



**California Energy Commission  
February 15, 2023 Business Meeting  
Backup Materials for Agenda Item No 06b:  
Symbio North America Corporation.**

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

1. Proposed Resolution (attached below).
2. Grant Request Form or Grant Amendment Request Form or Contract Request Form or Loan Request Form (applicable form attached below).
3. Scope of Work (attached below).
4. CEQA documents (if applicable, attached below).
5. Other relevant documentation or link to other documentation (if applicable, attached below).

STATE OF CALIFORNIA  
STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

**RESOLUTION: Symbio North America Corporation**

**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 ZVI-22-032 with Symbio North America Corporation for a \$9,076,445 grant to expand their facility in Poway and establish a new facility in Temecula for hydrogen fuel cell vehicle power systems and vehicle assembly. These California facilities will assemble regional long-haul heavy-duty fuel cell class 8 trucks and have an annual combined maximum production capacity of 250 trucks and 250 to 300 fuel cell power systems to expedite fuel cell truck deployment in California; 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 February 15, 2023.

AYE:  
NAY:  
ABSENT:  
ABSTAIN:

Dated:

\_\_\_\_\_  
Liza Lopez  
Secretariat



## GRANT REQUEST FORM (GRF)

### A. New Agreement Number

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

**New Agreement Number:** ZVI-22-032

### B. Division Information

1. Division Name: Fuels and Transportation
2. Agreement Manager: Pilar Magaña
3. MS: 27
4. Phone Number: 916-477-1546

### C. Recipient's Information

1. Recipient's Legal Name: Symbio North America Corporation
2. Federal ID Number: 87-0940054

### D. Title of Project

Title of project: Symbio One - California Hydrogen Fuel Cell Manufacturing and Training Facility

### E. Term and Amount

1. Start Date: 2/15/2023
2. End Date: 3/31/2026
3. Amount: \$9,076,445

### F. Business Meeting Information

1. Are the ARFVTP agreements \$75K and under delegated to Executive Director? No
2. The Proposed Business Meeting Date: 02/15/2023
3. Consent or Discussion? Discussion
4. Business Meeting Presenter Name: Pilar Magaña
5. Time Needed for Business Meeting: 5 minutes.
6. The email subscription topic is: Clean Transportation Program

#### **Agenda Item Subject and Description:**

Symbio North America Corporation. Proposed resolution approving Agreement ZVI-22-032 with Symbio North America Corporation for a \$9,076,445 grant to expand their facility in Poway and establish a new facility in Temecula for hydrogen fuel cell vehicle power systems and vehicle assembly, and adopting staff's determination that this action is exempt from CEQA. These California facilities will assemble regional long-haul heavy-duty fuel cell class 8 trucks and have an annual combined maximum production capacity of 250 trucks and 250 to 300 fuel cell power systems to expedite fuel cell truck deployment in California.

### 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: If Agreement is considered a "Project" under CEQA skip to question 2. Otherwise, provide explanation.

**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: 14 CCR 15301, 15304

Cal. Code Regs., Title 14, Sec. 15301 provides that projects which consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, and which involve negligible or no expansion of use beyond that existing at the time of the responsible agency's determination, are categorically exempt from the provisions of the California Environmental Quality Act.

Cal. Code Regs., Title 14, Sec. 15304 provides that projects which consist of minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry and agricultural purposes are categorically exempt from the provisions of CEQA. In this project, minor trenching and directional boring may be necessary to lay conduit from the existing or new electrical infrastructure (transformer, switchgear, etc.) to the charging equipment. The trenching/boring will take place on currently paved ground and surface will be restored. Therefore, the project falls within section 15304 and will not have a significant effect on the environment.

**Poway:** Modification of existing ground level loading door from 10'x12' to 12'x14' and adding an additional 12'x14' GL loading door, hydrogen enabled facility. Pipelines are low pressure (indoor) pipelines that will not impact CEQA.

**Temecula:** Modifications of existing facility to add walls, expand workspaces, offices, test labs, and hydrogen enabled facility. Pipelines are low pressure (indoor) pipelines that will not impact CEQA.

