



STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

A) New Agreement # ARV-21-029 (to be completed by CGL office)

B) Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation Division	Hieu Nguyen	27	916-273-2554

C) Recipient's Legal Name	Federal ID #
H2B2 USA LLC	81-3615101

D) Title of Project
Solar PV hydrogen production plant in Central California

E) Term and Amount

Start Date	End Date	Amount
08 / 11 / 2021	10 / 31 / 2024	\$ 3,965,000

F) Business Meeting Information

ARFVTP agreements \$75K and under delegated to Executive Director
 Proposed Business Meeting Date 08 / 11 / 2021 Consent Discussion
 Business Meeting Presenter Hieu Nguyen Time Needed: 5 minutes
 Please select one list serve. Altfuels (AB118- ARFVTP)

Agenda Item Subject and Description:

H2B2 USA LLC. Proposed resolution adopting CEQA Findings and approving the grant agreement for construction of H2B2 USA LLC's (H2B2) solar photovoltaic hydrogen production plant. (Clean Transportation Program funding) Contact: Hieu Nguyen (Staff Presentation: 5 minutes)

- a. CEQA Findings. Proposed resolution finding that based on the lead agency County of Fresno's Mitigated Negative Declaration, Initial Study No. 7943, Mitigated Negative Declaration (MND), Mitigation Monitoring and Reporting Program (MMRP), and County of Fresno's Resolution No. 12883 approving and adopting the MND and MMRP, the proposed project presents no new significant or substantially more severe environmental impacts beyond those already considered and mitigated.
- b. Proposed resolution approving agreement ARV-21-029 with H2B2 for a \$3,965,000 grant to construct a renewable hydrogen production plant in Fresno County, California to produce 1,000 kg per day of hydrogen transportation fuel, using renewable electricity produced by solar energy.

G) California Environmental Quality Act (CEQA) Compliance

1. Is Agreement considered a "Project" under CEQA?
 Yes (skip to question 2) No (complete the following (PRC 21065 and 14 CCR 15378)):

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



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2. If Agreement is considered a "Project" under CEQA:

- a) Agreement **IS** exempt.
 - Statutory Exemption. List PRC and/or CCR section number: 14 CCR section 15262 – Feasibility and Planning Studies
 - Categorical Exemption. List CCR section number: 14 CCR section 15306 – Information Collection
 - Common Sense Exemption. 14 CCR 15061 (b) (3) Explain reason why Agreement is exempt under the above section:

- b) Agreement **IS NOT** exempt. (consult with the legal office to determine next steps)

Check all that apply

- Initial Study
- Negative Declaration
- Mitigated Negative Declaration
- Environmental Impact Report
- Statement of Overriding Considerations

H) List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)

Legal Company Name:	Budget
Please see attachment for list of subcontractors.	\$ 0.00
	\$ 0.00
	\$ 0.00

I) List all key partners: (attach additional sheets as necessary)

Legal Company Name:
Please see attachment for list of key partners.

J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
ARFVTP	FY 18/19	601.118K	\$3,965,000
Funding Source			\$

R&D Program Area: Select Program Area TOTAL: \$

Explanation for "Other" selection

Reimbursement Contract #: Federal Agreement #:

K) Recipient's Contact Information



STATE OF CALIFORNIA

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CALIFORNIA ENERGY COMMISSION

1. Recipient's Administrator/Officer

Name: Shannon Botos
 Address: 151 West Prestwick Court
 City, State, Zip: Castle Rock, CO
 80104
 Phone: (720) 244-3555
 E-Mail:
shannon@calvertadvisors.com

2. Recipient's Project Manager

Name: James M. Corboy
 Address: 1215 K Street, Suite 1700
 City, State, Zip: Sacramento, CA
 95814-3945
 Phone: (303) 601-3535
 E-Mail: jim.corboy@h2b2.es

L) Selection Process Used

- Competitive Solicitation Solicitation #: GFO-17-602
- First Come First Served Solicitation Solicitation #: - -

M) The following items should be attached to this GRF

- | | | |
|---|---|--|
| 1. Exhibit A, Scope of Work | <input checked="" type="checkbox"/> | Attached |
| 2. Exhibit B, Budget Detail | <input checked="" type="checkbox"/> | Attached |
| 3. CEC 105, Questionnaire for Identifying Conflicts | <input checked="" type="checkbox"/> | Attached |
| 4. Recipient Resolution | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 5. CEQA Documentation | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |

