



**California Energy Commission
June 22, 2026 Business Meeting
Backup Materials for New Sun Road, P.B.C.**

The following backup materials for the above-referenced agenda item are available in this PDF packet as listed below:

1. Proposed Resolution
2. Grant Request Form
3. Scope of Work

CALIFORNIA ENERGY COMMISSION
PROPOSED RESOLUTION: New Sun Road, P.B.C.
RESOLUTION NO: 26-0622-XX

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-25-051 with New Sun Road, P.B.C. for a \$2,680,416 grant. This project will develop and validate advanced microgrid control technologies that enable microgrids to provide grid-services to utility Distributed Energy Resource Management Systems in conjunction with optimized load management and distributed energy resources control to improve resilience and economics to microgrid owners and utility customers. The technology will be tested at two front-of-the-meter community microgrids in East Los Angeles and Tomales; and

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

APPROVED AND ADOPTED this 22 day of June 2026, by the following vote:

AYE:

NAY:

ABSENT:

ABSTAIN:

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 approved and adopted by affirmative vote of the CEC at a meeting held on June 22, 2026.

Kim Todd
Secretariat



GRANT REQUEST FORM (GRF)

A. New Agreement Number

IMPORTANT: New Agreement # to be completed by Contracts, Grants, and Loans Office.

New Agreement Number: EPC-25-051

B. Division Information

1. Division Name: ERDD
2. Agreement Manager: Zoe Marshall
3. MS-:43
4. Phone Number: 916-931-5128

C. Recipient's Information

1. Recipient's Legal Name: New Sun Road, P.B.C.
2. Federal ID Number: 46-4877485

D. Title of Project

Title of project: MAGIC – Microgrids for Advanced Grid Interaction and Control

E. Term and Amount

1. Start Date: 6/23/2026
2. End Date: 6/30/2030
3. Amount: \$2,680,416.00

F. Business Meeting Information

1. Are the ARFVTP agreements \$75K and under delegated to Executive Director? No
2. The Proposed Business Meeting Date: 6/22/2026 .
3. Consent or Discussion? Discussion
4. Business Meeting Presenter Name: Sebastian Rubio Ruiz
5. Time Needed for Business Meeting: 5 minutes.
6. The email subscription topic is: Electric Program Investment Charge (EPIC)

Agenda Item Subject and Description:

New Sun Road, P.B.C. Proposed resolution approving agreement EPC-25-051 with New Sun Road, P.B.C. for a \$2,680,416 grant, and adopting staff's recommendation that this action is exempt from CEQA. This project will develop and validate advanced microgrid control technologies that enable microgrids to provide grid-services to utility Distributed Energy Resource Management Systems in conjunction with optimized load management and distributed energy resources control to improve resilience and economics to microgrid owners and utility customers. The technology will be tested at two front-of-the-meter community microgrids, located in East LA and Tomales. (EPIC funding) Contact: Zoe Marshall

G. California Environmental Quality Act (CEQA) Compliance

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

Yes

If yes, skip to question 2.



If no, complete the following (PRC 21065 and 14 CCR 15378) and explain why Agreement is not considered a "Project":

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

2. If Agreement is considered a "Project" under CEQA answer the following questions.

a) Agreement **IS** exempt?

Yes

Statutory Exemption?

No

If yes, list PRC and/or CCR section number(s) and separate each with a comma. If no, enter "None" and go to the next question.

PRC section number: None

CCR section number: None

Categorical Exemption?

Yes

If yes, list CCR section number(s) and separate each with a comma. If no, enter "None" and go to the next question.

CCR section number: Cal. Code Regs., tit. 14, § 15301 ; Cal. Code Regs., tit. 14, § 15306 ;

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

No

If yes, explain reason why Agreement is exempt under the above section. If no, enter "Not applicable" and go to the next section.

Cal. Code Regs., tit. 14, sec. 15301 provides that projects which consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, and which involve negligible or no expansion of existing or former use beyond that at the time of the lead agency's determination, are categorically exempt from the provisions of the California Environmental Quality Act (CEQA). The physical aspects of this work will involve software and controller integration for field demonstrations on two existing microgrids. The first existing site is the Tomales West Community Microgrid that include 297 kilowatts (kW) of solar photovoltaic and a 326 kW / 1,306 kilowatt-hour (kWh) battery energy-storage system. The second existing site is the East Los Angeles Community Microgrid, which includes 1.6 megawatts (MW) of combined solar photovoltaic resources and a 3 MW / 12 megawatt-hour (MWh) battery energy-storage system., The software and controller integration of this project will not constitute an alteration to, or significant change in use of, the immediate environment. This project will result in negligible or no expansion of use beyond that already existing. For these reasons, the proposed work will not have any significant effect on the environment and is exempt from CEQA under Cal. Code Regs., tit. 14, sec.15301.



California Code of Regulations, tit. 14, sec. 15306 provides that projects which consist of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource are categorically exempt from CEQA. The project will include load management testing to collect data and metrics, such as distribution-capacity utilization, avoided capacity upgrades, feeder load and renewable hosting capacity, and microgrid interconnection timelines to become operational with existing infrastructure, and submit a Monitoring and Evaluation Report and a Project Case Study Report with the results. This work will not result in a serious or major disturbance to an environmental resource. For this reason, the proposed project will not have a significant effect on the environment and is categorically exempt from CEQA under California Code of Regulations, tit. 14, sec.15306.

The project does not involve impacts on any particularly sensitive environment; will not impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies; 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.

IMPORTANT: consult with the legal office to determine next steps.

No

If yes, answer yes or no to all that applies. If no, list all as “no” and “None” as “yes”.

Additional Documents	Applies
Initial Study	No
Negative Declaration	No
Mitigated Negative Declaration	No
Environmental Impact Report	No
Statement of Overriding Considerations	No
None	Yes

H. Is this project considered “Infrastructure”?

No

I. Subcontractors



List all Subcontractors listed in the Budget (s) (major and minor). Insert additional rows if needed. If no subcontractors to report, enter “No subcontractors to report” and “0” to funds. **Delete** any unused rows from the table.

Subcontractor Legal Company Name	CEC Funds	Match Funds
Natural Capitalism Solutions, Inc.	\$ 594,485	\$0
The Regents of the University of California on behalf of its Berkeley campus	\$ 448,699	\$175,239

J. Vendors and Sellers for Equipment and Materials/Miscellaneous

List all Vendors and Sellers listed in Budget(s) for Equipment and Materials/Miscellaneous. Insert additional rows if needed. If no vendors or sellers to report, enter “No vendors or sellers to report” and “0” to funds. **Delete** any unused rows from the table.