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.

Not applicable

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
California State University Los Angeles	\$ 152,611	\$0
University of California, Riverside	\$ 225,000	\$0
Cerritos College	\$72,000	\$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
Velocity Trucking	\$0	\$5,000
Insurance Company (Temecula Site)	\$0	\$15,000
Insurance Company (Poway Site)	\$0	\$9,000
Internships-TBD	\$58,500	\$0

#### 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
Symbio France SAS

**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
General Fund	2022-2023	601.129 MGB	\$9,076,445

**TOTAL Amount:** \$9,076,445

R&D Program Area: Enter R&D Program Area. Example: EDMFO: EDMF

Explanation for "Other" selection Enter explanation for "Other"

Reimbursement Contract #: Enter Reimbursement Contract Number

Federal Agreement #: Enter Federal Agreement Number

**L. Recipient's Contact Information**

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

Name: Rob Del Core  
Address: 12760 Danielson Court, Ste. H-J  
City, State, Zip: Poway, CA 92121  
Phone: (858) 286-8930  
E-Mail: [rob.delcore@symbio.one](mailto:rob.delcore@symbio.one)

**2. Recipient's Project Manager**

Name: Michael Lee  
Address: 12760 Danielson Court, Ste. H-J  
City, State, Zip: Poway, CA 92121  
Phone: (626) 695-0305  
E-Mail: [michael.lee@symbio.one](mailto:michael.lee@symbio.one)

**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-21-605
First Come First Served Solicitation #	



Other	
-------	--

**N. Attached Items**

- 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	Yes

**Approved By**

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

**Agreement Manager:** Pilar Magaña

**Approval Date:** 12/28/2022

**Office Manager:** Charles Smith

**Approval Date:** 12/21/2022

**Deputy Director:** Melanie Vail

**Approval Date:** 1/11/2023

## Exhibit A SCOPE OF WORK

### TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2	X	Facility Secured, Design, Permitting and Improvement
3	X	Procurement and Manufacturing Line Build and Assembly
4	X	Manufacturing Line Commissioning and Production Trial
5		Workforce Training and Development
6		Data Collection and Analysis
7		Project Fact Sheet

### KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1,5,6,7	Michael Lee	Symbio North America	Symbio France SAS
2, 3, 4, 5, 6	Rick Brumley	Symbio North America	Brian Cox Mechanical, Power Link
5	Francois Esnault	Symbio France SAS	
5	Louis Guillame	Symbio France SAS	
5, 6	Georgios Karavalakis	University of California Riverside	
5, 6	David Blekhman	California State University of Los Angeles	
5, 6	Jannet Malig	Cerritos College	

### GLOSSARY

*Specific terms and acronyms used throughout this scope of work are defined as follows:*

Term/ Acronym	Definition
BOM	Build Of Materials
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission

<b>Term/ Acronym</b>	<b>Definition</b>
CTP	Clean Transportation Program
CPR	Critical Project Review
FCEV	Fuel Cell Electric Vehicle
FTD	Fuels and Transportation Division
Recipient	Symbio North America Corporation
TCO	Total Cost of Ownership
ZEV	Zero Emission Vehicles

**Background**

The Budget Act of 2021 (Assembly Bill (AB) 128, Ting, Chapter 21, Statutes of 2021, as amended by Senate Bill (SB) 129, Skinner, Chapter 69, Statutes of 2021 and SB 170, Skinner, Chapter 240, Statutes of 2021) appropriated \$785,000,000 from the General Fund to support infrastructure deployments and manufacturing projects for zero-emission light-duty and medium- and heavy-duty vehicles. The Budget Act of 2022 (SB 154, Skinner, Chapter 43, Statutes of 2022, as amended by AB 178, Ting, Chapter 45, Statutes of 2022) appropriated an additional \$255,000,000 from the General Fund to support infrastructure deployments and manufacturing projects for zero-emission light-duty and medium- and heavy-duty vehicles.

