



STATE OF CALIFORNIA

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

**A) New Agreement # EPC-21-004 (to be completed by CGL office)**

<b>B) Division</b>	<b>Agreement Manager:</b>	<b>MS-</b>	<b>Phone</b>
ERDD	Matthew Fung	43	916-776-0757

<b>C) Recipient's Legal Name</b>	<b>Federal ID Number</b>
Uprise Energy, LLC	90-1055578

<b>D) Title of Project</b>
Demonstrating Mobile Renewable Back-up generation with Uprise Energy's Mobile Power Station

**E) Term and Amount**

<b>Start Date</b>	<b>End Date</b>	<b>Amount</b>
8/1/2021	3/30/2026	\$ 1,589,012

**F) Business Meeting Information**

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

Proposed Business Meeting Date 7/15/2021 ☐ Consent ☒ Discussion

Business Meeting Presenter Matthew Fung Time Needed: 5 minutes

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

**Agenda Item Subject and Description:**

**Uprise Energy, LLC.** Proposed resolution approving agreement EPC-21-004 with Uprise Energy, LLC for a \$1,589,012 grant to demonstrate the ability of its 10-kW Mobile Power Station to provide back-up generation during PSPS events, as well as reduce GHG emissions and air pollutants in San Diego County and adopting staff's determination that this action is exempt from the CEQA. (EPIC funding)

**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, §§ 15301 and 15311

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

Explain reason why Agreement is exempt under the above section: This project is exempt under Cal. Code Regs., tit. 14, section 15301, Existing Facilities, which exempts the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of

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existing or former use and section 15311, Accessory Structures, which exempts construction or replacement of minor structures which are accessory to existing commercial, industrial, or institutional facilities. Uprise Energy will demonstrate their Mobile Power Station that may require minor modifications to residential and commercial sites existing electrical panel for the Mobile Power Station to supply power. This demonstration project will not result in serious or major disturbances to an environmental resource.

- 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
	\$

**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	\$1,589,012
			\$

R&D Program Area: ESRO: ETSI

TOTAL: \$ 1,589,012

Explanation for "Other" selection

Reimbursement Contract #: Federal Agreement #:

**K) Recipient's Contact Information**

**1. Recipient's Administrator/Officer**

Name: John Knight

Address: 8575 Aero Dr

City, State, Zip: San Diego, CA  
92123-1722

Phone: 619-666 - 1717

E-Mail: john@upriseenergy.com

**2. Recipient's Project Manager**

Name: John Knight

Address: 8575 Aero Dr



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City, State, Zip: San Diego, CA  
92123-1722

E-Mail: john@upriseenergy.com

Phone: 619-666 - 1717

**L) Selection Process Used**

- ☒ Competitive Solicitation      Solicitation #: GFO-20-310
- ☐ 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 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 type="checkbox"/> N/A              | <input checked="" type="checkbox"/> Attached |

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

\_\_\_\_\_  
**Date**

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

\_\_\_\_\_  
**Date**

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

\_\_\_\_\_  
**Date**

## Exhibit A

### Scope of Work

### Uprise Energy

#### I. TASK ACRONYM/TERM LISTS

##### A. Task List

Task #	CPR <sup>1</sup>	Task Name
1		General Project Tasks
2		Build Demonstration Units
3		Develop Photovoltaic (PV) Hybrid Feature
4		Pre-demonstration System Testing
5	X	Demonstration of Units
6		Community Engagement/Outreach
7		Evaluation of Project Benefits
8		Technology/Knowledge Transfer Activities

##### B. Acronym/Term List

Acronym/Term	Meaning
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CPR	Critical Project Review
LI/DAC	Low-income and Disadvantaged Community
PSPS	Public Safety Power Shutoff
TAC	Technical Advisory Committee
MPS	Uprise Energy Mobile Power Station

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

##### A. Purpose of Agreement

The purpose of this Agreement is to fund the development and demonstration of four (4) complete mobile power units that combine a proven, portable wind system with solar and storage technology to provide rapidly deployable emergency power that have lower greenhouse gas (GHG) emissions, less air pollution, and less environmental impacts than diesel generators.