Agreement Manager

Date

Office Manager

Date

Deputy Director

Date

Exhibit A SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Plant Design & Engineering
3		Safety Planning and Implementation
4	X	Equipment Procurement
5		Project Construction
6	X	Project Commissioning and Start Up
7		Plant Operations
8		Data Collection and Analysis
9		Project Fact Sheet

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Jim Corboy	SCB Professional Services	
2	Manuel, Delia	H2B2 Electrolysis Technologies, SL Anacapa Engineering & Design	
3	Jim Corboy, Delia	TBD	
4	Manuel Rodríguez, Delia	H2B2 Electrolysis Technology, SL & others TBD	
5	Manuel Rodríguez, Delia	H2B2 Electrolysis Technology, SL & others TBD	
6	Manuel Rodríguez Delia, Jim, Manuel Rosales	H2B2 Electrolysis Technology, SL SCB Professional Services	
7	Manuel Rodríguez,	H2B2 Electrolysis Technology, SL & others TBD	
8	Manuel Rodríguez Jim Corboy	SCB Professional Services	
9	Jim Corboy		

GLOSSARY

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

Term/ Acronym	Definition
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CPR	Critical Project Review
Clean Transportation Program	Formerly known as the Alternative and Renewable Fuel and Vehicle Technology Program
FCEV	Fuel Cell Electrical Vehicles
FTD	Fuels and Transportation Division
GHG	Greenhouse Gas
HRS	Hydrogen Refueling Stations
HSP	Hydrogen Safety Plan
Kg	Kilogram
NG	Natural Gas
PNNL	Pacific Northwest National Lab
PO	Purchase Order
PPA	Power Purchase Agreement
PG&E	Pacific Gas & Electric
Recipient	H2B2 USA, LLC
ZEV	Zero Emissions Electrical Vehicles

Background

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Clean Transportation Program (formerly known as the Alternative and Renewable Fuel and Vehicle Technology Program). The statute authorizes the California Energy Commission (Energy Commission) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change, clean air, and alternative energy policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the Clean Transportation Program through January 1, 2024. The Clean Transportation Program has an annual budget of approximately \$100 million and provides financial support for projects that:

- Reduce California's use and dependence on petroleum transportation fuels and increase the use of alternative and renewable fuels and advanced vehicle technologies.
- Produce sustainable alternative and renewable low-carbon fuels in California.
- Expand alternative fueling infrastructure and fueling stations.
- Improve the efficiency, performance and market viability of alternative light-, medium-, and heavy-duty vehicle technologies.

- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets to alternative technologies or fuel use.
- Expand the alternative fueling infrastructure available to existing fleets, public transit, and transportation corridors.
- Establish workforce training programs and conduct public outreach on the benefits of alternative transportation fuels and vehicle technologies.

The CEC issued GFO-17-602 entitled “Renewable Hydrogen Transportation Fuel Production Facilities and Systems” under the CEC’s Clean Transportation Program. To be eligible for funding under GFO-17-602, projects must also be consistent with the CEC’s current Clean Transportation Program Investment Plan, updated annually. In response to GFO-17-602, the Recipient submitted Proposal #8, which was proposed for funding in the CEC’s Notice of Proposed Awards on October 8, 2018. GFO-17-602 is 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. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the terms of the Recipient’s Application, the terms of this Agreement shall control.

Problem Statement:

Former Governor Brown issued Executive Order B-16-12 directing the state government to accelerate the market for zero-emission vehicle (ZEV) adoption in California. The Executive Order called for 1.5 million ZEVs in California by 2025 and established several milestones on the pathway toward this target.

The State of California has made a significant effort supporting the implementation of hydrogen refueling stations (HRS). HRS provide early adopters of fuel cell electric vehicles (FCEV) places to fuel their cars. However, hydrogen is produced from natural gas that generates GHG emissions and California requires that at least 33% of the hydrogen come from renewable sources.

California needs to implement plants to produce renewable hydrogen and the CEC recognizes that before current technology becomes fully commercial and attracts the financial community to invest in hydrogen production plants, it is necessary to demonstrate the technical and financial feasibility of renewable hydrogen production plants.

Goals of the Agreement:

The goal of this Agreement is to construct and operate a renewable hydrogen production facility and to demonstrate the technical and financial feasibility of electrolysis connected to renewable sources of energy, as an efficient way to supply renewable hydrogen.