On March 30, 2022, the California Energy Commission (CEC) released a Grant Funding Opportunity (GFO) entitled “Zero-Emission Transportation Manufacturing.” This competitive grant solicitation was to provide funding for projects that will increase in-state manufacturing of zero-emission vehicles (ZEV), ZEV components and batteries, and ZEV charging or refueling equipment. In response to GFO-21-605, the Recipient submitted application #15 which was proposed for funding in the CEC’s Notice of Proposed Awards on August 24, 2022. GFO-21-605 and Recipient’s application are hereby incorporated by reference into this Agreement in their entirety.

In the event of any conflict or inconsistency between the terms of the Solicitation and the terms of the Recipient’s Application, the Solicitation shall control. In the event of any conflict or inconsistency between the Recipient’s Application and the terms of CEC’s Award, CEC’s Award shall control. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the Recipient’s Application, the terms of this Agreement shall control.

**Problem Statement:**

California has aggressive goals to transition to 100 percent zero-emission heavy-duty vehicles. In order to achieve these goals, significant changes to the transportation industry need to be addressed in order for California to achieve its goals. Common barriers to wider adoption of zero-emission transportation include: inexperienced workforce, limited service and maintenance support, and lack of in-state manufacturing to help lower the high total cost of ownership (TCO). Zero-emission transportation manufacturing is needed to address challenging duty cycles in order to support California’s goal to transition to 100 percent zero-emission heavy-duty vehicles and California decarbonization goals.

**Goals of the Agreement:**

The goals of this Agreement are to establish a zero-emission transportation manufacturing and assembly facility in Temecula, CA and expand the manufacturing capability of the Poway, CA facility located in San Diego County to:

- ✓ Manufacture hydrogen fuel cell power systems and assemble fuel cell heavy-duty trucks to support the State's goal to manufacture zero-emission fuel cell electric vehicles in California at scale and to support the deployment of a fuel cell electric vehicle (FCEV) fleet through trained labor.
- ✓ Stimulate and create local zero-emission vehicle jobs and support small businesses in California.
- ✓ Train and support future local talent and workforce to support FCEV growth.
- ✓ Stimulate and encourage the mass adoption of FCEVs by broadening the fuel cell vehicle applications, improving FCEV availability, and supporting the after sales service and maintenance locally.
- ✓ Bring FCEV and fuel cell power system manufacturing capability and know-how to California.

**Objectives of the Agreement:**

The objectives of this Agreement are to:

- ✓ Establish manufacturing facilities with a combined annual total production capacity of 250 FCEV and 250 to 300 heavy-duty fuel cell power systems.
- ✓ Create and hire a zero-emission manufacturing and servicing workforce of 63 permanent positions.
- ✓ Establish Symbio's hydrogen fuel cell workforce training program in collaboration with universities in California that will train 122 students and fleet operators in total over the project duration and continue to train 180 students and fleet operators annually after the project.
- ✓ Assemble and deploy at least four FCEV over the project duration, which translates into a potential minimum total emissions reduction of 508 tonnes of carbon dioxide annually in California by the minimum four trucks built for fleet trials.

**TASK 1 ADMINISTRATION****Task 1.1 Attend Kick-off Meeting**

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement. The Commission Agreement Manager (CAM) shall designate the date and location of this meeting and provide an agenda to the Recipient prior to the meeting.

**The Recipient shall:**

- Attend a "Kick-Off" meeting with the CAM, the Commission Agreement Officer (CAO), and a representative of the CEC Accounting Office. The Recipient shall bring their Project Manager, Agreement Administrator, Accounting Officer, and any others determined necessary by the Recipient or specifically requested by the CAM to this meeting.

