



**California Energy Commission
May 31, 2023 Business Meeting
Backup Materials for Agenda Item No 03a:
SG H2 Lancaster Project Company, LLC**

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

1. Proposed Resolution
2. Grant Request Form
3. Scope of Work
4. CEQA Staff Memo
5. Links to other CEQA documentation

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: Lancaster Waste to Renewable Hydrogen Project

WHEREAS, the City of Lancaster (“City”) is the Lead Agency for “Lancaster Waste to Renewable Hydrogen Project” (“Project”), a proposed project to construct a renewable hydrogen production facility in the City; and

WHEREAS, the City Development Services Department, in 2022, prepared an Initial Study and Mitigated Negative Declaration (“IS/MND”) and Conditional Use Permit No. 21-06 (“CUP”) for work on 15 acres at the northwest corner of 6th Street East and Avenue M (“Project Site”), to SG H2 Lancaster Holding Company, LLC; and which IS/MND included analysis of the Project and evaluated the potential environmental impacts of implementing the Project; and copies of which are on file with the California Energy Commission and are provided in the backup materials; and

WHEREAS, the City Development Services Department considered and filed the IS/MND in August 29, 2022, a copy of which is on file with the Energy Commission and is provided in the backup materials; and made mitigation measures a condition of approval; and on December 12, 2022 the City Planning Commission approved the CUP for the Project, a copy of which is also on file with the Energy Commission; and

WHEREAS, the Energy Commission has reviewed and considered the City’s IS/MND, mitigation measures, and the findings contained therein, and filed Notice of Determination, and the Energy Commission staff’s findings, which are contained in the Staff Memorandum and CEQA Analysis of ARV-22-011, which is included in the backup materials; and

WHEREAS, the Energy Commission is considering proposed Agreement ARV-21-011, “Lancaster Waste to Renewable Hydrogen Project”, a grant to construct the renewable hydrogen production facility; and

WHEREAS, Prior to acting on the Agreement ARV-22-011, 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 IS/MND, mitigation measures, and the CUP that is relevant to its approval of ARV-22-011, and has reviewed the CEQA findings contained in the City’s IS/MND, mitigation measures, and the CUP, which are adopted to the extent that they are relevant to the Energy Commission’s decision to approve ARV-22-011, and has reviewed the Staff Memorandum identified above.
2. The City has already adopted the mitigation measures recommended in the Mitigated Negative Declaration, and the CUP, 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 IS/MND, mitigation measures, CUP, and Staff Memorandum, and finds that these documents are adequate for its use as the decision-making body for its consideration of ARV-22-011.
4. Approval of ARV-22-011 is within the scope of the Conditional Use Permit 21-06 approved by the City, and within the activities evaluated in the IS/MND and CUP.
5. Since the MND was finalized and filed on August 29, 2022; and since the CUP was approved on December 12, 2022, none of the circumstances within CEQA section 15162 are present and there have been no substantial project changes and no substantial changes in the project circumstances that would require major revisions to the MND or CUP, either due to the involvement of new significant environmental effects or to 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 MND.
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 the Project 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 Conditional Use Permit and Mitigated Negative Declaration will prevent ARV-22-011 from having any significant environmental impacts; and

BE IT FURTHER RESOLVED, that the Energy Commission approves ARV-22-011 with SG H2 Lancaster Project Company, LLC for \$3,000,000; 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 Commission 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 California Energy Commission held on May 31, 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: ARV-22-011

B. Division Information

1. Division Name: Fuels and Transportation Division
2. Agreement Manager: Sebastian Serrato
3. MS-: Not applicable
4. Phone Number: 916-891-9151

C. Recipient's Information

1. Recipient's Legal Name: SG H2 Lancaster Project Company, LLC
2. Federal ID Number: 86-1530109

D. Title of Project

Title of project: Lancaster Waste to Renewable Hydrogen

E. Term and Amount

1. Start Date: 5/31/2023
2. End Date: 12/31/2025
3. Amount: \$3,000,000

F. Business Meeting Information

1. Are the ARFVTP agreements \$75K and under delegated to Executive Director? No
2. The Proposed Business Meeting Date: 05/31/2023
3. Consent or Discussion? Consent
4. Business Meeting Presenter Name: N/A
5. Time Needed for Business Meeting: N/A
6. The email subscription topic is: Clean Transportation Program

Agenda Item Subject and Description:

SG H2 Lancaster Project Company, LLC

SG H2 Lancaster Project Company, LLC. Proposed resolution adopting California Environmental Quality Act (CEQA) findings for SG H2 Lancaster Project Company, LLC's (Lancaster Project Company) Lancaster Waste to Renewable Hydrogen Project and approving grant agreement ARV-22-011 with Lancaster Project Company. (Clean Transportation Program funding) Contact: Sebastian Serrato

I. CEQA Findings. Findings that, based on the lead agency City of Lancaster's Initial Study (IS) and Mitigated Negative Declaration (MND), and Conditional Use Permit (CUP) No. 21-06, which was approved by the City on December 12, 2022, work under the proposed project presents no new significant or substantially more severe environmental impacts beyond those already considered and mitigated; and that following the City's adoption of the MND and CUP, none of the circumstances within CEQA section 15162 are present.

II. Lancaster Waste to Renewable Hydrogen Project. Proposed resolution approving Agreement ARV-22-011 with Lancaster Project Company for a \$3,000,000 grant to develop,



construct, and operate a 100 percent renewable hydrogen production facility in Lancaster, California. The facility will convert 42,000 tons of waste per year to produce an estimated 3.8 million kilograms of renewable hydrogen per year to supply California's operational hydrogen refueling stations and support the zero-emission fuel cell electric vehicle rollout.

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?

No

Statutory Exemption?

Enter Yes or 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: PRC section number 1, PRC section number 2. Or, "None"

CCR section number: CCR section number 1, CCR section number 2. Or, "None"

Categorical Exemption?

Enter Yes or No

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: CCR section number 1, CCR section number 2. Or, "None"

Common Sense Exemption? 14 CCR 15061 (b) (3)

Enter Yes or No

If yes, explain reason why Agreement is exempt under the above section. If no, enter “Not applicable” and go to the next section.

Enter "Not applicable" or reason why Agreement is exempt under the above section

b) Agreement **IS NOT** exempt.

IMPORTANT: consult with the legal office to determine next steps.

Yes

If yes, answer yes or no to all that applies. If no, list all as “no” and “None” as “yes”.

Additional Documents	Applies
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Initial Study	Yes
Negative Declaration	No
Mitigated Negative Declaration	Yes
Environmental Impact Report	No
Statement of Overriding Considerations	No
None	No

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
Integrity Engineers & Constructors, LLC	\$77,349.00	\$217,302.00
ABB, Inc.	\$52,502.00	\$147,498.00
Reaction Engineering International, Inc.	\$18,835.00	\$52,916.00
Brad Thompson Company	\$17,063.00	\$47,937.00
Duke Engineering and Associates, Inc.	\$11,340.00	\$31,860.00

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
Phoenix Solutions, Inc.	\$397,272	\$785,448
Komar, Inc.	\$1,102,728	\$1,147,272

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
Air Liquide Global E&C Solutions US Inc.
Fluor Enterprises, Inc.
ABB, Inc.
Brad Thompson Company
Integrity Engineers & Constructors, LLC (IEC)
New Planet Energy Development (NPED)
Equilon Enterprises LLC (DBA – Shell Oil Products US)
Iwatani Corporation of North America, Inc.

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
ARFVTF	FY 19/20	601.118L	\$1,000,000
ARFVTF	FY 21/22	601.118N	\$2,000,000

TOTAL Amount: \$3,000,000

R&D Program Area: N/A

Explanation for “Other” selection: N/A

Reimbursement Contract #: N/A

Federal Agreement #: N/A

L. Recipient’s Contact Information

1. Recipient’s Administrator/Officer

Name: Eddie L. Robinson

Address: 12060 County Line Road, Suite J-278

City, State, Zip: Madison, AL 35756

Phone: (256) 270-0520, ext. 801

E-Mail: erobinson@integrity-engr.com

2. Recipient’s Project Manager

Name: Robert T. Do

Address: 1000 Potomac Street, NW 5th Floor

City, State, Zip: Washington, DC 20007

Phone: (202) 247-1459



E-Mail: rtdo@sgh2energy.com

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-20-609
First Come First Served Solicitation #	Not Applicable
Other	Not Applicable

N. Attached Items

1. List all items that should be attached to this GRF by entering “Yes” or “No”.

Item Number	Item Name	Attached
1	Exhibit A, Scope of Work/Schedule	Yes
2	Exhibit B, Budget Detail	Yes
3	CEC 105, Questionnaire for Identifying Conflicts	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: Sebastian Serrato