Objectives of the Agreement:

The objectives of this Agreement are to:

- Demonstrate the ability for the production plant to produce 1,000 kg of renewable hydrogen per day.
- Demonstrate the viability for the renewable hydrogen production plant to produce up to 180,000 kg of renewable hydrogen per year.
- Develop and execute an offtake agreement to ensure that the produced renewable hydrogen will be used at public hydrogen stations in California.

- Create at least three permanent positions for the operations and maintenance of the hydrogen production plant.

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 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 Commission Agreement Manager, the Grants Officer, and a representative of the Accounting Office. The Recipient shall bring its Project Manager, Agreement Administrator, Accounting Officer, and others designated by the Commission Agreement Manager to this meeting.
- Discuss the following administrative and technical aspects of this Agreement:
 - Agreement Terms and Conditions
 - Critical Project Review (Task 1.2)
 - Match fund documentation (Task 1.6) No reimbursable work may be done until this documentation is in place.
 - Permit documentation (Task 1.7)
 - Subcontracts needed to carry out project (Task 1.8)
 - The CAM’s expectations for accomplishing tasks described in the Scope of Work
 - An updated Schedule of Products and Due Dates
 - Monthly Progress Reports (Task 1.4)
 - Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
 - Final Report (Task 1.5)

Recipient Products:

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits

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 Energy Commission funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule or budget.

The Commission Agreement Manager 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 Energy Commission, but they may take place at another location.
- 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, the Commission Grants Office Officer, 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 and the Grants Officer about the following Agreement closeout items:

- What to do with any equipment purchased with CEC funds (Options)
 - CEC's 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 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 Monthly 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. Each progress report is due to the CAM within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in Section 6 of the Terms and Conditions of this Agreement.

- In the first Monthly Progress Report and first invoice, document and verify match expenditures and provide a synopsis of project progress, if match funds have been expended or if work funded with match share has occurred after the notice of proposed award but before execution of the grant agreement. If no match funds have been expended or if no work funded with match share has occurred before execution, then state this in the report. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.

Product:

- Monthly Progress Reports

Task 1.5 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. If the Recipient has obtained confidential status from the Energy Commission 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.

The Recipient shall:

- Prepare an Outline of the Final Report, if requested by the CAM.
- Prepare a Final Report 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 one bound copy of the Final Report with the final invoice.

Products:

- Outline of the Final Report
- Draft Final Report
- Final Report

Task 1.6 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 shall be spent concurrently or in advance of CEC funds for each task during the term of this Agreement. 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 1.7 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 shall 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 1.8 Obtain and Execute Subcontracts

The goal of this task is to ensure quality products and to procure subcontractors 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. It will also provide the CEC an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, and that the budgeted expenditures are reasonable and consistent with applicable cost principles.

The Recipient shall:

- Manage and coordinate subcontractor activities.
- Submit a draft of each subcontract required to conduct the work under this Agreement to the CAM for review.
- Submit a final copy of the executed subcontract.
- If Recipient decides to add new subcontractors, then the Recipient shall notify the CAM.

Products:

- Letter describing the subcontracts needed or stating that no subcontracts are required.
- Draft subcontracts
- Final subcontracts

TECHNICAL TASKS

TASK 2 PLANT DESIGN & ENGINEERING

The goal of this task is to complete the design and engineering for process, electrical, water, and equipment for the manufacturing, installation, and commissioning of the renewable hydrogen facility. The facility will be designed and engineered according to industry standards, safety standards, particular customer requirements related to electricity supply, available water quality, amount and quality of hydrogen, and commissioning and start-up. Upon completion of design and engineering, a final schedule will be developed to confirm the project timeline.

The Recipient shall:

- Prepare a Design and Engineering Report, which will include:
 - Technical check-list
 - Civil, structural, electrical, and mechanical installation diagrams/drawings
 - GANTT chart for manufacturing, tests, transport, installation, commissioning, and start-up
 - Process engineering
 - Water engineering
 - Electrical engineering
 - Tubing, piping, isometrics, and safety engineering

- Instrumentation and control engineering
- Plant engineering
- Installation and set-up protocols
- Flow charts
- Safety procedures
- Commissioning and start-up protocols
- Provide a copy of the Design and Engineering Report to the CAM.
- Implement Design and Engineering Report and receive appropriate approvals for finalization.
- Provide a Notice to Construct to the CAM confirming that final approval for design and engineering has been received and construction can begin.
- Prepare and provide a Commissioning and Start-Up Manual to the CAM.

