STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 12/2019) CALIFORNIA ENERGY COMMISSION

A) New Agreement # EPC-21-039 (to be completed by CGL office)

B) Division	Agreement Manager:	MS-	Phone
ERDD	Joshua Croft	51	925-452-7638

C) Recipient's Legal Name	Federal ID Number
Solid Energies Inc.	82-3158415

D) Title of Project
High Safety, Wide-operation-temperature, Low-cost All Solid-state Li-ion Battery Energy Storage Systems

E) Term and Amount

Start Date	End Date	Amount
7/15/2022	3/31/2026	$ 3,000,000

F) Business Meeting Information

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

Proposed Business Meeting Date 6/8/2022 ☐ Consent ☒ Discussion

Business Meeting Presenter Misa Werner Time Needed: 5 minutes

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

Agenda Item Subject and Description:

Solid Energies Inc. Proposed resolution approving Agreement EPC-21-039 with Solid Energies Inc. for a $3,000,000 grant to develop and integrate a new class of all-solid-state Lithium-ion battery cells with higher power density and better manufacturing for electric vehicle (EV) and stationary storage applications, and adopting staff's determination that this action is exempt from CEQA. This battery achieves the listed advantages with a combination of a novel polymer-composite based solid-state electrolyte, innovative composite electrodes, and a silicon-based composite anode.

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, § 15306; Cal. Code Regs., tit. 14, § 15301

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

Explain reason why Agreement is exempt under the above section:
Cal . Code Regs., tit. 14 Section 15306 provides that projects which consist of basic data collection, research, experimental management, and resource evaluation activities, and which do not result in a serious or major disturbance to an environmental resource are categorically exempt from the provisions of the California Environmental Quality Act. Under this grant, first, the technology will be designed and built using a low-rate production line in a building zoned for this activity. Second, the technology will be demonstrated at two existing facilities. There are no sensitive environmental resources at the demonstration sites. For these reasons, the proposed work will not have any significant effect on the environment and is exempt under Cal. Code Regs., tit 14, Section 15306.

The CEQA exemption under California Code of Regulations, title 14, section 15301, "Existing Buildings," applies. Section 15301 covers the operation, maintenance, or minor alteration of existing public or private structures, facilities, mechanical equipment, involving negligible or no expansion of existing or former use. The technology will be manufactured at an existing, permitted facility. The batteries will be tested at existing facilities. This involves negligible or no expansion of existing or former use.

The project does not involve any cumulative impacts of successive projects of the same type in the same place that might be considered significant; does not involve unusual circumstances that might have a significant effect on the environment; will not result in damage to scenic resources within a highway officially designated as a state scenic highway; the project site is not included on any list compiled pursuant to Government Code section 65962.5; and the project will not cause a substantial adverse change in the significance of a historical resource. Therefore, none of the exceptions to categorical exemptions listed in CEQA Guidelines section 15300.2 apply to this project, and this project will not have a significant effect on the environment.

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**
San Diego State University (SDSU)	$ 959,932

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

Legal Company Name:
Bioenno Tech, LLC

J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
EPIC	21-22	301.001I	$3,000,000

R&D Program Area: EDMFO: EDMF TOTAL: $ 3,000,000

Explanation for "Other" selection

Reimbursement Contract #: Federal Agreement #:

K) Recipient's Contact Information

1. Recipient's Administrator/Officer

Name: Timothy Lin
Address: 985 E Orangefair Ln
City, State, Zip: Anaheim, CA 92801-1104
Phone: 949-310-9899
E-Mail: contact@solidenergies.com

2. Recipient's Project Manager

Name: Timothy Lin
Address: 985 E Orangefair Ln
City, State, Zip: Anaheim, CA 92801-1104
Phone: 949-310-9899
E-Mail: contact@solidenergies.com

L) Selection Process Used

☒ Competitive Solicitation Solicitation #: GFO-20-301
☐ 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		☒ Attached
2.	Exhibit B, Budget Detail		☒ Attached
3.	CEC 105, Questionnaire for Identifying Conflicts		☒ Attached
4.	Recipient Resolution	☒ N/A	☐ Attached
5.	CEQA Documentation	☒ N/A	☐ Attached

Agreement Manager **Date**

Office Manager **Date**

Deputy Director **Date**

Exhibit A
Scope of Work
Solid Energies Inc.