Approval Date: 03/02/2023

Office Manager: Elizabeth John

Approval Date: 3/21/2023

Deputy Director: Melanie Vail

Approval Date: 04/04/2023

Exhibit A SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Front-end Loading Basic Engineering
3		Front-end Loading Detailed Engineering
4	X	Long-lead Procurement
5	X	Engineering, Procurement, and Construction
6		Data Collection and Analysis
7		Project Fact Sheet

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	SG H2 Lancaster Holding Company LLC (SG H2)	Integrity Engineers & Constructors, LLC (IEC)	
2	SG H2	IEC, TBD	
3	SG H2	TBD	
4	SG H2	TBD	
5	SG H2	Air Liquide Global E&C Solutions US Inc., Brad Thompson Company, ABB, Inc., TBD	
6	SG H2	TBD	
7	SG H2		

GLOSSARY

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

Term/ Acronym	Definition
CaFCP	California Fuel Cell Partnership
CAM	Commission Agreement Manager
CARB	California Air Resources Board
CAO	Commission Agreement Officer
CEC	California Energy Commission

CEQA	California Environmental Quality Act
CPR	Critical Project Review
CTP	Clean Transportation Program
EPC	Engineering, Procurement, and Construction
FEL	Front-end Loading: the process for conceptualizing and developing technical information in order to define the scope, approach, and cost
FTD	Fuels and Transportation Division
HRS	Hydrogen Refueling Station
LLE	Long-lead equipment: equipment identified during FEL that has a delivery time long enough to affect the overall lead time of a project
Recipient	SG H2 Lancaster Holding Company LLC (SG H2)
RH2	Renewable Hydrogen

Background

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Clean Transportation Program. The statute authorizes the California Energy Commission (CEC) 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.

On April 9, 2021, the CEC released a Grant Funding Opportunity (GFO) entitled “Renewable Hydrogen Transportation Fuel Production.” This competitive grant solicitation was to increase in-state production of 100 percent renewable hydrogen for on-road fuel cell electric vehicles. In response to GFO-20-609, the Recipient submitted application #05 which was proposed for funding in the CEC’s Notice of Proposed Awards on February 3, 2022. GFO-20-609 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 the CEC's Award, the 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:

The State of California has set ambitious targets to accelerate the development of its hydrogen fueling network with a strategic focus on growing the number of in-state hydrogen refueling stations (HRS) and providing affordable fueling for zero-emission vehicles. In particular, public California agencies, including the CEC, California Fuel Cell Partnership (CaFCP), and California Air Resources Board (CARB), are supporting the state's goals to achieve 200 HRS by 2025 and 1,000 HRS by 2030, but only 63 HRS are currently located in California. Currently, all in-state HRS are being supplied with gray hydrogen, which is derived from natural gas and is not zero emission. The state mandate from SB 1505 requires that no less than 33.3 percent of the hydrogen produced or dispensed for motor vehicles be made from renewable sources (i.e., green hydrogen). Supply of this renewable hydrogen is currently limited. As such, there is an immense demand for new renewable hydrogen production facilities to supply and keep pace with the projected growth of HRS and hydrogen fuel cell vehicles in California.

Goals of the Agreement:

The goal of this Agreement is to increase the production and supply of in-state renewable hydrogen to meet the growing demand from the projected development of California's hydrogen fueling network while also reducing greenhouse gas emissions to improve air quality. To achieve this goal, the Recipient will design and construct a renewable hydrogen production facility in Lancaster, California that will convert 42,000 tons per year of in-state rejected recycled mixed paper waste into 3,850,000 kilograms (kg) of renewable hydrogen (RH₂) per year; thereby displacing approximately 165,000 tons of carbon dioxide (CO₂) annually.

Objectives of the Agreement:

The objectives of this Agreement are to:

- (1) Build a new renewable hydrogen production facility with a production capacity of at least 1,000 kg of renewable hydrogen per day.
- (2) Utilize 100% in-state recycled mixed paper waste as feedstock.
- (3) Produce hydrogen gas at a purity >99.9%.
- (4) Operate the production facility with less than 5% annual downtime (i.e., 350 out of 365 days per year).
- (5) Stimulate the local economy through the creation of hundreds of construction jobs, forty (40) permanent high-paying jobs, and twenty-eight (28) full-time operations personnel.

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 10th 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 FRONT-END LOADING BASIC ENGINEERING

The goal of this task is to complete basic engineering and basis of design definition to support early project planning.

The Recipient shall:

- Perform Gasification Island Gap Analysis, including but not limited to performing a gap analysis on the current SGH2 proprietary equipment design(s) and technical information, in order to identify possible areas that may require further development vis-a-vis design basis; calculations; drawings; data sheets; manufacturing specifications, quality plans etc., prior to the commencement of FEED phase design and procurement activities, for the proprietary SGH2 equipment scope of supply. An assessment of the current SGH2 proprietary equipment supply chain and recommendations for short term action steps, to support SGH2 in its capacity of provider of proprietary equipment. A high level description of the scope and schedule for the typical FEED phase design and technical support activities, for the SGH2 proprietary equipment scope of supply; including a single line, budgetary estimate of the commensurate cost.

- Produce a *Gasification Island Gap Analysis Report*, to include but not be limited to a more detailed proprietary equipment tiering classification and listing, with due consideration of functional criticality of the item, associated intellectual property sensitivity and ease of fabrication and supply. The classification will be developed in collaboration with SGH2. Identification and short description of any gaps in proprietary equipment design, manufacture and supply information, requiring further development prior to the commencement of FEL activities. A high level proprietary supply chain and process, as depicted by a block flow diagram inclusive of short narrative on each step, indicating the major steps relative to the overall activities of SGH2, in support of a typical Project for the deployment of the SPEG technology scope of supply. A high level description of the scope and schedule for the typical FEED design and technical support activities, for the SGH2 proprietary equipment scope of supply; including a single line, budgetary estimate of the commensurate cost. For clarity, this deliverable will not be at the level of detail of a fully compliant and detailed response to a FEED RFP but it is intended to be a non-binding and for budgetary purposes only, and provide a copy to the CAM.
- Perform Gasification Island Engineering, including but not limited to FEL design/ engineering work associated with the design of gasification island equipment and processes.
- Produce *Task 2 Front-end Loading (FEL2) Specifications and Drawings for Gasification Island Engineering*, to include but not be limited to FEL2 discipline engineering design and documentation preparation for Gasification Island inclusive of feeding systems, gasifier , and provide a copy to the CAM.
- Perform Balance of Plant Engineering Design, including but not limited to FEL design work associated with the design of balance of plant equipment and processes .
- Produce *FEL2 Specifications and Drawings for Balance of Plant Engineering Design*, to include but not be limited to FEL2 discipline engineering design and documentation preparation for Balance of Plant systems inclusive of utilities, syngas clean-up, syngas compression, syngas conversion, syngas compression/ storage, and power island systems , and provide a copy to the CAM.
- Perform Mechanical Equipment Design, including but not limited to FEL design work associated with the design of mechanical equipment and processes .
- Produce *FEL2 Specifications and Drawings for Mechanical Equipment Design*, to include but not be limited to FEL2 discipline engineering design and documentation preparation for Mechanical Equipment Design for primary compressors, pumps systems, and provide a copy to the CAM.
- Perform Main Automation Contractor and Electrical Contractor Design, including but not limited to FEL design work associated with the design of main automation contractor and electrical contractor for instrument controls and electrical power distribution equipment for plant.

- Produce *FEL2 Specifications and Drawings for Main Automation Contractor and Electrical Contractor Design*, to include but not be limited to FEL2 discipline engineering design and documentation preparation for Main Automation Contractor and Electrical Contractor design documentation for instrument/controls an automation s system as well as electrical power distribution system, and provide a copy to the CAM.
- Perform Operations and Maintenance Analysis, including FEL level O&M Analysis and recommendation for operations and maintenance personnel requirements to support planned plant.
- Produce *FEL2 Preliminary Guidance Documentation and Plan for Operations and Maintenance*, to include but not be limited to FEL2 Preliminary O&M document providing guidance to required man-power needed for plant operations and maintenance, and provide a copy to the CAM.

Products:

- Gasification Island Gap Analysis Report
- FEL2 Technical Specifications and Drawings for Gasification Island Engineering
- FEL2 Specifications and Drawings for Balance of Plant Engineering Design
- FEL2 Specifications and Drawings for Mechanical Equipment Design
- FEL2 Specifications and Drawings for Main Automation Contractor and Electrical Contractor Design
- FEL 2 Preliminary Guidance Documentation and Plan for Operations and Maintenance

TASK 3 FRONT-END LOADING DETAILED ENGINEERING

The goal of this task is to refine and update engineering specifications, drawings and documentation developed in Task 2 and progress project planning to support final engineering of the plant.