Products:

- Design and Engineering Report
- Notice to Construct
- Commissioning and Start-Up Manual

TASK 3 SAFETY PLANNING AND IMPLEMENTATION

The goal of this task is to address the Pacific Northwest National Laboratory (PNNL) Hydrogen Safety Panel (HSP) comments on the Hydrogen Safety Plan submitted under GFO-17-602 following the *Safety Planning for Hydrogen and Fuel Cell Projects* guidance document, and to implement the plan with the hydrogen production plant operators, maintenance contractors, and first responders.

The Recipient shall:

- Address comments provided by the PNNL HSP on the hydrogen production plant's Hydrogen Safety Plan that was submitted at the time of application for this project.
- Provide a copy of the written report that reviews and addresses the PNNL HSP comments to the CAM.
- Provide a copy of the Draft Hydrogen Safety Plan to the CAM.
- Update the Hydrogen Safety Plan based on comments provided by the PNNL HSP.
- Provide a copy of the Updated Hydrogen Safety Plan to the CAM.
- Prepare Safety Training Materials, including presentations and manuals. Provide a copy of materials to the CAM.
- Conduct safety training consistent with the Hydrogen Safety Plan for plant operators, maintenance contractors, and first responders.

- Provide a list of safety training dates and the names of trained personnel to the CAM.
- Report unintended hydrogen releases or incidents pursuant to the California Health and Safety Code Section 25510(a) and the *Safety Planning for Hydrogen and Fuel Cell Projects* guidance document.
- Participate in annual safety evaluations with the PNNL HSP after the hydrogen production plant becomes operational until the end of this grant agreement. The evaluations will include the plant's adherence to the Hydrogen Safety Plan and any related Hydrogen Safety Plan implementation issues. Site visits and meetings via telephone may be conducted as part of the evaluations.
- Provide a written report listing the date, time, location, and participants of annual safety evaluations (in person or by telephone), if applicable, to the CAM.

Products:

- Written report that reviews and addresses the PNNL HSP comments
- Draft Hydrogen Safety Plan
- Updated Hydrogen Safety Plan
- Safety Training Materials
- A list of safety training dates and the names of trained personnel
- Within 10 days, copies of any release and incident reports submitted to the Certified Unified Program Agency (CUPA) per California Health and Safety Code Section 25510(a) (as applicable)
- Written report listing the date, time, location, and participants of annual safety evaluations (in person or by telephone), if applicable

NOTE: A draft hydrogen safety plan approved by the H2 Safety Panel is required before the Recipient is authorized to proceed with remaining technical tasks (except Task 9).

TASK 4 EQUIPMENT PROCUREMENT

The goal of this task is to acquire the equipment required for the plant.

The Recipient shall:

- Prepare and provide to the CAM an Equipment List. At a minimum, the list will include:
 - Name of item
 - Make, model, size, weight, capacity, and model number, as is appropriate for each item delivered
 - Identify entity to carry out and finalize purchase of item, supply, delivery and installation of item
 - Anticipated delivery date of item identified

- Estimated cost of supply and installation of item (if not already part of approved agreement)
- Purchase equipment.
- Prepare for transport of equipment.
- Provide photographs to the CAM of equipment once delivered.
- Conduct a Factory Acceptance Test on each piece of equipment. Provide a copy of the Factory Acceptance Test Report to the CAM.

Products:

- Equipment List
- Photographs of Delivered Equipment
- Factory Acceptance Test Report

[CPR WILL OCCUR AFTER THIS TASK. See Task 1.2 for details.]

TASK 5 PROJECT CONSTRUCTION

The goal of this task is to build the 1,000 kg/day renewable hydrogen facility with the connections required for installing all the machinery of the plant, including required elements for the dispensing of the produced hydrogen.

The Recipient shall:

- Construct facility.
- Perform civil, structural, electrical, and mechanical installation according to the Design and Engineer Report developed in Task 2.
- Connect electrolyzer to all inputs and outputs according to approved installation diagrams/drawings, verifying technical check list.
- Assemble all the interconnections required for the components of the plant.
- Prepare and submit written notification that construction and installation is complete, which includes photographs of the installed equipment.