##### B. Problem/ Solution Statement

###### **Problem**

California has seen a dramatic increase in severe, widespread wildfires. Several of these fires are thought to be a result of increasingly extreme weather and the state's aging electrical system.

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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

### Uprise Energy

Investor-owned Utilities (IOU) have initiated Public Safety Power Shutoffs (PSPS) to reduce the likelihood of electrically induced wildfires under certain weather conditions. During power outages, fossil fuel-powered back-up generation is standard. However, the GHG emissions and air pollution from these generators, and the upstream climate impact of fossil fuel extraction, contribute to the likelihood of extreme weather events. Moreover, rural and tribal communities, often located at the grid's edge where deferred maintenance and monitoring of electrical systems has led to unreliable—and unsafe—conditions, are increasingly prone to PSPS. Yet, these populations are already suffering disproportionately from the impacts of climate change and are least equipped to bear the economic costs of extended outages.

The California Energy Commission (CEC) recognizes the need for mobile clean energy back-up generation that can be deployed to PSPS locations throughout the state, and respond to provide emergency power to areas stricken by catastrophic wildfires, where emergency responders require safe, reliable and clean power to protect the health and safety of California communities. However, renewable energy faces significant technical challenges to portability and reliability. Wind and solar performance largely depend on weather conditions, and stationary infrastructure for stability and safety. Storage has a greater potential for mobility but must be recharged to provide continuous power. A comprehensive solution that combines high-performance, reliable generation, energy storage and new, innovative design, and novel electronics and communications systems can reduce the impacts of PSPS and ensure the health and safety of communities in California's most vulnerable regions.

#### **Solution**

Recipient has developed a rapidly deployable 10-kW turbine that fits in a 20' shipping container and can be transported by a standard towing vehicle for providing safe, reliable power during PSPS, emergencies, and natural disasters, without the environmental costs of diesel generators. Purpose-built to solve issues of energy scarcity and poverty beyond the grid's edge and initially intended for utilization in humanitarian relief, the Uprise Energy Mobile Power Station (MPS) provides a solution to the growing demand for clean, portable energy in an expanding range of applications. In addition to the physical hardware, Recipient has developed a proprietary novel technology to harvest the exponential energy available in wind gusts. Unlike wind turbines that are fixed in place (permanently sited), the MPS is purpose-designed to adjust to the always-changing variations in wind speed. This is achieved through dynamically optimized tip-speed-ratios, allowing for high levels of efficiency and energy capture at every instance throughout the operational range (variable speed turbine). Portability also eliminates the need for siting and wind studies, lowering costs and generating onsite energy in less than an hour. With the addition of on-board battery storage, the MPS provides reliable power at costs comparable to average commercial utility.

For emergency power back-up, the MPS outperforms diesel generators in cost and environmental impact, as well as safety. It also reduces the impact of PSPS, which is essential under certain conditions for safety and long-term grow resiliency. In addition to emergency relief, the MPS can improve grid reliability and resiliency by reducing peak load, particularly in rural areas where grid failure is most likely as a result of climatic conditions or weather events. For California's tribal reservations, often at the grid's edge, the added reliability provided by the MPS improves quality of life and empowers the state's indigenous people to remain on the land they have inhabited for generations.

## Exhibit A Scope of Work Uprise Energy

### C. Goals and Objectives of the Agreement

#### Agreement Goals

The goals of this Agreement are to provide a renewable mobile power system that:

- Combines wind and solar generation with energy storage.
- Can be rapidly deployed to provide instantaneous reliable power without grid interconnection.
- Achieves performance metrics in a range of California climate zones and weather conditions; and
- Provides multiple benefits to California ratepayers in low-income and disadvantaged communities (LI/DAC) and tribal communities.

Ratepayer Benefits:<sup>2</sup> This Agreement will result in the ratepayer benefits of greater electricity reliability, lower costs, and increased safety by utilizing a portable renewable energy generator with storage that will provide cost-effective, clean energy direct to the consumer in a distributed manner. The system will lower energy costs by providing power 24/7/365 direct to the consumer without the need for expensive transmission lines and be available to be deployed on a moment's notice when and if needed for emergency response.

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 by reducing greenhouse gas emissions (AB 32; SB 32) and air pollution (SB 350) from mobile fossil fuel generators.

