



**California Energy Commission  
June 22, 2026 Business Meeting  
Backup Materials for GridWrap, Inc.**

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: GridWrap, Inc.**

**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-25-056 with GridWrap, Inc. for a \$3,995,320 grant. This project will fund applied research, development, and demonstration of composite wire wrap technology at demonstration sites in Imperial and San Diego Counties. The composite wire wrap technology can increase the power capacity and structural performance of existing grid infrastructure, support integration of renewable energy, and increase grid resilience and reliability; 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-25-056

### B. Division Information

1. Division Name: ERDD
2. Agreement Manager: Alexander Wyckoff
3. MS-:51
4. Phone Number: (916) 352-0568

### C. Recipient's Information

1. Recipient's Legal Name: GridWrap, Inc.

### D. Title of Project

Title of project: Composite WiRe Wrap: Advancing Grid Capacity and Wildfire Safety in California

### E. Term and Amount

1. Start Date: 7/1/2026
2. End Date: 12/20/2028
3. Amount: \$3,995,320.00

### 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: Ben Wender
5. Time Needed for Business Meeting: 10 minutes.
6. The email subscription topic is: Electric Program Investment Charge (EPIC)

#### Project Description:

- G. GRIDWRAP, INC. Proposed resolution approving agreement EPC-25-056 with GridWrap, Inc. for a \$3,995,320 grant, and adopting staff's recommendation that this action is exempt from CEQA. This project will fund applied research, development, and demonstration of composite wire wrap technology at demonstration sites in Imperial and San Diego Counties. The composite wire wrap technology can increase the power capacity and structural performance of existing grid infrastructure, support integration of renewable energy, and increase grid resilience and reliability. (EPIC funding) Contact: Ben Wender

### H. 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":



**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, § 15303 ; Cal. Code Regs., tit. 14, §15304

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.

Project Site:

San Diego State University Imperial Valley Campus - Brawley, CA

Cal. Code Regs., tit. 14, Sec. 15301 provides that projects which consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alternations of existing public or private structures, facilities, mechanical equipment, or topographical features, and which involve negligible or no expansion of existing or former use at the time of the lead agency's determination, are categorically exempt from the provisions of the California Environmental Quality Act (CEQA). The proposed project will install and demonstrate Class 5 and Class 6 utility poles bolted to ground-mounted skids with approximately 200 to 600 feet of wiring (including test and control cables), located at the San Diego State University Imperial Valley Campus. The work will occur on an existing, already developed site and will require only limited electrical setup including the installation of equipment such as generators. Because the project involves minor alternations to an existing facility and will result in negligible or no expansion of use beyond the already existing infrastructure, it falls within section 15301 and will not have a significant effect on the environment.



Cal. Code Regs., tit. 14, Sec. 15303 provides that projects which consist of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure, are categorically exempt from the provisions of CEQA. The recipient plans to install a system consisting of Class 5 and Class 6 utility poles bolted to ground-mounted skids. If needed for pole installation, excavation to a depth of 4 feet may be required and then backfilled. Associated support equipment (generators, switchgear, metering) will also be installed on existing structures. Therefore, the proposed project falls within section 15303 and will not have a significant effect on the environment.

Cal. Code Regs., tit. 14, Sec. 15304 provides that projects which consist of minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes are categorically exempt from the provisions of CEQA. Examples listed in section 15304 include, but are not limited to, minor excavation and backfilling where the surface is restored. The proposed project consists of limited excavation and backfilling for the temporary installation of utility poles. The project would not remove any healthy, mature, or scenic trees. The excavation would be temporary, and the surface would be restored following completion of the demonstration. Therefore, the project falls within section 15304 and will not have a significant effect on the environment.

This project does not involve impacts on any particularly sensitive environment; cumulative impacts of successive projects of the same type in the same place that may be considered significant; unusual circumstances that may result in a significant effect on the environment; damage to scenic resources within a highway officially designated as a state scenic highway; work on a site listed pursuant to Government Code section 65962.5, or 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.