Products:

- Written Notification of Completed Construction and Installation

TASK 6 PROJECT COMMISSIONING AND START UP

The goals of this task are to safely test and start up the hydrogen plant with trained personnel and inform relevant authorities about the operation of the plant.

The Recipient shall:

- Execute the approved Commissioning and Start-Up Manual (from Task 2) and safely start up the plant.

- Commission all the elements at the plant and start up the systems as indicated by the Commissioning and Start-Up Manual.
- Prepare and provide a Report of Commissioning to the CAM.
- Develop and complete a check list for the facility operation process. Prepare and provide a Report of Operation to the CAM.
- Provide information and/or training to relevant authorities, including the California Department of Transportation, California Department of Public Health, Fresno County Fire Protection Districts, Fresno County Department of Public Works and Planning, San Joaquin Valley Air Pollution Control District, Fresno County Sheriff's Office, and the lease property owner .
- Communicate to relevant local actors the activities and specifications of the plant.
- Provide a Report of the Certification from Local Authorities, documenting that they have received information and safety training on the plant's operation and are satisfied with the safety training procedures.
- Execute performance test to certify the quality and quantity of produced hydrogen.
- Test and verify performance of the equipment, connections, and safety systems. Test and verify hydrogen quantity and quality. Prepare and provide a Report of Testing to the CAM.
- Train key staff for operation and maintenance.
- Prepare and provide a Report of Operator Training to the CAM.

Products:

- Report of Commissioning
- Report of Operation
- Report of the Certification from Local Authorities
- Report of Testing
- Report of Operator Training

[CPR WILL OCCUR DURING THIS TASK. See Task 1.2 for details.]

TASK 7 PLANT OPERATIONS

The goal of this task is to safely operate the hydrogen plant and produce 1,000 kg/day of hydrogen to dispense to customers.

The Recipient shall:

- Begin continuous operation of the facility producing 1,000 kg/day.
- Prepare and provide a written notification that the facility is operating continuously and producing 1,000 kg/day.

- Execute preventive maintenance routines.
- Produce, load, and deliver hydrogen.

Products:

- Notification of Continuous Operation

TASK 8 DATA COLLECTION AND ANALYSIS

The goal of this task is to collect operational data from the project, to analyze that data for economic and environmental impacts, and to include the data and analysis in the Final Report.

The Recipient shall:

- Troubleshoot any issues identified.
- Develop a data collection plan and collect at least twelve months of data, including, at a minimum, the following:
 - Throughput, usage, and operations data
 - Normal operating hours, up time, down time, and explanations of variations
 - Feedstock supply summary, including volumes and cost
 - Maximum capacity of the new hydrogen fuel production system in kilograms per day
 - Monthly volumes of renewable and non-renewable hydrogen produced and sold by the project facility.
 - List of hydrogen refueling stations served.
 - Record of co-products from production processes, including quantity
 - Record of wastes from production processes (waste water, solid waste, criteria emissions, etc.)
 - Electricity consumption
 - Expected air emissions reduction from the production facility, for example:
 - Non-methane hydrocarbons
 - Oxides of nitrogen
 - Non-methane hydrocarbons plus oxides of nitrogen
 - Particulate Matter
 - Formaldehyde
 - For any expected medium- and heavy-duty vehicle fleet use, duty cycle of the current fleet and the expected duty cycle of future vehicle acquisitions
 - Specific jobs and economic development resulting from this project
 - Finished hydrogen fuel price
 - Analysis of total facility costs, operation and maintenance costs, marginal abatement costs

- Provide a written record of registering with the Low Carbon Fuel Standard and Renewable Fuel Standard programs.
- 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.
- Provide a quantified estimate of the project's carbon intensity values or provide an Air Resources Board approved pathway carbon intensity.
- Estimate annual life-cycle greenhouse gas emission reduction.
- Compare any project performance and expectations provided in the proposal to Energy Commission with actual project performance and accomplishments.
- Collect data, information, and analysis described above and include in the Final Report.

Products:

- Data collection information and analysis will be included in the Final Report

TASK 9 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 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) from the project.

Products:

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

To: ARV-21-029, H2B2 USA LLC's Solar PV hydrogen production plant in Central California.

CEQA Analysis Date: July 19, 2021, Telephone: 916-237-2554, From: Hieu Nguyen

Subject: California Environmental Quality Act Analysis for ARV-21-029

I am an Energy Commission Specialist I, California Energy Commission, and am the Commission's Agreement Manager for proposed Agreement ARV-21-029 ("Agreement").