The MPS has the portability, performance, and power output to compete with back-up diesel generation in emergency situations, which will reduce GHG emissions and air pollution. In non-emergency scenarios, the MPS provides peak demand power, mitigating the need for fossil fuel peaker plants and helping the state achieve statutory renewable energy goals.

#### Agreement Objectives

The objectives of this Agreement are to:

- Design and build components for integrating solar PV capable of boosting generation during low wind periods.
- Demonstrate repeatable, rapid commissioning/decommissioning in at least three (3) climate zones in California.
- Demonstrate the MPS can provide a minimum of 10 kW output for 14 hours;

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<sup>2</sup> 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](http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF)).

<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

### Uprise Energy

- Validate that the MPS can connect to a variety of loads and provide consistent power with no voltage drops.
- Demonstrate ability to provide up to 30 hours of power using combined wind and solar generation to charge the on-board battery.

### 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:

## Exhibit A

### Scope of Work

### Uprise Energy

#### ○ **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.

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.

## Exhibit A

### Scope of Work

### Uprise Energy

#### 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;
- 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.

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 (subtask 1.5);
- Final Report (subtask 1.6);
- Technical Advisory Committee meetings (subtasks 1.10 and 1.11); and
- Any other relevant topics.

- Provide *Kick-off Meeting Presentation* to include but not limited to:
  - Project overview (i.e. project description, goals and objectives, technical tasks, expected benefits, etc.)
  - Project schedule that identifies milestones
  - List of potential risk factors and hurdles, and mitigation strategy
- Provide an *Updated Project Schedule*, *Match Funds Status Letter*, and *Permit Status Letter*, 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:

- Kick-off Meeting Presentation
- Updated Project Schedule (*if applicable*)
- Match Funds Status Letter (subtask 1.7) (*if applicable*)
- Permit Status Letter (subtask 1.8) (*if applicable*)

## Exhibit A

### Scope of Work

### Uprise Energy

#### **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 CEC 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 CEC 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 CEC.

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 CEC, but they may take place at another location, or may be conducted via electronic conferencing (e.g., WebEx) as determined by the CAM.

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

- Prepare and submit 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.
- 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* with 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)

## Exhibit A

### Scope of Work

### Uprise Energy

#### CAM Products:

- CPR Agenda
- 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 CEC 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.

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 procured equipment.
  - The CEC'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 copies of *All Final Products* on a USB memory stick, organized by the tasks in the Agreement.

#### Products:

- Final Meeting Agreement Summary (*if applicable*)
- Schedule for Completing Agreement Closeout Activities
- All Final 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.

## Exhibit A

### Scope of Work

### Uprise Energy

#### 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 Funds and in-state expenditures.

#### 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. When creating the Final Report Outline and the Final Report, the Recipient must use the CEC 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 *Energy Commission Style Manual* provided by the CAM.

#### Recipient Products:

- Final Report Outline (draft and final)

#### CAM Product:

- Energy Commission 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, Energy Commission 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**)

## Exhibit A

### Scope of Work

### Uprise Energy

- 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)
- Submit a draft of the Executive Summary to the TAC for review and comment.
  - Develop and submit a *Summary of TAC Comments* received on the Executive Summary. For each comment received, the recipient will identify in the summary the following:
    - Comments the recipient proposes to incorporate.
    - Comments the recipient does propose to incorporate and an explanation for why.
  - 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.

## Exhibit A

### Scope of Work

### Uprise Energy

#### 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.
  - 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.

## Exhibit A

### Scope of Work

### Uprise Energy

#### 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:
  - 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 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).

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#### 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.
- Advocate, to the extent the TAC members feel is appropriate, 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.

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

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- 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.
- 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.

#### 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.

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- 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 identify key performance targets for the project. 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 draft *Project Performance Metrics Questionnaire* to the CAM prior to the Kick-off Meeting.
- Present the draft *Project Performance Metrics Questionnaire* at the first TAC meeting to solicit input and comments from the TAC members.
- 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 final *Project Performance Metrics Questionnaire*.
  - TAC comments the recipient does not propose to incorporate with and explanation why.
- Submit a final *Project Performance Metrics Questionnaire* with incorporated TAC feedback.
- 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 Performance Metrics Questionnaire*.
- Discuss the final *Project Performance Metrics Questionnaire* and *Project Performance Metrics Results* at the Final Meeting.