- Provide a written statement of project activities that have occurred after the notice of proposed awards but prior to the execution of the agreement using match funds. If none, provide a statement that no work has been completed using match funds prior to the execution of the agreement. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.
- Discuss the following administrative and technical aspects of this Agreement:
  - Agreement Terms and Conditions
  - Critical Project Review (Task 1.2)
  - Match fund documentation (Task 1.7) No reimbursable work may be done until this documentation is in place.
  - Permit documentation (Task 1.8)
  - Subawards needed to carry out project (Task 1.9)
  - The CAM's expectations for accomplishing tasks described in the Scope of Work
  - An updated Schedule of Products and Due Dates
  - Monthly Calls (Task 1.4)
  - Quarterly Progress Reports (Task 1.5)
  - Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
  - Final Report (Task 1.6)

**Recipient Products:**

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits
- Written Statement of Match Share Activities

**Commission Agreement Manager Product:**

- Kick-Off Meeting Agenda

**Task 1.2 Critical Project Review (CPR) Meetings**

CPRs provide the opportunity for frank discussions between the CEC and the Recipient. The goal of this task is to determine if the project should continue to receive CEC funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule or budget.

The CAM may schedule CPR meetings as necessary, and meeting costs will be borne by the Recipient.

Meeting participants include the CAM and the Recipient and may include the CAO, the Fuels and Transportation Division (FTD) program lead, other CEC staff and Management as well as other individuals selected by the CAM to provide support to the CEC.

**The CAM shall:**

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the CEC, but they may take place at another location or remotely.
- Send the Recipient the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion on both match funding and permits.
- Conduct and make a record of each CPR meeting. Prepare a schedule for providing the written determination described below.
- Determine whether to continue the project, and if continuing, whether or not modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (please see section 8 of the Terms and Conditions). If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Lead Commissioner for Transportation for his or her concurrence.
- Provide the Recipient with a written determination in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more product(s) that were included in the CPR.

**The Recipient shall:**

- Prepare a CPR Report for each CPR that discusses the progress of the Agreement toward achieving its goals and objectives. This report shall include recommendations and conclusions regarding continued work of the projects. This report shall be submitted along with any other products identified in this scope of work. The Recipient shall submit these documents to the CAM and any other designated reviewers at least 15 working days in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

**CAM Products:**

- Agenda and a list of expected participants
- Schedule for written determination
- Written determination

**Recipient Product:**

- CPR Report(s)

**Task 1.3 Final Meeting**

The goal of this task is to closeout this Agreement.

**The Recipient shall:**

- Meet with CEC staff to present the findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement.

This meeting will be attended by, at a minimum, the Recipient and the CAM. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be two separate meetings at the discretion of the CAM.

The technical portion of the meeting shall present an assessment of the degree to which project and task goals and objectives were achieved, findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The CAM will determine the appropriate meeting participants.

The administrative portion of the meeting shall be a discussion with the CAM about the following Agreement closeout items:

- What to do with any equipment purchased with CEC funds (Options)
  - CEC request for specific “generated” data (not already provided in Agreement products)
  - Need to document Recipient’s disclosure of “subject inventions” developed under the Agreement
  - “Surviving” Agreement provisions
  - Final invoicing and release of retention
- Prepare a schedule for completing the closeout activities for this Agreement.

**Products:**

- Written documentation of meeting agreements
- Schedule for completing closeout activities

**Task 1.4 Monthly Calls**

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

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

**The CAM shall:**

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

**The Recipient shall:**

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

**Product:**

- Email to CAM concurring with call summary notes.

**Task 1.5 Quarterly Progress Reports**

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement on time and within budget.

The objectives of this task are to summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, and to form the basis for determining whether invoices are consistent with work performed.

**The Recipient shall:**

- Prepare a Quarterly Progress Report which summarizes all Agreement activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Progress reports are due to the CAM the 10<sup>th</sup> day of each January, April, July, and October. The Quarterly Progress Report template can be found on the ECAMS Resources webpage available at <https://www.energy.ca.gov/media/4691>.

**Product:**

- Quarterly Progress Reports

**Task 1.6 Final Report**

The goal of the Final Report is to assess the project's success in achieving the Agreement's goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.

The objectives of the Final Report are to clearly and completely describe the project's purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further projects and improvements to the FTD project management processes.

The Final Report shall be a public document and is limited to 25 pages. If the Recipient has obtained confidential status from the CEC and will be preparing a confidential version of the Final Report as well, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

In addition to any other applicable requirements, the Final Report must comply with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. 12101 et seq.), which prohibits discrimination on the basis of disability; all applicable regulations and guidelines issued pursuant to the ADA; Cal. Gov. Code sects. 7405 and 11135; and Web Content Accessibility Guidelines 2.0, or a subsequent version, as published by the Web Accessibility Initiative of the World Wide Web Consortium at a minimum Level AA success criteria.

