

GRANT REQUEST FORM (GRF)CEC-270 (Revised 10/2015)
COMMISSION

CALIFORNIA ENERGY

New Agreement EPC-18-023 (To be completed by CGL Office)

Division	Agreement Manager:	MS-	Phone
ERDD	Quenby Lum	43	916-327-1492

Recipient's Legal Name	Federal ID Number
Eos Energy Storage LLC	32-0256144

Title of Project
Utility Demonstration of Non-Flammable, Aqueous-Zinc Battery Storage: Innovation Scale-Up to Alleviate T&D . . .

Term and Amount	Start Date	End Date	Amount
	6/28/2019	3/30/2022	\$ 2,986,110

Business Meeting Information

<input type="checkbox"/> ARFVTP agreements under \$75K delegated to Executive Director.			
Proposed Business Meeting Date	6/12/2019	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Qing Tian	Time Needed:	5 minutes
Please select one list serve. EPIC (Electric Program Investment Charge)			

Agenda Item Subject and Description

EOS ENERGY STORAGE LLC. Proposed resolution approving Agreement EPC-18-023 with Eos Energy Storage LLC for a \$2,986,110 grant to scale up a zinc hybrid battery technology in a plug-and-play battery storage system to demonstrate improved power and energy density, and enable full characterization of performance in peak shaving, load following, and frequency regulation, and adopting staff's determination that this action is exempt from CEQA.

California Environmental Quality Act (CEQA) Compliance

- Is Agreement considered a "Project" under CEQA?
 - Yes (skip to question 2) No (complete the following (PRC 21065 and 14 CCR 15378)):
 - Explain why Agreement is not considered a "Project":
 - Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because
 - If Agreement is considered a "Project" under CEQA:
 - a) Agreement **IS** exempt. (Attach draft NOE)
 - Statutory Exemption. List PRC and/or CCR section number: _____
 - Categorical Exemption. List CCR section number: Cal. Code Regs., tit. 14, § 15303
 - Common Sense Exemption. 14 CCR 15061 (b) (3)
 - Explain reason why Agreement is exempt under the above section:
 - The grant project activities will include: (1) manufacturing and assembly of the Gen3 battery system, (2) fire-safety testing, (3) installation of the battery system at an existing San Diego Gas & Electric Company (SDG&E) energy storage site, and (4) battery system demonstration at the SDG&E site. The CEQA exemption under California Code of Regulations, title 14, section 15303, "New Construction or Conversion of Small Structures," includes these relevant circumstances: construction and location of limited numbers of new, small facilities or structures; and installation of small new equipment and facilities in small structures. Under the grant project, small, new, manufacturing-related equipment would be installed in an existing structure in Galt, California. (At a yet-to-be-determined location, the testing work will be performed in an existing lab and will have no environmental impact.) The battery system construction and demonstration in Pala, California amounts to one, new, small (shipping container-size) battery system and a transformer, along with a concrete pad and underground electrical connection. The battery system project footprint will be fully within the existing SDG&E facility. Furthermore, the new battery system will be just one, new structure in a yard of similar battery storage devices under testing. Therefore, this project is exempt under California Code of Regulations, title 14, section 15303.
 - b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)
- Check all that apply
- | | |
|---|---|
| <input type="checkbox"/> Initial Study | <input type="checkbox"/> Environmental Impact Report |
| <input type="checkbox"/> Negative Declaration | <input type="checkbox"/> Statement of Overriding Considerations |
| <input type="checkbox"/> Mitigated Negative Declaration | |

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

GRANT REQUEST FORM (GRF)



Legal Company Name:	Budget
First Priority GreenFleet LLC	\$ 1,496,705
Peaxy, Inc.	\$ 801,404
San Diego Gas & Electric Company	\$ 319,002
TBD - Contractor	\$ 175,000
TBD - Contractor	\$ 95,000
TBD - SubContractor Sub	\$ 10,000
TBD - Electrical	\$ 20,000
TBD Professional Services	\$ 6,000
	\$

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

Legal Company Name:

Budget Information			
Funding Source	Funding Year of Appropriation	Budget List No.	Amount
EPIC	17-18	301.001E	\$262,119
EPIC	18-19	301.001F	\$2,723,991
			\$
			\$
			\$
			\$
R&D Program Area:	ESRO: ETSI	TOTAL:	\$2,986,110
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Recipient's Administrator/ Officer		Recipient's Project Manager	
Name:	Luke Peleggi	Name:	Philippe Bouchard
Address:	3920 Park Ave	Address:	3 E 80th St
City, State, Zip:	Edison, NJ 08820-3002	City, State, Zip:	New York, NY 10075-0154
Phone:	732-243-6642 / Fax: - -	Phone:	212-628-7191 / Fax: - -
E-Mail:	lpeleggi@eosenergystorage.com	E-Mail:	pbouchard@eosenergystorage.com

Selection Process Used

Competitive Solicitation Solicitation #: GFO-18-304

First Come First Served Solicitation

The following items should be attached to this GRF

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

Agreement Manager _____ Date _____ Office Manager _____ Date _____ Deputy Director _____ Date _____

EXHIBIT A

Scope of Work

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR ¹	Task Name
1		General Project Tasks
2		System Engineering/Design
3		Battery Manufacturing
4		AC System Integration & UL Certification
5		Develop Data Monitoring & Analytics
6	X	Shipping, Installation, and Commissioning
7	X	Testing, Operation, Monitoring & Verification
8		Evaluation of Project Benefits
9		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
AC	Alternating Current
BMS	Battery Management System
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CPR	Critical Project Review
CPUC	California Public Utilities Commission
DC	Direct Current
EMS	Energy Management System
Gen3	Eos' 3 rd Generation Znyth™ Battery
GHG	Greenhouse Gas
IOU	Investor Owned Utility
ISO	International Standards Organization
LCOE	Levelized Cost of Energy
PCS	Power Conversion System
SOC	State of Charge
T&D	Transmission and Distribution
TAC	Technical Advisory Committee
Znyth™	Eos' proprietary zinc-hybrid cathode battery technology

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

A. Purpose of Agreement

The purpose of this Agreement is to demonstrate and deploy an innovative scale up of an AC-integrated containerized system incorporating the recipient's advanced Gen3 Znyth™ zinc hybrid-cathode battery technology to maintain the momentum from a previously successful Energy Commission project, EPC-14-023. This project will demonstrate the improved power and energy density by more than 25% and help scale up and commercialize an advanced, non-lithium-ion

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

battery storage solution in California that will help lower costs, improve safety, and provide greater electricity reliability for California Investor Owned Utilities (IOU) ratepayers.

B. Problem/ Solution Statement

Problem

California leads the nation in clean energy policies that help accelerate the deployment of renewable energy to reduce greenhouse gas (GHG) emissions and mitigate the impacts of climate change. The integration of more variable renewable energy requires flexible, fast-responding resources on the grid and changes to the balance of electricity supply and demand, which necessitates the deployment of energy storage technologies to absorb the excess renewable energy during times of peak generation and discharge to cover the exacerbated peak demand. To date, California IOUs have focused almost exclusively on commercially available lithium-ion technologies, which exposes California to fundamental risks and challenges. These include: upfront cost, supply chain concerns due to the use of cobalt and other rare earth materials, availability of the technology-based demand for electric vehicles, environmental and social impacts of mining and disposing of the batteries, and potential fire risk. One of the largest barriers to entry is the intensive upfront capital costs necessary to scale the manufacturing capabilities to bring down the overall costs through economies of scale. There is an immediate need to build on the previous support from the Energy Commission and demonstrate a state-of-the-art, non-lithium-ion battery storage system to help commercialize a more cost-effective, resilient, and safer energy storage solution for California and its ratepayers.

