/Final)
- Summary of TAC Comments
- Project Case Study (Draft/Final)
- High Quality Digital Photographs

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.

STATE OF CALIFORNIA
STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION WATTEV, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement EPC-21-006 with WattEV, Inc. for a \$4,000,000 grant to fund the design, construction, and commissioning of a modular distributed energy resource (DER) package composed of solar photovoltaics, second life battery storage, and an AC/DC distribution control system at a public access electric truck stop. The scalable DER package is intended to provide reliable low-cost renewable energy for a dedicated fleet of ten Class 8 battery electric trucks and to support broader public access to MD/HD Plug-in EV charging for fleets in a burgeoning trade corridor; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC 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 CEC held on September 8, 2021.

AYE:

NAY:

ABSENT:

ABSTAIN:

Liza Lopez
Secretariat