**The Recipient shall:**

- Prepare an Outline of the Final Report, if requested by the CAM.
- Prepare a Final Report complying with ADA requirements and following the latest version of the Final Report guidelines which will be provided by the CAM. The CAM shall provide written comments on the Draft Final Report within fifteen (15) working days of receipt. The Final Report must be completed at least 60 days before the end of the Agreement Term.
- Submit Final Report in Microsoft Word format or similar electronic format as approved by the CAM.

**Products:**

- Outline of the Final Report, if requested
- Draft Final Report
- Final Report

**Task 1.7 Identify and Obtain Matching Funds**

The goal of this task is to ensure that the match funds planned for this Agreement are obtained for and applied to this Agreement during the term of this Agreement.

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. Although the CEC budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds must be identified in writing and the associated commitments obtained before the Recipient can incur any costs for which the Recipient will request reimbursement.

**The Recipient shall:**

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the CAM at least 2 working days prior to the kick-off meeting. 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 such 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 each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied.
  - Amount of each in-kind contribution, a description, documented market or book value, and its 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 shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located.
- Provide a copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured. For match funds provided by a grant a copy of the executed grant shall be submitted in place of a letter of commitment.

- Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide the appropriate information to the CAM if during the course of the Agreement additional match funds are received.
- Notify the CAM within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR meeting.

**Products:**

- A letter regarding match funds or stating that no match funds are provided
- Copy(ies) of each match fund commitment letter(s) (if applicable)
- Letter(s) for new match funds (if applicable)
- Letter that match funds were reduced (if applicable)

**Task 1.8 Identify and Obtain Required Permits**

The goal of this task 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. Although the CEC budget for this task will be zero dollars, the Recipient may budget match funds for any expected expenditures associated with obtaining permits. Permits must be identified in writing and obtained before the Recipient can make any expenditure for which a permit is required.

**The Recipient shall:**

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the CAM at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
  - A list of the permits that identifies the:
    - Type of permit
    - Name, address and telephone number of the permitting jurisdictions or lead agencies
  - The schedule the Recipient will follow in applying for and obtaining these permits.
- Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule and the copies of the permits. The implications to the Agreement 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 the Progress Reports and will be a topic at CPR meetings.

- If during the course of the Agreement additional permits become necessary, provide the appropriate information on each permit and an updated schedule to the CAM.
- As permits are obtained, send a copy of each approved permit to the CAM.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 working days. Either of these events may trigger an additional CPR.

**Products:**

- Letter documenting the permits or stating that no permits are required
- A copy of each approved permit (if applicable)
- Updated list of permits as they change during the term of the Agreement (if applicable)
- Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)
- A copy of each final approved permit (if applicable)

**Task 1.9 Obtain and Execute Subawards**

The goal of this task is to ensure quality products and to procure subrecipients required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Recipient's own procurement policies and procedures.

**The Recipient shall:**

- Manage and coordinate subrecipient activities.
- If requested by the CAM, submit a draft of each subaward required to conduct the work under this Agreement to the CAM for review.
- If requested by the CAM, submit a final copy of the executed subaward.
- If Recipient intends to add new subrecipients or change subrecipients, then the Recipient shall notify the CAM.

**Products:**

- Letter describing the subawards needed, or stating that no subawards are required
- Draft subcontracts (if requested)
- Final subcontracts (if requested)

**TECHNICAL TASKS**

**TASK 2 FACILITY SECURED, DESIGN, PERMITTING AND IMPROVEMENT**

The goal of this task is to review the facility design, review manufacturing documentation for vehicles and fuel cell power systems, secure the facility with all necessary permitting, and complete all tenant improvements.