Solution

This project will demonstrate and deploy the recipient's Gen3 product, a 125kW|500kWh Alternating Current (AC) integrated energy storage system integrating a low-cost, long life, and safe aqueous-zinc battery technology (Znyth™), at San Diego Gas and Electric's Pala del Norte energy storage test site. The project will test and validate the next generation system design that incorporates the Gen3 battery module in a ruggedized, plug-and-play International Standards Organization (ISO) shipping container to improve power and energy density by more than 25% from the previous awarded Energy Commission project, while reducing manufacturing and installation costs. This project will integrate multi-phased battery testing with grid modeling to enable dynamic performance characterization and economic evaluation in response to simulated grid conditions. In addition, the recipient is developing data analytics and modeling infrastructure to fully optimize the use of the storage system as well as optimize the supply chain side of manufacturing to produce the best and lowest cost product. The commercial process is being simplified through a web-based Fast Proposal Solution where a customer can input their storage project requirements and an indicative bid is delivered.

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are to:

- Deploy an advanced, non-lithium-ion battery storage system rated at 125kW | 500 kWh to validate improvement in power/energy density by >25% from prior product generations.
- Commercialize a state-of-the-art, turn-key energy storage solution in California.
- Demonstrate fire safety of the aqueous zinc battery technology for wildfire prone regions.
- Characterize AC/DC system performance in a variety of utility use cases.
- Develop and implement cloud-based data management and analytics to provide end-to-end insights from manufacturing to performance in the field.

EXHIBIT A Scope of Work

- Provide greater reliability, lower costs, and improved safety for IOU ratepayers.
- Support increased deployment of renewable energy in CA by alleviating the duck curve.
- Enable technology advancement to overcome barriers to achieve the state's statutory energy goals, including AB 32, AB 2514, and SB 350.
- Provide new technical capabilities and skilled employment in a disadvantaged community.

Ratepayer Benefits:² This Agreement will result in greater electricity reliability, lower costs, and increased safety for IOU ratepayers in California. Specifically, the project will provide **greater electricity reliability** by demonstrating the application and benefits of a most cost-effective and efficient energy storage solution to allow for significant load shifting and reduction of grid congestion. This will allow California to further deploy renewable energy to reach its renewable energy goals, including procuring 50% renewable energy by 2030 and 100% zero-carbon resources by 2045 (SB100). Flexible resources demonstrated in the proposed Project, which can switch state of charge near instantaneously, will help utilities meet these requirements and provide greater electricity reliability to ratepayers.

This Agreement will also result in the ratepayer benefit of **lower costs** by demonstrating the most cost-effective battery technology on the market to allow California IOU's to more cost-effectively meet their procurement goals under AB 2514, along with savings that are passed down to California ratepayers as there is less of a need for back-up power from natural gas, new peaker plants and/or network upgrades.

This Agreement will result in the ratepayer benefit of **increased safety** by promoting the development of an energy storage battery product that is non-toxic and nonflammable, helping to mitigate the increasing risks today from wildfires in the state, unlike many other energy storage solutions. It also offers reliability during natural disasters or other times of emergency, hence the committed interest from Beale Air Force Base and the Department of Defense. Eos Znyth™ uses inert materials and is designed to be suitable for use both in densely populated residential areas and remote grid connectivity stations.

Technological Advancement and Breakthroughs:³ 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 advancing the technological development and commercialization of an advanced, non-lithium-ion battery storage solution for California. Specifically, this project will test and validate the next generation Znyth™ technology system design that incorporates the Gen3 battery module in a ruggedized, plug-and-play ISO-shipping container to improve power and energy density, while reducing manufacturing and installation costs. This technology has previously been identified as having potential to achieve <\$100/kWh manufactured cost, making it the most cost-effective battery technology on the market. The technology's low cost will allow CA IOU's to more cost-effectively meet their procurement goals for AB 2514. These savings will be passed down to California ratepayers through more affordable

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).

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.

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electricity bills.

In addition, California's clean energy and climate policies and programs, including SB 100 and AB 32, will expand the deployment of renewable energy, which has the potential to increase electricity rates. With the added demand for renewables generation comes the overwhelming overproduction of clean energy seen today through curtailments when that clean energy cannot be used.⁴ Flexible resources such as the battery systems that will be demonstrated in the project, which can switch their state of charge nearly instantaneously in response to market conditions, will help capture and sustain a large share of the renewables curtailments seen today and assist utilities to more cost-effectively meet the requirements, helping to lower costs for California IOU ratepayers.

