California Energy Commission
May 10, 2023 Business Meeting
Backup Materials for Agenda Item No 09b:
ElectricFish Energy 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

RESOLUTION NO: 23-0510-09b

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION: ElectricFish Energy 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-22-015 for a $1,690,103 grant to establish LRIP of a containerized EV charger. ElectricFish has developed a containerized charging system that includes integrated EV fast charging using batteries. The charging system directly integrates with a site's existing electrical infrastructure to add high-capacity vehicle charging and energy storage. The system uses software-based distributed energy resources optimization to lower costs for site hosts and charging customers and support local grid resiliency; 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 May 10, 2023.

AYE:
NAY:
ABSENT:
ABSTAIN:

Dated:

_____
Liza Lopez
Secretariat

STATE OF CALIFORNIA
CALIFORNIA ENERGY COMMISSION

CEC-270 (Revised 9/2022)

GRANT REQUEST FORM (GRF)

A. New Agreement Number

IMPORTANT: New Agreement # to be completed by Contracts, Grants, and Loans Office. **New Agreement Number**: EPC-22-015

B. Division Information

1. Division Name: ERDD
2. Agreement Manager: Savi Ellis
3. MS-:None
4. Phone Number: 916.400.1630

C. Recipient's Information

1. Recipient's Legal Name: ElectricFish Energy Inc.
2. Federal ID Number: 85-2989430

D. Title of Project

Build-out of a new dedicated assembly facility for Low Rate of Initial Production of ElectricFish's modular EV charger with an interoperable extreme-fast vehicle charging capability

E. Term and Amount

1. Start Date: 5/10/2023
2. End Date: 6/30/2028
3. Amount: $1,690,103.00

F. Business Meeting Information

1. Are the ARFVTP agreements $75K and under delegated to Executive Director? No
2. The Proposed Business Meeting Date: 5/10/2023 .
3. Consent or Discussion? Discussion
4. Business Meeting Presenter Name: Michael Ferreira
5. Time Needed for Business Meeting: 5 minutes.
6. The email subscription topic is: EPIC (Electric Program Investment Charge).

Agenda Item Subject and Description:
ElectricFish Energy Inc. Proposed resolution approving agreement EPC-22-015 for a $1,690,103 grant to establish LRIP of a containerized EV charger and adopting staff's determination that this action is exempt from CEQA. ElectricFish has developed a containerized charging system that includes integrated EV fast charging using batteries. The charging system directly integrates with a site's existing electrical infrastructure to add high-capacity vehicle charging and energy storage. The system uses software-based distributed energy resources optimization to lower cost for site hosts and charging customers and support local grid resiliency.

G. California Environmental Quality Act (CEQA) Compliance

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

   If yes, skip to question 2.

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

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

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

a) Agreement **IS** exempt?

Yes

Statutory Exemption?
No

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

PRC section number: None

CCR section number: None

Categorical Exemption?
Yes

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

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

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 Existing Facilities provides an exemption for the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing structures, facilities, mechanical equipment or topographical features involving negligible or no expansion of use beyond that existing. This project will conduct research, development, and manufacturing within already existing facilities. There will be negligible or no expansion of existing use. Therefore, the project falls within Section 15301 and will not have a significant effect on the environment.

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

H. 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
Electric Power Research Institute, Inc.	$ 300,000	**$**0
DEKRA Certification, Inc.	$ 90,000	**$**0
The Corporation for Manufacturing Excellence (Manex)	$ 35,000	**$**0
To Be Determined (EPC contractor for permitting, utilities, upgrades)	$ 15,000	**$**0
ChargerHelp, Inc	$ 28,800	**$**0

I. 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	**$**	**$**

J. 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

K. 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	21-22	301.001I	$ 1,690,103

TOTAL Amount: $ 1,690,103

R&D Program Area: EDMFB: EDMF

Explanation for "Other" selection Not applicable

Reimbursement Contract #: Not applicable

Federal Agreement #: Not applicable

L. Recipient's Contact Information

1. Recipient's Administrator/Officer

Name: Vincent Wong

Address: 40523 Encyclopedia Cir

City, State, Zip: Fremont, CA 94538-2469

Phone: 917-435-3798

E-Mail: vince@electricfish.co

3. Recipient's Project Manager

Name: Vincent Wong

Address: 40523 Encyclopedia Cir

City, State, Zip: Fremont, CA 94538-2469

Phone: 917-435-3798

E-Mail: vince@electricfish.co

M. Selection Process Used

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

Selection Process	Additional Information
Competitive Solicitation #	GFO-21-304
First Come First Served Solicitation #	Not applicable
Other	Not applicable

N. 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	Enter Yes or No.
4	Recipient Resolution	Enter Yes or No.
5	Awardee CEQA Documentation	Enter Yes or No.

