**California Energy Commission**
**July 10, 2024 Business Meeting**
**Backup Materials for Wrightspeed, 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

[PROPOSED]

**RESOLUTION NO: 24-0710-13i**

**STATE OF CALIFORNIA**

**STATE ENERGY RESOURCES**
**CONSERVATION AND DEVELOPMENT COMMISSION**

**RESOLUTION: Wrightspeed, Inc.**

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

**RESOLVED**, that the CEC approves agreement EPC-24-010 with Wrightspeed, Inc for a $3,000,000 grant. This agreement will fund the design and build-out of LRIP lines for a repower kit that enables the conversion of diesel medium-duty and heavy-duty trucks to EVs at a manufacturing facility in Alameda County; and

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

***CERTIFICATION***

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the CEC held on July 10, 2024.

AYE:
NAY:
ABSENT:
ABSTAIN:

Dated:

_____
Kristine Banaag
Secretariat

STATE OF CALIFORNIA
CALIFORNIA ENERGY COMMISSION

CEC-270 (Revised 01/2024)

# GRANT REQUEST FORM (GRF)

## A. New Agreement Number

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

**New Agreement Number**: EPC-24-010

## B. Division Information

1. Division Name: ERDD
2. Agreement Manager: Lindsey Fransen
3. MS: None
4. Phone Number: 916-908-7495

## C. Recipient's Information

1. Recipient's Legal Name: Wrightspeed, Inc.
2. Federal ID Number: 20-2113214

## D. Title of Project

Title of project: Accelerating the Production of Zero-Emission Medium Duty/Heavy Duty Vehicle Repower Kits

## E. Term and Amount

1. Start Date: 8/1/2024
2. End Date: 3/31/2029
3. Amount: $3,000,000.00

## F. Business Meeting Information

1. Are the ARFVTP agreements $75K and under delegated to Executive Director? No
2. The Proposed Business Meeting Date: 7/10/2024.
3. Consent or Discussion? Discussion
4. Business Meeting Presenter Name: Benson Gilbert
5. Time Needed for Business Meeting: 10 minutes.
6. The email subscription topic is: EPIC (Electric Program Investment Charge).

## G. Agenda Item Subject and Description:

Wrightspeed, Inc.
Proposed resolution approving agreement EPC-24-010 with Wrightspeed, Inc. for a $3,000,000 grant, and adopting staff's determination that this action is exempt from CEQA. This agreement will fund the design and build-out of LRIP lines for a repower kit that enables the conversion of diesel medium-duty and heavy-duty trucks to EVs at a manufacturing facility in Alameda County. (EPIC funding) Contact: Benson Gilbert

## 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":

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 ;

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, Section 15301 provides that projects which consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public and private structures, facilities, mechanical equipment, or topographical features, and which involve negligible or no expansion of use beyond that existing at the time of the lead agency's determination, are categorically exempt from the provisions of the California Environmental Quality Act.

This project will involve the designing and build-out of low-rate initial production (LRIP) pilot lines for a repower kit that enables the conversion of diesel medium duty & heavy duty (MD/HD) trucks to electric vehicles. The project's activities are limited and contained within a pre-existing facility that will likely be upgraded to comply with all requirements needed to implement the production process. While in this site, work completed under this project will not result in a serious or major disturbance to an environmental resource, and any additional accessory structures will be minor in nature. For those reasons, the proposed work will not have any significant effect on the environment and is exempt under Cal. Code Regs., tit. 14, Section 15301.

Additionally, the project 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 |

## 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 |
|---|---|---|
| Ettractive Inc. | $ 0 | $300,000 |
| Nevada Automotive Test Center | $ 0 | $125,000 |
| Component Level Testing - TBD | $ 99,000 | $94,000 |
| TBD - Repower Vehicles | $ 99,000 | $88,000 |