The proposed Agreement with H2B2 USA LLC will construct and operate a renewable hydrogen production facility and demonstrate the technical and financial feasibility of electrolysis connected to renewable sources of energy, as an efficient way to supply renewable hydrogen. The project will be located at the Bar20 Dairy Farm (24387 West Whitesbridge Road (California Highway 180)) in Fresno County, California ("Project"). The production facility will have the ability to produce up to 1,000 kg of renewable hydrogen per day or up to 180,000 kg per year.

The Project includes the design, construction, and operation of a 180,000 kg renewable hydrogen production system. In accordance with the California Environmental Quality Act (CEQA) documentation (to be discussed later) the Project proposes the following:

- Water Treatment Plant
- Hydrogen Separator System
- Oxygen Separator System
- Hydrogen Purification System
- Rectifier System
- Electrolyzer electrical components
- Control Board System
- Polymer electrolyte membrane (PEM) based Electrolyzer
 - Finalize design, fabricate, and install the Electrolyzer and support system at the project host-site.

The work to be undertaken for ARV-21-029 is covered in the CEQA documents prepared by the lead agency, Fresno County Department of Public Works and Planning (Fresno County) in 2021, including a Mitigated Negative Declaration (E-202110000067) for the Initial Study No. 7943 and Unclassified Conditional Use Permit Application No. 3691. Pursuant to Fresno County Board Resolution No. 12883 (Fresno County Resolution, approved on May 20, 2021), Fresno County filed a Notice of Determination (NOD) of its finding of a Mitigated Negative Declaration on June 8, 2021. This determination is based on the Mitigation Monitoring and Reporting Plan included in the Fresno County Resolution as Exhibit A and summarized below:

MM AESTHETICS-1 All outdoor lighting shall be hooded and directed downward so as not to shine on adjacent properties or public right-of-way.

MM Cultural Resources/Tribal Cultural Resources-1 In the event that cultural resources are unearthed during ground-disturbing activities, all work shall be halted in the area of

the find. An archeologist shall be called to evaluate the findings and make any necessary mitigation recommendations. If human remains are unearthed during ground-disturbing activities, no further disturbance is to occur until the Fresno County Sheriff-Coroner has made the necessary findings as to origin and disposition. All normal evidence procedures should be followed by photos, reports, video, etc. If such remains are determined to be Native American, the Sheriff-Coroner must notify the Native American [Heritage] Commission within 24 hours.

Pursuant to my work in developing the agreement, including the Scope of Work for the agreement, I have reviewed the Fresno County Initial Study and MND. Based on my review and consideration of the above documents, it is my professional opinion that, since the above CEQA documents have been finalized, there have been no new project changes, and no new, additional, or increased significant environmental impacts.

As noted by Fresno County authorized representative Thomas Kobayashi in the Initial Study/Evaluation of Environmental Impacts for the subject project beginning on page 1 of the Staff Report of environmental issues and the following issues were determined to have either NO IMPACT, LESS THAN SIGNIFICANT IMPACT or a LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.

The reasons for my conclusions are as follows in the brief explanation for all categories below:

Aesthetics: The proposed agreement has a less than significant impact with mitigation measures on Aesthetics and will not change the impacts identified in the Fresno County CEQA documents.

Agricultural and Forestry Resources: The proposed agreement has less than significant impact on Agricultural and Forestry Resources and will not change the impacts identified in the Fresno County CEQA documents. The proposed project will convert farmland to non-agricultural use but does not impact agricultural resources.

Air Quality: The proposed agreement will have less than significant impact on Air Quality and will not change the impacts identified in the Fresno County CEQA documents.

Biological Resources: The proposed agreement will have less than significant impact on Biological Resources and will not change the impacts identified in the Fresno County CEQA documents.

Cultural Resources: The proposed agreement has a less than significant impact with mitigation measures on Cultural Resources and will not change the impacts identified in the Fresno County CEQA documents.

Energy: The proposed agreement has no impact on Energy and will not change the impacts identified in the Fresno County CEQA documents.

Geology and Soils: The proposed agreement will have less than significant impact on geology and soils and will not change the impacts identified in the Fresno County CEQA documents.