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



**I. Is this project considered “Infrastructure”?**

No

**J. 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
California Tribal Emergency Response & Relief Agency (CAL TERRA)	\$ 207,500	\$20,000
Dowell Engineering	\$ 67,500	\$0
TBD - Grant Administrator	\$ 60,000	\$0
Idaho National Laboratory	\$ 0	\$114,000

**K. 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
GC Green, Incorporated	\$75,000	\$24,000

**L. 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

**M. 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	19-20	301.001G	\$ 2,798,578
EPIC	25-26	301.001M	\$ 1,196,742

**TOTAL Amount: \$ 3,995,320**



R&D Program Area: ESTB: ETSI

Explanation for “Other” selection Not applicable

Reimbursement Contract #: Not applicable

Federal Agreement #:

**N. Recipient’s Contact Information**

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

Name: Talieh Zargar

Address: 12855 Corbett Ct

City, State, Zip: San Diego, CA 92130

Phone: 520-548-5511

E-Mail: talieh@gridwrap.com

**2. Recipient’s Project Manager**

Name: Talieh Zargar

Address: 12855 Corbett Ct

City, State, Zip: San Diego, CA 92130

Phone: 520-548-5511

E-Mail: talieh@gridwrap.com

**O. 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

**P. 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	Yes
4	Recipient Resolution	No.
5	Awardee CEQA Documentation	No.

## **Approved By**

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

**Agreement Manager:** Alexander Wyckoff

**Approval Date:** 5/8/2026

**Branch Manager:** Reynaldo Gonzalez

**Approval Date:** 5/14/2026

**Director:** Jonah Steinbuck (*delegated to Branch Manager*)

**Approval Date:** n/a

**Exhibit A  
Scope of Work  
GridWrap, Inc.**

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

**A. Task List**

<b>Task #</b>	<b>CPR<sup>1</sup></b>	<b>Task Name</b>
1		General Project Tasks
2		Gather Stakeholder Requirements
3		Engineering Design for Large-Scale Demonstration
4	X	Site Preparation and Pilot Line Construction
5	X	Installation and Testing of WiRe Wrap™ System at Large-Scale Test Facility
6		Product Refinement and Manufacturing for Utility-Scale Grid Testbed
7	X	Deployment and Testing at Utility-Scale Grid Testbed Facility
8		Measurement and Verification (M&V)
9		Develop Decision-Making Tool for Integration of WiRe Wrap™ System into Utility Planning
10		Community Outreach and Engagement
11		Evaluation of Project Benefits
12		Technology/Knowledge Transfer Activities

**B. Acronym/Term List**

<b>Acronym/Term</b>	<b>Meaning</b>
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CPR	Critical Project Review
IOU	Investor-Owned Utility
M&V	Measurement and Verification
TAC	Technical Advisory Committee
WiRe Wrap™	GridWrap's WiRe Wrap™ system is a composite material that is installed to wrap around existing bare conductor lines.

**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 testing of a composite wire wrap technology that can increase the power capacity and structural performance of existing grid infrastructure, support integration of renewable energy, and increase grid resilience and reliability.

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

# Exhibit A

## Scope of Work

### GridWrap, Inc.

#### B. Problem/ Solution Statement

##### Problem

The rapid deployment of intermittent renewable energy resources and widespread shift towards building and vehicle electrification are straining California's electric grid infrastructure. Grid challenges such as congestion, renewable curtailment, and insufficient capacity to connect new resources and loads illustrate the need for advanced grid technology solutions that increase grid resilience and reliability while achieving the state's energy and climate goals. At the same time, ratepayers are facing affordability challenges largely driven by wildfire mitigation costs. There is a critical need to develop and deploy scalable, cost-effective solutions that affordably increase grid capacity, resilience, and reliability in the face of climate change and wildfire threats.

##### Solution

The Recipient has developed a Composite WiRe Wrap™ system for direct installation on existing electrical lines. When installed, the wire wrap system increases the capacity, performance, and safety of the electrical grid while reducing the need for costly, time-consuming rebuilds or reconductoring alternatives.

Scaled deployment of this technology can support California in achieving its statutory energy goals by enabling clean energy integration, increasing grid resilience, and improving energy affordability.