## 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 |
|---|---|---|
| No vendors to report | **$** | **$** |

## 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 | 22-23 | 301.001J | $ 3,000,000 |

**TOTAL Amount:** $ 3,000,000

R&D Program Area: TIEB: EDMF

Explanation for “Other” selection Not applicable

Reimbursement Contract #: Not applicable

Federal Agreement #: Not applicable

## N. Recipient’s Contact Information

### 3. Recipient’s Administrator/Officer

Name: Kevin Landis

Address: 650 W Tower Ave

City, State, Zip: Alameda, CA 94501-5047

Phone: 408- 624-9534

E-Mail: kevin@firsthandcapital.com

### 4. Recipient’s Project Manager

Name: Kevin Landis

Address: 650 W Tower Ave

City, State, Zip: Alameda, CA 94501-5047

Phone: 408- 624-9534

E-Mail: kevin@firsthandcapital.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-21-304R2 |
| 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 Conflicts | 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:** Lindsey Fransen

**Approval Date:** 6/10/2024

**Branch Manager:** Anthony Ng

**Approval Date:** 6/10/2024

**Director:** Anthony Ng

**Approval Date:** 6/10/2024

# Exhibit A
# Scope of Work
# Wrightspeed, Inc.

## I. TASK ACRONYM/TERM LISTS

### A. Task List

| Task # | CPR[1] | Task Name |
|---|---|---|
| 1 | | General Project Tasks |
| 2 | | Develop Supply Chain |
| 3 | | Create Standard Operating Procedures |
| 4 | X | Build LRIP Lines |
| 5 | | Demonstrate Pilot Line Production |
| 6 | | Vehicle Integration Design and Installation |
| 7 | X | Proof of Design/Manufacturing Quality of the Powertrain |
| 8 | | Promote Training & Highly Skilled Careers in Disadvantaged Communities |
| 9 | | Evaluation of Project Benefits |
| 10 | | Technology/Knowledge Transfer Activities |

### B. Acronym/Term List

| Acronym/Term | Meaning |
|---|---|
| CAM | Commission Agreement Manager |
| CAO | Commission Agreement Officer |
| CCW | Complete Coach Works (company--EV conversions) |
| CEC | California Energy Commission |
| CPR | Critical Project Review |
| EMD | EMD Limited (company--engineering) |
| EV | Electric Vehicle |
| EVC | EV Choice (company--EV conversions) |
| HV | High Voltage |
| ICE | Internal Combustion Engine |
| JTI | Jaya Tri Ismaya (company--engineering) |
| LRIP | Low Rate Initial Production |
| MD/HD | Medium Duty and Heavy Duty (buses and trucks) |
| TAC | Technical Advisory Committee |
| ZEV | Zero Emission Vehicle |

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

### A. Purpose of Agreement

The purpose of this Agreement is to fund the design and build-out of Low Rate Initial Production (LRIP) pilot lines for a repower kit that enables the conversion of diesel medium duty and heavy duty (MD/HD) trucks to Electric Vehicles (EV). This kit includes all required technical

[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.

components, packaging, and instructions for electrification. Another purpose of this Agreement is to benefit disadvantaged communities by providing skills training and technologically advanced jobs, as well as reducing air pollution through the reduction of diesel truck traffic in such communities.

## B. Problem/ Solution Statement

**Problem**

MD/HD vehicles account for nearly 25% of greenhouse gas emissions in California's transportation sector. The state's Advanced Clean Trucks Act (ACT) addresses this by requiring vehicle manufacturers to sell zero-emission vehicles (ZEVs) or near-zero-emission vehicles (NZEVs) such as plug-in electric hybrids as an increasing percentage of their annual sales from 2024 to 2035. Fleet operators are concerned about their ability to comply with this mandate due to cost and availability – new MD/HD EVs currently cost 2 to 3 times more than their diesel counterparts, and when the law was passed, less than 2,000 MD/HD EVs were on the road in California. Additionally, while the mandate could lead to new jobs repowering MD/HD EVs, such jobs and careers are typically only available at big businesses which tend to be located outside of California due to the state's relatively high employment and infrastructure costs.

**Solution**

The Recipient has developed a replacement powertrain to retrofit fossil-powered MD/HD vehicles in existing fleets. This powertrain is less expensive than buying new EVs; relatively quick to install; and requires less retraining and maintenance provisioning than purchasing new vehicles. In addition, repowering existing vehicles minimizes scrappage, reducing landfill waste and the time, effort, energy, & money required to scrap retired vehicles. Finally, since the repower kits do not require large factories, job opportunities can be distributed broadly – the Recipient trains and provides EV skill sets to technicians and mechanics in disadvantaged communities.