The Recipient shall:

- Perform Gasification Island Engineering, including but not limited to FEL design/engineering work associated with the design of gasification island equipment and processes.
- Produce *Task 3 Front-end Loading (FEL3) Technical Specifications and Drawings for Gasification Island Engineering*, to include but not be limited to FEL3 discipline engineering design and documentation preparation for Gasification Island inclusive of feeding systems, gasifier, and provide a copy to the CAM.
- Perform Balance of Plant Engineering Design, including but not limited to FEL design work associated with the design of balance of plant equipment and processes.

- Produce *FEL3 Specifications and Drawings for Balance of Plant Engineering Design*, to include but not be limited to FEL3 discipline engineering design and documentation preparation for Balance of Plant systems inclusive of utilities, syngas clean-up, syngas compression, syngas conversion, syngas compression/storage, and power island systems, and provide a copy to the CAM.
- Perform Mechanical Equipment Design, including but not limited to [FEL design work associated with the design of mechanical equipment and processes.
- Produce *FEL3 Specifications and Drawings for Mechanical Equipment Design*, to include but not be limited to FEL3 discipline engineering design and documentation preparation for Mechanical Equipment Design for primary compressors, pumps systems, and provide a copy to the CAM.
- Perform Main Automation Contractor and Electrical Contractor Design, including but not limited to [FILL IN THE BLANK].
- Produce *FEL3 Specifications and Drawings for Main Automation Contractor and Electrical Contractor Design*, to include but not be limited to FEL design work associated with the design of main automation contractor and electrical contractor for instrument controls and electrical power distribution equipment for plant, and provide a copy to the CAM.
- Perform Operations and Maintenance Analysis, including but not limited to FEL level O&M Analysis and recommendation for operations and maintenance personnel requirements to support planned plant.
- Revise *FEL3 Revised Guidance Documentation and Plan for Operations and Maintenance* and provide a copy to the CAM.

Products:

- FEL3 Technical Specifications and Drawings for Gasification Island Engineering
- FEL3 Specifications and Drawings for Balance of Plant Engineering Design
- FEL3 Specifications and Drawings for Mechanical Equipment Design
- FEL3 Specifications and Drawings for Main Automation Contractor and Electrical Contractor Design
- FEL3 Revised Guidance Documentation and Plan for Operations and Maintenance

TASK 4 LONG-LEAD PROCUREMENT

The goal of this task is to perform long-lead equipment (LLE) procurement, including fabrication and delivery of major process equipment.

The Recipient shall:

- Develop specifications and procurement strategy for LLE procurement of major process equipment.
- Produce a long-lead equipment list (LLE Equipment List), which will include description of each equipment, fabrication requirements, and cost estimates.

- Provide a copy of the *LLE Equipment List* to the CAM.
- Monitor fabrication of LLE and commence shipment of LLE to project site.

Products:

- LLE Equipment List

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

TASK 5 ENGINEERING, PROCUREMENT, AND CONSTRUCTION

The goal of this task is to perform detailed engineering, procurement, and construction of 100 percent renewable hydrogen production technology and equipment at a new facility in Lancaster, California.

The Recipient shall:

- Perform detailed engineering (i.e., civil, structural, mechanical, process, equipment, instrumentation, and electrical).
- Produce *Issue-for-construction Specification and Drawings* for the following disciplines:
 - Site Preparation
 - Civil Foundations
 - Structural Erection
 - Support Buildings Erection
 - Process Equipment Installation
 - Piping and Piping Racks Installation
 - Electrical Installation
 - Instrumentation and Controls Installation
 - Mechanical Completion
 - Commissioning and Start-Up
- Provide *Issue-for-construction Specification and Drawings* to the CAM.
- Develop a *Procurement Plan for Balance of Equipment* and provide a copy to the CAM.
- Construct, commission, and start-up plant.
- Perform quality control and assurance to ensure installed works meet the required project specifications.
- Provide a *Turnover Package* to the CAM, including as-built drawings, quality assurance documentation, start-up procedures, operation manual, etc. demonstrating that the project has met substantial completion and can be operated safely in accordance with project requirements.

Products:

- Procurement Plan for Balance of Equipment
- Issue-for-construction Specification and Drawings
- Turnover Package

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

TASK 6 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.

The Recipient shall:

- Troubleshoot any issues identified.
- Develop a *Data Collection Plan* and collect at least six 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 CEC with actual project performance and accomplishments.
- Provide a *Data Collection and Information Analysis Report* that lists and analyzes all the data and information described above.

Products:

- Written record of registering with the Low Carbon Fuel Standard and Renewable Fuel Standard programs
- Draft Data Collection Plan
- Data Collection and Information Analysis Report

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 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

Memorandum

For: ARV-22-011, SG H2 LANCASTER PROJECT COMPANY, LLC

From: Sebastian Serrato, Energy
Commission Specialist II
Medium- and Heavy-Duty Zero
Emission Technologies Branch
California Energy Commission
715 P Street
Sacramento, California 95814

Date: May 15, 2023

Subject: California Environmental Quality Act Analysis for Agreement ARV-22-011, SG H2 LANCASTER PROJECT COMPANY, LLC's, "Lancaster Waste to Renewable Hydrogen" Project

I. Introduction.

I am an Energy Commission Specialist II in the Fuels and Transportation Division of the California Energy Commission (CEC) and am the Commission's Agreement Manager for proposed grant Agreement ARV-22-011, titled "Lancaster Waste to Renewable Hydrogen" with SG H2 LANCASTER PROJECT COMPANY, LLC (SGH2).

This memo analyzes and documents the consideration of the environmental impacts of the proposed project, which is a renewable hydrogen fuel production facility in the City of Lancaster (City).

SGH2 applied and was awarded a grant under GFO-20-609 Renewable Hydrogen Transportation Fuel Production to develop, construct and operate a renewable hydrogen production facility.

II. Proposed Project.

The proposed project to be funded under ARV-22-011 is for a \$3,000,000 grant to develop, construct, and operate a 100 percent renewable hydrogen production facility at the intersection of 6th Street East and Avenue M, in Lancaster, California. The proposed project consists of the construction and operation of a facility that would produce hydrogen from unrecyclable mixed waste-paper feedstock. The feedstock would be gasified to produce a hydrogen-rich gas that would be further processed and transported off-site to hydrogen refueling stations throughout California. The proposed project would convert 42,000 tons of feedstock into 4,570 metric tons of hydrogen per year with a full production capacity of 13.1 metric tons of hydrogen per day. The facility would also capture approximately 70,000 metric tons of carbon dioxide as a byproduct of hydrogen production. The facility would operate for a period of approximately 25

years and is designed to operate 24 hours a day, 7 days a week for 350 days each year or 8,400 hours per year. The main areas of the facility include feed and product storage and transport areas, water systems, and a flare system. Access to the proposed facility would be from Avenue L-72, 5th Street East and 6th Street East. A perimeter wall would be installed around the site. There would be a total of four buildings on the project site totaling 47,181 square feet. The remainder of the site would be developed with various types of equipment to support the proposed industrial processes including oxygen-blown fixed bed gasification island, pumps, boilers, compressors, power generation equipment, ground level flare, wastewater treatment system, flare stack, emergency generator, cooling tower, deaerator vent, oil-water separator, pressure swing adsorption unit and air separator unit.

III. City's Environmental Review.

As the Lead Agency, the City prepared and circulated a Draft Initial Study (IS) and Mitigated Negative Declaration (MND) in accordance with the California Environmental Quality Act (CEQA) to determine if the renewable hydrogen production facility project would have a significant effect on the environment.

The Draft IS/MND was released for public and agency review on August 31, 2022. The public and agency review and comment period on the Draft IS/MND was scheduled to be 30 days in length and was anticipated to end at the close of the business day on September 30, 2022. However, during the review period, two entities requested an extension to the public review period until October 16, 2022, which the City granted. Since October 16 was a Sunday, comments were accepted through the close of business on October 17, 2022. During the review period, the public had the opportunity to provide written comments on the contents and conclusions of the Draft IS/MND. Four public agencies, one Union, and one City resident provided written comments on the Draft IS/MND.

The Notice of Availability/Notice of Intent to Adopt a Mitigated Negative Declaration pursuant to the California Environmental Quality Act (NOA/NOI) was distributed to agencies, organizations, and property owners within 500 feet of the project site. The NOA/NOI was also published on the State Clearinghouse (SCH) website (SCH Number 2022080669), along with the Draft IS/MND and supporting technical studies (<https://ceqanet.opr.ca.gov/2022080669>). In addition, the NOA/NOI was posted on the Los Angeles County Clerk website under Filing Number 2022200141 and Project Title "CONDITIONAL USE PERMIT (CUP) NO. 21-06" (<https://apps.lavote.net/CEQA>).