Vendor/Seller Legal Company Name	CEC Funds	Match Funds
Symphonic Energy	\$59,500	\$0
Underwriters Laboratories, Inc.	\$89,500	\$0
Step Function LLC	\$27,965	\$0
SunSpec Alliance	\$20,000	\$0
TBD – Engineering, Procurement, Construction Permitting	\$140,000	\$0
TBD – IEEE 2030.5 Implementation	\$15,000	\$0

K. Key Partners

List all key partner(s). Insert additional rows if needed. If no key partners to report, enter “No key partners to report.” **Delete** any unused rows from the table.

Key Partner Legal Company Name
No key partners to report

L. Budget Information

Include all budget information. Insert additional rows if needed. If no budget information to report, enter “N/A” for “Not Applicable” and “0” to Amount. **Delete** any unused rows from the table.

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
EPIC	23-24	301.001K	\$ 2,000,000
EPIC	25-26	301.001M	\$ 680,416

TOTAL Amount: \$ 2,680,416



STATE OF CALIFORNIA
CALIFORNIA ENERGY COMMISSION

Grant Request Form
CEC-270 (Revised 01/2024)

R&D Program Area: ESB: Transportation

Explanation for "Other" selection Not applicable

Reimbursement Contract #: Not applicable

Federal Agreement #: 101 Local Assistance

M. Recipient's Contact Information

1. Recipient's Administrator/Officer

Name: Adrienne Pierce

Address: 1301 S 46TH ST BUILDING 112

City, State, Zip: RICHMOND, CA 94804

Phone: (650)283-9202

E-Mail: apierce@newsunroad.com

2. Recipient's Project Manager

Name: Susana Arrechea

Address: 1301 S 46TH ST BUILDING 112

City, State, Zip: RICHMOND, CA 94804

Phone: (510) 944-6294

E-Mail: sarrechea@newsunroad.com



N. Selection Process Used

There are three types of selection process. List the one used for this GRF.

Selection Process	Additional Information
Competitive Solicitation #	GFO-24-312
First Come First Served Solicitation #	Not applicable
Other	Not applicable

O. Attached Items

1. List all items that should be attached to this GRF by entering “Yes” or “No”.

Item Number	Item Name	Attached
1	Exhibit A, Scope of Work/Schedule	Yes
2	Exhibit B, Budget Detail	Yes
3	CEC 105, Questionnaire for Identifying Conflicts	Yes
4	Recipient Resolution	Yes
5	Awardee CEQA Documentation	Yes

Approved By

Individuals who approve this form must enter their full name and approval date in the MS Word version.

Agreement Manager: Zoe Marshall

Approval Date: 05/13/2026

Branch Manager: Reynaldo Gonzalez

Approval Date: 05/13/2026

Director: Reynaldo Gonzalez for Jonah Steinbuck

Approval Date: 5/13/2026

**Exhibit A
Scope of Work
New Sun Road, P.B.C.**

1 **I. TASK AND ACRONYM/TERM LISTS**

2 **A. Task List**

3

Task #	CPR ¹	Task Name
1		General Project Tasks
2		Controller Software Integrations and Testing
3	X	Controller Hardware Preparation, Testing and Certification
4		Load Management and Economic Optimization Analysis and Customization
5		Rural Community Demonstration
6	X	Urban Community Demonstration
7		Monitoring and Evaluation
8		Evaluation of Project Benefits
9		Technology/Knowledge Transfer Activities

4 **B. Acronym/Term List**

5

6

Acronym/Term	Meaning
BTM	Behind The Meter
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CBO	Community-Based Organization
CEC	California Energy Commission
CPR	Critical Project Review
DER	Distributed Energy Resource
DERMS	Distributed Energy Resource Management System
EPIC	Electric Program Investment Charge
FTM	Front The Meter
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
M&V	Measurement and Verification
MESA	Modular Energy System Architecture
Recipient	New Sun Road, P.B.C.
SB	Senate Bill
TAC	Technical Advisory Committee
TRL	Technology Readiness Level
UL	Underwriter Laboratory

7
8
9

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
New Sun Road, P.B.C.

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

A. Purpose of Agreement

The purpose of this Agreement is to fund the development and validation of advanced microgrid control technologies that enable microgrids to provide grid-services to utility Distributed Energy Resource Management Systems (DERMS) in conjunction with optimized load management and distributed energy resources (DERs) control to improve resilience and economics to microgrid owners and utility customers. The project will emphasize increasing interoperability between customer-owned DERs and utility control systems to respond to real-time grid conditions and developing replicable models for advancing Front-of-the-Meter (FTM) community microgrids across investor-owned utility territories.

B. Problem/ Solution Statement

Problem

California's electric grid faces growing challenges from increasing electricity demand, rising costs, variable generation, and climate-driven disruptions that threaten reliability. These challenges are most acute in disadvantaged and underserved communities but also affect small businesses, local governments, and critical facilities that rely on dependable power. Traditional grid upgrades are costly, slow, and limited in geographic reach.

Microgrids, whether community-based, commercial, or privately operated, offer a promising pathway to enhance local resilience and integrate more clean energy. However, most operate independently and their potential capabilities to support utility distribution systems and defer capacity upgrades are underutilized. The existing focus of utility DERMS and interoperable protocols on individual inverter-based assets misses the opportunity to use the flexibility of microgrids more broadly to increase the effective capacity and resilience of the grid. Recent advances in California microgrid policy, such as the demonstration of the Redwood Coast Airport Microgrid, adoption of the Community Microgrid Enablement Tariff, and the rollout of the Microgrid Incentive Program are accelerating microgrid adoption and increasing the potential opportunity for microgrids to support the distribution grid. Nevertheless, integrating these advanced grid-support capabilities with customer Behind-the-Meter (BTM) priorities for resilience and cost-savings remains a complex challenge, requiring additional support to develop scalable integrations and demonstrate the benefits to utilities and ratepayers.

Solution

This project will develop, test, and validate advanced microgrid control technologies that enhance the coordination of DERs for resilience, reliability, and economic performance. The New Sun Road, P.B.C. (Recipient) will advance microgrid control systems by increasing predictive optimization capabilities, implementing interoperability standards Institute of Electrical and Electronics Engineers (IEEE) 1815.2 and 2030.5 in its existing controller to enable microgrids to be controlled as a single, flexible asset by utility DERMS, and completing Underwriter Laboratory (UL) 61010 certification for the controller, which is required for commercial readiness in FTM microgrids.

Technical activities will include software integration with market and grid-operation systems, certification testing, pre-deployment analysis of load and resource optimizations, implementation

Exhibit A
Scope of Work
New Sun Road, P.B.C.