Agreement Objectives

- Demonstrate a 125kW/500kWh energy storage system integrating Eos' aqueous zinc battery technology system to test and validate the improved power and energy density by more than 25% from the previously awarded projects.
- Integrate the scaled-up battery system with advanced inverter and energy management system technologies to help commercialize turn-key energy storage solutions.
- Complete UL product certification, including a UL 9540 burn test to demonstrate fire safety.
- Develop and increase industry understanding of utility requirements for interoperability with communication/control systems to provide response to real-time grid conditions.
- Model economic benefits of the energy storage system in target uses cases (i.e. peak shaving/shifting, solar integration, demand management, T&D deferral) – including demonstrating cost/benefit analysis for California IOU ratepayers.
- Demonstrate lower upfront costs compared to lithium-ion battery storage systems
- Reduce GHG emissions by up to 2.4M lbs. of CO₂e over 15 years.

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)**. 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

⁴ S&P Global. “As Calif. Solar records fall, curtailments of renewables rise.” March 2019.

<https://platform.mi.spglobal.com/web/client?auth=inherit#news/article?id=50621600&KeyProductLinkType=23>

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Project Schedule (Part V). The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt, unless otherwise specified in the task/subtask for which the product is required.

- Consider incorporating all CAM comments into the final product. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final product.
- Submit the revised product and responses to comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period, or approves a request for additional time.

For products that require a final version only

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

For all products

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

Instructions for Submitting Electronic Files and Developing Software:

○ **Electronic File Format**

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

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

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

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- SQL (Structured Query Language).
- Microsoft SQL Server 2008, Stored Procedures. Recommend 2008 R2.
- Microsoft SQL Reporting Services. Recommend 2008 R2.
- XML (external interfaces).

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

MEETINGS

Subtask 1.2 Kick-off Meeting

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

The Recipient shall:

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

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

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

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

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

The CAM shall:

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

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Recipient Products:

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

CAM Product:

- Kick-off Meeting Agenda

Subtask 1.3 Critical Project Review (CPR) Meetings

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

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

The Recipient shall:

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

The CAM shall:

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

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- Provide the Recipient with a *Progress Determination* on continuation of the project, in accordance with the schedule. The Progress Determination may include a requirement that the Recipient revise one or more products.

Recipient Products:

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

CAM Products:

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

Subtask 1.4 Final Meeting

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

The Recipient shall:

- Meet with Energy Commission staff to present project findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement. This meeting will be attended by the Recipient and CAM, at a minimum. The meeting may occur in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.
The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be divided into two separate meetings at the CAM's discretion.
 - The technical portion of the meeting will involve the presentation of findings, conclusions, and recommended next steps (if any) for the Agreement. The CAM will determine the appropriate meeting participants.
 - The administrative portion of the meeting will involve a discussion with the CAM and the CAO of the following Agreement closeout items:
 - Disposition of any state-owned equipment.
 - Need to file a Uniform Commercial Code Financing Statement (Form UCC-1) regarding the Energy Commission's interest in patented technology.
 - The Energy Commission's request for specific "generated" data (not already provided in Agreement products).
 - Need to document the Recipient's disclosure of "subject inventions" developed under the Agreement.
 - "Surviving" Agreement provisions such as repayment provisions and confidential products.
 - Final invoicing and release of retention.
- Prepare a *Final Meeting Agreement Summary* that documents any agreement made between the Recipient and Commission staff during the meeting.
- Prepare a *Schedule for Completing Agreement Closeout Activities*.
- Provide *All Draft and Final Written Products* on a CD-ROM or USB memory stick, organized by the tasks in the Agreement.