## C. Goals and Objectives of the Agreement

**Agreement Goals**

The goals of this Agreement are to:

- Design and build out LRIP pilot lines for the manufacture of advanced plug-in repower kits for electrification of fossil-powered MD/HD chassis supported by the Recipient.
- Validate proof of design/manufacturing quality of Recipient's repower kit.
- Improve environmental quality by reducing landfill waste from early retirement of fossil-powered MD/HD vehicles and reducing air pollution in disadvantaged communities with high MD/HD vehicle traffic.
- Provide disadvantaged communities with high-demand skills training through larger centralized repower facilities and local repower centers.

# Exhibit A
# Scope of Work
# Wrightspeed, Inc.

**Ratepayer Benefits**[2] This Agreement will result in the ratepayer benefits of greater reliability, lower costs, and increased safety.

- **Greater reliability:** Greater reliability will be achieved by using recipient's powertrain to reduce electrical consumption and load on the grid compared to alternative EVs and through the enhanced reliability of MD/HD vehicles, virtually all of which serve the public by transporting goods or people, or by use in utility or construction fields.
- **Lower costs:** MD/HD vehicle owners will be able to repower existing vehicles in their fleet, in a short time period and at significantly less than half the cost of a new EV, and even less when factoring in state and federal incentives to move away from Internal Combustion Engine (ICE) vehicles. Fewer and more efficient moving parts than ICE vehicles create more effective solutions with less maintenance that in turn provide additional lower operating costs. Highly efficient regenerative braking will recapture energy, increasing the efficiency of MD/HD vehicles.
- **Increased safety:** Repowered vehicles will have lower emissions of both greenhouse gases and air pollutants than the fossil powered components they replace.

**Technological Advancement and Breakthroughs**
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 facilitating the conversion of California's MD/HD fleets from ICE vehicles to ZEVs. The Recipient has developed a replacement powertrain to retrofit fossil-powered vehicles in existing fleets, which is far less expensive than purchasing new EVs. The retrofit is also fairly quick and can be done by local mechanics without specialized facilities, and will reduce waste by preventing the early retirement of ICE vehicles.

**Agreement Objectives**
The objectives of this Agreement are to:

- Design and build out LRIP pilot lines for the manufacture of advanced plug-in repower kits, which include eAxles, Battery Systems, an HV Power Distribution Unit, Auxiliary Electrification Components, and Powertrain Systemand Control, eAxle, Battery System, HV Power Distribution Unit,uxiliary Electrification Components, and Powertrain System and Control, at a rate of 3 kits per day with a target failure rate of less than 5%.
- Validate and qualify the repower kit at the following levels: (1) complete component level testing at suppliers; (2) complete subsystem level testing with in-house dyno and at specialized testing facilities; and (3) complete vehicle level road testing by completing 150,000 miles of customer use.
- Establish lower cost electrification capability for all communities throughout California (and the US) by producing kits at a target cost of $150,000, exclusive of chassis-specific costs, when in volume production.
- Reduce scrappage and landfill waste, demonstrated by analysis of estimated energy and

[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).

materials savings and reduction in landfill based on forecasts of vehicle sales.

- Provide disadvantaged communities with high-demand skills training through larger centralized repower facilities, and later, through local repower centers such as bus depots and independently owned up-fit garages. This will be measured by documenting the number of hours of training provided and surveying changes in incomes for trainees.
- Improve air quality in areas with heavy traffic of diesel buses and trucks, in which disadvantaged communities are over-represented, to improve health and safety outcomes. This will be measured by performing calculations demonstrating contribution toward cleaner air of each of Recipient's repowered MD/HD vehicles, in terms of reduced pollutants emitted.