#### Products:

- Project Performance Metrics Questionnaire (draft and final)
- TAC Performance Metrics Summary
- Project Performance Metrics Results

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#### IV. TECHNICAL TASKS

##### TASK 2 BUILD DEMONSTRATION UNITS

The goal of this task is to build four (4) MPS units that will be used over the course of the project.

##### The Recipient shall:

- Procure a Bill of Materials (BoM) for all raw materials and component parts for the MPS units.
- Fabricate systems and assemble units per existing design and specifications.
- Develop initial *Safety Test Plan* for operational testing at the Recipient's headquarters in San Diego, CA.
- Perform basic set-up and testing to verify structural and electrical safety.
- Submit *Safety Test Report* to the CEC.

##### Products:

- Safety Test Plan
- Safety Test Report

##### TASK 3 DEVELOP PV HYBRID FEATURES

The goal of this task is to develop a photovoltaic system that will be mounted on the mobile wind turbine trailer to increase total power generation and reliability.

##### The Recipient shall:

- Design integration of PV system into existing MPS design.
- Procure requisite materials, including solar panels, charge controller, cabling and mounting hardware to build the system.
- Complete integration of the PV system.
- Develop initial *PV Test Plan* to verify safety and performance of integrated PV.
- Test system.
- Submit *PV Test Report* to CEC.

##### Products:

- PV Test Plan
- PV Test Report

##### TASK 4 PRE-DEMONSTRATION SYSTEM TESTING

The goal of this task is to validate solar/wind hybrid generation and storage in a real-world environment.

##### The Recipient shall:

- Develop a Pre-Demonstration *Test Plan*.
- Tow the self-contained MPS units to an offsite testing location in San Diego County.
- Perform tests to verify wind, PV, and storage systems meet minimum performance standards.

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- Submit a *Pre-Demonstration Test Report* to CEC.

#### Products:

- Pre-Demonstration Test Plan
- Pre-Demonstration Test Report

#### TASK 5 DEMONSTRATION OF HYBRID MOBILE POWER STATIONS

The goal of this task is to demonstrate that the four *Uprise Energy Mobile Power Stations* will perform as intended in PSPS demonstrations. During this task a test method will be developed to ensure transportation, setup and power generation/delivery are working reliably.

#### Subtask 5.1 System Measurement and Verification

##### The Recipient shall:

- Establish verification and testing methods to demonstrate:
  - Validate On and Off Highway transportation
  - Onsite mobilization and demobilization can be performed by a single person in one hour or less
  - Power generation by wind and solar systems are meeting their respective power curves
  - Power generated by wind and solar is charging onboard battery system
  - Power can be delivered from the MPS via all typical connection types in off-grid installations
- Create a *Verification Plan* that includes but is not limited to an outline of:
  - The tests being conducted
  - Critical metrics being validated
  - Measurement tools for verification
  - Desired certifications
- Prepare a draft *Verification Report* which includes but not limited to:
  - High-level executive summary discussing:
    - Process and results of the final demonstration
    - Testing of the product
    - Technical issues
    - Lessons learned for this phase in the project
- Submit the draft *Verification Report* to the CAM for feedback and incorporate changes as requested in the final *Verification Report*.
- Prepare a *CPR Report #1* in accordance with subtask 1.3 (CPR Meetings).
- Participate in a CPR meeting.

#### Products:

- Verification Plan
- Verification Reports (draft and final)
- CPR Report #1

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#### Subtask 5.2 Non-emergency system demonstration

The goal of this Subtask is to demonstrate the performance and benefits of each MPS during non-emergency usage.

##### The Recipient shall:

- Set-up each of three (3) demonstration units to provide non-emergency power at each site through a power hub/charging station (either to community members or site owner).
- Prepare a *Data Analysis Report* that summarizes the collection and analysis of data on energy generation, storage, and output from the system, as well as data on energy usage and energy savings at each location.

##### Products:

- Data Analysis Report

#### Subtask 5.3 Emergency/PSPS simulation and demonstration

The goal of this Subtask is to demonstrate the performance of each MPS during twenty (20) real or simulated PSPS events.