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR[1]	Task Name
1		General Project Tasks
2		Material Design
3	X	Processing Development I – Optimization/Scaling-up of Electrolyte
4		Processing Development II – Cell Processing Optimizations and Scaling-up
5		Prototyping I – Small- to Pilot-scale Pouch Cell Fabrication
6		Prototyping II – BESS Demonstration
7		Demonstration, Analysis, and Site Validation
8		Evaluation of Project Benefits
9		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
Ah	Amp hour rate
ASSLiB	All-solid-state Lithium-ion Battery
BESS	Battery Energy Storage System
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CPR	Critical Project Review
LLZO	$Li_7La_3Zr_3O_{12}$
LNMO	$LiNi_{0.5}Mn_{1.5}O_4$
PEGDA	Poly (ethylene glycol) Diacrylate
PVDF-HFP	Poly (vinylidene fluoride-co-hexafluoropropylene)
PS	Polystyrene
Si	Silicon
SOP	Standard Operating Procedure
SSE	Solid-state Electrolyte
TAC	Technical Advisory Committee

[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
Solid Energies Inc.

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

A. Purpose of Agreement

The purpose of this agreement is to develop and integrate a new class of all-solid-state lithium-ion (Li-ion) battery (ASSLiB) cells with higher power density, better manufacturability, and longer cycle life. These batteries will be designed for use in commercial buildings and other applications such as electrical vehicle solutions. The battery uses a novel solid-state electrolyte with high conductivity that is compatible with roll-to-roll manufacturing. The battery technology also uses a silicon (Si)-based anode to reduce anode cost and address dendrite formation.

B. Problem/ Solution Statement

Problem

Energy storage based on lithium-ion batteries (LiBs) is one of key enabling technologies to address the large daily variations in green electricity. State-of-the-art LiBs, however, suffer from safety issues such as flammable and toxic electrolytes, limited working temperature range, and low energy densities. Solid-state Li-ion batteries (SSLiBs) address these issues but are still faced with several limitations. These limitations include low power density (due to interface resistance between the electrode and the electrolyte, and low ionic conductivity in electrode layers), severe dendrite growth leading to low cycle life, a narrow range of operation temperatures, high material costs, and complex manufacturing incompatible with the current Li-ion battery production line.

Solution

The project team will develop and demonstrate a novel class of SSLiB which are able to achieve excellent safety and high energy density while achieving high power density, a wider operating temperature range, longer cycling life, and low manufacturing costs. This battery achieves these advantages with: (1) a novel polymer-composite based solid-state electrolyte with high ionic conductivity, a wide operation temperature range, and can be processed with a roll-to-roll process into a flexible thin membrane compatible with traditional LiBs processes; (2) a new design of solid-state electrolyte (SSE) -infiltrated composite electrodes whose multilayer battery structure can provide high ionic conductivity and minimized interface resistance; (3) a Si-based composite anode (to replace the Li anode commonly used in other SSLIB) that would reduce the anode cost, dendrite formations and processing complexity. The resultant SSLiB can be integrated with renewable energy sources to provide stable and cost-effective energy storage and electric vehicle solutions.

C. Goals and Objectives of the Agreement

Agreement Goals

The goal of this Agreement is to ensure the successful development and demonstration of the proposed ASSLiBs and the resultant BESSs that will provide a cost-effective, safe and stable solution for renewable energy storage applications surpassing the currently used counterparts, and to:

- Establish a cost-effective and scalable manufacturing route for the fabrication of the ASSLiBs cells that are highly compatible with the existing Li-ion cell production lines.

- Design and construct a pilot-scale production line is capable of producing 200 pieces. high-quality ASSLiBs cells (10 kWh per day) using the established material design and processing, with batch-to-batch consistency and with yielding rate >98%.
- Demonstrate the manufacturability of the ASSLiBs cells having superior safety (no firing hazard), high specific energy (350 Wh/kg), low cost (<$70/kwh), and wide service temperature ranging from -40 °C (low temperature capability) to +90 °C environment.