Greenhouse Gas Emissions: The proposed agreement will have less than significant impact on greenhouse gas emissions and will not change the impacts identified in the Fresno County CEQA documents.

Hazards and Hazardous Materials: The proposed agreement will have less than significant impact on hazards and hazardous materials and will not change the impacts identified in the Fresno County CEQA documents.

Hydrology and Water Quality: The proposed agreement will have less than significant impact on hydrology and water quality and will not change the impacts identified in the Fresno County CEQA documents.

Land Use and Planning: The proposed agreement will have no impact on land use and planning and will not change the impacts identified in the Fresno County CEQA documents.

Mineral Resources: The proposed agreement will have no impact on mineral resources and will not change the impacts identified in the Fresno County CEQA documents.

Noise: The proposed agreement will have less than significant impact on noise and will not change the impacts identified in the Fresno County CEQA documents.

Population and Housing: The proposed agreement will have no impact on population and housing and will not change the impacts identified in the Fresno County CEQA documents.

Public Services: The proposed agreement will have no impact on public services and will not change the impacts identified in the Fresno County CEQA documents.

Recreation: The proposed agreement will have no impact on recreation and will not change the impacts identified in the Fresno County CEQA documents.

Transportation: The proposed agreement will have less than significant impact on transportation and will not change the impacts identified in the Fresno County CEQA documents.

Tribal Cultural Resources: The proposed agreement will have less than significant impact with mitigation incorporated on Tribal Cultural Resources and will not change the impacts identified in the Fresno County CEQA documents.

Utilities and Service Systems: The proposed agreement will have no impact on utilities and service systems and will not change the impacts identified in the Fresno County CEQA documents.

Wildfire: The proposed agreement will have no impact on wand will not change the impacts identified in the Fresno County CEQA documents.

Mandatory Findings of Significance: The proposed agreement will have less than significant impact with mitigation incorporated on Mandatory Findings of Significance and will not change the impacts identified in the Fresno County CEQA documents.

California Environmental Quality Act

**Initial Study, Mitigation Monitoring and Reporting Program, Notice of Determination-
Mitigated Negative Declaration, and County of Fresno Resolution**

H2B2 USA Renewable Hydrogen Production Project

Follow cut and paste the link below into a web browser to view the documents listed above

https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fh2b2-my.sharepoint.com%2F%3A%2Fpersonal%2Fjim_corboy_h2b2_es%2F%2F5wWEqN-f9ElgdcyM6qTCEBDIa3A_sE94Eqb9Xn-ijlSg%3F%3D5%253asKKcwt%26at%3D9&data=04%7C01%7C%7C928a88c9d2b64ddb795908d955eff5f%7Cac3a124413f44ef68d1bbaa27148194e%7C0%7C0%7C637635311536750683%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C1000&sdta=a=Sp7tDRVct0hcGFCMipfz5ffes6STNqANhsseh6oNZN8%3D&reserved=0

NOTICE OF DETERMINATION

E202110000067

File original and one copy with: Fresno County Clerk 2221 Kern Street Fresno, California 93721		Space Below For County Clerk Only. FILED JUN 08 2021 TIME 11:11am CLK-2046.00 E04-73 R00-00	
Agency File No: IS 7943	LOCAL AGENCY PROPOSED MITIGATED NEGATIVE DECLARATION	County Clerk File No. E- FRESNO COUNTY CLERK	
Responsible Agency (Name): Fresno County	Address (Street and P.O. Box): 2220 Tulare St. Sixth Floor	City: Fresno	DEPT Code: 93721
Agency Contact Person (Name and Title): Thomas Kobayashi Planner	Area Code: 559	Telephone Number: 600-4224	Extension: N/A
Project Applicant/Sponsor (Name): H2B2 USA, LLC.	Project Title: Unclassified Conditional Use Permit Application No. 3691		
Project Description: Allow a renewable hydrogen generation facility on a 324.66-acre parcel in the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District.			
Justification for Negative Declaration: Based upon the Initial Study prepared for Unclassified Conditional Use Permit Application No. 3691, staff has concluded that the project will not have a significant effect on the environment. It has been determined that there would be no impacts to Energy, Land Use Planning, Population and Housing, Public Services, Recreation, Utilities and Service Systems, and Wildfire. Potential impacts related to Agricultural and Forestry Resources, Air Quality, Biological Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, and Transportation have been determined to be less than significant. Potential impacts relating to Aesthetics, Cultural Resources, and Tribal Cultural Resources have determined to be less than significant with compliance with implementation of listed Mitigation Measures.			
FINDING: The proposed project will not have a significant impact on the environment.			
Newspaper and Date of Publication: Fresno Business Journal – April 9, 2021		Review Date Deadline: Planning Commission – May 20, 2021	
Date: 6.8.21	Type or Print Signature: David Randall Senior Planner	Submitted by (Signature): Thomas Kobayashi Planner	