## TASK 1 GENERAL PROJECT TASKS

### PRODUCTS

**Subtask 1.1 Products**

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

**The Recipient shall:**

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

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

For products that require a final version only

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

For all products

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

Instructions for Submitting Electronic Files and Developing Software:

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

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

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

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

## *MEETINGS*

**Subtask 1.2 Kick-off Meeting**

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

**The Recipient shall:**

- Attend a "Kick-off" meeting with the CAM, the Commission Agreement Officer (CAO), and any other CEC staff relevant to the Agreement. The Recipient will bring its Project Manager and any other individuals designated by the CAM to this meeting. The

administrative and technical aspects of the Agreement will be discussed at the meeting. Prior to the meeting, the CAM will provide an agenda to all potential meeting participants. The meeting may take place in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The administrative portion of the meeting will include discussion of the following:
- Terms and conditions of the Agreement;
- Invoicing and auditing procedures;
- Administrative products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Match fund documentation (subtask 1.7);
- Permit documentation (subtask 1.8);
- Subcontracts (subtask 1.9); and
- Any other relevant topics.

The technical portion of the meeting will include discussion of the following:
- The CAM's expectations for accomplishing tasks described in the Scope of Work;
- An updated Project Schedule;
- Technical products (subtask 1.1);
- Progress reports (subtask 1.5);
- Final Report (subtask 1.6);
- Technical Advisory Committee meetings (subtasks 1.10 and 1.11); and
- Any other relevant topics.

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

- Provide an *Updated Project Schedule, Match Funds Status Letter,* and *Permit Status Letter*, as needed to reflect any changes in the documents.

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

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

**CAM Product:**
- Kick-off Meeting Agenda

**Subtask 1.3 Critical Project Review (CPR) Meetings**
The goal of this subtask is to determine if the project should continue to receive CEC funding, and if so whether any modifications must be made to the tasks, products, schedule, or budget. CPR

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

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

**The Recipient shall:**

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

**The CAM shall:**

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

**Recipient Products:**

- CPR Report(s)

**CAM Products:**

- CPR Agenda(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 and the CAO of the following Agreement closeout items:
  - Disposition of any procured equipment.
  - The CEC's request for specific "generated" data (not already provided in Agreement products).
  - Need to document the Recipient's disclosure of "subject inventions" developed under the Agreement.
  - "Surviving" Agreement provisions such as repayment provisions and confidential products.
  - Final invoicing and release of retention.

- Prepare a *Final Meeting Agreement Summary* that documents any agreement made between the Recipient and Commission staff during the meeting.
- Prepare a *Schedule for Completing Agreement Closeout Activities*.
- Provide copies of *All Final Products* on a USB memory stick, organized by the tasks in the Agreement.

**Products:**

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

***REPORTS AND INVOICES***

**Subtask 1.5 Progress Reports and Invoices**

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

**The Recipient shall:**

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

**Products:**

- Progress Reports
- Invoices

**Subtask 1.6 Final Report**
The goal of this subtask is to prepare a comprehensive Final Report that describes the original purpose, approach, results, and conclusions of the work performed under this Agreement. When creating the Final Report Outline and the Final Report, the Recipient must use the CEC Style Manual provided by the CAM.

**Subtask 1.6.1 Final Report Outline**

**The Recipient shall:**
- Prepare a *Final Report Outline* in accordance with the *Energy Commission Style Manual* provided by the CAM.

**Recipient Products:**
- Final Report Outline (draft and final)

**CAM Product:**
- Energy Commission Style Manual
- Comments on Draft Final Report Outline
- Acceptance of Final Report Outline

**Subtask 1.6.2 Final Report**

**The Recipient shall:**
- Prepare a *Final Report* for this Agreement in accordance with the approved Final Report Outline, Energy Commission Style Manual, and Final Report Template provided by the CAM with the following considerations:
  - Ensure that the report includes the following items, in the following order:
    - Cover page (**required**)
    - Credits page on the reverse side of cover with legal disclaimer (**required**)
    - Acknowledgements page (optional)
    - Preface (**required**)
    - Abstract, keywords, and citation page (**required**)
    - Table of Contents (**required**, followed by List of Figures and List of Tables, if needed)
    - Executive summary (**required**)
    - Body of the report (**required**)
    - References (if applicable)
    - Glossary/Acronyms (If more than 10 acronyms or abbreviations are used, it is required.)
    - Bibliography (if applicable)
    - Appendices (if applicable) (Create a separate volume if very large.)
    - Attachments (if applicable)
- Submit a draft of the Executive Summary to the TAC for review and comment.