1 at two microgrid demonstration sites, including one microgrid located in a rural community, and
2 one microgrid located in an urban community, and analysis of grid support benefits. These
3 efforts will deliver verified control methods, benchmark datasets, and scalable design
4 frameworks that accelerate the transition of grid-interactive microgrid control technologies from
5 prototype (Technology Readiness Level (TRL) 5) to field-ready solutions (TRL 8), supporting
6 California’s Electric Program Investment Charge (EPIC) goals for decarbonization, reliability,
7 resilience, and affordability.
8

9 **C. Goals and Objectives of the Agreement**

10 **Agreement Goals**

11 The goals of this Agreement are to:

- 12 • Advance the integration between microgrid control systems and DERMS to allow
13 customer-owned assets to provide near real-time services (e.g., dispatchable power and
14 voltage support) to the distribution grid. These services will enable utilities to increase
15 the load and renewable generation hosting capacity of existing feeders without costly
16 upgrades, supporting California’s affordability, decarbonization, and grid-modernization
17 goals.
- 18 • Demonstrate the benefits of these integrations to both distribution utilities and customers
19 and inform the broader deployment of microgrids for distribution grid services.
- 20 • Facilitate the scale-up of FTM and community microgrids by:
 - 21 ○ Improving the customer value proposition of microgrids by demonstrating the
22 value of optimized load and DER control to increase uptime and reduce fuel
23 consumption in island mode, and to minimize energy costs when grid connected.
 - 24 ○ Developing a scalable and replicable integration between the customer and
25 distribution utility microgrid controllers to streamline islanding studies and the
26 operational approval of FTM community microgrids.

27 **Ratepayer Benefits:**² This Agreement will result in ratepayer benefits in the following key ways:

- 28 • Greater reliability: Increasing the capability of microgrids to withstand outages through
29 extended periods of time and enabling microgrids to support distribution grid reliability.
- 30 • Lower costs: Deferring capacity upgrades by integrating microgrids and customer-owned
31 DERs with utility DERMS; reducing energy costs and fuel usage to microgrid owners and
32 users through optimization and load management and extending islanded operation
33 without additional generation and storage capacity.
- 34 • Safety: Pursuing UL 61010 certification for microgrid control hardware in the project.

35
36
37
38

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

Exhibit A

Scope of Work

New Sun Road, P.B.C.

1 Technological Advancement and Breakthroughs:³ The technology advancements support
2 California’s clean energy and grid modernization goals and progress towards statutory mandates
3 for 100% clean energy (Senate Bill (SB) 100) and DER integration (SB 1339) in several ways:

- 4 • Increasing grid resilience by accelerating community microgrid deployment by enabling
5 new value propositions and streamlining implementation.
- 6 • Increasing feeder hosting capacity for electric vehicles and other beneficial loads,
7 supporting shifts to decarbonize buildings and transportation.
- 8 • Increasing feeder hosting capacity for renewable energy, especially solar photovoltaics,
9 to decarbonize energy supply.
- 10 • Providing additional storage and load flexibility resources to grid operators to help
11 manage intermittency of renewable energy generation and decrease reliance on fossil
12 fuel generation.
- 13 • Reducing the use of backup diesel and propane generators in microgrids through load
14 management and optimized controls to prioritize solar energy.

15
16 Technology development will emphasize control system interoperability through the IEEE 2030.5
17 and IEEE 1815.2 Modular Energy System Architecture - Distributed Energy Resources (MESA-
18 DER) standards, hardware certification to UL/International Electrotechnical Commission (IEC)
19 61010 requirements for control equipment, scalability and replicability of the microgrid control
20 system by designing and documenting configurations for emerging standardized control
21 architecture, and knowledge generation of the role of forecasting and predictive optimization in
22 microgrid resource control.

23 24 Agreement Objectives

25 The objectives of this Agreement are to:

- 26 • Achieve utility-deployable hardware readiness by completing relevant certifications of the
27 Recipient’s microgrid controller, including successful laboratory testing, corrective
28 actions, and documentation required for safe operation in FTM microgrids.
- 29 • Implement and certify interoperable communication standards by developing, testing,
30 and obtaining third-party certification that enable the microgrid controller to operate as a
31 standards-based aggregated DER asset.
- 32 • Integrate with electricity market and operation systems and provide complete end-to-end
33 telemetry validation readiness testing with a scheduling coordinator.
- 34 • Customize and validate predictive load management, storage dispatch, and fuel-based
35 generator use minimization algorithms for two demonstration microgrids based on pre-
36 deployment analyses of site resources, load patterns, constraints, and resilience
37 priorities.
- 38 • Quantify technical performance improvements at each site by measuring: increases in
39 renewable hosting capacity (targeting 20 to 30 percent), distribution-capacity utilization
40 and deferred upgrade potential through peak load reduction (10 to 30 percent), hours of
41 critical-load ride-through beyond 24 hours, and deductions in diesel/propane generator
42 use (5 to 15 percent).
- 43 • Develop validated datasets, benchmark methods, and evaluation models—including
44 feeder-level simulations, measurement and verification (M&V) analysis, business-as-

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

**Exhibit A
Scope of Work
New Sun Road, P.B.C.**

1 usual comparisons, and scalability assessments—to support replication and statewide
2 deployment.

- 3 ● Advance California’s EPIC goals by generating evidence of how interoperable, grid-
4 interactive microgrids can reduce ratepayer costs, improve reliability and safety, support
5 electrification, and expand equitable access to clean, resilient energy solutions—
6 especially in disadvantaged communities.

7
8
9 **III. TASK 1 GENERAL PROJECT TASKS**

10
11 **PRODUCTS**

12 **Subtask 1.1 Products**

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

24
25 **The Recipient shall:**

26
27 For products that require a draft version, including the Final Report Outline and Final Report

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

38
39 For products that require a final version only

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

42
43 For all products

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

45
46 Instructions for Submitting Electronic Files and Developing Software:

- 47
48 ○ **Electronic File Format**

Exhibit A
Scope of Work
New Sun Road, P.B.C.

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

7
8 The following describes the accepted formats for electronic data and documents
9 provided to the CEC as products under this Agreement, and establishes the
10 software versions that will be required to review and approve all software
11 products:

- 12 ▪ Data sets will be in MS Access or MS Excel file format (version 2007 or later), or
13 any other format approved by the CAM.
14 ▪ Text documents will be in MS Word file format, version 2007 or later.
15 ▪ Project management documents will be in Microsoft Project file format, version
16 2007 or later.

17
18 ○ **Software Application Development**

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

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

33
34 Any exceptions to the Electronic File Format requirements above must be approved
35 in writing by the CAM. The CAM will consult with the CEC’s Information Technology
36 Services Branch to determine whether the exceptions are allowable.