Products:

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

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- All Draft and Final Written Products

REPORTS AND INVOICES

Subtask 1.5 Progress Reports and Invoices

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

The Recipient shall:

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

Products:

- Progress Reports
- Invoices

Subtask 1.6 Final Report

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

Subtask 1.6.1 Final Report Outline

The Recipient shall:

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

Recipient Products:

- Final Report Outline (draft and final)

CAM Product:

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

Subtask 1.6.2 Final Report

The Recipient shall:

- Prepare a *Final Report* for this Agreement in accordance with the approved Final Report

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Outline, Style Manual, and Final Report Template provided by the CAM with the following considerations:

- Ensure that the report includes the following items, in the following order:
 - Cover page (**required**)
 - Credits page on the reverse side of cover with legal disclaimer (**required**)
 - Acknowledgements page (optional)
 - Preface (**required**)
 - Abstract, keywords, and citation page (**required**)
 - Table of Contents (**required**, followed by List of Figures and List of Tables, if needed)
 - Executive summary (**required**)
 - Body of the report (**required**)
 - References (if applicable)
 - Glossary/Acronyms (If more than 10 acronyms or abbreviations are used, it is required.)
 - Bibliography (if applicable)
 - Appendices (if applicable) (Create a separate volume if very large.)
 - Attachments (if applicable)
- Ensure that the document is written in the third person.
- Ensure that the Executive Summary is understandable to the lay public.
 - Briefly summarize the completed work. Succinctly describe the project results and whether or not the project goals were accomplished.
 - Identify which specific ratepayers can benefit from the project results and how they can achieve the benefits.
 - If it's necessary to use a technical term in the Executive Summary, provide a brief definition or explanation when the technical term is first used.
- Follow the Style Guide format requirements for headings, figures/tables, citations, and acronyms/abbreviations.
- Ensure that the document omits subjective comments and opinions. However, recommendations in the conclusion of the report are allowed.
- Include a brief description of the project results in the Abstract.
- Submit a draft of the report to the CAM for review and comment. The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt
- Consider incorporating all CAM comments into the Final Report. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final product
- Submit the revised Final Report and responses to comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period or approves a request for additional time.
- Submit one bound copy of the *Final Report* to the CAM along with *Written Responses to Comments on the Draft Final Report*.

Products:

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

CAM Product:

- Written Comments on the Draft Final Report

EXHIBIT A Scope of Work

MATCH FUNDS, PERMITS, AND SUBCONTRACTS

Subtask 1.7 Match Funds

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

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

The Recipient shall:

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

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

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

Products:

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

Subtask 1.8 Permits

The goal of this subtask is to obtain all permits required for work completed under this Agreement

EXHIBIT A

Scope of Work

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

The Recipient shall:

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

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

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

Products:

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

Subtask 1.9 Subcontracts

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

The Recipient shall:

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

EXHIBIT A Scope of Work

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.

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

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

The Recipient shall:

- Prepare a *List of Potential TAC Members* that includes the names, companies, physical and electronic addresses, and phone numbers of potential members and a summary of relevant experience and potential value to the project. 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.

EXHIBIT A

Scope of Work

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

Products:

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

Subtask 1.11 TAC Meetings

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

The Recipient shall:

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

Products:

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

EXHIBIT A Scope of Work

IV. TECHNICAL TASKS

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

TASK 2 SYSTEM ENGINEERING & DESIGN

The goals of this task are (1) engineer and design a 125kW/500kWh containerized DC battery system—inclusive of the batteries, racking, enclosure, dc-dc contactors, wiring, ventilation fans, etc. all the way up to the DC disconnect—and (2) engineer and design the AC System integrating the DC battery system with commercial off-the-shelf Power Conversion System (PCS) and commercial off-the-shelf Energy Management System (EMS) to optimize project functionality and performance.

The Recipient shall:

- Develop engineering drawings for the DC battery system
 - System design shall include detailed sub-module and stack configurations, sub-module and stack interconnections, battery management systems (BMS), packaging and containerization, etc.
 - Computer-aided design and computer-aided manufacturing illustrations will be created to effectively incorporate design concepts into the final prototype.
- Develop engineering drawings for the AC-integrated Containerized System
 - System design shall include DC Battery System, AC inverter integration design, and EMS integration design.
 - Computer-aided design and computer-aided manufacturing illustrations will be created to effectively incorporate design concepts into the final prototype.
- Collaborate with the team to develop detailed technical specification for the DC and AC-integrated battery system.
- Prepare a *System Engineering and Design Memo* including but not limited to:
 - A summary of technical specifications and lessons learned.