**The Recipient shall:**

- Review facility functional and production requirements.
- Review fuel cell vehicle manufacturing Bill of Materials (BOM) and fuel cell power systems' manufacturing BOM.
- Review manufacturing workflow processes for subassemblies and vehicles in accordance with sustainable and lean practices.
- Review and finalize floorspace usage zones for each operation including assembly, inspection, test validation, and packaging for shipment.
- Create detailed facility design and layout drawings for workstations, work cells, feeder stations, hydrogen enabled work areas, hydrogen plumbing infrastructure, inventory, and delineation of workflows between manufacturing zones.
- Review manufacturing documentation for vehicles and fuel cell power system products including, but not limited to, 3D CAD models, 2D mechanical drawing packages, control system operating theory, electrical schematics, and thermal management system schematics.
- Review detailed design of workstations for major components including but not limited to power electronics, power distribution, electric drive, controls, high voltage and low voltage assembly, work cells for fuel cell assembly, testing, and commissioning areas.
- Design inventory cage areas for secure access and storage of components for products.
- Finalize and document facility equipment list.
- Finalize operational software and IT tools for Enterprise Resource Planning, production scheduling, work order generation, performance reporting, shortages tracking, and crisis recovery.
- Finalize supply chain management plan including list of qualified principal vendors.
- Finalize product manufacturing BOM, production plans, drawings, and routings.
- Prepare Facility Design Report that includes but is not limited to:
  - Floorplan facility layout and Design Rendering BOM
  - Facility Equipment list
  - List of Suppliers
  - Cost of tenant improvements
  - Photos and reports of all tenant improvements.
- Sign facility lease and provide copy of signed lease to the CAM.
- Identify and complete all tenant improvements and building upgrades.
- Prepare and compile all necessary compliance documents and submit in a Compliance Report that includes but is not limited to copies of the following documentation:
  - Business license and registration
  - California Environmental Protection Agency number for the facility

- Fire alarm permit
- Hazardous Material Business Plan to Department of Toxic Substance Control
- Local and state facility permits.

**Products:**

- Facility Design Report
- Copy of Signed Lease
- Compliance Report

**[CPR WILL BE HELD IN THIS TASK. See Task 1.2 for details]**

**TASK 3 PROCUREMENT AND MANUFACTURING LINE BUILD AND ASSEMBLY**

The goal of this task is to procure equipment and employ local businesses needed to commission the manufacturing facility, assembly line, and establish the new facility.

**Subtask 3.1 Procurement and Manufacturing Line Build and Assembly**

The goal of this task is to procure equipment to commission the manufacturing facility, assembly line, and establish the new facility.

**The Recipient shall:**

- Purchase all equipment needed for the facility.
- Prepare report of all purchased equipment including but not limited to:
  - Photos
  - Serial number of equipment
  - Invoices.
- Purchase all materials related to vehicle assembly and manufacturing line including, but not limited to, trucks, fuel cells, drive systems, truck chassis, and other materials for vehicle integration and inventory.
- Compile and maintain a list of third-party contractors for manufacturing of specific components.
- Compile and maintain a list of third-party vendors/suppliers for manufacturing materials.
- Prepare a Supply Report that includes but is not limited to :
  - Photos of purchased equipment and materials
  - Part numbers of equipment and materials
  - Lists of local contractors, vendors and suppliers.
- Assemble manufacturing lines including installation for work cells, inventory cages, assembly stations, and factory acceptance test equipment.
- Prepare a Completed Assembly Line Report that includes but is not limited to:
  - Photos of assembled lines
  - Issues and solutions
  - Lessons learned.

**Products:**

- Supply Report
- Completed Assembly Line Report

**[CPR WILL BE HELD IN THIS TASK. See Task 1.2 for details]**

**Subtask 3.2 Employ Local Businesses and Entities**

The goal of this task is to employ local businesses and entities to establish the facility. Local businesses and entities will be employed to provide tenant improvements as well as materials and equipment to establish the facility.

**The Recipient shall:**

- Identify local businesses and entities and prioritize Disadvantaged Business Enterprises (DBE) within the surrounding communities.
- Employ local DBEs that can provide equipment or provide services needed to establish the facility and manufacturing lines.
- Provide copies of all invoices from local businesses and entities that provided services for tenant improvement, materials, and services or equipment, and include business names and business information in a Local Business Summary.