37
38 **MEETINGS**

39 **Subtask 1.2 Kick-off Meeting**

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

42
43 **The Recipient shall:**

- 44 • Attend a “Kick-off” meeting with the CAM, and other CEC staff relevant to the
45 Agreement. The Recipient’s Project Manager and any other individuals deemed
46 necessary by the CAM or the Project Manager shall participate in this meeting. The
47 administrative and technical aspects of the Agreement will be discussed at the meeting.
48 Prior to the meeting, the CAM will provide an agenda to all potential meeting

**Exhibit A
Scope of Work
New Sun Road, P.B.C.**

1 participants. The meeting may take place in person or by electronic conferencing (e.g.,
2 Teams, Zoom), with approval of the CAM.
3

4 The Kick-off meeting will include discussion of the following:

- 5 ○ The CAM's expectations for accomplishing tasks described in the Scope of Work;
- 6 ○ An updated Project Schedule;
- 7 ○ Terms and conditions of the Agreement;
- 8 ○ Invoicing and auditing procedures;
- 9 ○ Travel;
- 10 ○ Equipment purchases;
- 11 ○ Administrative and Technical products (subtask 1.1);
- 12 ○ CPR meetings (subtask 1.3);
- 13 ○ Monthly Calls (subtask 1.5)
- 14 ○ Quarterly Progress reports (subtask 1.6)
- 15 ○ Final Report (subtask 1.7)
- 16 ○ Match funds (subtask 1.8);
- 17 ○ Permit documentation (subtask 1.9);
- 18 ○ Subawards(subtask 1.10);
- 19 ○ Technical Advisory Committee meetings (subtasks 1.11 and 1.12);
- 20 ○ Agreement changes;
- 21 ○ Performance Evaluations; and
- 22 ○ Any other relevant topics.

- 23
- 24 ● Provide *Kick-off Meeting Presentation* to include but not limited to:
 - 25 ○ Project overview (i.e. project description, goals and objectives, technical tasks,
26 expected benefits, etc.)
 - 27 ○ Project schedule that identifies milestones
 - 28 ○ List of potential risk factors and hurdles, and mitigation strategy
- 29
- 30 ● Provide an *Updated Project Schedule, Match Funds Status Letter, and Permit Status*
31 *Letter*, as needed to reflect any changes in the documents.
32

33 **The CAM shall:**

- 34 ● Designate the date and location of the meeting.
- 35 ● Send the Recipient a *Kick-off Meeting Agenda*.
- 36

37 **Recipient Products:**

- 38 ● Kick-off Meeting Presentation
- 39 ● Updated Project Schedule (*if applicable*)
- 40 ● Match Funds Status Letter (subtask 1.7) (*if applicable*)
- 41 ● Permit Status Letter (subtask 1.8) (*if applicable*)
- 42

43 **CAM Product:**

- 44 ● Kick-off Meeting Agenda
- 45

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

47 The goal of this subtask is to determine if the project should continue to receive CEC funding,
48 and if so whether any modifications must be made to the tasks, products, schedule, or budget.
49 CPR meetings provide the opportunity for frank discussions between the CEC and the

Exhibit A
Scope of Work
New Sun Road, P.B.C.

1 Recipient. As determined by the CAM, discussions may include project status, challenges,
2 successes, advisory group findings and recommendations, final report preparation, and
3 progress on technical transfer and production readiness activities (if applicable). Participants
4 will include the CAM and the Recipient and may include the CAO and any other individuals
5 selected by the CAM to provide support to the CEC.

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

14
15 **The Recipient shall:**

- 16 ● Prepare and submit a *CPR Report* for each CPR meeting that: (1) discusses the
17 progress of the Agreement toward achieving its goals and objectives; and (2) includes
18 recommendations and conclusions regarding continued work on the project.
- 19 ● Attend the CPR meeting.
- 20 ● Present the CPR Report and any other required information at each CPR meeting.

21
22 **The CAM shall:**

- 23 ● Determine the location, date, and time of each CPR meeting with the Recipient's input.
- 24 ● Send the Recipient a *CPR Agenda* with a list of expected CPR participants in advance of
25 the CPR meeting. If applicable, the agenda may include a discussion of match funding
26 and permits.
- 27 ● Conduct and make a record of each CPR meeting. Provide the Recipient with a
28 schedule for providing a Progress Determination on continuation of the project.
- 29 ● Determine whether to continue the project, and if so whether modifications are needed
30 to the tasks, schedule, products, or budget for the remainder of the Agreement. A
31 determination of unsatisfactory progress This may result in project delays, including a
32 potential Stop Work Order, while the CEC determines whether the project should
33 continue.
- 34 ● Provide the Recipient with a *Progress Determination* on continuation of the project, in
35 accordance with the schedule. The Progress Determination may include a requirement
36 that the Recipient revise one or more products.

37
38 **Recipient Products:**

- 39 ● CPR Report(s)

40
41 **CAM Products:**

- 42 ● CPR Agenda(s)
- 43 ● Progress Determination

44
45 **Subtask 1.4 Final Meeting**

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

47
48 **The Recipient shall:**

- 49 ● Meet with CEC staff to present project findings, conclusions, and recommendations. The

Exhibit A
Scope of Work
New Sun Road, P.B.C.

1 final meeting must be completed during the closeout of this Agreement. This meeting will
2 be attended by the Recipient and CAM, at a minimum. The meeting may occur in person
3 or by electronic conferencing (e.g., WebEx), with approval of the CAM.
4

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

- 7 ○ The technical portion of the meeting will involve the presentation of findings,
8 conclusions, and recommended next steps (if any) for the Agreement. The CAM will
9 determine the appropriate meeting participants.
- 10 ○ The administrative portion of the meeting will involve a discussion with the CAM of
11 the following Agreement closeout items:
 - 12 ▪ Disposition of any procured equipment.
 - 13 ▪ The CEC's request for specific "generated" data (not already provided in
14 Agreement products).
 - 15 ▪ Need to document the Recipient's disclosure of "subject inventions" developed
16 under the Agreement.
 - 17 ▪ "Surviving" Agreement provisions such as repayment provisions and confidential
18 products.
 - 19 ▪ Final invoicing and release of retention.
- 20 ● Prepare a *Final Meeting Agreement Summary* that documents any agreement made
21 between the Recipient and Commission staff during the meeting.
- 22 ● Prepare a *Schedule for Completing Agreement Closeout Activities*.
- 23 ● Provide copies of *All Final Products* organized by the tasks in the Agreement.
24

25 **Products:**

- 26 ● Final Meeting Agreement Summary (*if applicable*)
- 27 ● Schedule for Completing Agreement Closeout Activities
- 28 ● All Final Products
29

30 **MONTHLY CALLS, REPORTS AND INVOICES**

31 **Subtask 1.5 Monthly Calls**

32 The goal of this task is to have calls at least monthly between the CAM and Recipient to verify
33 that satisfactory and continued progress is made towards achieving the objectives of this
34 Agreement on time and within budget.