The Composite WiRe Wrap™ system strengthens existing wire conductors, reduces thermal sag, and can double the transmission capability of existing infrastructure at one-tenth of the cost of rebuilding transmission lines. By increasing the efficiency of existing lines, the Composite WiRe Wrap™ system can help reduce congestion caused by thermal sag. Moreover, the Composite WiRe Wrap™ system avoids the time-consuming and costly regulatory processes often associated with rebuilding transmission infrastructure. Because the system can be installed directly on existing infrastructure using automated robotic systems, it requires minimal permitting and is expected to have limited environmental impacts. Finally, the technology can also reduce the potential for live wire contact during high wind and heat events, lowering wildfire risk and reducing the likelihood of power outages.

#### C. Goals and Objectives of the Agreement

##### Agreement Goals

The goals of this Agreement are to:

- Demonstrate a cost-effective solution for increasing grid transmission capacity and system reliability.
- Validate performance and safety metrics required for de-risking deployment with California investor-owned utilities (IOUs).
- Verify market readiness through stakeholder engagement and alignment with industry standards.

# Exhibit A

## Scope of Work

### GridWrap, Inc.

Ratepayer Benefits:<sup>2</sup> This Agreement will result in the ratepayer benefits of greater electricity reliability, lower costs, and increased safety. The proposed solution improves reliability by facilitating power transmission under thermal stress. Lower costs are afforded by increasing system capacity and performance without costly rebuilds. The solution also increases safety by reducing wildfire risk from sagging electrical conductors and reducing power outages during high winds and heat waves.

Technological Advancement and Breakthroughs:<sup>3</sup> This Agreement will lead to technological advancement and breakthroughs to overcome barriers to the achievement of the State of California's statutory energy goals by demonstrating an innovative, cost-effective composite material solution for increasing transmission capacity without full system rebuilds.

#### Agreement Objectives

The objectives of this Agreement are to:

- Demonstrate an increase up to a factor of two in transmission capacity for composite-wrapped lines compared to existing unwrapped lines.
- Demonstrate more than 75 percent reduction in thermal sag in composite-wrapped wires compared to existing unwrapped lines.
- Verify costs savings of more than 80 percent as compared to reconductoring.
- Verify that the composite material has no impact on grid safety or reliability when deployed.
- Identify 3-5 priority areas within a California IOU service territory for scaled deployment.

### 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.

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

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

## **Exhibit A Scope of Work GridWrap, Inc.**

### **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.

## **Exhibit A Scope of Work GridWrap, Inc.**

- 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, and other CEC staff relevant to the Agreement. The Recipient's Project Manager and any other individuals deemed necessary by the CAM or the Project Manager shall participate in 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., Teams, Zoom), with approval of the CAM.

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

- The CAM's expectations for accomplishing tasks described in the Scope of Work;
- An updated Project Schedule;
- Terms and conditions of the Agreement;
- Invoicing and auditing procedures;
- Travel;
- Equipment purchases;
- Administrative and Technical products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Monthly Calls (subtask 1.5)
- Quarterly Progress reports (subtask 1.6)
- Final Report (subtask 1.7)
- Match funds (subtask 1.8);
- Permit documentation (subtask 1.9);
- Subawards(subtask 1.10);
- Technical Advisory Committee meetings (subtasks 1.11 and 1.12);
- Agreement changes;
- Performance Evaluations; and
- Any other relevant topics.

## **Exhibit A Scope of Work GridWrap, Inc.**

- 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 may 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.

## **Exhibit A Scope of Work GridWrap, Inc.**

- Send the Recipient a *CPR Agenda* with a list of expected CPR participants in advance of the CPR meeting. If applicable, the agenda may 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. A determination of unsatisfactory progress This may result in project delays, including a potential Stop Work Order, while the CEC determines whether the project should continue.
- 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(s)
- 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 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.

## **Exhibit A Scope of Work GridWrap, Inc.**

- 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* organized by the tasks in the Agreement.