- Develop and submit a *Summary of TAC Comments on 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 SUBCONTRACTS*

**Subtask 1.7 Match Funds**

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

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

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

  If match funds were a part of the proposal that led to the CEC awarding this Agreement, then provide in the letter:
  - A list of the match funds that identifies:
    - The amount of cash match funds, their source(s) (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied.
    - The amount of each in-kind contribution, a description of the contribution type (e.g., property, services), the documented market or book value, the source

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

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

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

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

  The list of permits and the schedule for obtaining them will be discussed at the Kick-off meeting (subtask 1.2), and a timetable for submitting the updated list, schedule, and copies of the permits will be developed. The impact on the project if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in progress reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, then provide the CAM with an *Updated List of Permits* (including the appropriate information on each permit) and an *Updated Schedule for Acquiring Permits*.
- Send the CAM a *Copy of Each Approved Permit*.

- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 days. Either of these events may trigger a CPR meeting.

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

**Subtask 1.9 Subcontracts**
The goals of this subtask are to: (1) procure subcontracts required to carry out the tasks under this Agreement; and (2) ensure that the subcontracts are consistent with the terms and conditions of this Agreement.

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

**Products:**
- Subcontracts *(draft if required by the CAM)*

***TECHNICAL ADVISORY COMMITTEE***

**Subtask 1.10 Technical Advisory Committee (TAC)**
The goal of this subtask is to create an advisory committee for this Agreement. The TAC should be composed of diverse professionals. The composition will vary depending on interest, availability, and need. TAC members will serve at the CAM's discretion. The purpose of the TAC is to:
- Provide guidance in project direction. The guidance may include scope and methodologies, timing, and coordination with other projects. The guidance may be based on:
  - Technical area expertise;
  - Knowledge of market applications; or
  - Linkages between the agreement work and other past, present, or future projects (both public and private sectors) that TAC members are aware of in a particular area.
- Review products and provide recommendations for needed product adjustments, refinements, or enhancements.
- Evaluate the tangible benefits of the project to the state of California, and provide recommendations as needed to enhance the benefits.

- Provide recommendations regarding information dissemination, market pathways, or commercialization strategies relevant to the project products.
- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.
- Advocate, to the extent the TAC members feel is appropriate, on behalf of the project in its effort to build partnerships, governmental support, and relationships with a national spectrum of influential leaders.
- Ask probing questions that insure a long-term perspective on decision-making and progress toward the project's strategic goals.

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

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

**The Recipient shall:**

- Prepare a *List of Potential TAC Members* that includes the names, companies, physical and electronic addresses, and phone numbers of potential members. The list will be discussed at the Kick-off meeting, and a schedule for recruiting members and holding the first TAC meeting will be developed.
- Recruit TAC members. Ensure that each individual understands member obligations and the TAC meeting schedule developed in subtask 1.11.
- Prepare a *List of TAC Members* once all TAC members have committed to serving on the TAC.
- Submit *Documentation of TAC Member Commitment* (such as Letters of Acceptance) from each TAC member.

**Products:**

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

**Subtask 1.11 TAC Meetings**

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

# Exhibit A
# Scope of Work
# Wrightspeed, Inc.

**The Recipient shall:**

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

**The TAC shall:**

- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.
- Advocate on behalf of the project in its effort to build partnerships, governmental support and relationships with a national spectrum of influential leaders.
- Ask probing questions that insure a long-term perspective on decision-making and progress toward the project's strategic goals.
- Review and provide comments to proposed project performance metrics.
- Review and provide comments to proposed project Draft Technology Transfer Plan.

**Products:**

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

**Subtask 1.12 Project Performance Metrics**

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

**The Recipient shall:**

- Complete and submit the project performance metrics from 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 an 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

## III. TECHNICAL TASKS

### TASK 2 DEVELOP SUPPLY CHAIN

The goal of this task is to develop a robust supply chain that maximizes domestic sourcing, provides multiple options for as many components as possible, and evaluates the suppliers and their products to create a database / list of pre-approved suppliers and products for operations.