The City prepared the Final IS/MND to meet all of the substantive and procedural requirements of the CEQA and the CEQA Guidelines. The City designed the Final IS/MND to be used in conjunction with the content of the Draft IS/MND. It contains all written comments received on the Draft IS/MND, responses to the comments received on the Draft IS/MND, and all revisions to the text of the Draft IS/MND that were undertaken as a result of consideration of the comments received on the Draft IS/MND. In addition, a mitigation monitoring plan was prepared by the City, consistent with CEQA Guidelines Section 15097.

On December 12, 2022, the City approved Resolution No. 22-35 approving the Conditional Use Permit (CUP) No. 21-06 allowing for the development of hydrogen production facility and associated on-site and off-site improvements. The CUP made the following determinations regarding described project: 1. The project will not have a significant effect on the

environment., 2. A Mitigated Negative Declaration was prepared for this project pursuant to the provisions of CEQA., 3. Mitigation measures were made a condition of the approval of the project. 4. A Statement of Overriding Considerations was not adopted for this project. 5. Findings were made pursuant to the provisions of CEQA.

IV. Responsible Agency Considerations.

Prior to reaching a decision on the proposed project under ARV-22-011, the CEC as a responsible agency must consider the environmental effects of the proposed project as shown in the mitigated negative declaration prepared for the proposed project by the City. In its role as responsible agency, the CEC has reviewed the City's: Draft and Final IS and MND, resolutions approving the CUP and site plan; Mitigation Monitoring Program, Notices of Determination and related documentation.

V. Discussion.

The environmental factors and mitigation measures identified for the proposed project by the City's MND are listed below:

Aesthetics:

The proposed project is expected to have less than significant impacts on aesthetics with mitigation incorporated. The MND noted that the project site is relatively flat and includes vacant, undeveloped land with sparse, desert scrub vegetation comprised primarily of shrubs and sandy soils. The MND further noted that according to the City's Master Environmental Assessment, major visual resources or topographic features are not located within or in proximity to the project site. Long-range views of the San Gabriel mountains are visible to the south; however, these views are interrupted by the four, large water storage tanks at an adjacent industrial facility to the south of the project site.

The MND found there would be no impact to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway since no State scenic highways are located in or near the project site. The MND noted that the project site does contain two live Western Joshua trees that would need to be removed, but these trees are not located along a State scenic highway. Therefore, the project would have no impact.

The MND noted the project site is zoned as Heavy Industrial. The project site is adjacent to or near other industrial facilities and three residences. Therefore, the project site is located in an urbanized area. The MND includes objectives, policy, and actions in the City of Lancaster General Plan 2030 for scenic resources. To further reduce potential impacts, the applicant shall prepare an aesthetics plan during the final design phase of the project to address the color of the equipment, wall, lighting, and landscaping to reduce visual intrusion that could result from the facility, as well as minimize the potential for lighting to adversely affect views in the area. The plan shall be submitted to the City of Lancaster to demonstrate compliance with this measure. Therefore, the project would have a less than significant impact with mitigation incorporated.

The MND notes that the facility would be designed with materials that would minimize daytime glare and a perimeter wall that would be constructed of non-reflective materials that would not create substantial glare. With implementation of Mitigation Measure 1 (Aesthetics Plan), the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area because the facility's lighting and materials would be designed to minimize light or glare that could affect daytime or nighttime views from surrounding areas. Therefore, the project would have a less than significant impact with mitigation incorporated.

Therefore, it is my conclusion on the basis of the entire record, that the aesthetics impacts of the proposed project are less than significant regarding the substantial adverse effect on a scenic vista. I also conclude that the proposed project would have no impact with respect to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway. I further conclude that with the adoption of the proposed mitigation measures, the proposed project would have a less than significant impact with respect to conflicts with applicable zoning and other regulations governing scenic quality in urbanized area and the creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Agriculture and Forest Resources:

The Project is expected to have no impact on Agricultural and Forest Resources. The project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). The MND states that the most recent Los Angeles County Important Farmland Map classifies the site as "Other Land," which is not included in any other mapping category. "Other Land" can include vacant and nonagricultural land surrounded on all sides by urban development. Because Farmland is not present within or surrounding the project site, the project would not convert Farmland to non-agricultural use, therefore the project would have no impact.

The MND found that the project site is zoned as Heavy Industrial and is not zoned for agricultural use, and that the project site includes undeveloped land not being used for agricultural purposes and is not subject to a Williamson Act contract. Therefore, the project would have no impact.

The MND further found that the project site includes shrubs and bushes, but no trees are located on the with the exception of two live Western Joshua trees, which are not harvested for lumber or other forest products. In addition, the project site is not being used to grow commercial species of trees and is zoned as Heavy Industrial; therefore, the project site does not include timberland or timberland zoned Timberland Production. The project would also not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production because the site is not zoned for these uses. Therefore, the project would have no impact.

The MND further found that the project site has no forest land, so the project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, the project would have no impact.

The MND further found that because there is no Farmland located within or surrounding the project site, the project would not involve other changes to the existing environment that could

result in the conversion of Farmland to non-agricultural use. Therefore, the project would have no impact.

Therefore, I recommend that CEC find that, on the basis of the entire record, that the proposed project will have no impact on agricultural or forestry resources.

Air Quality:

The project site is located in the Antelope Valley portion of the Mojave Desert Air Basin, which is in nonattainment with the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS) for ozone and the CAAQS for PM₁₀. Each of California's local air districts are responsible for managing local air quality and administering the state and federal air quality control programs to ensure implementation of applicable air quality management plans. The regional air quality management plan anticipates a baseline level of construction activity and some permanent population growth. The anticipated growth includes the addition of industry and employment growth. A project could be inconsistent with the applicable air quality management plan or attainment plan if it could cause population and/or employment growth or growth in vehicle miles traveled in excess of the growth forecasts included in the attainment plan. The proposed project is expected to employ approximately 43 individuals for long-term operation and up to 281 staff onsite during construction. The MND notes that this level of population growth would not be substantial in light of the population growth in the Antelope Valley Air Quality Management District jurisdiction (AVAQMD). All activities associated with the project would be subject to compliance with applicable air quality rules and regulations administered by AVAQMD and the California Air Resources Board (CARB) to ensure progress towards achieving attainment, including dust control and stationary source emission controls during construction and operation, and submittal of a construction excavation fee and comply with the requirements of Rule 403 related to the stabilization of surfaces. Additionally, the applicant is required to obtain applicable permits for any equipment or process that may have the potential to emit or control air contaminants, and be compliance with CARB In-Use Off-Road Diesel Vehicle Regulation. The MND notes that the project would not conflict with or obstruct implementation of the applicable air quality plan. Therefore, the project would have a less than significant impact.

The MND notes that construction-phase emissions would be the result of project development activity on unpaved and paved surfaces, ground disturbance, and materials hauling, which cause fugitive dust (PM₁₀ and PM_{2.5}), and the necessary use of equipment and motor vehicles that cause tailpipe emissions through the use of motor gasoline or diesel fuel. Overall construction-phase emissions would span two calendar years. Operational-phase emissions would be the result of mobile sources, area and offroad sources, and stationary sources. The MND further notes that the total quantities of criteria air pollutants during the full duration of construction, and the annual quantities of criteria air pollutants that could be emitted during routine operation of the proposed project would not exceed the significance threshold levels for any air pollutants. As a result, construction and operation of the project would not result in a cumulatively considerable net increase of any criteria pollutant and would not be likely to violate any air quality standard. Therefore, the project would have less than a significant impact.

The MND found that construction emissions would present a potential health risk due to emissions of diesel particulate matter, which is classified as a toxic air contaminant because many toxic compounds adhere to diesel exhaust particles. Coccidioidomycosis, often referred

to as Valley Fever, is an infectious disease caused by a fungus that lives in the soil and dirt that may be stirred up by wind, vehicles, excavation, or other ground-disturbing activities and become airborne. The MND notes that construction fugitive dust emissions would be controlled by an AVAQMD approved site-specific Dust Control Plan, with additional mitigation measures which requires training for construction personnel and the use of personal protective equipment. The project would have a less than significant impact with mitigation incorporated.