### **Products:**

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

### **MONTHLY CALLS, REPORTS AND INVOICES**

#### **Subtask 1.5 Monthly Calls**

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

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

#### **The CAM shall:**

- Schedule monthly calls.
- Provide questions to the Recipient prior to the monthly call.
- Provide call summary notes to Recipient of items discussed during call.

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

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

#### **Product:**

- Email to CAM concurring with call summary notes.

#### **Subtask 1.6 Quarterly 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 *Quarterly 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 reporting period, 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. Progress reports are due to the CAM the 10th day of each January,

## **Exhibit A Scope of Work GridWrap, Inc.**

April, July, and October. The Quarterly Progress Report template can be found on the ECAMS Resources webpage available at:  
<https://www.energy.ca.gov/media/4691>

- Submit a monthly or quarterly *Invoice* on the invoice template(s) provided by the CAM.

### **Recipient Products:**

- Quarterly Progress Reports
- Invoices

### **CAM Product:**

- Invoice template

### **Subtask 1.7 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 1.7.1 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 Products:**

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

#### **Subtask 1.7.2 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)

## Exhibit A Scope of Work GridWrap, Inc.

- 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 Draft Final 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 Draft Final 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 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,

## Exhibit A Scope of Work GridWrap, Inc.

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. 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.

## **Exhibit A Scope of Work GridWrap, Inc.**

- 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 1.10 Obtain and Execute Subawards and Agreements with Site Hosts**

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

### **The Recipient shall:**

- Execute and manage subawards and coordinate subrecipients activities in accordance with the requirements of this Agreement.
- Execute and manage site host agreements, and ensure the right to use the project site throughout the term of the Agreement, as applicable. A site host agreement is not required if the Recipient is the site host.
- Notify the CEC in writing immediately, but no later than five calendar days, if there is a reasonable likelihood the project site cannot be acquired or can no longer be used for the project.
- Incorporate this Agreement by reference into each subaward.
- Include any required Energy Commission flow-down provisions in each subaward, in addition to a statement that the terms of this Agreement will prevail if they conflict with the subaward terms.
- Ensure that subrecipients and vendor corporations are registered with the California Secretary of State and in good standing with the Secretary of State and Franchise Tax Board before subrecipients and vendor corporations begin work.
- Notify the CAM once subrecipients and vendor corporations are registered with the California Secretary of State and in good standing with the Secretary of State and Franchise Tax Board in a *Subrecipient and Vendor Registration and Standing Status Letter*.
- Submit a *Subaward and Site Letter* to the CAM describing the subawards and any site host agreement needed or stating that no subawards or site host agreements are required.
- If requested by the CAM, submit a draft of each *Subaward* and any *Site Host Agreement* required to conduct the work under this Agreement.
- If requested by the CAM, submit a final copy of each executed *Subaward* and any *Site Host Agreement*.
- Notify and receive written approval from the CAM prior to adding any new subrecipient (see the terms regarding subrecipient additions in the terms and conditions).

# Exhibit A Scope of Work GridWrap, Inc.

## Products:

- Subaward and Site Letter
- Subrecipient and Vendor Registration and Standing Status Letter
- Draft Subawards *(if requested by the CAM)*
- Draft Site Host Agreement *(if requested by the CAM)*
- Final Subawards *(if requested by the CAM)*
- Final Site Host Agreement *(if requested by the CAM)*

## **TECHNICAL ADVISORY COMMITTEE**

### **Subtask 1.11 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 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;

## **Exhibit A Scope of Work GridWrap, Inc.**

- 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.
- 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.

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- 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:

- 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: GATHER STAKEHOLDER REQUIREMENTS

The goal of this task is to identify, document, and align the technical, operational, and regulatory requirements for deployment with utility customers in California and at the measurement and

## **Exhibit A Scope of Work GridWrap, Inc.**

verification (M&V) partner's operational grid testing facility. This will ensure that the pilot design meets customer requirements, complies with applicable standards, and is testable within M&V evaluation frameworks.