Ratepayer Benefits:[2] This Agreement will result in the ratepayer benefits of greater electricity reliability, excellent battery safety, and lower costs. This will be done by 1) optimizing and scaling-up the production of a proprietary SSE, 2) designing, developing and scaling-up the production (from small-scale to pilot-scale) of ASSLiB based on the developed SSE and high-capacity sulfur composite electrodes, and 3) designing and demonstrating BESS that can greatly improve the safety, stability, energy density and the lifetime of renewable energy storage systems.

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 developing and producing a novel class of all ASSLiB for next generation BESS for renewable energy applications. The technological developments generated by this proposed work will increase the versatility, safety, lifetime/durability, and efficiency of the BESSs while also lowering the total cost of these systems.

Agreement Objectives

The objectives of this Agreement are to:

- Further optimize/scale-up a proprietary multi-functional SSE, offering (1) high ionic conductivity and good functionality in wide temperature range (*e.g.,* from -40˚C to +90˚C); (2) high voltage capability up to 5V; (3) high flexibility that can be processed into a free-standing, large-dimension, ultra-thin bendable/windable electrolyte membrane; and (4) high compatibility with the high energy composite electrodes.
- Demonstrate high energy 3D-networking composite cathode/anode that is composed of active materials and SSE (acting as both an ionic conductivity enhancer and binder), offering (1) compatibility/adoption of high voltage, high capacity cathode (such as high voltage ~5V $LiNi_{0.5}Mn_{1.5}O_4$ (LNMO), and high specific capacity anode (*e.g.,* Si-dominant anode); (2) high capacity retention vs. charge-discharge cycling (>80% across 1,000 cycles); (3) good processability enabling the implementation of composite electrodes with intimate contacts between active materials and conductive components; and (4) high flexibility that can be processed into electrode layer that are similar to conventional ones.
- Demonstrate a new class of ASSLiB that is expected to provide specific energy densities >350Wh/kg, cyclability across >2000 cycles with a capacity retention >80%, low costs (< $70/kWh in mass production), and wide operation temperature (-40˚C to +90˚C)

[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).

- Demonstrate a pilot-scale production that can produce 20Ah ASSLiB cells with consistent product quality in batch-to-batch and high yield rates (>98%), which can be used to build 48V/100Ah battery systems as building block for the BESS products that can be tailored to different configurations and/or requirements; and
- Design and deploy the BESS products (for instance, 5kWh, scalable to higher capacity) to two selected test sites located in disadvantaged and low-income communities to evaluate the system performance and demonstrate its benefits for the communities.

III. TASK 1 GENERAL PROJECT TASKS

PRODUCTS

Subtask 1.1 Products

The goal of this subtask is to establish the requirements for submitting project products (e.g., reports, summaries, plans, and presentation materials). Unless otherwise specified by the Commission Agreement Manager (CAM), the Recipient must deliver products as required below by the dates listed in the **Project Schedule (Part V).** All products submitted which will be viewed by the public, must comply with the accessibility requirements of Section 508 of the federal Rehabilitation Act of 1973, as amended (29 U.S.C. Sec. 794d), and regulations implementing that act as set forth in Part 1194 of Title 36 of the Federal Code of Regulations**.** All technical tasks should include product(s). Products that require a draft version are indicated by marking **"(draft and final)"** after the product name in the "Products" section of the task/subtask. If "(draft and final)" does not appear after the product name, only a final version of the product is required. With respect to due dates within this Scope of Work, **"days"** means working days.

The Recipient shall:

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

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

For products that require a final version only

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

For all products

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

Instructions for Submitting Electronic Files and Developing Software:

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

  The following describes the accepted formats for electronic data and documents provided to the CEC as products under this Agreement, and establishes the software versions that will be required to review and approve all software products:
  - Data sets will be in MS Access or MS Excel file format (version 2007 or later), or any other format approved by the CAM.
  - Text documents will be in MS Word file format, version 2007 or later.
  - Project management documents will be in Microsoft Project file format, version 2007 or later.