Approved By

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

Agreement Manager: Savi Ellis

Approval Date: Agreement Manager's Approval Date

Branch Manager: Office Manager Name

Approval Date: Office Manager's Approval Date

Director: Deputy Director Name

Approval Date: Deputy Director's Approval Date

Exhibit A
Scope of Work
ElectricFish Energy Inc.

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR[1]	Task Name
1		General Project Tasks
2		Planning and Conceptual Design of the Facility
3		Production, Materials, and Methodology Preparation
4		Buildout of Assembly Facility
5	X	Initial Line Setup and Validation
6		Demonstration of Low Rate of Initial Production (LRIP)
7		In-Field Measurement and Verification (M&V), and Reliability Test
8		Evaluation of Project Benefits
9		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
CAM	Commission Agreement Manager
CAD	Computer Aided Design
CAO	Commission Agreement Officer
CEC	California Energy Commission
CPR	Critical Project Review
DAC	Disadvantaged Communities
DER	Distributed Energy Resources
EPC	Engineering, Procurement and Construction
EV	(Battery) Electric Vehicles
EVSE	Electric Vehicle Service Equipment
FRP	Full Rate Production
LRIP	Low-Rate Initial Production
M&V	Measurement and Validation
RA	Resource Adequacy
TAC	Technical Advisory Committee
V2G	Vehicle to Grid
WBS	Work Breakdown Structure
XFC	Extreme Fast Charging (>=350kW)

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

A. Purpose of Agreement

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

Exhibit A
Scope of Work
ElectricFish Energy Inc.

The purpose of this Agreement is to fund the construction of a new dedicated assembly facility and to build, deploy and test sixteen electric vehicle chargers paired with battery storage. This technology provides extreme fast charging (XFC) to electric vehicles, and backup energy to the local electricity grid while taking days to weeks to install instead of months. The facility would reach an assembly time of approximately 40 hours per unit – a reduction from the current 3 months' time frame. The facility would also be used for interoperability testing of the units with multiple automotive partners. The project seeks to create more than 15 jobs and provide them training with manufacturing prowess in high voltage battery systems and power electronics.

B. Problem/ Solution Statement

Problem

Typical deployment of extreme fast vehicle charging requires up to 2 years and $100k+ due to sites lacking grid infrastructure compatible with the requirements for Direct Current (DC) Fast Charging. Once installed, chargers fluctuate in their utilization and can incur high peak costs from stressing the grid. These issues pose impediments for the mass adoption of electric vehicles. Vehicle electrification continues to lead as a critical pathway to decarbonizing the planet. However, slow deployment, grid impacts, and economics of charging infrastructure remain key issues that need to be addressed.

Solution

The Recipient builds and deploys a containerized unit which includes integrated EV fast charging using batteries. The charging unit directly integrates with a site's existing electrical infrastructure to add high-capacity vehicle charging and energy storage for site hosts. The system uses software-based DER optimization to lower cost for customers and support local grid resiliency.

The Recipient's unique approach saves permitting delays for trenching and grid hookup pose issues, and $100k+ in installation costs and shortens installation time by up to 17 months by eliminating permitting delays and infrastructure upgrades.

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are to set up a facility to produce the Recipient's technology in Low-Rate Initial Production (LRIP) volume in preparation for mass production enabling their deployment to high-risk grid locations.

1) Develop a facility capable of producing a unit in approximately 40 hours
2) Produce and deploy up to 2 units[2]
3) Conduct evaluation on the performance of the deployed products for 1-3 months

[2] Although Exhibit C, terms and conditions, section 2, incorporates by reference the Recipient's proposal, the following content from the Recipient's proposal is not incorporated into this grant agreement: Production of up to 16 units. Funding in this grant will be used to produce two units and a production line capable of low-rate initial production of additional units.