**Products:**

- Local Business Summary

**TASK 4 MANUFACTURING LINE COMMISSIONING AND PRODUCTION TRIAL**

The goal of this task is to commission the facility for manufacturing and to perform production trial for one vehicle followed by production trial of multiple vehicles.

**Subtask 4.1 Manufacturing Line Commissioning**

The goal of this task is to commission the production line and perform trial production of the vehicle(s) to be assembled at the facility.

**The Recipient shall:**

- Verify implementation of health and safety measures by performing line inspections.
- Perform health and safety inspection related to the manufacturing line.
- Consult environmental health engineer from health department on work environment.
- Provide safety training and operational training for current and new employees.
- Commission the manufacturing lines.
- Prepare Commissioning Completion Report that includes but is not limited to:
  - Issues identified during commissioning and solutions
  - Lessons learned

- Results of commissioning
- Copies of documentation for inspection completion.

**Products:**

- Commissioning Completion Report

**Subtask 4.2 Production Trial**

The goal of this task is to perform a production line trial operation of one vehicle on one manufacturing line as a benchmark production trial.

**The Recipient shall:**

- Complete the fabrication of all vehicle subassemblies.
- Perform production build of vehicle.
- Perform production build of fuel cell power systems.
- Evaluate production line efficiency.
- Identify production line issues.
- Develop production line fixes and corrective actions.
- Document build process.
- Prepare *Production Trial Completion Report* that includes but is not limited to:
  - Issues identified during production trial
  - Solutions implemented
  - Lessons learned
  - Results of production trial
  - Copies of documentation for the production line.

**Products:**

- Production Trial Completion Report

**Subtask 4.3 Full Operation and Manufacturing Lines**

The goal of this task is to perform production line test to evaluate efficiency by building at least one vehicle per manufacturing line commissioned.

**The Recipient shall:**

- Perform production build of at least one vehicle on each commissioned manufacturing line.
- Evaluate production lines efficiency
- Identify production lines issues
- Develop production lines fixes
- Document/update build process
- Prepare *Commissioning Completion Report* that includes but is not limited to:

- Issues identified
- Solutions implemented
- Results of production
- Lessons learned
- Copies of documentation for the production line.

**Products:**

- Commissioning Completion Report  
**[CPR WILL BE HELD IN THIS TASK. See Task 1.2 for details]**

**TASK 5 WORKFORCE TRAINING AND DEVELOPMENT**

The goal of this task is to expand Symbio’s workforce and to develop and implement a workforce development program to increase the zero-emission transportation workforce.

**Subtask 5.1 Workforce Recruitment, Training, Expansion, and Development**

The goal of this task is to expand Symbio’s direct labor workforce in accordance with planned production and develop a workforce development program and provide curriculum and training to students and maintenance personnel.

**The Recipient shall:**

- Post new positions on job boards at local colleges and universities, and at community-based organizations focused on addressing employment barriers and employing residents from low-income or disadvantaged communities.
- Employ personnel and workforce from under-resourced communities located near and around the facility.
- Provide virtual training session(s) for new Symbio hires covering the following:
  - Hydrogen Safety
  - Hydrogen Fundamentals
  - Zero-Emission Hydrogen Fuel Cell Vehicles
  - Preventative Maintenance
  - Safety Protocols
  - Symbio’s Hydrogen Fuel Cell Architecture.
- Prepare Workforce Expansion and Training Report that includes but is not limited to:
  - Recruitment schedule and plan
  - Number of recruitments
  - Channels of recruitments
  - Results.
- Develop Workforce Development Plan with partner universities, colleges, and commercial service networks that includes a curriculum plan and an internship plan and provide a copy of the plan to the CAM.
- Develop technical training courses for maintenance personnel in classroom and hands-on settings covering the following:
  - Hydrogen Fundamentals