- **Software Application Development**

  Use the following standard Application Architecture components in compatible versions for any software application development required by this Agreement (e.g., databases, models, modeling tools), unless the CAM approves other software applications such as open-source programs:
  - Microsoft ASP.NET framework (version 3.5 and up). Recommend 4.0.
  - Microsoft Internet Information Services (IIS), (version 6 and up) Recommend 7.5.
  - Visual Studio.NET (version 2008 and up). Recommend 2010.
  - C# Programming Language with Presentation (UI), Business Object and Data Layers.
  - SQL (Structured Query Language).
  - Microsoft SQL Server 2008, Stored Procedures. Recommend 2008 R2.
  - Microsoft SQL Reporting Services. Recommend 2008 R2.
  - XML (external interfaces).

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

MEETINGS

Subtask 1.2 Kick-off Meeting

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

The Recipient shall:

- Attend a "Kick-off" meeting with the CAM, the Commission Agreement Officer (CAO), and any other CEC staff relevant to the Agreement. The Recipient will bring its Project Manager and any other individuals designated by the CAM to this meeting. The administrative and technical aspects of the Agreement will be discussed at the meeting. Prior to the meeting, the CAM will provide an agenda to all potential meeting

participants. The meeting may take place in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The administrative portion of the meeting will include discussion of the following:
- Terms and conditions of the Agreement;
- Invoicing and auditing procedures;
- 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)*

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)

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.

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**)
    - 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 on the Draft Report* 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 on the Draft Report
- Draft Final Report
- Written Responses to Comments *(if applicable)*
- Final Report

CAM Product:

- Written Comments on the Draft Final Report

MATCH FUNDS, PERMITS, AND SUBCONTRACTS

Subtask 1.7 Match Funds

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

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

The Recipient shall:

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

  If match funds were a part of the proposal that led to the CEC awarding this Agreement, then provide in the letter:
    - A list of the match funds that identifies:
        - The amount of cash match funds, their source(s) (including a contact name, address, and telephone number), and the task(s) to which the match funds

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

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

Subtask 1.8 Permits
The goal of this subtask is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track. Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement, with the exception of costs incurred by University of California recipients. Permits must be identified and obtained before the Recipient may incur any costs related to the use of the permit(s) for which the Recipient will request reimbursement.

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

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
- 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.
- Ask probing questions that insure a long-term perspective on decision-making and progress toward the project's strategic goals.
- Review and provide comments to proposed project performance metrics.
- Review and provide comments to proposed project Draft Technology Transfer Plan.

Products:

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

Subtask 1.12 Project Performance Metrics
The goal of this subtask is to finalize key performance targets for the project based on feedback from the TAC and report on final results in achieving those targets. The performance targets should be a combination of scientific, engineering, techno-economic, and/or programmatic metrics that provide the most significant indicator of the research or technology's potential success.

The Recipient shall:

- Complete and submit the project performance metrics section of the *Initial Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task, to the CAM.

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

Products:

- TAC Performance Metrics Summary
- Project Performance Metrics Results

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: MATERIAL DEVELOPMENT

The goals of this task are to design and optimize the compositions of SSE composite electrodes. A series of compositions for each component will be processed and characterized with an aim of identifying the optimized compositions (focused on SSE and Si composite-based anode) and thus achieving overall optimal performances.

The Recipient shall:

- Optimize the SSE compositions based on the established baseline, with a focus on the refinement of polymers (*e.g.,* PEGDA, PVDF-HFP, and PS) weight ratios.
- Characterize the obtained SSE membranes through microstructure analysis (e.g., via scanning electron microscopy), and ionic conductivity measurement.
- Optimize the electrodes compositions, including Si-dominant composite anode and LNMO ($LiN_{i0.5}Mn_{1.5}O_4$)-based high voltage composite cathode, with a focus on the refinement of active materials weight ratios.
- Prepare a *Coin Cell Test Plan*. This plan will:
    - Cover two major types of testing: (1) charge-discharge or rate performance. Charge-discharge profiles will be investigated at various rates from 0.1C-5C and environmental temperatures (-40ºC to 80 ºC with a 10 ºC step increment); and (2) cycling at various rates (such as 0.5C, 1C, 2C), temperatures (such as -25, 0, 25, 50, and 75 ºC), and cut-off voltages (such as ~4.0-5.7V). The cycling performance (capacity retention and efficiency vs. cycling numbers) and its dependence on temperature and C-rates will be evaluated.
    - Analyze the testing results to evaluate the materials and cell properties' demonstrated advantages over the state-of-the-art, which include: (1) capacity,