The MND notes that construction vehicles and equipment may generate some odors, but these odors would be similar to vehicles traveling along Avenue M. The MND further notes that the project would result in other emissions (such as those leading to odors) adversely affecting a substantial number of people because construction odors would be similar to existing vehicles along Avenue M, and odors from facility operations would be minimized by complying with applicable regulations and conducting operational activities within enclosed buildings. Therefore, the project would have a less than significant impact.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the mitigation measures reduce the air quality impacts to less than significant with respect to exposing sensitive receptors to substantial pollutant concentrations; and the proposed project has a less than significant impact with respect to implementing the applicable air quality plan or violation of air quality standards, will not result in a cumulatively considerable net increase of criteria pollutants of which the project region is non-attainment, and will not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Biological Resources:

The MND found no federally listed threatened or endangered plant species were observed on the project site during the field survey, and none have a potential to be present. The MND noted that the special-status plant species that have a potential to be present on the project site were two Western Joshua trees and two California Rare Plant Rank 4 species. The two live Western Joshua trees present at the site did not show evidence of reproduction and were too young to have produced flowers or fruit. The MND further found that no special-status, federally listed threatened or endangered wildlife species were observed at the project site. Project construction would require the removal of two non-reproductive Western Joshua trees. If present, the Western Joshua tree seedbank on the project site would also be impacted by ground and soil disturbance. In addition, project construction would require shrub removal and ground-disturbing activities that could affect nesting birds, burrowing owls, special-status raptors and bats, and other foraging and resident special-status wildlife species on the project site. Mitigation Measures 3, 4, 5, and 6 shall be required to mitigate, avoid, and minimize impacts on these wildlife species. With implementation of these mitigation measures, which require pre-construction surveys for nesting birds, burrowing owls and other special-status wildlife species, as well as an Incidental Take Permit for the removal of two Western Joshua trees (pending a final decision by the California Fish and Game Commission), the project would have a less than significant impact on substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species. In addition, the proposed project would be subject to the requirements of Ordinance No. 848, Biological Impact Fee, which requires the payment of \$770 per acre to help offset the cumulative loss of biological resources in the Antelope Valley as a result of development. Therefore, the project would have a less than significant impact with mitigation incorporated.

The MND notes that riparian habitat and sensitive natural communities are not present on the project site, so the project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service. Therefore, the project would have no impact.

The MND further notes that no wetlands have been mapped within or near the project site. Because protected wetlands are not present within or near the site, the project would not have a substantial adverse effect on state or federally protected wetlands. Therefore, the project would have no impact.

The MND found that the project site is not identified on the Essential Connectivity Map and no water bodies are located in the project site; therefore, migratory fish are not present on the project site, and the project site would not interfere with the movement of any fish. While the project site is not within any designated wildlife corridors, the project site is expected to provide localized wildlife movement within the region. With implementation of Mitigation Measures 3, 4, and 5 which require pre-construction surveys, the project would not interfere substantially with the movement of wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites, because measures would be implemented to avoid and minimize disturbance of protected species. Therefore, the project would have a less than significant impact with mitigation incorporated.

The MND further notes that the Lancaster Municipal Code does not include any other policies or ordinances that protect biological resources on the project site. Therefore, the project would have no impact.

The MND also further notes that no Habitat Conservation Plans or Natural Communities Conservation Plans have been adopted for the project site or vicinity, or other local, regional, or State habitat conservation plan has been approved for the site and surrounding area. Therefore, the project would have no impact.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the biological resources impacts are less than significant with respect to sensitive or special status species, with mitigation incorporated; and that there will be no impact with respect to riparian habitat or wetlands. I further conclude that adoption of the proposed mitigation measures would have a less than significant impact with respect to interfering substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. I also conclude that the proposed project would have no impact with respect to conflicts with any local policies or ordinances protecting biological resources or with conflicts with the provisions of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

Cultural Resources:

The MND found that the project site is vacant, undeveloped land and has never been developed. No new resources were observed during the field survey and no previously recorded resources were identified on the project site through the cultural records search. The project would not cause a substantial adverse change in the significance of a historical

resource because these resources are not present on the project site. Therefore, the project would have no impact.

The MND found that the record search did not identify any previously recorded archaeological resources within the project site or 0.5-mile buffer. No archaeological resources were observed during the field survey, but additional mitigation measures shall be required in the event of an unanticipated cultural resource discovery. Mitigation Measure 7 includes having a professional archaeologist available to identify and evaluate previously unidentified cultural resources discovered during construction activities. Mitigation Measure 8 include notification to the Fernandefio Tatviam Band of Mission Indians (FTBMI) and the Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) about any pre-contact and/or post-contact finds during construction. Mitigation Measure 9 includes retaining a professional Native American monitor procured by the FTBMI and YSMN if a find during construction is deemed significant to observe all remaining ground-disturbing activities including, but not limited to, excavating, digging, trenching, plowing, drilling, tunneling, quarrying, grading, leveling, clearing, driving posts, auguring, blasting, stripping topsoil or similar activity, and archaeological work. Mitigation Measure 10 includes developing a Monitoring and Treatment Plan by the archaeologist if pre-contact and/or historic-era cultural resources are discovered during construction and avoidance cannot be ensured. Mitigation Measure 11 includes that any and all archaeological/cultural documents created as a part of the project shall be supplied to the City of Lancaster for dissemination to FTBMI and YSMN. Additionally, that the applicant in consultation with the City of Lancaster shall, in good faith, consult with the FTBMI and YSMN on the disposition and treatment of any Tribal Cultural Resource encountered during all ground disturbing activities and throughout the life of the project.

The MND noted that the search of NAHC's Sacred Lands File was negative for the presence of resources and no resources were identified through the cultural record search or survey, and there are no known cemeteries within the project site. In the event of an unanticipated cultural resource discovery, the MND includes Mitigation Measure 12 which requires construction to halt and notification of the County Coroner in the event that human remains or potential human remains are discovered, the project would not disturb any human remains, including those interred outside of formal cemeteries. Therefore, the project would have a less than significant impact with mitigation incorporated.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the cultural resources impacts are no impact with respect to historical resources and less than significant with mitigation incorporated in respect to archaeological resources and the disturbance of human remains.

Energy:

The MND noted that project construction would require energy consumption during a 16-month period to operate construction vehicles and equipment. This use of energy is necessary to construct the facility and would be temporary, and that this consumption of energy resources during project construction would not be wasteful, inefficient, or unnecessary. During operation, the facility would require 10 MW of power of the gasification system. The facility is designed to produce a portion of its own power (a maximum of 2 MW) for internal plant consumption. This energy would be generated from waste heat that is produced during the gasification process and reuse this heat to minimize the need for additional energy resources.

The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project or operation, because of the project's energy efficient design and the consumption of energy is necessary to construct the facility that would produce clean hydrogen. Therefore, the project would have no impact.

The proposed project would produce renewable hydrogen from unrecyclable mixed waste paper and would therefore help meet CARB's requirement that no less than 33.3 percent of hydrogen sold for motor vehicles come from renewable sources. In addition to the optimized energy efficiency noted above, an additional 10 MW of renewable energy would be supplied through a grid tie-in to the Lancaster renewable power grid. This power is generated through 100 percent renewable energy sources with solar, wind, or geothermal sources. Because the facility would use 100 percent renewable energy and would be designed to optimize energy efficiency, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the project would have no impact.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that there would be no impacts to energy resources with respect to consumption of such resources or conflict with any state or local plan concerning renewable energy or energy efficiency.

Geology and Soils:

The MND found that the project site is not located within an Alquist-Priolo earthquake fault zone. Because the project site does not include any earthquake faults, the project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault. Therefore, the project would have no impact.

The MND further found that an Alquist-Priolo Earthquake Fault Zone is located approximately 5.5 miles to the south of the project site. Because the project site is near a major, active fault, the site would on average experience stronger shaking more frequently. The proposed project would be designed in compliance with Uniform Building Code standards specific to Zone 4 and the facility would be equipped with safety mechanisms, such as detectors/alarms and shutdown systems in the event of a seismic event or other emergency. The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking because compliance with standard seismic design requirements would minimize potential risks. Therefore, the project would have a less than significant impact.

The MND found that the project site is not within a Liquefaction Hazard Zone, which is a zone where liquefaction may occur during a strong earthquake. Because the project site is not prone to liquefaction, and the project would be designed in compliance with Uniform Building Code standards, the project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. Therefore, the project would have no impact.

The MND found that the project site is not located within a Landslide Hazard Zone, which is a zone where landslides may occur during a strong earthquake. Because the project site is not prone to landslides, the project would not directly or indirectly cause potential substantial

adverse effects, including the risk of loss, injury, or death involving landslides. Therefore, the project would have no impact.

The MND further found that vegetation on the project site would be removed, and the site would be graded and completely paved during project construction. Vegetation removal and grading would likely result in the loss of topsoil. In addition, soils at the project site are sandy soils, which are typically very susceptible to wind and water erosion. The proposed project would be required to adequately wet or seal the soil to prevent wind erosion. Water erosion controls must be provided as part of the proposed project's grading plans to be reviewed and approved by the Capital Engineering Division and the City of Lancaster would also require an Erosion Control Plan as a standard condition of approval for the project. This plan would require the installation of erosion control devices and the removal of loose soil and debris that may create a potential hazard to off-site property. The MND also includes Mitigation Measure 13, which requires a Dust Control Plan in accordance with AVAQMD Rule 403, Fugitive Dust. The project would not result in substantial soil erosion or the loss of topsoil because the application of water or other dust suppressant equipment would minimize the disturbance of loose soils. Therefore, the project would have a less than significant impact with mitigation incorporated.