Ratepayer Benefits:[3] This Agreement will result in the ratepayer benefit of greater electrical reliability, lower costs of electricity, and increased safety, and overcome the barriers to achieve the state's statutory energy goals.
The agreement addresses the goal of greater electricity reliability by increasing local hosting capacity of the electricity grid through a bidirectional electrical connection, and peak shaving the EV charging load, through the production and deployment of this patented hardware.

The deployments will lower costs of charging electricity for transportation and decrease cost of domestic electricity by offsetting the gap between consumption and renewable generation through electrochemical storage. Also, the technology will result in increased energy security and safety by bolstering local electricity grid's flexibility and reducing congestion. This agreement also will help overcome the barriers that prevent the achievement of the state's statutory energy goals of high EV penetration by bringing a gasoline level experience to EVs. The production of Electric Vehicle Service Equipment (EVSE) equipment locally will help reduce reliance on off-the-shore components, and imports of this novel technology, and enhance in-state capabilities of rapid and cheaper manufacturing of EV charging stations.

When deployed, the recipient's distributed energy storage network innovation will accelerate access to clean, energy-resilient resources for DACs. The Recipient uses an intelligent siting tool to highlight locations that will experience the greatest impact from co-locating energy storage with DC Fast charging. The recipient's targeted approach will increase access to energy resources for DACs. This patented solution needs to be built locally and scaled to prove the cost recovery of the hardware and integrate it with state-of-the-art software protocols. Building locally in California will also maximize the carbon impact of the product.

Technological Advancement and Breakthroughs:[4] 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 the feasibility of a locally produced unit that can provide energy storage and fast charging in a matter of weeks instead of years. These fast-charging systems can be produced at cost-parity and high assembly speed.

Agreement Objectives
The objective of this Agreement is to:

- Reduce the assembly time for the unit from months to days and create detailed Design for Manufacturing (DFM) documentation for FRP (full rate production.)
- Support a domestic supply chain of components and develop local vendors to provide EVSE equipment.
- Promote interoperability and full network capabilities with this hardware by ensuring compatibility with communication protocols such as IEC61850, ISO15118, OpenADR 2.0b, for communication among PEVs, system operators, and utilities.

[3] 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).
[4]

- Reliably produce a unit with an installed cost (including cost of equipment) of $240,000-270,000
- Demonstrate the production of 16 of the Recipient's units within an LRIP pilot line with a build time per unit of approximately 40 hours per unit and consistent product quality (incoming AQL 1.0% level 2, line 95% yield, outgoing AQL 1.0% level 2) while employing locally disadvantaged labor.

III. TASK 1: GENERAL PROJECT TASKS

PRODUCTS

Subtask 1.1 Products

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

The Recipient shall:

<u>For products that require a draft version, including the Final Report Outline and Final Report</u>

- 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.

<u>For products that require a final version only</u>

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

<u>For all products</u>

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

<u>Instructions for Submitting Electronic Files and Developing Software</u>:

- **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 the following:
  - 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. The report should be no more than 15 pages and include an executive summary written for a non-technical audience.
- 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.
  - Be no more than 15 pages and include an executive summary written for a non-technical audience.
- 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.

Exhibit A
Scope of Work
ElectricFish Energy Inc.

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.

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 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

TASK 2: PLANNING AND CONCEPTUAL DESIGN OF THE FACILITY

The goal of this task is to finalize plans for the fully scaled LRIP facility and prepare a plan for hiring and onboarding personnel needed.

Pre-requisite conditions for site selection: The manufacturing location must be inside an existing facility (including existing parking lots and electrical connections) that is located on a parcel already zoned for light industrial use or heavy industrial use, depending upon the local government's requirements. Installation of the manufacturing operation must not require expansion of the existing building envelope. The manufacturing location must already be permitted for the proposed use, and not require a Conditional Use Permit, variance, or other discretionary land use or other discretionary approval by the agency(ies) with land use and/or other jurisdiction over the site. The proposed use must also already be in conformance with any designations in the applicable General Plan for the parcel, and in conformance with any applicable General Plan-related land use policies, and the proposed use must not require a discretionary approval for a variation in or change in General Plan land use designation or policies.