### **The Recipient shall:**

- Conduct structured interviews and workshops with utility subject matter experts to define operational objectives, integration constraints, safety considerations, and desired performance outcomes and key performance indicators.
- Engage with the M&V partner's technical staff to document testing protocols, data collection requirements, safety requirements, and performance validation criteria as well as technical specifications for installation in an operational grid environment.
- Review applicable utility standards, regulatory requirements, and safety guidelines to ensure compliance.
- Compile findings into a *Stakeholder Requirements Specification Document (Draft)* that includes functional, technical, and data requirements for the pilot.
- Circulate the draft requirements document among stakeholders and the CAM for review and incorporate feedback into a *Stakeholder Requirements Specification Document (Final)* to be used in the pilot design phase.

### **Products:**

- Stakeholder Requirements Specification Document (Draft and Final)

### **TASK 3: ENGINEERING DESIGN FOR LARGE-SCALE DEMONSTRATION**

The goal of this task is to design an outdoor, large-scale testing rig for pilot demonstration of the WiRe Wrap™ system. The Recipient will also engineer the wire wrap to meet performance specifications identified in Task 2 and develop installation procedures.

#### **Subtask 3.1 Pilot Demonstration Engineering Design**

### **The Recipient shall:**

- Design and configure a pilot conductor line that reflects the operational, environmental, and performance requirements identified in Task 2.
- Define design factors and testing criteria for the WiRe Wrap™ system, including mechanical, thermal, and electrical performance requirements.
- Complete detailed *Pilot Demonstration Engineering Drawings and Specifications*.
- Perform design reviews to ensure manufacturability and compliance with applicable standards.

### **Products:**

- Pilot Demonstration Engineering Drawings and Specifications

#### **Subtask 3.2 Manufacture WiRe Wrap™ System**

### **The Recipient shall:**

- Manufacture the WiRe Wrap™ system in accordance with technical requirements specified in engineering designs approved by the CAM.
- Perform quality assurance inspections to confirm conformity to design specifications prior to shipment to the pilot facility.

**Exhibit A**  
**Scope of Work**  
**GridWrap, Inc.**

- Document that the manufactured WiRe Wrap™ meets specifications in a *Specifications Summary Report*.

**Products:**

- Specifications Summary Report

# Exhibit A

## Scope of Work

### GridWrap, Inc.

#### Subtask 3.3 Installation Procedure Design

##### The Recipient shall:

- Develop a step-by-step installation procedure based on engineering specifications, safety requirements, and site conditions.
- Document this procedure in a *Draft Installation Procedure Manual* with validated steps, tools list, and safety protocols.

##### Products:

- Draft Installation Procedure Manual

#### TASK 4: SITE PREPARATION AND PILOT LINE CONSTRUCTION

The goal of this task is to construct the outdoor test rig at the pilot demonstration sites in compliance with all safety regulations.

##### The Recipient shall:

- Obtain materials and equipment for construction of the outdoor pilot testing rig.
- Assess demonstration sites for safety and compliance (e.g., vegetation clearing, electrical safety, etc.) and complete site preparation activities.
- Construct pilot conductor line in accordance with engineering design and technical specifications.
- Complete final inspection of pilot conductor line in accordance with structural and electrical safety requirements.
- Document completion of construction in a *Construction Completion Report*.
- Conduct a CPR meeting with all project stakeholders and prepare a *Task 4 CPR Report*.

##### Products:

- Construction Completion Report
- Task 4 CPR Report

#### TASK 5: INSTALLATION AND TESTING OF WiRE WRAP™ SYSTEM AT LARGE-SCALE TEST FACILITY

The goal of this task is to verify WiRe Wrap™ performance in a large-scale demonstration under relevant environmental conditions over a minimum of 12 months.