The MND further found that sandy soils are not typically prone to expansion, but are susceptible to collapse. Project construction would include site grading and preparation to stabilize the project site prior to paving and the installation of facility buildings and equipment. In addition, the project would be designed in accordance with standard geotechnical requirements, which include constructing appropriate foundations and equipment supports. The proposed project would be required to have a geotechnical study prepared and all recommendations followed as part of the City's building permit process. The project would not be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, or liquefaction, because the site is not susceptible to these hazards; in addition, site preparation activities and compliance with standard geotechnical requirements would minimize the potential for the project to destabilize soils and result in collapse. Therefore, the project would have a less than significant impact.

The MND found that the project site is not located on expansive soil as defined in the Uniform Building Code and would not create substantial direct or indirect risks to life or property. Therefore, the project would have no impact.

The MND notes that the project includes the installation of a septic tank for the basic sewage treatment of wastewater flows from the administrative/control and warehouse buildings. The soil underlying the project site is identified as Cajon loamy sand. According to the Web Soil Survey, Cajon loamy sand is unfavorable for septic tanks because of the filtering capacity of the soil. The installation of the septic system would require approval by the Lahontan Regional Water Quality Control Board (RWQCB). In addition, the City's Department of Building and Safety also requires that plot plans be approved by the Los Angeles County Health Department for installation of the septic system prior to the issuance of a New Commercial/Industrial Building Permit. Furthermore, the MND includes Mitigation Measure 14 which requires a geotechnical study prior to issuance of building permits to determine if soil remediation is required to adequately support the use of a septic tank and achieve proper drainage and filtration. If the study determines that remediation is required, the applicant shall

conduct soil remediation activities prior to installing the septic system. With implementation of Mitigation Measure 14, the project's soils would not be incapable of adequately supporting the use of a septic tank because a geotechnical study would be conducted and any soils that cannot support the septic system would be remediated. Therefore, the project would have a less than significant impact with mitigation incorporated.

The MND further notes that a field survey and paleontological record search did not identify any fossils within the project site; however, localities have been noted within the same sedimentary deposits in the surrounding vicinity included camel, snakes, lizards, birds, and rodents. Because fossil localities have been uncovered nearby the project site, even relatively shallow excavations in the project site have the potential to uncover significant fossil specimens. The MND includes Mitigation Measure 15, which requires paleontological monitoring for excavations deeper than 3 feet. With implementation of Mitigation Measure 15, the project would not directly or indirectly destroy a unique paleontological resource or site because disturbance of paleontological resources would be avoided. Therefore, the project would have a less than significant impact with mitigation incorporated.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the geology and soils impacts of the proposed project are less than significant with respect to strong seismic ground shaking and unstable soil that would potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. I further recommend that CEC finds that with the adoption of the proposed mitigation measures, the proposed project would have a less than significant impact with respect to soil or the loss of topsoil, soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems, or directly or indirectly destroying a unique paleontological resource or site or unique geologic feature. I further recommend that CEC finds that the proposed project would have no impact with respect to rupture of a known earthquake fault, seismic-related ground failure including liquefaction, landslides, or being located on expansive soil creating substantial direct or indirect risks to life or property.

Greenhouse Gas Emissions:

The MND found that project construction would cause greenhouse gas (GHG) emissions during a 16-month period from the use of diesel fuel and gasoline to power construction vehicles and equipment. Construction phase GHG emissions would be temporary and limited to the short-term duration of construction. The one-time quantity of GHG emitted during construction of the project would be a total of approximately 3,335 metric tons of carbon dioxide equivalent (MTCO_{2e}) spanning two calendar years. Project operation would also create GHG emissions through the transportation demand to deliver feed, distribute products, and dispose of project wastes. Additionally, stationary sources would use fossil fuels in the routine operation of process equipment. Operation of the facility would also use up to 10 MW in electric power from the grid for routine operations while producing up to a maximum of 2 MW for onsite use. The MND further found that the proposed project GHG emissions would be well below the AVAQMD recommended annual GHG emissions significance threshold of 90,719 MTCO_{2e} per year, with the estimated emissions being about 15,500 (3,400 Construction/12,100 Operation) MTCO_{2e} per year, not taking into account the emission savings of the renewable fuel being produced at the facility. Therefore, the project would have a less than significant impact.

The MND notes that the State and City GHG emissions reduction plans that would be applicable to the proposed project are the CARB Climate Change Scoping Plan and the City's Climate Action Plan. The project would add to California's supply of low carbon transportation fuel by producing renewable hydrogen for transportation use and replacing gasoline or diesel consumption, thus helping to actually reduce overall GHG emissions. The project would also commit to using only renewable and carbon-free electricity from Lancaster Choice Energy, and as a result, would be supportive of the City's Climate Action Plan. The project would not have the potential to conflict with the CARB Scoping Plan or the City's Climate Action Plan. Therefore, the project would have no impact.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the GHG emissions impacts of the proposed project are less than significant with respect to the generation of GHG emissions, either directly or indirectly that may have a significant impact on the environment, and that there would be no impact with respect to conflicts with any plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions.

Hazards and Hazardous Materials:

The proposed project is expected to have less than significant impacts on hazards and hazardous materials with mitigation incorporated. The MND noted that project construction would require typical construction materials to install the facility buildings and equipment. The project would not involve the demolition of any structures, and therefore, would not expose individuals or the environment to asbestos-containing materials or lead-based paint. The project would require the routine transport, use, and disposal of hazardous materials for facility operations, including various chemicals for the gasification system and support processes, as well as the routine transport of hydrogen. These routine activities would be conducted in compliance with applicable regulations to minimize potential hazards to the public and to the environment. Waste products, including brine and slag, would be transported offsite to appropriate disposal facilities. The facility would also be equipped with safety mechanisms, such as fire protection and sprinkler systems, dust suppression systems, detectors/alarms, shutdown systems, and temperature monitoring and controls, and would undergo a full Hazard and Operability Analysis review as part of engineering design. No more than 4,400 pounds of hydrogen would be stored onsite at any given time which is below the US EPA hydrogen threshold for requiring a management plan for a permanent/stationary fire hazard. The project site is not located along a hazardous materials transportation corridor and the facility is designed to accommodate up to 14 hydrogen trucks at any given time. The MND includes Mitigation Measure 16 which requires onsite traffic signage to be incorporated into the project's general circulation plan. With implementation of Mitigation Measure 16, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials because the project would comply with applicable regulations to minimize potential hazards to the public and environment; the facility would be designed with spill containment and safety mechanisms, in coordination with the Los Angeles County Fire Department; and hydrogen would be stored at quantities below regulatory thresholds and would be transported in a manner that would reduce potential hazards. Therefore, the project would have a less than significant impact with mitigation incorporated.

The MND notes that the project would require coordination with, and approval by, the Los Angeles County Fire Department for fire access, life safety equipment, and hazardous materials permitting. Produced CO₂ would not be vented except under emergency conditions.

In addition, all upset vents would be sent to the ground level flare for safe combustion. The facility would not discharge any process gas streams into the atmosphere. The MND also includes Mitigation Measure 17, which would require project contact information to be posted at the project site throughout the duration of project construction in a manner that is readily visible to the public, so that any member of the public can notify the facility manager of a potentially hazardous incident or a nuisance originating at the site. Therefore, the project would have a less than significant impact with mitigation incorporated.

The MND notes that no existing or proposed schools are within a one-quarter mile of the project site therefore the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Therefore, the project would have no impact.

The MND further notes that the project that no hazardous waste cleanup sites are located within or adjacent to the project site. The project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or the environment. Therefore, the project would have no impact.

The MND further finds that Palmdale Regional Airport (PMD) and United States Air Force Plant 42 (Plant 42), are located approximately 0.7 miles south of the project site. PMD does not have any scheduled passenger airline service, and Plant 42 is operated as a component of Edwards Air Force Base, which is approximately 23 miles to the northeast. Construction staff would be exposed to noise from activities conducted at the project site. The MND also notes that during project construction and operation, no people would reside at the project site. The project would not result in a safety hazard or excessive noise for people residing or working in the project area because construction staff and operational employees would not reside in the project area; construction activities would be temporary, airplane operations at PMD and Plant 42 are intermittent and of short duration; the proposed facility would not interfere with PMD or Plant 42 operations; and operational employees would be shielded from noise sources within and outside the plant to minimize their exposure to noise. Therefore, the project would have a less than significant impact.

The MND also notes that while traffic to and from the project site would increase after project implementation, vehicles would not obstruct any evacuation routes. The hydrogen trucks would be required to only make protected left turns when traveling to and from the project site. Because the project would be designed with safety mechanisms in coordination with the Los Angeles County Fire Department and would accommodate truck shipments to and from the site, the project would impair an adopted emergency response plan or emergency evacuation plan. Therefore, the project would have a less than significant impact.