Products:

- System Engineering and Design Memo

TASK 3 BATTERY MANUFACTURING

The goals of this task are to (1) manufacture the Znyth™ battery modules, and (2) construct and containerize the DC battery system—together these components represent the primary innovation that will be tested over the course of the project for both the system demonstration and future UL testing.

Subtask 3.1 Production of Battery Sub-Modules

The goal of this subtask is to manufacture the battery sub-modules that will serve as the building blocks of the energy storage system and UL certification process.

The Recipient shall:

- Source appropriate, cost-effective materials for the construction of DC battery modules.
- Assemble components (e.g., electrodes, battery case, electrolyte) into sub-modules.
- Ship DC battery modules to be integrated with DC system enclosure.

EXHIBIT A

Scope of Work

- Document the process for later inclusion in *DC Battery System Assembly Memo*

Subtask 3.2 DC Battery System Assembly

The goal of this subtask is to create an aggregated DC system that meets performance objectives, employing the sub-modules manufactured in Subtask 3.1 and the design developed in Task 2.

The Recipient shall:

- Assemble and containerize the modules to create the ultimate DC battery product.
- Design and install all electrical wiring required for the integrated energy storage system.
- Perform initial electrical testing to validate electrical connections.
- Document the process for later inclusion in *DC Battery System Assembly Memo*
- Produce a *DC Battery System Assembly Memo* including but not limited to:
 - Photos of the product during assemblage and when finished
 - Summary of lessons learned in the manufacturing of the DC system

Products:

- DC Battery System Assembly Memo

TASK 4 AC SYSTEM INTEGRATION & UL CERTIFICATION

The goals of this task are to (1) integrate the DC battery system with a bi-directional inverter to create an AC energy storage system, (2) implement an EMS to allow for testing to be performed and data collected, (3) qualify the system prior to deployment at the host site, and (4) perform UL certification testing for UL 1973 and UL 9540 fire testing.

Subtask 4.1 Integrate Inverter

The goal of this subtask is to identify, specify, and integrate a bi-directional inverter suitable for interconnecting the DC battery with AC grid systems.

The Recipient shall:

- Procure and integrate hardware and software for three phase, 480v, bi-directional inverters (AC to DC) for utility application
- Generate computer-aided design inverter diagram and inverter spec sheet for technical specification

Subtask 4.2 Integrate EMS

The goal of this subtask is to implement the EMS and PCS software interface necessary for remote control and optimized dispatch of the AC/DC Battery system, allowing for the test protocols to be executed and data collected.

The Recipient shall:

- Develop and implement a software interface to allow communication and collaboration with the BMS, EMS, and PCS.
- Integrate an EMS with host site for testing of desired use cases, data acquisition and downstream analysis.
- Validate safety mechanisms, State of Charge calculations, and determine the most cost-effective way to cycle the batteries for grid services control.

EXHIBIT A

Scope of Work

Subtask 4.3 AC/DC System Integration

The goal of this subtask is to finalize the preparation of the DC battery system for integration with the AC inverter system.

The Recipient shall:

- Review intended application use cases, required storage product attributes, integration approach of subsystems, master controller and with host site, address reliability.
- Physically integrate the DC system with AC inverter.
- Prepare *AC/DC System Integration Summary Memo* including but not limited to:
 - Lessons learned from the AC inverter and EMS software integration
 - A one-line diagram of the AC/DC system
 - Recommendations on effective methods for future projects

Products:

- AC/DC System Integration Summary Memo

Subtask 4.4: UL Certification

The goal of this subtask is to attain UL Certification 1973 and 9540 to ensure the system is officially tested and certified against the essential UL Certifications to be rated as safe in all use cases and to confirm mitigation of fire risk in wildfire prone regions.

The Recipient shall:

- Work with a to-be-determined subcontractor to test and certify the Gen3 Battery for UL 1973 Certification
- Complete burn testing of battery (and system as required) under UL9540
- Prepare a *UL Certification Presentation* including but not limited to:
 - A summary of the UL certification process
 - Results
 - Lessons learned

Products:

- UL Certification Presentation

TASK 5 DEVELOP DATA MONITORING & ANALYTICS

The goal of this task is to develop and implement a cloud-based data monitoring and analytics platform which will monitor and optimize the system performance of the Gen3 system. The platform will provide application-specific measurement and verification (M&V) reports for the project to show how system performance and other benefits will be measured. Site data will be utilized to characterize system performance, identify promising use cases, and assess the capacity of the technology to meet vital grid needs such as load shifting, localized congestion relief, and supply firming for growing renewables on the California grid.