The Recipient has engaged with several different suppliers and has an initial target source for most major components. As the Recipient moves from low volume prototypes with a focus on reliable and timely suppliers to higher volumes, their focus will shift to competitive pricing from established manufacturers. As LRIP lines are developed, the Recipient expects to tweak designs to accommodate manufacturing constraints. When designs are stable, the Recipient will conduct competitive bidding.

**The Recipient shall:**

- Research suppliers and create a starting database of supplier names and products, research suppliers and begin to populate the database with basic information such as name, location, products available and prices of those products, and contact information.
- Conduct due diligence on suppliers to understand their technical qualifications, DEIA and other employment or environmental, social, governance (ESG) practices, history, reliability, vision and goals, industry credibility, credentials and publications, and /or any other elements of their background and evaluate their suitability as a supplier and update the database with this information.
- Evaluate components from suppliers for suitability and update the database with this information.
- Attempt to negotiate a supplier agreement with the pre-approved suppliers.
- Produce a five- to ten-page *Sourcing Memo* documenting key findings from research and due diligence. This memo should not disclose any confidential information.

**Products:**

- Sourcing Memo

### TASK 3 CREATE STANDARD OPERATING PROCEDURES

The goal of this task is to develop Standard Operating Procedures providing detailed instructions for completing all essential production and related business activities. They will include, at a minimum, information on procurement procedures, Line operation procedures, data collection procedures, and evaluation and reporting procedures.

**The Recipient shall:**

- Develop a *Procedure Manual* that compiles the procurement procedure, production line operation procedure, data collection procedure and evaluation and reporting procedures. This manual should not disclose any confidential information.

**Products:**

- Procedure Manual

### TASK 4 BUILD LRIP LINES

The goal of this task is to build and commission the five LRIP lines.

**The Recipient shall:**

- Create and Finalize designs for the LRIP lines: eAxle line; Battery System line; HV Power Distribution Unit line; Auxiliary Electrification Components line; Powertrain System and Control line.
- Finalize equipment requirements for all LRIP lines.
- Make facilities improvements necessary to implement the LRIP production lines, including:
    - Identifying all facility modifications necessary to accommodate the five LRIP lines
    - Procuring an architect or engineer to create designs or drawings, if needed
    - Preparing any designs or drawings necessary to effectuate the facility modifications
    - Obtaining any required local authorization to effectuate the facility modifications
    - Procuring a local contractor to implement the facility modifications
    - Implementing the facility modifications
- Procure all necessary equipment and/or supplies necessary to commission the LRIP lines, including:
    - Identifying choices for suppliers
    - Engaging suppliers and negotiating prices and other terms
    - Placing orders for and receiving equipment
    - Conducting Site Acceptance Tests (SATs) on line equipment
    - Verifying and documenting the condition of equipment received
    - Identifying problems and returning / replacing if needed or if the product is defective or incorrect.

- Install line equipment for all LRIP lines
- Commission the lines
- Prepare *Commissioning Report* on all LRIP lines. This report will be 10-15 pages, will include graphics and figures and will have an executive summary that is written for a non-technical audience. This report should not disclose any confidential information.
- Prepare *CPR Report #1* in accordance with subtask 1.3 (CPR Meetings).
- Participate in the CPR meeting.

**Products:**

- Commissioning Report
- CPR Report #1

## TASK 5 DEMONSTRATION OF PILOT LINE PRODUCTION

The goal of this task is to demonstrate the LRIP pilot lines for the production of repower kits.

### Subtask 5.1: eAxle Pilot Line

This line shall assemble/integrate motors, motor control units, transmission gear trains, and final drives into eAxles and verify if the eAxle is meeting the requirements.

**The Recipient Shall:**

- Establish eAxle Verification/Validation and Testing Procedures to demonstrate:
  - Low rate initial production
  - Product quality when building at production rates
- Create an *eAxle Verification/Validation Plan* that includes but is not limited to an outline of:
  - The tests being conducted
  - Critical metrics being validated
  - Measurement tools for verification
  - Desired certifications
- Prepare an *eAxle Verification/Validation Report* which includes but is not limited to a high-level executive summary discussing:
  - Process and results of the final demonstration
  - Testing of the product
  - Technical issues
  - Lessons learned for this phase in the project
  - This report should not disclose any confidential information.