##### The Recipient shall:

- Reduce general power usage to allow the on-board battery to fully charge prior to the event.
- Provide instantaneous power from the on-board storage system during the event.
- Collect data on energy generation, storage, and output from the system, as well as data on energy usage, duration of event, and total time the MPS is able to provide power.
- Reset system after outage event.
- In the event of an actual fire threat to the system location, Uprise will break down and mobilize the power station to a designated community emergency resource facility to provide power using on-board storage.
- Produce an *PSPS Event Summary Report* that summarizes each real or simulated event.

##### Products:

- PSPS Event Summary Report

#### Subtask 5.4 Energy Commission Demonstrations

##### The Recipient shall:

- Make available (one) demonstration unit for a total of three demonstrations of the CEC's choosing during the agreement.
- Work with CEC (or other) personnel to provide basic training in deploying and operating the MPS unit.
- Prepare a *Non-Emergency Event Summary Report* that summarizes the operation of the unit for non-emergency performance evaluation (see Subtask 5.2) when not called-upon for CEC demonstration.

##### Products:

- Non-Emergency Event Summary Report

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#### TASK 6 COMMUNITY ENGAGEMENT/OUTREACH

The goal of this task is to engage with local community members at project sites and within San Diego County to provide informational and educational opportunities that will enhance understanding of distributed energy and energy technology.

##### The Recipient shall:

- Develop print *Outreach Materials* to distribute to residents of project communities.
- Conduct at least one in-person presentation (or synchronous virtual presentation depending on COVID-related restrictions) for each community. *Webinar Recordings* will be available to community members on the Uprise Energy website ([www.upriseenergy.com](http://www.upriseenergy.com)) for the duration of the project.
- Provide training to site owners and community members on MPS deployment and operation.
- Provide project updates on the Uprise Energy blog and on social media accounts (e.g. Twitter).
- Engage with San Diego-based community organizations (e.g., Cleantech San Diego and San Diego Urban Sustainability Coalition) to provide career development opportunities for LI/DAC residents.
- Work with community-based organizations to disseminate project results and convey MPS benefits and opportunities for LI/DAC and tribal communities.

##### Products:

- Outreach Materials
- Webinar Recordings

#### TASK 7 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.

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- 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.
  - 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 CEC may send the Recipient similar questionnaires after the Agreement term ends. Responses to these questionnaires will be voluntary.

### Products:

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### Uprise Energy

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

#### **TASK 8 TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES**

The goal of this task is to conduct activities that will accelerate the commercial adoption of the technology being supported under this agreement. The primary activity will be to conduct a scale-up analysis including manufacturing analysis, independent design verification, and process improvement efforts.

#### **The Recipient Shall:**

- Develop and submit a *Technology Transfer Plan (Draft/Final)* that identifies the proposed activities the recipient will conduct to accelerate the successful commercial adoption of the technology.
- Present the *Draft Technology Transfer Plan* to the TAC for feedback and comments.
- Develop and submit a *Summary of TAC Comments* that summarizes comments received from the TAC members on the *Draft Technology Transfer 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 Technology Transfer Plan* to the CAM for approval.
- Implement activities identified in *Final Technology Transfer Plan*.
- Develop and submit a *Technology Transfer Summary Report (Draft/Final)* that includes high level summaries of the activities, results, and lessons learned of tasks performed relating to implementing the *Final Technology Transfer Plan*. This report should not include any proprietary information.
- 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 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:**

- Technology Transfer Plan (Draft/Final)
- Summary of TAC Comments
- Technology Transfer Summary Report (Draft/Final)
- High Quality Digital Photographs

**Exhibit A**  
**Scope of Work**  
**Uprise Energy**

1   **V. PROJECT SCHEDULE**

2

3       Please see the attached Excel spreadsheet.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: UPRISE ENERGY, LLC

**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-21-004 with Uprise Energy, LLC for a \$1,589,012 grant to demonstrate the ability of its 10-kW Mobile Power Station to provide back-up generation during PSPS events, as well as reduce GHG emissions and air pollutants in San Diego County; 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 July 15, 2021.

AYE:

NAY:

ABSENT:

ABSTAIN:

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Liza Lopez  
Secretariat