The MND further notes that the project site and surrounding area is not located within a state responsibility area or in a very high fire hazard severity zone. Because the project site is not susceptible to wildfires, the project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Therefore, the project would have no impact.

Therefore, I recommend that CEC finds that, on the basis of the entire record, the hazards and hazardous materials impacts of the proposed project with the adoption of the proposed mitigation measures, would be less than significant with respect to the routine use,

transportation, or disposal of hazardous materials, or from the release of such materials into the environment. I further recommend that CEC finds that the proposed project would have a less than significant impact with respect to being a safety hazard or excessive noise located within an airport land use plan or within two miles of a public airport, and interfering or impairing implementation of an adopted emergency response plan or emergency evacuation plan. I further recommend that CEC also finds that the proposed project would have no impact with respect to emitting or handling of hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; creating a significant hazard to the public or environment being located on a site which is included on a list of hazardous materials sites; and exposing people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires.

Hydrology and Water Quality:

The MND evaluated the risk of the proposed project violating any water quality standards or waste discharge requirements, or degrading surface water or groundwater quality. The MND noted that the project site does not include any water bodies and that the nearest body of water, Amargosa Creek, is approximately one mile west of the project site. The Lahontan Regional Water Quality Control Board (RWQCB) oversees compliance with water quality standards and waste discharge requirements for surface waters and groundwater in the Lahontan Region where the project site is located. A National Pollution Discharge Elimination System, General Construction Stormwater Pollution Prevention Plan (SWPPP) with water quality Best Management Practices would be implemented for the project, as required by the Lahontan RWQCB. In addition, the project would require approval by the Lahontan RWQCB and Los Angeles County Public Health Department for the septic system, as well as approval by the Los Angeles County Sanitation District for a connection to the sewer system. Inclusion of Mitigation Measure 14 which shall be required to ensure that soils can adequately support the septic system and achieve proper drainage and filtration. With implementation of this measure, the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality because a geotechnical study would be conducted and any soils that cannot support the septic system would be remediated. In addition, stormwater and wastewater would be contained within the project site; or accommodated by existing storm drains (stormwater) or a connection to the sewer system (wastewater) with oversight by the Lahontan RWQCB, Los Angeles County Public Health Department, and Los Angeles County Sanitation District. Therefore, the project would have a less than significant impact with mitigation incorporated.

The MND notes that the project would not include any groundwater wells or pumping activities. Landale Mutual Water Company would supply potable water for the plant's power and process water, as well as domestic water, requirements. Additional process water would be obtained through stormwater retention via an above ground retention basin on the site. Because the proposed facility would retain stormwater for onsite use, as well as re-use process wastewater, the project's water requirements would be minimized. During project implementation, the entire site would be paved, which would prevent surface water from moving downward to recharge groundwater. However, the project site is only 15 acres in size, and the paving of this size of an area would not be expected to substantially interfere with groundwater recharge in such a manner that would impede sustainable groundwater management of the basin. The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater

management of the basin, because the facility would be designed to minimize water requirements, and the paving of the 15-acre site would not substantially interfere with groundwater recharge. Therefore, the project would have a less than significant impact.

The MND notes that project construction would require ground disturbance, which would loosen soils and could result in erosion or siltation on- or off-site. However, during construction, the project would be required to comply with a SWPPP to control stormwater and prevent erosion or siltation. Surface runoff would be controlled and contained within the project site in a stormwater retention basin accommodated by existing storm drains. The project would not substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation on- or off-site, because a SWPPP would be implemented during construction to control erosion, the entire site and adjacent streets would be paved, and surface runoff would be contained within the site or would be accommodated by existing storm drains. Therefore, the project would have a less than significant impact.

The MND further notes that the project site is designated as Zone X, which is an area of minimal flood hazard. With compliance with a SWPPP a requirement during construction, the project would not substantially alter the existing drainage pattern of the site or area in a manner which would substantially increase the rate or amount of surface runoff and result in flooding on- or off-site. Because surface runoff would be controlled and contained within the project site in a stormwater retention basin or accommodated by existing storm drains. In addition, the project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, the project would have a less than significant impact.

The project would not impede or redirect flood flows because the project site is not susceptible to flooding, and stormwater runoff would be controlled and contained within the project site or accommodated by existing storm drains. Therefore, the project would have no impact.

The MND further found that the project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones because the project site is not located within these zones. Therefore, the project would have no impact.

The MND found that water quality objectives and standards relevant to the project site are included in the Water Quality Control Plan for the Lahontan RWQCB. The project would require approval by the Lahontan RWQCH and Los Angeles County Public Health Department for the septic system and with implementation of Mitigation Measure 14, the project is found to not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the project would have a less than significant impact with mitigation measures incorporated.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the hydrology and water quality impacts of the proposed project with the adoption of the proposed mitigation measures, are less than significant with respect to violation of water quality standards or waste discharge requirements and respect to the implementation of any water quality control plan or groundwater management plan; less than significant with respect to decreasing groundwater supplies or interfering with groundwater recharge; less than significant with respect to altering the existing draining pattern of the site; and that there is no impact regarding tsunami, seiche, or inundation risks.

Land Use and Planning:

The MND noted that the project site and all of the adjacent and surrounding properties are zoned Heavy Industrial. The single-family residences adjacent to the east and west are legal non-conforming uses. One adjoining property in the southwest corner of Avenue M and 5th Street East is not included in the project site and also vacant, undeveloped land. Because the project site is currently vacant, undeveloped land that is already separated from adjacent, developed properties by roadways, the project would not physically divide an established community. Therefore, the project would have no impact.

The MND found that with implementation of the mitigation measures included throughout the document, that the proposed project is consistent with the City's General Plan and must be in conformance with the Lancaster Municipal Code. The proposed project would be in compliance with the city adopted Uniform Building Code and erosion control requirements. Additionally, the project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or State habitat conservation plan. The MND further found that the proposed project does not involve the provision of housing nor is housing permitted under the Heavy Industrial zoning. With implementation of mitigation measures discussed throughout the MND, the project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the project would have a less than significant impact with mitigation incorporated.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the proposed project would have no impact with respect to division of an established community and a less than significant impact with mitigation incorporated with respect to causing a significant environmental impact due to a conflict with any land use plan, policy, or regulation.

Mineral Resources:

The MND noted that no oil, gas wells, or mines are located at the project site. The project site is located in a Mineral Resource Zone classified as MRZ-3. This designation is an area that is classified as containing mineral deposits, the significance of which cannot be evaluated from available data. Because the project site is currently vacant and is not being used for the extraction of mineral resources, the proposed construction and operation of the proposed project would not result in the loss of availability of a known mineral resource. Therefore, the project would have no impact.

The MND further found that the project site is not delineated as a locally important mineral resource recovery site in the City of Lancaster general Plan 2030. The project would not result in the loss of availability of any of these sites. Therefore, the project would have no impact.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the proposed project would have no impacts to mineral resources with respect to the loss of availability of a known mineral resource of value or the loss of availability of a locally important mineral resource recovery site on a local general, specific, or other land use plan.

Noise:

The MND analyzed a Noise Technical Report prepared in July 2022 to assess project impacts on areas that are sensitive to community noise. Noise sensitive residences occur on parcels adjacent to the proposed project site, although no other noise sensitive land uses, such as school, community parks, or other recreational uses are within 1,000 feet of the site. Noise measurements resulted in ambient sound levels for the project site ranged from 40.3 decibels (dB) to a maximum of 93.8 dB. The City of Lancaster's Noise Ordinance prohibits any construction or repair work of any kind or performing any earth excavating, filling, or moving "where any of the foregoing entails the use of any air compressor, jack hammer, power-driven drill, riveting machine, excavator, diesel-powered truck, tractor or other earth-moving equipment, hard hammers on steel or iron or any other machine tool, device or equipment which makes loud noises within five hundred feet of an occupied dwelling, apartment, hotel, mobile home or other place of residence" between the hours of 8:00 p.m. and 7:00 a.m. and at any time on Sunday. Provided construction work is conducted during the hours specified in the Lancaster Municipal Code and the adoption and implementation of Mitigation Measures 18-25, which aim to reduce, minimize, and resolve noise impacts by restricting noise producing activities, the project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City of Lancaster General Plan 2030 or Noise Ordinance, because a public reporting process and noise control features would ensure that the facility equipment would not exceed these standards. Therefore, the project would have a less than significant impact with mitigation incorporated.

The MND also found that the project would not result in generation of excessive ground borne vibration or ground borne noise levels because construction activities would be temporary; the project would be designed to limit operational noise levels in compliance with City and OSHA standards; and truck traffic would be distributed over a 24-hour period at regular intervals, which would minimize ground borne vibration and noise levels. Therefore, the project would have a less than significant impact.