**Products:**

- eAxle Verification/Validation Plan
- eAxle Verification/Validation Report

### Subtask 5.2: Battery System Pilot Line

This line shall put together battery packs, battery management systems, battery communication lines, cooling loops to verify if the battery system is meeting the requirements.

**The Recipient Shall:**

- Establish Battery System Verification/Validation and Testing Procedures to demonstrate:
  - Low rate initial production
  - Product quality when building at production rates
- Create a *Battery System Verification/Validation Plan* that includes but is not limited to an outline of:
  - The tests being conducted
  - Critical metrics being validated
  - Measurement tools for verification
  - Desired certifications
- Prepare a *Battery Testing Verification/Validation Report* which includes but is not limited to a high-level executive summary discussing:
  - Process and results of the final demonstration
  - Testing of the product
  - Technical issues
  - Lessons learned for this phase in the project
  - This report should not disclose any confidential information.

**Products:**

- Battery System Verification/Validation Plan
- Battery System Verification/Validation Report

**Subtask 5.3: HV Power Distribution Unit Pilot Line**

This line shall put together inverters, converters, relays, HV cables to verify if the HV power distribution unit is meeting the requirements.

**The Recipient Shall:**

- Establish HV Power Distribution Unit Verification/Validation and Testing Procedures to demonstrate:
  - Low rate initial production
  - Product quality when building at production rates
- Create an *HV Power Distribution Unit Verification/Validation Plan* that includes but is not limited to an outline of:
  - The tests being conducted
  - Critical metrics being validated
  - Measurement tools for verification
  - Desired certifications
- Prepare an *HV Power Distribution Unit Verification/Validation Report* which includes but is not limited to a high-level executive summary discussing:
  - Process and results of the final demonstration
  - Testing of the product
  - Technical issues

- Lessons learned for this phase in the project
- This report should not disclose any confidential information.

**Products:**

- HV Power Distribution Unit Verification/Validation Plan
- HV Power Distribution Unit Verification/Validation Report

### Subtask 5.4: Auxiliary Electrification Components Pilot Line

This line shall verify the procured separate electric motors meet requirements to drive the existing power steering, brakes, and A/C.

**The Recipient Shall:**

- Establish Auxiliary Electrification Components Verification/Validation and Testing Procedures to demonstrate:
  - Low rate initial production
  - Product quality when building at production rates
- Create an *Auxiliary Electrification Components Verification/Validation Plan* that includes but is not limited to an outline of:
  - The tests being conducted
  - Critical metrics being validated
  - Measurement tools for verification
  - Desired certifications
- Prepare an *Auxiliary Electrification Components Verification/Validation Report* which includes but is not limited to a high-level executive summary discussing:
  - Process and results of the final demonstration
  - Testing of the product
  - Technical issues
  - Lessons learned for this phase in the project
  - This report should not disclose any confidential information.

**Products:**

- Auxiliary Electrification Components Verification/Validation Plan
- Auxiliary Electrification Components Verification/Validation Report

### Subtask 5.5: Powertrain System and Control Pilot Line

This line shall verify if the software defined vehicle controls and computing and communication hardware are meeting the requirements to manage eAxles, battery systems, power distribution unit, electrified power steering, braking and A/C.

**The Recipient Shall:**

- Establish Powertrain System and Control Verification/Validation and Testing Procedures to demonstrate:
  - Low rate initial production
  - Product quality when building at production rates
- Create a *Powertrain System and Control Verification/Validation Plan* that includes but is not limited to an outline of:

  - The tests being conducted
  - Critical metrics being validated
  - Measurement tools for verification
  - Desired certifications
- Prepare a *Powertrain System and Control Verification/Validation Report* which includes but is not limited to a high-level executive summary discussing:
  - Process and results of the final demonstration
  - Testing of the product
  - Technical issues
  - Lessons learned for this phase in the project
  - This memo should not disclose any confidential information.

**Products:**

- Powertrain System and Control Verification/Validation Plan
- Powertrain System and Control Verification/Validation Report

## TASK 6 VEHICLE INTEGRATION DESIGN AND INSTALLATION

The goal of this task is to install the repower kit onto a specific MD/HD chassis for vehicle-level road testing (see Task 7). This will also establish the exact procedures for repowering diesel trucks.