rate capability, and their dependence on environmental temperature, and (2) cycling life (capacity retention and efficiency vs. cycling numbers) and its dependence on temperature and discharging rate.
    - This report will be 3-10 pages, will include graphics and figures, and will have an executive summary that is written for a non-technical audience.
- Characterize the electrochemical properties of the SSEs and electrodes by using half and full coin cells in tests including capacity, rate performance, cycling at various temperatures from -40˚C, to + 90˚C).
- Prepare a *Materials Design/Optimization Results* report.
    - The report will present the testing results for each material composition in the compositions as shown in the previous Table 1 and Table 2, including charging-discharging profiles and the resultant capacity under different temperatures, difference discharge rates and cycling life under different temperatures and discharging rates;
    - These results will be used to compare and evaluate the properties of different materials and determine the best/optimized material design. These optimization results will be used to demonstrate their advantages over those state-of-the-art material designs;
    - This report will be 5-15 pages, will include graphics and figures, and will have an executive summary that is written for a non-technical audience.

Products:
- Coin Cell Test Plan
- Materials Design/Optimization Results

TASK 3: PROCESSING DEVELOPMENT I – OPTIMIZATION/SCALING-UP OF SSE
The goals of this task are to optimize the processing parameters for SSE, and then scale-up its fabrication. This will involve the establishment of cost-effective and scalable techniques for an economic, rapid synthesis of SSE membranes with targeted properties.

The Recipient shall:
- Optimize processing parameters of SSE slurries by adjusting stirring time and strengths with a focus of achieving homogeneous dispersion of higher ratio of LLZO nanofillers.
- Optimize casting/coating speed/thickness of SSE membranes and the subsequent UV/heating curing temperature and time.
- Establish a roll-to-roll system for the scaled-up fabrication of qualified SSE membranes.
- Prepare an *Electrolyte Processing Optimization and Scaling-up Report*.
    - This report will be 5-15 pages, will include graphics and figures, and will have an executive summary that is written for a non-technical audience.
- Prepare *CPR Report #1* and participate in a CPR meeting in accordance with subtask 1.3 (CPR Meetings).

Products:
- Electrolyte Processing Optimization and Scaling-up Report
- CPR Report #1

TASK 4: PROCESSING DEVELOPMENT II – CELL PROCESSING OPTIMIZATION AND SCALING-UP

The goal of this task is to optimize the fabrication process of ASSLiB cells, and then scale-up the optimized process to fabricate pouch cells with larger capacities (*e.g.,* 20Ah). During this task, the optimized process parameters will be established and the related technical issues in scaling-up will be identified and addressed.

The Recipient shall:

- Develop and optimize the fabrication process of ASSLiB battery cells (~3 Ah) based on a preliminarily established prototyping procedure.
- Identify the key processing parameters in the preparations, including but not limited to, SSE membranes, cathode and anode layer, unit stack lamination and hot-press, and cell sealing.
- Based on the optimized process, further scale-up the fabrication of ASSLiB with higher capacities (~20 Ah).
- Test and evaluate the ASSLiB battery cell performance (charge-discharge, rate, and cycling at various temperatures).
- Prepare a *Test Plan for ASSLiB Pouch Cells*.
- Prepare an *ASSLiB Pouch Cell Processing Optimization and Scaling-up Report*.

Products:

- Test Plan for ASSLiB Pouch Cells
- ASSLiB Pouch Cell Processing Optimization and Scaling-up Report (draft and final)

TASK 5: PROTOTYPING I – SMALL- TO PILOT-SCALE POUCH CELL FABRICATION

The goal of this task is to establish pilot-scale (100-200 pouches/batch) fabrication capability of full-scale (20Ah) ASSLiB pouch cells with good uniformity and yield rate, through which Standard Operating Procedure (SOP) for cell production will be developed and finalized.