#### Subtask 5.1 Install WiRe Wrap™ System

##### The Recipient shall:

- Install WiRe Wrap™ system on pilot conductor line(s).
- Refine installation tools, steps, and safety protocols based on field trial feedback and final product design updates.
- Revise installation methods and provide any updates in the *Final Installation Procedure Manual*.
  - Provide manuals to utility stakeholders for review and feedback for compliance and alignment with internal procedures

##### Products:

- Final Installation Procedure Manual

# Exhibit A

## Scope of Work

### GridWrap, Inc.

#### Subtask 5.2 Pilot Testing, Data Collection, and Analysis

##### The Recipient shall:

- Monitor installed units under normal and stress conditions.
- Collect data on key performance metrics over a minimum of 12 months, including mechanical stability, load performance, and environmental durability.
- Summarize data collection findings in a *Pilot Test Performance Monitoring Report (Draft and Final)*.
- Provide collected data to a third-party M&V partner for validation.
- Evaluate performance results to determine iterative engineering requirements for utility-scale grid testbed demonstration.
- Document third-party M&V feedback and changes made based on performance evaluation in a *Summary Recommendations for System Improvements*.
- Conduct a CPR meeting with all project stakeholders and prepare a *Task 5 CPR Report*.

##### Products:

- Pilot Test Performance Monitoring Report (Draft and Final)
- Summary Recommendations for System Improvements
- Task 5 CPR Report

#### TASK 6: PRODUCT REFINEMENT AND MANUFACTURING FOR UTILITY-SCALE GRID TESTBED

The goal of this task is to refine engineering of the WiRe Wrap™ system and manufacture units for utility-scale testbed demonstration.

#### Subtask 6.1 Final Product Design Updates

##### The Recipient shall:

- Adjust wire wrap material, dimensions, or manufacturing specifications, if needed, to meet all technical and performance specifications required for testing at utility-scale test bed site.
- Validate changes with additional testing at pilot facility or engineering calculations and simulations.
- Complete a *Final Product Design Package Memo* inclusive of engineering drawings, technical specifications, and a bill of materials.

##### Products:

- Final Product Design Package Memo

#### Subtask 6.2 Manufacturing of Field-Ready Units

##### The Recipient shall:

- Produce field-ready units with updated specifications.
- Conduct quality control checks to ensure conformity to design.
- Document completed manufacturing and delivery of units in a *Manufacturing Completion Report*.

##### Products:

- Manufacturing Completion Report

## **Exhibit A Scope of Work GridWrap, Inc.**

### **TASK 7: DEPLOYMENT AND TESTING AT UTILITY-SCALE GRID TESTBED FACILITY**

The goal of this task is to validate WiRe Wrap™ performance in a utility-scale test bed environment over a 6-month field test period.

#### **Subtask 7.1 Installation at Utility-Scale Grid Testbed**

**The Recipient shall:**

- Install field test units on simulated transmission and distribution lines at utility-scale test bed facility.
- Document installation time, labor requirements, and any field challenges encountered in a *Field Installation Report*.

**Products:**

- Field Installation Report

#### **Subtask 7.2 Operational Monitoring at Utility-Scale Grid Testbed**

**The Recipient shall:**

- Monitor installed field test units under normal and stress conditions over a 6-month period.
- Record key performance metrics, including mechanical stability, load performance, and environmental durability.
- Document performance metrics in a *Field Test Performance Monitoring Report*.
  - Provide draft and final reports to the utility stakeholders for review and feedback.
- Adjust field-deployed systems, as needed, in accordance with utility stakeholder feedback.
- Conduct a CPR meeting with all project stakeholders and prepare a *Task 7 CPR Report*.

**Products:**

- Field Test Performance Monitoring Report (Draft and Final)
- Task 7 CPR Report

### **TASK 8: MEASUREMENT AND VERIFICATION (M&V)**

The goal of this task is to collect data on field performance and validate impact on grid capacity, reliability, resilience, and safety.

**The Recipient shall:**

- Develop a *Draft Measurement and Verification Plan*, in collaboration with the utility partner and M&V partner, that specifies the testing protocols to be used for validation of technical specifications and technology benefits.
- Implement the Measurement and Verification Plan to collect field performance data over a 12-month demonstration period for comparison against baseline and large-scale test results. Data collection and analysis includes, but is not limited to, the following:
  - Measuring thermal sag of cables before and after installation to assess improvements in conductor clearance and associated fire risk reduction.
  - Evaluating power capacity changes pre- and post-installation to confirm any enhancements or impacts on load handling (and measuring changes in conductor working temperature).
  - Assessing potential impacts of the corona effect on the durability of the system.