**The Recipient shall:**

- Create installation brackets and electrical harness for the repower kit onto a specified chassis
- Fabricate the installation brackets and electrical harness.
- Install the repower kit onto a specified vehicle.
- Develop an installation guide to document the steps to install the repower kit. Develop a *Vehicle Integration Report* to summarize the installation procedure including pictures to illustrate installed components, subsystems, and final vehicles.
- This report should not disclose any confidential information.

**Products:**

- Vehicle Integration Report

## TASK 7 PROOF OF DESIGN / MANUFACTURING QUALITY OF THE REPOWER KITS

The goal of this task is to validate manufacturing quality of the recipient's repower kit by completing 150,000 miles of representative customer use with production representative hardware using highly accelerated reliability and durability testing techniques. During this task, a test procedure will be developed to ensure product quality is replicable and that the design is robust.

**The Recipient shall:**

- Establish Vehicle Verification/Validation and Testing Procedures to demonstrate:
  - Complete component level testing at suppliers

    - Complete subsystem level testing with in-house dyno and at specialized testing facilities
    - Complete vehicle level testing and certification (where required) through:
        - In-house testing
        - Stretch Goal: Initiate/Complete vehicle level testing at 3rd party facility, if required by particular customers.
        - Altoona and/or NATC (North America Testing Center), if required by government for certification/recertification.
- Create a *Vehicle Verification/Validation Plan* that includes but is not limited to:
    - The tests being conducted
    - Critical metrics being validated
    - Measurement tools for verification
    - Desired certifications
- Prepare a *Vehicle Verification/Validation Report* which includes but not limited to:
    - High-level executive summary discussing:
        - Process and results of the final demonstration
        - Testing of the product
        - Technical issues
        - Lessons learned for this phase in the project
    - This report should not disclose any confidential information.
- Prepare *CPR Report #2* in accordance with subtask 1.3 (CPR Meetings).
- Participate in the CPR meeting.

**Products:**

- Vehicle Verification/Validation Plan
- Vehicle Verification/Validation Report
- CPR Report #2

**TASK 8: PROMOTE TRAINING & HIGHLY SKILLED CAREERS IN DISADVANTAGED COMMUNITIES**

The goals of this task are to 1. Create larger, centralized repower facilities and kit storage warehouses using already established EV integrators; and 2. Create smaller, local repower centers like bus depots and independently owned up-fit garages. Ensure robust quality installation at each facility.

**The Recipient shall:**

- Establish Re-Power *Training Manual* to demonstrate:
    - HV Safety Certification (including final written test)
    - Safe and common disassembly as well as Re-Power reassembly
- Recruit automotive repair shops or mechanics in disadvantaged communities who are interested in repowering ICE vehicles to sign up for Re-Power Training. Generate a training manual for the RE-Power trainings.
- Provide free consulting to trained mechanics in converting ICE vehicles.

- Become suppliers of the recipient's Repower kits or parts to trained mechanics or repaired shops.

**Products:**
- Training Manual

## TASK 9: EVALUATION OF PROJECT BENEFITS

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

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

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

## TASK 10: TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES

The goal of this task is to ensure the learning that resulted from this project is captured and disseminated so that similar efforts build on the lessons learned.

**The Recipient shall:**

- Develop and submit a *Project Case Study Plan* that outlines how the Recipient will document the planning, establishment, and operation of the project. The *Project Case Study Plan* should include:
  - An outline of the objectives, goals, and activities of the case study.
  - The organization that will be conducting the case study and the plan for conducting it.
  - A list of professions and practitioners involved in the project's development.
  - 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 an 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 (draft and final)*
- 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 the 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.
- Attend industry events and share lessons learned and outcomes from project
- Write and publish an article on the project in one or more relevant industry publications.

Products:

- Project Case Study Plan
- Summary of TAC Comments
- Project Case Study
- High Quality Digital Photographs
- Annual Survey(s)

## IV. PROJECT SCHEDULE

Please see Attachment 6, the Project Schedule.