- Preventative Maintenance
- Power System Architecture
- Hydrogen Safety
- Safety Protocol
- Develop curriculum for Symbio Hydrogen Infrastructure and Safety including the following:
  - Hydrogen Topics Introduction
  - Hydrogen and Industrial Safety Practices
  - Hydrogen Station Operations and Equipment
  - Fueling Protocols and Software, SAEJ2601 and Heavy-Duty refueling safety
  - Hydrogen Infrastructure Principles, Modeling, and Networks
- Develop curriculum for Symbio Renewable Energy Principles and Hydrogen Production including the following:
  - Climate Change Concerns
  - Renewable Energy Forms and Storage
  - Hydrogen Production via Electrolysis
  - Hydrogen Production via Fuel Reforming, Biofuels and Color Wheel
  - Understanding of Global Energy Environment and Hydrogen Valley Principles
- Collaborate with Community Colleges on curriculum development and training for instructors on Symbio's Hydrogen Academy that provides professional training for future jobs linked to hydrogen mobility and fuel cell systems.
- Establish Symbio Hydrogen Academy
  - Work with Symbio France SAS to develop standardized hydrogen specific courses and modules to be used in technical training and college curriculum
  - Provide formal training session(s) and hydrogen specific modules to universities and colleges
  - Develop curriculum with partnering universities and colleges, providing industry knowledge to expand current zero-emission transportation curriculum
- Prepare Workforce Development Report that includes but is not limited to:
  - Description of courses developed
  - Number of courses available
  - Expected number of participants and demographics
  - Expected outcomes
  - Copies of modules and courses developed

**Products:**

- Workforce Expansion and Training Report
- Workforce Development Report
- Workforce Development Plan

## **Task 6: DATA COLLECTION AND ANALYSIS**

The goal of this task is to collect operational data from the project and to analyze that data for economic and environmental impacts.

### **The Recipient shall:**

- Develop a *Data Collection Outline and Plan* and submit to the CAM for review..
- Identify key project issues encountered and resolution of the issues.
- Collect a minimum of 6 months of project and operations data.
- Identify the number and description of units produced from product beta testing and validation through commercial production. The Recipient shall also characterize the use of these products after the project.
- Describe the market(s) for the manufactured products and compare the market status from the time of the original project proposal to the time of the project's completion.
- Provide a projection of the number of units to be manufactured per year, for the products identified in the original application, 3 years after the completion of the project. The Recipient shall also provide assumptions for projected growth.
- Compare project performance and expectations provided in the original project proposal with actual project performance, results, and accomplishments.
- Provide data on specific jobs and economic impact as a direct result of the project, including:
  - Number and type of short-term jobs created or retained by the project
  - Number and type of sustained, long-term jobs created or retained by the project
  - Estimates and descriptions of future jobs resulting from the project
  - Estimates of local economic impacts and revenues to state and local governments
  - Number of employees participating in training programs, and types of training programs
  - Number of indirect jobs resulting from the project.
- Identify any current and planned use of renewable energy at the facility.
- Describe any energy efficiency measures used in the facility that may exceed Title 24 standards in Part 6 of the California Code Regulations.
- Provide data on potential job creation, economic development, and increased state revenue as a result of expected future expansion.
- Compare any project performance and expectations provided in the proposal to CEC with actual project performance and accomplishments.

### **Products:**

- Data Collection Outline and Plan
- Data collection information and analysis

## **TASK 7: PROJECT FACT SHEET**

The goal of this task is to develop an initial and final project fact sheet that describes the CEC-funded project and the benefits resulting from the project for the public and key decision makers.

### **The Recipient shall:**

- Prepare an *Initial Project Fact Sheet* at the start of the project that describes the project and the expected benefits. Use the format provided by the CAM.
- Prepare a *Final Project Fact Sheet* at the project's conclusion that describes the project, the actual benefits resulting from the project, and lessons learned from implementing the project. Use the format provided by the CAM.
- Provide at least (6) six *High Quality Digital Photographs* (minimum resolution of 1300x500 pixels in landscape ratio) of pre and post technology installation at the project sites or related project photographs.

### **Products:**

- Initial Project Fact Sheet
- Final Project Fact Sheet
- High Quality Digital Photographs