35 The objectives of this task are to verbally summarize activities performed during the reporting
36 period, to identify activities planned for the next reporting period, to identify issues that may
37 affect performance and expenditures, to verify match funds are being proportionally spent
38 concurrently or in advance of CEC funds or are being spent in accordance with an approved
39 Match Funding Spending Plan, to form the basis for determining whether invoices are
40 consistent with work performed, and to answer any other questions from the CAM. Monthly
41 calls might not be held on those months when a quarterly progress report is submitted or the
42 CAM determines that a monthly call is unnecessary.
43

44 **The CAM shall:**

- 45 ● Schedule monthly calls.
- 46 ● Provide questions to the Recipient prior to the monthly call.
- 47 ● Provide call summary notes to Recipient of items discussed during call.
48

**Exhibit A
Scope of Work
New Sun Road, P.B.C.**

1 **The Recipient shall:**

- 2 • Review the questions provided by CAM prior to the monthly call
3 • Provide verbal answers to the CAM during the call.
4

5 **Product:**

- 6 • Email to CAM concurring with call summary notes.
7

8 **Subtask 1.6 Quarterly Progress Reports and Invoices**

9 The goals of this subtask are to: (1) periodically verify that satisfactory and continued progress
10 is made towards achieving the project objectives of this Agreement; and (2) ensure that invoices
11 contain all required information and are submitted in the appropriate format.
12

13 **The Recipient shall:**

- 14 • Submit a *Quarterly Progress Report* to the CAM. Each progress report must:
15 ○ Summarize progress made on all Agreement activities as specified in the scope of
16 work for the reporting period, including accomplishments, problems, milestones,
17 products, schedule, fiscal status, and an assessment of the ability to complete the
18 Agreement within the current budget and any anticipated cost overruns. Progress
19 reports are due to the CAM the 10th day of each January, April, July, and October.
20 The Quarterly Progress Report template can be found on the ECAMS Resources
21 webpage available at: <https://www.energy.ca.gov/media/4691>
22 • Submit a monthly or quarterly *Invoice* on the invoice template(s) provided by the CAM.
23

24 **Recipient Products:**

- 25 • Quarterly Progress Reports
26 • Invoices
27

28 **CAM Product:**

- 29 • Invoice template
30

31 **Subtask 1.7 Final Report**

32 The goal of this subtask is to prepare a comprehensive Final Report that describes the original
33 purpose, approach, results, and conclusions of the work performed under this Agreement.

34 When creating the Final Report Outline and the Final Report, the Recipient must use the CEC
35 Style Manual provided by the CAM.
36

37 **Subtask 1.7.1 Final Report Outline**

38
39 **The Recipient shall:**

- 40 • Prepare a *Final Report Outline* in accordance with the *Energy Commission Style Manual*
41 provided by the CAM.
42

43 **Recipient Products:**

- 44 • Final Report Outline (draft and final)
45

46 **CAM Products:**

- 47 • Energy Commission Style Manual
48 • Comments on Draft Final Report Outline
49 • Acceptance of Final Report Outline

Exhibit A
Scope of Work
New Sun Road, P.B.C.

1
2 **Subtask 1.7.2 Final Report**
3

4 **The Recipient shall:**

- 5 ● Prepare a *Final Report* for this Agreement in accordance with the approved Final Report
6 Outline, Energy Commission Style Manual, and Final Report Template provided by the
7 CAM with the following considerations:
8 ○ Ensure that the report includes the following items, in the following order:
9 ▪ Cover page (**required**)
10 ▪ Credits page on the reverse side of cover with legal disclaimer (**required**)
11 ▪ Acknowledgements page (optional)
12 ▪ Preface (**required**)
13 ▪ Abstract, keywords, and citation page (**required**)
14 ▪ Table of Contents (**required**, followed by List of Figures and List of Tables, if
15 needed)
16 ▪ Executive summary (**required**)
17 ▪ Body of the report (**required**)
18 ▪ References (if applicable)
19 ▪ Glossary/Acronyms (If more than 10 acronyms or abbreviations are used, it is
20 required.)
21 ▪ Bibliography (if applicable)
22 ▪ Appendices (if applicable) (Create a separate volume if very large.)
23 ▪ Attachments (if applicable)
24 ● Submit a draft of the Executive Summary to the TAC for review and comment.
25 ● Develop and submit a *Summary of TAC Comments on Draft Final Report* received on
26 the Executive Summary. For each comment received, the Recipient will identify in the
27 summary the following:
28 ○ Comments the Recipient proposes to incorporate.
29 ○ Comments the Recipient does propose to incorporate and an explanation for why.
30 ● Submit a draft of the report to the CAM for review and comment. The CAM will provide
31 written comments to the Recipient on the draft product within 15 days of receipt.
32 ● Incorporate all CAM comments into the *Final Report*. If the Recipient disagrees with any
33 comment, provide a *Written Responses to Comments* explaining why the comments
34 were not incorporated into the final product.
35 ● Submit the revised *Final Report* electronically with any Written Responses to Comments
36 within 10 days of receipt of CAM's Written Comments on the Draft Final Report, unless the
37 CAM specifies a longer time period or approves a request for additional time.
38

39 **Products:**

- 40 ● Summary of TAC Comments on Draft Final Report
41 ● Draft Final Report
42 ● Written Responses to Comments (*if applicable*)
43 ● Final Report
44

45 **CAM Product:**

- 46 ● Written Comments on the Draft Final Report
47

Exhibit A
Scope of Work
New Sun Road, P.B.C.

MATCH FUNDS, PERMITS, AND SUBAWARDS

Subtask 1.8 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. 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 application 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 application 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 1.9 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.

Exhibit A
Scope of Work
New Sun Road, P.B.C.