## **Exhibit A Scope of Work GridWrap, Inc.**

- Verifying the feasibility of cable inspection techniques to ensure ongoing maintenance capabilities.
- Assessing potential improvements in system safety.
- Monitoring and quantifying cable movement due to wind before and after the installation to evaluate mechanical stabilization effects.
- Assessing system performance under aggressive environmental conditions.
- Conducting a wildfire mitigation risk assessment comparing conditions prior to and following installation, focusing on ignition risk reduction.
- Complete pilot testing and document results in a *Preliminary Measurement and Verification Report*.
- Based on pilot test results, prepare the *Final Measurement and Verification Plan*, including adding or adjusting specific field testing and verification based on utility stakeholder feedback. Submit Final Measurement and Verification Plan to the CAM for approval.
- Complete grid-scale testbed testing for a minimum of 6 months and document results in the *Final Measurement and Verification Report*, which should include but is not limited to:
  - A description and analysis of the process and results of the demonstrations carried out in accordance with the Measurement and Verification Plan approved by the CAM
  - A description and analysis of the technical and safety issues encountered throughout the demonstrations and data collection periods
  - An analysis of the degree of success achieved in achieving the targeted performances in each of the critical metrics proposed in the Measurement and Verification Plan approved by the CAM, including its ability to:
    - Demonstrate up to a 2-times increase in transmission capacity.
    - Demonstrate greater than 75 percent reduction in thermal sag.
    - Provide cost savings of more than 80 percent compared to reconductoring.
    - Verify that the composite material has no impact on grid safety or reliability.
  - Lessons learned for this phase in the project, and an analysis of the commercialization pathways supported by the demonstration data

### **Products:**

- Measurement and Verification Plan (Draft and Final)
- Measurement and Verification Report (Preliminary and Final)

### **TASK 9: DEVELOP DECISION-MAKING TOOL FOR INTEGRATION OF WIRE WRAP™ SYSTEM INTO UTILITY PLANNING**

The goal of this task is to design an open-source, data-driven tool to guide utilities on when, where, and how to deploy the WiRe Wrap™ product to maximize grid reliability and wildfire risk mitigation.

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

- Compile and analyze data from pilot testing, including thermal sag reduction, power capacity changes, cable movement, and wildfire risk assessments.
- Incorporate external factors such as geographic risk zones, weather patterns, and grid loading conditions.

## **Exhibit A Scope of Work GridWrap, Inc.**

- Define key decision criteria for WiRe Wrap™ application, including technical thresholds, cost-benefit parameters, and operational constraints.
- Develop a basic open-source *Decision-Making Tool* to guide utilities on when, where, and how to deploy the WiRe Wrap™ system. The Decision-Making Tool will allow utilities to input grid data and will provide output on: (1) cost-benefit analysis and (2) recommendations on WiRe Wrap™ deployment.
- Identify 3-5 priority areas within California for scaled deployment.
- Document how to use the Decision-Making Tool and provide recommendations for integration with utility planning in a *User Guide*.

### **Products:**

- Decision-Making Tool (Draft and Final)
- User Guide

### **TASK 10: COMMUNITY OUTREACH AND ENGAGEMENT**

The goal of this task is to develop a strategy for community engagement and explore potential approaches to workforce training that supports scaled technology deployment.

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

- Draft a *Community Outreach Plan* containing potential approaches for engaging community stakeholders in areas where the technology may be deployed.
- Review the plan with at least two (2) community-based organizations to align with specific needs.
- Conduct at least one (1) listening session with members of disadvantaged communities or a Tier 2 or Tier 3 High Fire Threat District community. Collect, discuss, and propose measures for incorporating community feedback in a *Community Engagement Report*.
- Finalize the *Community Outreach Plan* and disseminate it to stakeholders.
- Compile data on all benefits, including economic and energy-related benefits, resulting from the project and WiRe Wrap™ technology that would be useful for the relevant local communities.
- Work with a community-based workforce development organization to identify approaches and opportunities for workforce training that support economic development in low-income and/or disadvantaged communities.
  - Document strategies in a *Preliminary Workforce Training Assessment*.