If these pre-requisite conditions for site selection appear to be unattainable for the particular site, the Recipient shall notify the CAM in writing within two business days.

Further pre-requisite conditions for site selection: The Recipient shall inform the CAM in writing via a *Site Entitlements Memorandum* of the location (by address and parcel number), zoning, General Plan designation, and applicable General Plan policies, if any, and any other relevant information about ministerial or discretionary permits that would be required to implement its manufacturing operation at the selected site, and furthermore, receive no objection from the CAM within five (5) business days, prior to signing the lease. Such lack of CAM objection, if that occurs, shall not be construed as the California Energy Commission's further implicit or explicit

approval of the proposed site. The Recipient shall be solely responsible for adherence to these pre-requisite conditions.

Subtask 2.1 Finalize Facility, Schedule, Work Breakdown Structure, Hiring Needs, and EPC firm

The Recipient shall:

- Evaluate, and after meeting the pre-requisites above, including submission of the *Site Entitlements Memorandum*, secure a manufacturing location, and sign a lease agreement.
- Review and finalize project schedule with internal and external stakeholders.
- Review and finalize a *Planning and Conceptual Design Report* that includes but is not limited to the following:
    - A discussion of the selected manufacturing location, why it was chosen, and what alternative locations were not chosen, if any.
    - A work breakdown structure which identifies internal and external stakeholders and their responsibilities, describes the work being completed by the stakeholders, and in what order the work will be completed with regards to the planning and conceptual design of the facility
    - A detailed Gantt Chart that visually outlines the timeline for each facility preparation step
    - An 3-5 page executive summary that is graphic-heavy, written for a non-technical audience, and summarizes the points above.
- Collaborate with partner to identify target areas and demographics for hiring efforts.
- Conduct outreach and advertising in targeted areas for hiring.
- Review and select an engineering, procurement, and construction (EPC) vendor who will deliver the facility.
- Review and provide signed *EPC Provider Contract.*
- Review and update work breakdown structure and project timeline where necessary.
- Revise budget where necessary.

Products:

- Site Entitlements Memorandum
- Planning and Conceptual Design Report
- EPC Provider Contract

Subtask 2.2 Design Facility Layout

The goal of this subtask is to finalize a manufacturing layout within the secured manufacturing facility to achieve a throughput capacity of 8 units of product per month.

The Recipient shall:

- Develop a *Master Facility Layout Plan Report* which includes but is not limited to the following: Facility size, layout, process flow, retrofit costs etc. The report should be no more than 15 pages and include an executive summary written for a non-technical audience.
- Utilize computerized layout techniques to define the optimum layout of the factory.
- Ensure that the Recipient's promise in its CEQA Worksheet is fulfilled: "All physical installation work will occur in existing parking structures, parking lots, or electrical hookups.

There will be no disturbance of any natural areas directly or indirectly." This is in addition, and not limiting, the pre-requisites above.

- If the selected site is the identified site in Oakland as of April 2023, ensure that the equipment installation is designed to meet the applicable requiremens for the liquefaction hazard at the site (Liquefaction Severity 5, according the Oakland zoning map-related information),
- Prepare *Facility Fit-Up Requirements Document*, which includes but is not limited to a description of:
    - testing equipment, facility equipment, weight handling equipment, safety certifications needed, plans for facility upgrades
- Size and design an in-house warehouse management system for batch tracking.
- Fulfill personnel requirements like first-aid stations, transgender bathrooms, and parking locations.
- Initiate permitting process.
- Review and Complete *Permitting In-Progress Checklist* which includes but is not limited to the following:
    - description of the permits required for the facility, estimated timelines for procurement, paperwork needed for filing
    - descriptions of permits being sought, including but not limited to:
        - structural integrity
        - fire safety compliance
        - grounding requirements for heavy equipment handling

Products:

- Master Facility Layout Plan Report
- Facility Fit-Up Requirements Document
- Permitting In-Progress Checklist

Subtask 2.3 Building a Training Plan for Personnel

The goal of this subtask is to recognize the variety of standards for the occupational safety and health of workers and engineers and create a workplace training that protects all employees that is free from recognized hazards.