1 Permit costs and the expenses associated with obtaining permits are not reimbursable under
2 this Agreement, with the exception of costs incurred by University of California recipients.
3 Permits must be identified and obtained before the Recipient may incur any costs related to the
4 use of the permit(s) for which the Recipient will request reimbursement.
5

6 **The Recipient shall:**

- 7 ● Prepare a *Permit Status Letter* that documents the permits required to conduct this
8 Agreement. If no permits are required at the start of this Agreement, then state this in the
9 letter. If permits will be required during the course of the Agreement, provide in the letter:
10 ○ A list of the permits that identifies: (1) the type of permit; and (2) the name, address,
11 and telephone number of the permitting jurisdictions or lead agencies.
12 ○ The schedule the Recipient will follow in applying for and obtaining the permits.
13

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

- 19 ● If during the course of the Agreement additional permits become necessary, then
20 provide the CAM with an *Updated List of Permits* (including the appropriate information
21 on each permit) and an *Updated Schedule for Acquiring Permits*.
22 ● Send the CAM a *Copy of Each Approved Permit*.
23 ● If during the course of the Agreement permits are not obtained on time or are denied,
24 notify the CAM within 5 days. Either of these events may trigger a CPR meeting.
25

26 **Products:**

- 27 ● Permit Status Letter
- 28 ● Updated List of Permits (*if applicable*)
- 29 ● Updated Schedule for Acquiring Permits (*if applicable*)
- 30 ● Copy of Each Approved Permit (*if applicable*)
31

32 **Subtask 1.10 Obtain and Execute Subawards and Agreements with Site Hosts**

33 The goals of this subtask are to: (1) procure and execute subrecipients and site host
34 agreements, as applicable, required to carry out the tasks under this Agreement; and (2) ensure
35 that the subrecipients and site host agreements are consistent with the Agreement terms and
36 conditions and the Recipient's own contracting policies and procedures.
37

38 **The Recipient shall:**

- 39 ● Execute and manage subawards and coordinate subrecipients activities in accordance
40 with the requirements of this Agreement.
- 41 ● Execute and manage site host agreements and ensure the right to use the project site
42 throughout the term of the Agreement, as applicable. A site host agreement is not
43 required if the Recipient is the site host.
- 44 ● Notify the CEC in writing immediately, but no later than five calendar days, if there is a
45 reasonable likelihood the project site cannot be acquired or can no longer be used for
46 the project.
- 47 ● Incorporate this Agreement by reference into each subaward.

Exhibit A
Scope of Work
New Sun Road, P.B.C.

- 1 ● Include any required Energy Commission flow-down provisions in each subaward, in
2 addition to a statement that the terms of this Agreement will prevail if they conflict with
3 the subaward terms.
- 4 ● Submit a *Subaward and Site Letter* to the CAM describing the subawards and any site
5 host agreement needed or stating that no subawards or site host agreements are
6 required.
- 7 ● If requested by the CAM, submit a draft of each *Subaward* and any *Site Host Agreement*
8 required to conduct the work under this Agreement.
- 9 ● If requested by the CAM, submit a final copy of each executed *Subaward* and any *Site*
10 *Host Agreement*.
- 11 ● Notify and receive written approval from the CAM prior to adding any new subrecipient
12 (see the terms regarding subrecipient additions in the terms and conditions).

13
14 **Products:**

- 15 ● Subaward and Site Letter
- 16 ● Draft Subawards (*if requested by the CAM*)
- 17 ● Draft Site Host Agreement (*if requested by the CAM*)
- 18 ● Final Subawards (*if requested by the CAM*)
- 19 ● Final Site Host Agreement (*if requested by the CAM*)

20
21 **TECHNICAL ADVISORY COMMITTEE**

22 **Subtask 1.11 Technical Advisory Committee (TAC)**

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

- 27 ● Provide guidance in project direction. The guidance may include scope and
28 methodologies, timing, and coordination with other projects. The guidance may be based
29 on:
 - 30 ○ Technical area expertise;
 - 31 ○ Knowledge of market applications; or
 - 32 ○ Linkages between the Agreement work and other past, present, or future projects
33 (both public and private sectors) that TAC members are aware of in a particular area.
- 34 ● Review products and provide recommendations for needed product adjustments,
35 refinements, or enhancements.
- 36 ● Evaluate the tangible benefits of the project to the state of California, and provide
37 recommendations as needed to enhance the benefits.
- 38 ● Provide recommendations regarding information dissemination, market pathways, or
39 commercialization strategies relevant to the project products.
- 40 ● Help set the project team's goals and contribute to the development and evaluation of its
41 statement of proposed objectives as the project evolves.
- 42 ● Provide a credible and objective sounding board on the wide range of technical and
43 financial barriers and opportunities.
- 44 ● Help identify key areas where the project has a competitive advantage, value
45 proposition, or strength upon which to build.
- 46 ● Advocate, to the extent the TAC members feel is appropriate, on behalf of the project in
47 its effort to build partnerships, governmental support, and relationships with a national
48 spectrum of influential leaders.

Exhibit A
Scope of Work
New Sun Road, P.B.C.

- Ask probing questions that ensure 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 1.12.
- 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 1.12 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.

Exhibit A
Scope of Work
New Sun Road, P.B.C.

- Prepare *TAC Meeting Summaries* for each TAC Meeting 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 ensure 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 1.13 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:

Exhibit A
Scope of Work
New Sun Road, P.B.C.

- TAC Performance Metrics Summary
- Project Performance Metrics Results

IV. TECHNICAL TASKS

TASK 2 – CONTROLLER SOFTWARE INTEGRATION AND TESTING

The goal of this task is to perform and certify software integrations in the Recipient’s microgrid control platform to enable its vendor-agnostic microgrid controller to serve as the resource controller in FTM community microgrid projects and enable FTM community microgrids to provide distribution grid-support functions via utility DERMS. The Recipient’s controller and cloud software are both pre-existing commercial products for microgrid and DER control and this task will enable critical integrations with utility and system operator control systems.

The Recipient shall:

- Implement interoperable monitoring, communication, and control protocols on the microgrid controller then test and obtain certifications.
 - Specific protocols and certifications to be pursued include, but are not limited to, IEEE 1815 (DNP3), IEEE 1815.2 (MESA-DER), and IEEE 2030.5 / SunSpec Common Smart Inverter Profile / Smart Energy Profile 2.0.
 - Prepare an *Interoperable Communication and Control Conformance Testing and Verification Report*.
- Design a microgrid controller configuration for integration with utility systems to support monitoring and transitions between grid-connected and islanded modes, in accordance with the utility’s Community Microgrids Technical Best Practices guide and to streamline islanding studies for FTM microgrids.
 - Perform cloud software and controller firmware updates for cybersecurity and reliability and document in a *Microgrid Control Integration Report*.
- Integrate with the system operator or Scheduling Coordinator systems for economic optimization under relevant tariffs and rules and obtain system operator certification and approval:
 - Integrate system operator Automated Dispatch System command pathways into the microgrid controller application layer, implement authentication and timestamp synchronization, and enable publishing to the system operator direct telemetry system.
 - Implement integration between cloud-based microgrid management software and the system operator Open Access Same-Time Information System data service to retrieve real-time and day-ahead market prices for use in DER economic optimization algorithms.
 - Prepare for required end-to-end telemetry validation testing with the Scheduling Coordinator and the system operator by conducting component tests and documenting systems readiness for end-to-end telemetry validation testing in *Controller Wholesale Market Readiness Report*.

Products:

- Interoperable Communication and Control Conformance Testing and Verification Report
- Microgrid Control Integration Report
- Controller Wholesale Market Readiness Report

Exhibit A
Scope of Work
New Sun Road, P.B.C.