The Recipient shall:

- Develop web-based platform allowing for monitoring and optimization of system performance.
- Develop web-based platform that evaluates the grid services that the technology can deliver through cost benefit analysis and summarizes Levelized Cost of Energy (LCOE) energy storage modeling for targeted use cases.

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- Develop web-based platform that will automatically generate reports through the cloud-based platform so that system performance data and other relevant information is collected, documented, and shared effectively. Data generated through these reports will be used to quantify project benefits and be incorporated into the Test Plan summary.
- Prepare a *Use Case Characterization Presentation* including but not limited to:
 - Summary of the web-based LCOE energy storage modeling and use case valuation

Products:

- Use Case Characterization Presentation

TASK 6 SHIPPING, INSTALLATION, COMMISSIONING

The goal of this task is to transport the system to the host site, where the system will be installed and interconnected.

The Recipient shall:

- Develop installation and commissioning manual.
- Transport Gen3 system to the host site.
- Install the AC-integrated energy storage system.
- Set up remote cellular communication and local area network (LAN) connectivity on site to remotely monitor and manage the system.
- Demonstrate compliance with host site's grid interconnection requirements.
- Commission the energy storage system.
- Prepare *Installation and Commissioning Task Memo* including but not limited to:
 - Summary of interconnection and commissioning process
 - Photos of commissioning
 - Summary of lessons learned from interconnection and commissioning process
- Prepare a *TAC Summary Memo #1*
- Prepare a *CPR Report #1* and participate in CPR Meeting as described in subtask 1.3

Products:

- Installation and Commissioning Task Memo
- TAC Summary Memo #1
- CPR Report #1

TASK 7 TESTING, OPERATING, MONITORING & VERIFICATION

The goals of this task are to: (1) develop testing protocol and testing plans for the evaluation of system performance with respect to specific applications/use cases for a grid-connected energy storage system, (2) operate the Energy Storage System to pre-determined applications at the host site; (3) monitor operating communications, safety and control, and (4) verify storage application use to provide quantitative confirmation of added benefits to the grid.

The Recipient shall:

- Develop a *Test Plan* with operation and testing protocols for the energy storage system that includes design basis use cases for grid-tied applications. Using the system's master controller, sample tests may include but are not limited to:
 - Utility dispatch for grid support peak shaving.

EXHIBIT A Scope of Work

- PV smoothing and shifting.
- Ramp and frequency regulation tests for the CAISO.
- Peak shaving to simulate end-use energy management.
- Use collected data/analytics to validate best-use case scenarios.
- Test system performance and limitations for multiple use cases.
- Develop a *System Performance Presentation* including but not limited to:
 - A summary of test results from performance testing.
 - A summary of lessons learned from performance testing.
- Prepare a *TAC Summary Memo #2*
- Prepare a *CPR Report #2* and participate in CPR Meeting as described in subtask 1.3

Products:

- Test Plan
- System Performance Presentation
- TAC Summary Memo #2
- CPR Report #2

TASK 8 EVALUATION OF PROJECT BENEFITS

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

The Recipient shall:

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

EXHIBIT A Scope of Work

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

Products:

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

TASK 9 TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES

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

The Recipient shall:

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

EXHIBIT A

Scope of Work

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

Products:

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

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: EOS ENERGY STORAGE LLC

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

RESOLVED, that the Energy Commission approves Agreement EPC-18-023 with Eos Energy Storage LLC for a \$2,986,110 grant to scale up a zinc hybrid battery technology in a plug-and-play battery storage system to demonstrate improved power and energy density, and enable full characterization of performance in peak shaving, load following, and frequency regulation, and adopting staff's determination that this action is exempt from CEQA; and

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

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on June 12, 2019.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Cody Goldthrite,
Secretariat