State 15083, 15085

County Clerk File No.: _____

**LOCAL AGENCY
MITIGATED NEGATIVE DECLARATION**

RESOLUTION NO: 21-0811-7

STATE OF CALIFORNIA

**STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION**

RESOLUTION - RE: H2B2 USA LLC – SOLAR PHOTOVOLTAIC HYDROGEN PRODUCTION PLANT IN CENTRAL CALIFORNIA

WHEREAS, the County of Fresno is the Lead Agency for “Solar Photovoltaic Hydrogen Production Plant in Central California” (hereinafter, “Project”), a proposed project to construct a renewable hydrogen production plant; and

WHEREAS, the County of Fresno prepared an Initial Study on April 8, 2021, and Mitigated Negative Declaration for the Project to evaluate the potential environmental impacts of implementing the Project, copies of which are on file with the California Energy Commission; and

WHEREAS, the County of Fresno on May 20, 2021 approved and adopted the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the Project, thereby imposing mitigation measures upon the Project; and

WHEREAS, the County of Fresno adopted findings required by the California Environmental Quality Act (“CEQA”), and approved the Project, by Adoption of Resolution No. 12883, a copy of which Resolution is on file with the Energy Commission; and

WHEREAS, the Energy Commission is considering proposed Agreement ARV-21-029, “Solar Photovoltaic Hydrogen Production Plant in Central California” (hereafter, “ARV-21-029”), a grant to construct a renewable hydrogen production plant; and

Prior to acting on the Agreement ARV-21-029, the Energy Commission desires to make certain findings pursuant to the CEQA Guidelines, title 14, section 15096.

NOW THEREFORE, BE IT RESOLVED:

1. The Energy Commission has reviewed the information contained in the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program, that is relevant to its approval of ARV-21-029, and has reviewed the CEQA findings contained in the County of Fresno's Initial Study, Mitigated Negative Declaration, and Mitigation Monitoring and Reporting Program, which are adopted to the extent that they are relevant to the Energy Commission's decision to approve ARV-21-029.
2. The County of Fresno has already adopted the mitigation measures recommended in the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program and has authority to implement the mitigation measures or to seek any required approvals for the mitigation measures, and the Energy Commission has no direct authority to implement the mitigation measures.
3. The Energy Commission has reviewed and considered the Initial Study, Mitigated Negative Declaration, and Mitigation Monitoring and Reporting Program, and finds that these documents are adequate for its use as the decision-making body for its consideration of ARV-21-029.
4. Approval of ARV-21-029 (Solar Photovoltaic Hydrogen Production Plant in Central California) is within the scope of the activities evaluated in the Initial Study, Mitigated Negative Declaration, and Mitigation Monitoring and Reporting Program.
5. Since the Mitigated Negative Declaration was finalized, and adopted on May 20, 2021 there have been no substantial project changes and no substantial changes in the project circumstances that would require major revisions to the Mitigated Negative Declaration, due to the involvement of new significant environmental effects or an increase in the severity of previously identified significant impacts, and there is no new information of substantial importance that would change the conclusion set forth in the Mitigated Negative Declaration.
6. The Energy Commission has not identified any feasible alternative or additional feasible mitigation measures within its power that would substantially lessen or avoid any significant effect which the solar photovoltaic hydrogen production plant would have on the environment.

THEREFORE BE IT RESOLVED, that the Energy Commission finds, on the basis of the entire record before it, that the mitigation measures incorporated in the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program will prevent ARV-21-029 from having any significant environmental impacts; and

BE IT FURTHER RESOLVED, that the Energy Commission approves Agreement ARV-21-029 with H2B2 USA LLC, for \$3,965,000; and

BE IT FURTHER RESOLVED, that this document authorizes the Executive Director or his or her designee to execute the same on behalf of the Energy Commission.

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 August 11, 2021.

AYE:

NAY:

ABSENT:

ABSTAIN:

Liza Lopez
Secretariat