1
2 **TASK 3 – CONTROLLER HARDWARE PREPARATION, TESTING, AND CERTIFICATION**

3 The goals of this task are to prepare, test, and certify the Recipient’s microgrid resource
4 controller hardware for compliance with relevant standards such as from ULs, ensuring safe and
5 reliable operation in FTM microgrid applications.

6
7 **The Recipient shall:**

- 8 ● Perform laboratory setup and procure equipment for development and pre-certification
9 testing.
- 10 ● Prepare the microgrid controller hardware for testing with design modifications and
11 documentation.
- 12 ● Coordinate with a Nationally Recognized Testing Laboratory to plan certification testing
13 in accordance with relevant standards including UL/IEC 61010-2-201.
- 14 ● Conduct certification testing to evaluate electrical safety, insulation, and grounding
15 integrity under normal and fault conditions.
- 16 ● Perform any corrective actions identified during testing and perform design or
17 documentation updates as required to meet certification criteria.
- 18 ● Obtain final certification for the Recipient’s microgrid controller and provide proof of
19 certification.
- 20 ● Prepare a *Hardware Certification and Testing Report* summarizing test procedures,
21 results, corrective actions (if applicable), and certification documentation.
- 22 ● Participate in a CPR meeting and prepare the *CPR Report #1* in accordance with
23 Subtask 1.3.

24
25 **Products:**

- 26 ● Hardware Certification and Testing Report (draft and final)
- 27 ● CPR Report #1

28
29
30 **TASK 4 – LOAD MANAGEMENT AND ECONOMIC OPTIMIZATION ANALYSIS AND**
31 **CUSTOMIZATION**

32 The goals of this task are to perform pre-deployment analyses for each of the two microgrid
33 demonstration sites to establish baseline performance, identify optimization opportunities, and
34 implement site-specific algorithm customizations that enhance microgrid resilience and
35 economic efficiency.

36
37 **The Recipient shall:**

- 38 ● Conduct a pre-deployment analysis for each microgrid demonstration site to evaluate
39 load profiles, generation capacity, storage configuration, and critical-load priorities.
- 40 ● Develop and document performance benchmarks for each site, including metrics for
41 load-management efficiency, economic optimization, and resilience under grid-
42 connected and islanded conditions.
- 43 ● Implement site-specific customizations to forecasting and optimization modules in the
44 Recipient’s platform to improve system performance based on the unique characteristics
45 of each microgrid, including resource mix, demand patterns, and communication network
46 constraints.
- 47 ● Validate algorithm configurations through simulation and functional testing before
48 deployment.
- 49 ● Prepare a *Site Analysis and Optimization Report* summarizing pre-deployment analysis

**Exhibit A
Scope of Work
New Sun Road, P.B.C.**

1 results, benchmark metrics, implemented algorithm enhancements, and expected
2 performance improvements for each microgrid demonstration site.
3

4 **Products:**

- 5 ● Site Analysis and Optimization Report (draft and final)
- 6
7

8 **TASK 5 – RURAL COMMUNITY MICROGRID DEMONSTRATION**

9 The goal of this task is to demonstrate the Recipient’s microgrid control platform capabilities to
10 seamlessly implement FTM advanced microgrid controls and distribution grid services
11 integrated with BTM load management and DER control at a rural community microgrid.
12

13 **The Recipient shall:**

- 14 ● Engage local stakeholders and coordinate with the community-based organization
15 (CBO) and utility providing service on microgrid interconnection. Establish
16 communication, meeting frequency, and coordination mechanisms; provide ongoing
17 updates during implementation; and address questions, concerns, and operational
18 feedback.
- 19 ● Prepare designs and plans to install additional submetering and contactors as necessary
20 to enable circuit-level load management by the Recipient’s microgrid control platform.
- 21 ● Coordinate with stakeholders to ensure applicable permits are obtained and coordinate
22 with the utility providing service to obtain approval to operate as the Microgrid
23 Resource/Generation controller.
- 24 ● Coordinate with stakeholders to ensure necessary electrical and communication
25 upgrades to support data acquisition and control integration are performed.
- 26 ● Commission hardware and configure the site within the control platform.
- 27 ● Conduct virtual new user training for the cloud-based microgrid management software.
- 28 ● Conduct end-to-end telemetry testing with the system operator and the relevant
29 Scheduling Coordinator for market participation and secure approval prior to operation.
- 30 ● Coordinate with the utility providing service to execute DERMS integration tests to
31 demonstrate distribution grid services capabilities.
- 32 ● Prepare a *Rural Community Microgrid Demonstration Report* documenting site
33 configuration, testing results, and lessons learned.
34
35

36 **Products:**

- 37 ● Rural Community Microgrid Demonstration Report (draft and final)
- 38
39

40 **TASK 6 – URBAN COMMUNITY MICROGRID DEMONSTRATION**

41 The goal of this task is to demonstrate behind-the-meter load management and DER control at
42 an urban or suburban community microgrid serving a disadvantaged community within a second
43 utility’s service territory.
44

45 **The Recipient shall:**

- 46 ● Engage local stakeholders and coordinate with the CBO, utility, and community
47 representatives to align demonstration activities with resilience and equity objectives.
48 Establish communication, meeting frequency, and coordination mechanisms; provide

Exhibit A Scope of Work New Sun Road, P.B.C.

1 ongoing updates during implementation; and address questions, concerns, and
2 operational feedback.

- 3 ● Review proposed microgrid configuration and site energy profile to identify circuit-level
4 load-control opportunities.
- 5 ● Prepare site electrical plans and drawings to install additional submetering and
6 contactors as necessary to implement circuit-level load control by the Recipient's
7 microgrid control platform.
- 8 ● Coordinate with stakeholders to ensure necessary permits are obtained and coordinate
9 with site hosts to plan electrical upgrades.
- 10 ● Coordinate with stakeholders to ensure necessary electrical and communication
11 upgrades to support data acquisition and control integration are performed.
- 12 ● Develop and implement electrical and communication plans to enable prioritized load
13 management via cloud-based microgrid management software.
- 14 ● Perform equipment integrations as required to enable secure data exchange and real-
15 time control.
- 16 ● Commission microgrid controller hardware and configure the site within the cloud-based
17 microgrid management software platform.
- 18 ● Conduct demonstration testing focused on extended islanded operation and optimization
19 of DERs during normal and outage conditions.
- 20 ● Conduct virtual new user training for the cloud-based microgrid management software,
- 21 ● Prepare an *Urban Community Microgrid Demonstration Report* documenting
22 implementation steps, test results, and lessons learned.
- 23 ● Participate in a CPR meeting and prepare the *CPR Report #2* in accordance with
24 Subtask 1.3.