The Recipient shall:

- Fabricate ASSLiB pouch cells starting using a small-scale production (~20-50 pcs/batch) based on the further optimized processes to establish SOP.
- Based on the established SOP, fabricate pilot-scale ASSLiB pouch cells (~100-200 pcs/batch), and finalize the SOP for pilot-scale ASSLiB pouch cell fabrication.
- Test and evaluate the obtained ASSLiB pouch cell including safety and abuse performance).
- Prepare a *Safety/Abuse Test Report of Full-size ASSLiB Pouch Cell* that:
    - Present the testing results of Safety and Abuse Tests including: 1) controlled crush; 2) nail penetration; 3) thermal stability; 4) over charge; 5) over discharge; 6) short circuit; 7) drop; and 8) thermal cycle.
    - Analyze these results to evaluate their safety features of different pouch cell prototypes under different processing conditions, thus identifying the best/optimized pouch cell design/processing and demonstrating their performance in comparison with the state-of-the-art.
    - This report will be 5-15 pages, will include graphics and figures, and will have an executive summary that is written for a non-technical audience.
- Prepare *SOP Documents of Pilot-scale Fabrication of ASSLiB Pouch Cells*

- The documents will cover: (1) the optimized compositions if electrolyte and electrodes; (2) a proper and finalized procedures and the associated processing parameters for the preparations of electrolyte, cathode, and anode layer respectively; (3) a proper and finalized procedure and the associated processing parameters for the final battery assembly; and (4) a well-established testing matrix and quality assurance procedures for the products.
- The documents will be used to guide the pilot-scale production to produce battery cells with good uniformity in the cell performance (voltages, capacities, and inner resistance, etc.), excellent consistency in batch-to-batch production, and high yielding rate of battery cell production.
- This report will be 10-20 pages, will include graphics and figures, and will have an executive summary that is written for a non-technical audience.

Products:

- Safety/Abuse Test Report of Full-size ASSLiB Pouch Cell
- SOP Documents of Pilot-scale Fabrication of ASSLiB Pouch Cells

TASK 6: PROTOTYPING II – BESS DEMONSTRATION

The goal of this task is to develop, demonstrate, and evaluate two sets of 48V/100 Ah BESSs, using the fabricated ASSLiB battery pouch cells. During this task, high performance battery management system and thermal management will also be developed. Other components such as solar charger controller, central control unit, DC-AC inverter, etc., will be carefully selected and integrated into the proposed BESS.

The Recipient shall:

- Develop high performance battery management system and thermal management for the proposed BESS.
- Select and evaluate proper accessories such as solar charger controller, central control unit, and DC-AC inverters, *etc.*
- Assemble, test, and deploy the proposed BESS. The team will first build the battery system that is integrated with a battery management system (BMS), an active balancing system, and a thermal management system. The assembled battery system will then be integrated with a solar charger controller and a DC-AC inverter to form a complete renewable battery energy storage system (BESS). The resultant BESS will be further connected with an array of solar panels to test the function and performance of BESS. The testing will include (1) the testing of input side (how much power and energy can be charged or input from solar panels or electricity grid); (2) the testing of output side (how much output power and energy can be delivered); and (3) if the system can work well and properly under charging and discharging at the same time. The testing will be also conducted under different testing conditions such as minimum inputs/outputs, maximum inputs/outs and regular input/output. After the testing is successfully conducted, the system can be ready to deploy for further demonstration in the selected testing sites.
- Prepare an *Energy/Power Performance Analysis Report*
    - The report will present the testing results (1) under different testing conditions including minimum inputs/outputs, maximum inputs/outs and regular input/output, and under different modes including the testing of input side (how much power and energy can be charged or input), the testing of output side (how much output

power and energy can be delivered), and the testing of the system under charging and discharging at the same time.
    - The report will analyze the testing results in term of energy and power and provide an appropriate testing procedure to optimize the operation of the BESS for subsequent field-testing demonstration.
    - This report will be 10-20 pages, will include graphics and figures, and will have an executive summary that is written for a non-technical audience.
- Prepare a *Software and User Manual* for *Proactive Maintenance*.
- Prepare a *Site Test Plan* describing how BESS will be tested at selected test sites.