The Recipient shall:

- Develop a *Personnel Training Plan* which includes but is not limited to the following: Employment, Training, Safety etc.

Products:

- Personnel Training Plan

TASK 3: PRODUCTION, MATERIALS, AND METHODOLOGY PREPARATION

Subtask 3.1 Supply Chain and Vendor Identification

The goal of this task is to seek vendors for factory equipment systems and suppliers for the bill of materials. Generate initial capital cost and product cost estimations.

The Recipient shall:

- Develop a *Supply Chain and Vendor Report* which includes but not limited to vendors selected, material handling and management plans, and cost information.
- Develop an *Initial Cost Model of Operations Report* which includes but not limited to the following: Facility costs, equipment costs, material costs, personnel costs, etc.

Products:

- Supply Chain and Vendor Report
- Initial Cost Model Of Operations Report

Subtask 3.2 Identify Testing and Assembly Equipment
The goal of this task is to work with technical partners to identify the requirements for testing and assembly equipment.

The Recipient shall:

- Develop a *Testing and Handling Equipment List.* This list will include but not be limited to the following: all testing equipment needed to meet the required testing standards, the assembly and handling equipment based upon the weight of the materials needed to be handled.
- Evaluate electrical loading for the test equipment, and their peak consumption
- Identify shelving requirements, workbenches, and eight handling equipment like forklifts, and hoists.
- Prepare an *Updated Facility Design Plan* based on location of equipment.
- Prepare *Manufacturing and Testing Lines Installation Plan* which includes but is not limited to the location of the equipment in the factory, the delivery plan for each item, and the plan for acceptance

Products:

- Updated Facility Design Plan
- Testing and Handling Equipment List
- Manufacturing and Testing Lines Installation Plan

Subtask 3.3 Finalize Factory Utilities Design, Order Equipment and Materials
The goal of this task is to finalize the factory design and turn equipment quotations into orders from vendors.

The Recipient shall:

- Finalize all elements of Factory Design, including electrical, water, and IT infrastructure required.
- Prepare and provide *Administration Equipment Order Receipt(s)*.
- Order materials
- Initiate facility fit-up with contractors
- Create a *Summary of Equipment Quotes and Orders Memo* that will include, but not be limited to the following:
    - A comparison and summary of quotes received
    - The selected equipment based on those quotes and a summary for why each was chosen

Products:

- Administration Equipment Order Receipt(s)
- Summary of Equipment Quotes and Orders Memo

Subtask 3.4 Environmental and Safety Assessment of the Facility Design and Process Blueprints

The goal of this subtask is to work with the Recipient's technical patents to evaluate which regulatory standards are applicable to the factory and process layout.

The Recipient shall:

- Complete analysis for material flow, handling, and ergonomics of material handling.
- Evaluation of Occupational Safety and Health Administration (OSHA) requirements and the safety of workers.
- Evaluate facility safety like the hydrant design, air conditioning, and fire exits.
- Evaluate contingency plans for natural disasters like earthquakes.
- Obtain an *OSHA Compliance Report.* The report should include an executive summary written for a non-technical audience.
- Prepare an *Updated Factory Plan* or layout based on the assessment.

Products:

- Environmental Impact Analysis Report
- OSHA Compliance Report
- Updated Factory Plan

Subtask 3.5 Defining New Process Instruction (NPI)

The goal of this process is to write down manufacturing process instruction (MPI), Test process instruction (TPI), that is accessible to production operators, maintenance technicians, and quality inspectors.

The Recipient shall:

- Develop a *Process, Procedure, and Work Instruction Document* which includes the following components:
    - Visualization of the standard work instruction.
    - Defined materials, test, and audit processes.

Products:

- Process, Procedure and Work Instruction Document.

TASK 4: BUILDOUT OF ASSEMBLY FACILITY

The goal of this task is to complete facility upgrades and equipment installations.

Subtask 4.1 Complete Facility Construction

The goal of this subtask is to complete the facility construction, create subsections, and secure all amenities.

The Recipient shall:

- Complete a *Production-Ready Facility Shell Plan.*
- Work with the contractor to obtain all required permits, build out and gain inspection approvals.
- Install all working stations and secured areas throughout the facility.
- Setup utilities.
- Facilitate with subcontractors and in house staff the delivery and set up of equipment in the facility.