### **Products:**

- Community Outreach Plan (Draft and Final)
- Community Engagement Report
- Preliminary Workforce Training Assessment

### **TASK 11: 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 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* if requested by the CAM. The survey covers, but is not limited to the following topics, as applicable to the project:

## Exhibit A Scope of Work GridWrap, Inc.

- Changes in energy consumption, utility bills, and emissions
- Public and private funding
- Demonstration and deployment beyond the project
- Community engagement
- Improvements in codes and standards
- Confirm and revise survey responses as directed by the CAM.
- 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 benefits questionnaire drafts.
- Complete the project profile on the CEC's public online project on the [Energize Innovation website \(www.energizeinnovation.fund\)](http://www.energizeinnovation.fund), and provide *Documentation of Initial Project Profile on EnergizeInnovation.fund*, including the profile link, to the CAM.
- Address any edits or questions from the CAM regarding the Energize Innovation Project Profile content.
- If the Recipient is an Innovation Partner on the project, complete and update the organizational profile on the CEC's public online project and recipient directory on the [Energize Innovation website \(www.energizeinnovation.fund\)](http://www.energizeinnovation.fund), and provide *Documentation of Organization Profile on EnergizeInnovation.fund*, including the profile link, to the CAM.
- If the Recipient's organizational profile is changed, update the organizational profile on the CEC's public online project and recipient directory on the [Energize Innovation website \(www.energizeinnovation.fund\)](http://www.energizeinnovation.fund), and provide an *Documentation of Updated Organization Profile on EnergizeInnovation.fund*, including the profile link, as needed.
- If the Recipient's project profile is changed, update the project profile on the CEC's public online project and recipient directory on the [Energize Innovation website \(www.energizeinnovation.fund\)](http://www.energizeinnovation.fund), and provide *Documentation of Updated ([Year]) Project Profile on EnergizeInnovation.fund*, including the profile link, to the CAM.
- Address any edits or questions from the CAM regarding the Project Profile content.

### Products:

- Initial Project Benefits Questionnaire
- Annual Survey(s)
- Final Project Benefits Questionnaire
- Documentation of Initial Project Profile on EnergizeInnovation.fund
- Documentation of Updated Organization Profile on EnergizeInnovation.fund (as needed)
- Documentation of Updated ([Year]) Project Profile on EnergizeInnovation.fund

### **TASK 12: TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES (*Mandatory task*)**

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

### **The Recipient Shall:**

- Develop and submit a *Project Case Study Plan* that outlines how the Recipient will document the planning, construction, commissioning, and operation of the technology or system being demonstrated. The Project Case Study Plan should include:
  - An outline of the objectives, goals, and activities of the case study.

## **Exhibit A Scope of Work GridWrap, Inc.**

- The organization that will be conducting the case study and the plan for conducting it.
- A list of professions and practitioners involved in the technology's deployment.
- Specific activities the recipient will take to ensure the learning that results from the project is disseminated to those professions and practitioners.
- Presentations/webinars/training events to disseminate the results of the case study.
- Present the draft *Project Case Study Plan* to the TAC for review and comment.
- Develop and submit a *Summary of TAC Comments* that summarizes comments received from the TAC members on the draft *Project Case Study Plan*. This document will identify:
  - TAC comments the Recipient proposes to incorporate into the final *Technology Transfer Plan*.
  - TAC comments the Recipient does not propose to incorporate with and explanation why.
- Submit the final *Project Case Study Plan* to the CAM for approval.
- Execute the final Project Case Study Plan and develop and submit a Project Case Study.
- When directed by the CAM, develop presentation materials for a CEC sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in annual EPIC symposium(s) sponsored by the California CEC.
- Provide at least (6) six High Quality Digital Photographs (minimum resolution of 1300x500 pixels in landscape ratio) of pre and post technology installation at the project sites or related project photographs.

### **Products:**

- Project Case Study Plan (draft and final)
- Summary of TAC Comments
- Project Case Study (draft and final)
- High Quality Digital Photographs

## **V. PROJECT SCHEDULE**

Please see the attached Excel spreadsheet.