25 26 **Products:**

- 27 ● Urban Community Microgrid Demonstration Report (draft and final)
- 28 ● CPR Report #2

29 30 31 **TASK 7 – MONITORING AND EVALUATION**

32 The goals of this task are to evaluate microgrid performance against baseline and benchmark
33 conditions, quantify the system-level benefits of advanced microgrid controls, and assess the
34 scalability of these technologies to support California's grid-modernization and electrification
35 objectives.

36 37 **The Recipient shall:**

- 38 ● Conduct a pre-deployment analysis to establish business-as-usual and benchmark
39 scenarios that define reference conditions for measuring project impacts.
- 40 ● Develop and document project performance metrics addressing increased distribution-
41 capacity utilization, avoided capacity upgrades, increased feeder load and renewable
42 hosting capacity, and reduced microgrid interconnection timelines to become operational
43 with existing infrastructure. Business-as-usual scenarios will identify distribution grid
44 capacity upgrade requirements for ranges of plausible load growth and renewables
45 deployment, consistent with California's policy goals. Benchmark scenarios will be used
46 to establish the maximum benefits that could be achieved by advanced microgrid control
47 under idealized assumptions about microgrid deployment and control.

Exhibit A
Scope of Work
New Sun Road, P.B.C.

- 1 ● Perform M&V activities that evaluate microgrid performance against the project targets
- 2 using the pre-deployment analysis to quantify benefits relative to the business-as-usual
- 3 scenarios, and to quantify real-world performance against the benchmarks.
- 4 ● Carry out a scale-up analysis to inform California's microgrid implementation policy and
- 5 grid modernization efforts using project data and qualitative lessons learned to identify
- 6 locations and site and feeder profiles where microgrids can provide high-impact grid
- 7 services simultaneously with community resilience. Quantitatively explore the impacts on
- 8 California's climate and electrification policy goals.
- 9 ● Prepare a *Monitoring and Evaluation Report* summarizing analytical methods, quantified
- 10 benefits, results relative to project targets, and recommendations for statewide
- 11 replication.
- 12 ● Prepare a *Project Case Study Report* summarizing project objectives, site activities,
- 13 technical results, and lessons learned. The case study will focus on replicable insights
- 14 derived from each of the microgrid demonstration sites, as well as summarize
- 15 recommendations for how microgrids can deter capacity upgrades and accommodate
- 16 increasing load and DER penetration.

17
18 **Products:**

- 19 ● Monitoring and Evaluation Report (draft and final)
- 20 ● Project Case Study Report

21
22
23 **TASK 8 – EVALUATION OF PROJECT BENEFITS**

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

25
26 **The Recipient shall:**

- 27 ● Complete the *Initial Project Benefits Questionnaire*. The Initial Project Benefits
- 28 Questionnaire shall be completed by the Recipient with 'Kick-off' selected for the
- 29 'Relevant data collection period' and submitted to the CAM for review and approval.
- 30 ● Complete the *Annual Survey* if requested by the CAM. The survey covers, but is not
- 31 limited to the following topics, as applicable to the project:
 - 32 ○ Changes in energy consumption, utility bills, and emissions
 - 33 ○ Public and private funding
 - 34 ○ Demonstration and deployment beyond the project Community engagement
 - 35 ○ Improvements in codes and standards
- 36 ● Confirm and revise survey responses as directed by the CAM.
- 37 ● Complete the *Final Project Benefits Questionnaire*. The Final Project Benefits
- 38 Questionnaire shall be completed by the Recipient with 'Final' selected for the 'Relevant
- 39 data collection period' and submitted to the CAM for review and approval.
- 40 ● Respond to CAM questions regarding the benefits questionnaire drafts.
- 41 ● Complete the project profile on the CEC's public online project on the [Energize](#)
- 42 [Innovation website](#) (www.energizeinnovation.fund), and provide *Documentation*
- 43 *of Initial Project Profile on EnergizeInnovation.fund*, including the profile link, to the
- 44 CAM.
- 45 ● Address any edits or questions from the CAM regarding the Energize Innovation Project
- 46 Profile content.
- 47 ● If the Recipient is an Innovation Partner on the project, complete and update the
- 48 organizational profile on the CEC's public online project and recipient directory on

Exhibit A
Scope of Work
New Sun Road, P.B.C.

1 the [Energize Innovation website](http://www.energizeinnovation.fund) (www.energizeinnovation.fund),
2 and provide *Documentation of Organization Profile on EnergizeInnovation.fund*,
3 including the profile link, to the CAM.

- 4 • If the Recipient's organizational profile is changed, update the organizational profile on
5 the CEC's public online project and recipient directory on the [Energize Innovation](http://www.energizeinnovation.fund)
6 [website](http://www.energizeinnovation.fund) (www.energizeinnovation.fund), and provide an *Documentation*
7 *of Updated Organization Profile on EnergizeInnovation.fund*, including the profile link, as
8 needed.
- 9 • If the Recipient's project profile is changed, update the project profile on the CEC's
10 public online project and recipient directory on the [Energize Innovation](http://www.energizeinnovation.fund)
11 [website](http://www.energizeinnovation.fund) (www.energizeinnovation.fund), and provide *Documentation of Updated ([Year])*
12 *Project Profile on EnergizeInnovation.fund*, including the profile link, to the CAM.
- 13 • Address any edits or questions from the CAM regarding the Project Profile content.

14
15 **Products:**

- 16 • Initial Project Benefits Questionnaire
- 17 • Annual Survey(s)
- 18 • Final Project Benefits Questionnaire
- 19 • Documentation of Initial Project Profile on EnergizeInnovation.fund
- 20 • Documentation of Updated Organization Profile on EnergizeInnovation.fund (as
21 needed)
- 22 • Documentation of Updated ([Year]) Project Profile on EnergizeInnovation.fund

23
24
25 **TASK 9 TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES**

26 The goal of this task is to conduct activities that will accelerate the commercial adoption of the
27 technology being supported under this agreement. Eligible activities include, but are not limited
28 to, the following:

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

36
37 **The Recipient Shall:**

- 38 • Develop and submit a *Technology Transfer Plan* that identifies the proposed activities
39 the recipient will conduct to accelerate the successful commercial adoption of the
40 technology.
- 41 • Present the draft *Technology Transfer Plan* to the TAC for feedback and comments.
- 42 • Develop and submit a *Summary of TAC Comments* that summarizes comments
43 received from the TAC members on the Draft Technology Transfer Plan. This document
44 will identify:
 - 45 ○ TAC comments the Recipient proposes to incorporate into the final *Technology*
46 *Transfer Plan*.

**Exhibit A
Scope of Work
New Sun Road, P.B.C.**

- 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* 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 and final)
- Summary of TAC Comments
- Technology Transfer Summary Report (draft and final)
- High Quality Digital Photographs

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.