Products:

- Production-Ready Facility Shell Plan

Subtask 4.2 Installation of Testing, IT, and Handling Equipment
The goal of this subtask is to install all equipment needed for production.

The Recipient shall:

- Deliver all necessary equipment needed for production.
- Install equipment systems and conduct individual tooling tests.
- Install IT infrastructure.
- Complete installation of the manufacturing and testing lines.
- Prepare the, *IT Infrastructure Completion Memorandum*, a short memorandum documenting completion of the infrastructure for the project.

Products:

- IT Infrastructure Completion Memorandum

Subtask 4.3 Safety Planning and Contingency Scenarios Definition
The goal of this subtask is to build contingency plans for evacuation and handling for fire/accidents.

The Recipient shall:

- Prepare a *Fires, Hydrant Layout, and Substance Incidents Hazard Mitigation Plan* which includes but is not limited to the following: Location use and handling requirements of fire fighting equipment, chemical handling and storage requirements, etc.

Products:

- Fires, Hydrant Layout, And Substance Incidents Hazard Mitigation Plan

Exhibit A
Scope of Work
ElectricFish Energy Inc.

TASK 5: INITIAL LINE SETUP AND VALIDATION
The goals of this task are to continue employee and management training, process and line setup, initial unit build, unit, and line validation.

Subtask 5.1 Build Preparation
The goal of this subtask is to prepare staff, materials, machines, and methods for production of the finished product.

The Recipient shall:
- Develop and prepare a *Build Readiness Report* which includes but is not limited to the following: an audit of line readiness including staff, machine, materials and methods. The report should be no more than 15 pages and include an executive summary written for a non-technical audience.

Products:
- Build Readiness Report

Subtask 5.2 Pilot Build
The goal of this subtask is building the first 2 production units, and validating that they conform to specifications and for understanding the line efficiency.

The Recipient shall:
- Build and test the first unit and baseline the process
- Develop and prepare a *Quality Control Report* which includes but is not limited to incoming inspection, in-line inspection/line yield and outgoing inspection results. The report should be no more than 15 pages and include an executive summary written for a non-technical audience.
- Develop and prepare a *Validated Line and Associated Processes Report.* The report should be no more than 15 pages and include an executive summary written for a non-technical audience.

Products:
- Quality Control Report
- Validated Line and Associated Processes Report

Subtask 5.3 Product Validation
The goal of this subtask is to test and validate the hardware and the communication interface for aggregated smart and bidirectional vehicle charging/discharging and the support grid services.

The Recipient shall:
- Send the equipment to a project partner site for testing of Grid forming capabilities
- Prepare *Test Summary Report* on technology using results of test equipment on site, and also portable equipment provided by a technology partner.
- Develop and prepare *EV Charging Interoperability Report.*
- Develop and prepare *Grid Network Interface Testing Report*.
- Develop and prepare *Product Performance Validation Report.*

- The reports for this subtask should be no more than 15 pages each and include executive summaries written for a non-technical audience.

Products:
- Test Summary Report
- EV Charging Interoperability Report
- Grid Network Interface Testing Report
- Product Performance Validation Report

Subtask 5.4 Post Build Review
The goal of this subtask is to review all data gathered during the build and to determine if the objectives of the build were achieved or if any adjustments are needed before the LRIP build.

The Recipient shall:
- Develop a *Pilot Build Report* that includes but is not limited to the following: review of test results, needed modifications of jigs and fixtures, corrective actions and updates to metrics, etc. The report should be no more than 15 pages and include an executive summary written for a non-technical audience.
- Conduct a review meeting with the company to share findings and learning

Products:
- Pilot Build Report
- Internal review meeting

Subtask 5.5 Critical Project Review
The goal of this subtask is to verify the readiness of the production line to initiate LRIP.

The Recipient shall:
- Develop a *CPR Report #1*. The report should include an executive summary written for a non-technical audience.
- Attend and participate in a CPR meeting with the CAM.

Products:
- CPR Report #1

Exhibit A
Scope of Work
ElectricFish Energy Inc.