Products:
- Energy/Power Performance Analysis Report
- Software and User Manual for Proactive Maintenance
- Site Test Plan

TASK 7: DEMONSTRATION, ANALYSIS, AND SITE VALIDATION

The goal of this task is to set up and test the developed BESS product at two selected test sites to demonstrate and analyze the resultant technical and economic benefits for the communities.

The Recipient shall:
- Set up and operate the developed BESSs at two test sites.
- Collect the energy/power performance data of the BESSs.
- Evaluate the performance and the resultant technical and economic benefits.
- Prepare a site *Improvement Analysis Report* that:
    - Describes how the ASSLiB and BESS technologies developed in this work improve the communities' benefits.
    - The report will demonstrate (1) significant reduction in demand charge of the testing sites by reducing the peak demand using BESS's energy during peak demand; and (2) shift usage during peak period of the day to super-off-peak period of the day so as to save electricity cost of the sites. These obtained results will be employed to demonstrate the expected technical/economic benefits of these BESSs for the test sites and the associated communities, which would set up a solid foundation for subsequent large-scale commercialization.
    - The report, based on the testing results and the optimization of the BESS control, will also provide a recommended operation protocol to achieve the best efficiency in energy use and most cost saving. It is expected that according to our preliminary study, that approximately 20 to 30% of cost savings can be achieved based on the optimization of the BESS control.
    - This report will be 5-15 pages, will include graphics and figures, and will have an executive summary that is written for a non-technical audience.

Products:
- Improvement Analysis Report

TASK 8: EVALUATION OF PROJECT BENEFITS

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

The Recipient shall:

- Complete *the Initial Project Benefits Questionnaire*. The Initial Project Benefits Questionnaire shall be initially completed by the Recipient with 'Kick-off' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- Complete the *Annual Survey* by January 31st of each year. The Annual Survey includes but is not limited to the following information:
  - Technology commercialization progress
  - New media and publications
  - Company growth
  - Follow-on funding and awards received
- Complete the *Final Project Benefits Questionnaire*. The Final Project Benefits Questionnaire shall be completed by the Recipient with 'Final' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- Respond to CAM questions regarding the questionnaire drafts.
- Complete and update the project profile on the CEC's public online project and recipient directory on the Energize Innovation website (www.energizeinnovation.fund), and provide *Documentation of Project Profile on EnergizeInnovation.fund*, including the profile link.
- If the Prime Recipient is an Innovation Partner on the project, complete and update the organizational profile on the CEC's public online project and recipient directory on the Energize Innovation website (www.energizeinnovation.fund), and provide *Documentation of Organization Profile on EnergizeInnovation.fund*, including the profile link.

Products:

- Initial Project Benefits Questionnaire
- Annual Survey(s)
- Final Project Benefits Questionnaire
- Documentation of Project Profile on EnergizeInnovation.fund
- Documentation of Organization Profile on EnergizeInnovation.fund

TASK 9: 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. Eligible activities include, but are not limited to, the following:

- Scale-up analysis including manufacturing analysis, independent design verification, and process improvement efforts.
- Technology verification testing or application to a test bed program located in California.
- Legal services or licensing to secure necessary intellectual property to further develop the technology
- Market research, business plan development, and cost-performance modeling.
- Entry into an incubator or accelerator program located in California.

Exhibit A
Scope of Work
Solid Energies Inc.

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

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.

RESOLUTION NO: 22-0608-8a

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION: SOLID ENERGIES, INC.

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

RESOLVED, that the CEC approves Agreement EPC-21-039 with Solid Energies Inc. for a $3,000,000 grant to develop and integrate a new class of all-solid-state Lithium-ion battery cells with higher power density and better manufacturing for electric vehicle (EV) and stationary storage applications. This battery achieves the listed advantages with a combination of a novel polymer-composite based solid-state electrolyte, innovative composite electrodes, and a silicon-based composite anode; and

FURTHER BE IT RESOLVED, that the Executive Director or their 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 June 8, 2022.
AYE:
NAY:
ABSENT:
ABSTAIN:

_____
Liza Lopez
Secretariat