TASK 6: DEMONSTRATION OF LOW-RATE OF INITIAL PRODUCTION (LRIP)
The goals of this task are to demonstrate the LRIP has been met with specified quality and throughput.

Subtask 6.1 LRIP Build
The goals of this subtask are to build the LRIP build quantity and validate it conforms to specifications, and to validate the line can meet the throughput and quality objectives.

The Recipient shall:
- Buildout of the LRIP quantity
- Develop and prepare the *Line and Associated Processes Validation Report* which includes but is not limited to the following: quality and throughput results vs. targets. The report should be no more than 15 pages and include an executive summary written for a non-technical audience.

Products:
- Line and Associated Processes Validation Report

Subtask 6.2 Post Build Review
The goal of this subtask is to review all data gathered during the LRIP build and to determine if the objectives of the build were achieved or if any adjustments are needed before any future builds.

The Recipient shall:
- Develop an *LRIP Build Report* which includes but is not limited to the following: Issues, failure modes and associated corrective actions for future builds, and update to target metrics as appropriate. The report should be no more than 15 pages and include an executive summary written for a non-technical audience.
- Conduct a review meeting with the company to share findings and learning

Products:
- LRIP Build Report
- Post build review meeting

TASK 7: IN-FIELD PRODUCT EVALUATION AND RELIABILITY TEST

The goals of this task are to collect data from the field installations of the manufactured EV chargers[5] and analyze it to verify impacts according to References for Calculating Electricity End-Use, Electricity Demand and GHG Emissions, and to characterize the EVSE's ability for interoperability for vehicles, and grid control signals.

Subtask 7.1 Product Evaluation Plan

The goal of this task is to detail and document the product evaluation plan in the application Project Narrative with collaboration with technical partners

The Recipient shall:

- Pre-requisite conditions for EV charger installation sites selection: The locations must be in or on existing parking lots and use existing electrical connections. The local land use authority's approvals must be only ministerial and not discretionary.
    - Ensure that the Recipient's promise in its CEQA Worksheet is fulfilled: "All physical installation work will occur in existing parking structures, parking lots, or electrical hookups. There will be no disturbance of any natural areas directly or indirectly." This is in addition, and not limiting, the pre-requisites above.
- Develop and prepare a *Product Evaluation Plan* that includes but is not limited to the following: the plan for field testing, vehicle compatibility testing, installation and troubleshooting.

Products:

- Product Evaluation Plan

Subtask 7.2 Metering Installation and Ongoing Measurement

The goal of this subtask is to install metering suites on deployed EVSE and ensure data acquisition systems are operational.

The Recipient shall:

- Configure metering suites, install metering according to product evaluation plan and ensure safety protocols are followed.
- Continually test metering for accuracy and communication reliability.
- Develop and prepare *In-Field Installation and Metering Report.* The report should be no more than 15 pages and include an executive summary written for a non-technical audience.

Products:

- In-Field Installation and Metering Report

TASK 8: EVALUATION OF PROJECT BENEFITS

[5] Although Exhibit C, terms and conditions, section 2, incorporates by reference the Recipient's proposal, the following content from the Recipient's proposal is not incorporated into this grant agreement: Discussion of noise and traffic impacts on p. 4 of the CEQA Worksheet.

Rather, the incremental traffic to a new, fast EV charger is not expected to be significant, based on trip estimates provided for fast EV chargers in East Bay communities recently. (See e.g., ZVI-22-022, East Bay Community Energy, East Bay Community Energy's Multi-family Hotspot Fast Charging Hubs.)

Exhibit A
Scope of Work
ElectricFish Energy Inc.

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

Exhibit A
Scope of Work
ElectricFish Energy Inc.

TASK 9: 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 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 (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 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.
- Develop and submit a one to two page *Technology/Knowledge Transfer Report (draft and final)* that includes the following:
  - Summary of the ways the results of this project were shared during the duration of the agreement, including events and interactions with stakeholders
  - An executive summary written for a non-technical audience.

Products:

- Project Case Study Plan (draft and final)
- Summary of TAC Comments
- Project Case Study (draft and final)
- High Quality Digital Photographs
- Technology/Knowledge Transfer Report (draft and final)

Exhibit A
Scope of Work
ElectricFish Energy Inc.

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.