The MND further found that the project would not expose people residing or working in the project area to excessive noise levels because construction staff and operational employees would not reside in this area, construction activities would be temporary, airplane operations at PMD and Plant 42 are intermittent and of short duration, and operational employees would be shielded from noise sources within and outside the plant to minimize their exposure to noise. Therefore, the project would have a less than significant impact.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the noise impacts of the proposed project are less than significant with the adoption of the proposed mitigation with respect to generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project. I further recommend that CEC finds that the proposed project would have a less than significant impact with respect to the generation of excessive ground borne vibration, ground borne noise levels, and the exposure of excessive noise levels for people residing or working in the project area.

Population and Housing:

The MND noted that the project site is currently vacant, undeveloped land. The hydrogen production facility is expected to employ a total of 43 people during its operations. Existing roadways would be used to access the project site. The project does not include the construction of homes and would not require the extension of roads. A septic tank, wastewater

treatment system, and connections to existing electrical, wastewater, and water utilities would be required for facility operations. The project site and surrounding area is designated as heavy industrial, and the City's Zoning Code intends to allow the development of industrial uses by providing the industrial and employment needs of the city and adjoining areas and business in an urban environment with full urban services. The proposed construction and operation of the hydrogen production facility would not induce substantial unplanned population growth in the area, either directly or indirectly, because growth has already been anticipated in the City of Lancaster General Plan 2030.

The proposed project site is currently vacant, undeveloped land with no housing or people on the site. Three single-family residences are adjacent to the project site and would not be displaced as a result of the project. The project would not displace substantial numbers of existing people or housing necessitating the construction of replacement housing elsewhere.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the proposed project would have no impact with respect to inducing substantial unplanned population growth, and would have no impact with respect to displacement of existing housing.

Public Services:

The MND found that after project implementation, existing facilities with respect to fire, police, schools, parks, or other public facilities would adequately serve the needs of any additional residents resulting from the proposed project, and no new or physically altered facilities would be required to maintain the existing performance objectives. The MND further found that the project would not result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered fire protection, police protection, school, park, or other public facilities because the project would not affect existing performance objectives for these services. Therefore, the project would have no impact.

Therefore, I recommend that CEC find that, on the basis of the entire record, that there are no impacts to public services of the proposed project with respect to adverse impacts resulting from the need for new or altered facilities for fire protection, police protection, schools, parks, or other public services.

Recreation:

The MND noted that a maximum of 281 staff would be onsite during construction for a limited time, and generally a range of 81 to 277 staff would be onsite during the 16-month construction period. The project is consistent with planned development in the City of Lancaster General Plan 2030 and Zoning Code, which ensures that necessary public services and facilities are provided to accommodate both existing and proposed development in the City. The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated because existing facilities would adequately serve the needs of any additional residents resulting from the proposed project.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the proposed project would have no impact with respect to any increase in usage of existing parks and recreational facilities; and that there would be no impact with respect to the construction or expansion of such facilities.

Transportation:

The MND noted that there are no transit or bicycle facilities located within or near the project site. A sidewalk is located on the north side of Avenue L-12 but would not be affected by the project. All public roadway improvements would be conducted in compliance with the Lancaster Municipal Code, Chapter 12.12 – Streets, Curbs, and Sidewalks. The MND found that the project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, because no transit, bicycle, or pedestrian facilities would be affected by the project; and roadway improvements would be completed to facilitate truck movement to and from the project site. Therefore, the project would have no impact.

The MND found that the project would meet Criterion 1 of the City of Lancaster adopted standards and thresholds for analyzing projects with respect to vehicle miles traveled (VMT), and that the project would generate fewer than 110 trips per day and a VMT analysis is not required. The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) because the project does not meet the city approved thresholds of significance for VMT impacts based on the daily trips generated by the project. Therefore, the project would have a less than significant impact.

The MND notes that the project would require coordination with, and approval by, the Los Angeles County Fire Department for fire access, life safety equipment, and hazardous materials permitting. The MND further notes that adequate space is provided within the facility for hydrogen truck staging and loading and no changes are being proposed to the roadway network that would create dangerous situations. The project would not substantially increase hazards due to a geometric design feature or incompatible uses because the project would be designed in coordination with the Los Angeles County Fire Department to minimize potential hazards; hydrogen would be transported in a manner that would reduce potential hazards; and no changes are being proposed to the roadway network that would create dangerous situations. Therefore, the project would have a less than significant impact.

The MND further found that while traffic to and from the project site would increase after project implementation, vehicles would not obstruct any emergency access routes. Trucks transporting hydrogen would be required to only make protected left turns when traveling to and from the project site. Because the project would be designed with safety mechanisms in coordination with the Los Angeles County Fire Department to minimize potential access impacts and would accommodate truck shipments to and from the site, the project would not result in inadequate emergency access. Therefore, the project would have a less than significant impact.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the transportation impacts of the proposed project are no impact with respect to any program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. I further recommend that CEC also finds that the proposed project would have less than significant impacts with respect to CEQA Guidelines, the substantial increase of hazards due to a geometric design feature or incompatible use, and the inadequacy of emergency access results.

Tribal Cultural Resources:

The MND noted that a cultural records search for the project was conducted in July 2022 and did not identify any previously recorded cultural resources within the project site or 0.5-mile buffer. A search of the Native American Heritage Commission's Sacred Lands File was negative for the presence of resources. The MND further noted that in accordance with compliance with AB 52, the City sent consultation letters regarding the hydrogen fuel production facility to three tribes that had previously requested general consultation opportunities. The city received responses from two tribes. No tribal cultural resources were identified by any of the Native American tribes with cultural affiliations in the area. Mitigation measures included within the MND were requested by the tribes and shall be required in the event of an unanticipated tribal cultural resource discovery. The project would not cause a substantial adverse change in the significance of tribal cultural resources because no resources have been identified on the project site and measures requested by the tribes would be implemented in the event of an inadvertent discovery. Therefore, the project would have no impact.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the proposed project would have no impact on tribal cultural resources, with respect to any substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code section 21074.

Utilities and Service Systems:

The MND noted that infrastructure managed by Landale Mutual Water Company would supply potable water for the facility's power and process water with additional process water being obtained through stormwater retention via an above ground retention basin on the site. The facility's design would allow process wastewater to be treated and re-used internally with no discharges into the drain system. Utility connections and improvements would be limited to the project site and public right-of-way. Mitigation measures included in the MND would reduce environmental effects to less than significant, thus the project would have a less than significant impact with mitigation incorporated.

The total water usage for facility operation, based on the full production capacity of 13.1 metric tons of hydrogen per day, would be 100 acre-feet per year over the 25-year life of the project. The daily water usage would be approximately 90,000 gallons per day over the 350 operational days each year. The MND noted that the project would have sufficient water supplies available to serve the project and reasonably foreseeable future development because the facility would be designed to minimize water requirements through the retention of stormwater for onsite use, as well as the re-use of process wastewater and the purchase of water by the City's Economic Development Department. Therefore, the project would have no impact.

The MND further noted that the facility will not discharge into the storm drain system and would only be needed if the facility's wastewater treatment system is down for any reason. The wastewater treatment provider would have adequate capacity to serve the project's demand in addition to existing commitments because the project would have redundant systems to minimize wastewater requirements. There, the project would have no impact on wastewater treatment services.

The MND further noted that each day, solid waste generated at the facility would include 3.1 metric tons of slag and approximately 17 metric tons of brine. These wastes would be removed

by truck and taken to an appropriate disposal facility. The project would divert unrecyclable mixed waste paper from landfills and convert the waste paper into hydrogen while contributing to solid waste reduction goals. The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, and because solid waste generated at the facility would be sent to local landfills, the project would have no impact.

The MND further noted that the project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Because the solid waste generated at the facility would be removed by truck and disposed of at an appropriate disposal facility in compliance with solid waste statutes and regulations; and the project would also prevent waste paper from being disposed of in landfills, therefore the project would have no impact.

Therefore, I recommend that CEC finds that, on the basis of the entire record, that the utilities and service systems impacts of the proposed project are less than significant, with mitigation incorporated with respect to relocation or construction of new/expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities. The proposed project would have no impact on available water supplies and the capacity of the local wastewater treatment provider to meet its existing commitments. The proposed project would have no impact on the generation of solid waste, and would have no impact on compliance with federal, state, and local LORS related to solid waste.

Wildfire:

The MND noted that the project site is not in a designated fire hazard severity zone. Thus, there would be no impact with respect to exacerbating wildfire risks and exposing employees to wildfire pollutants. There would likewise be no impact regarding the installation or maintenance of infrastructure that would exacerbate fire risk. Lastly, there would be no impact with respect to exposing people or structures to significant risks of flooding or landslides as a result of runoff, post-wildfire slope instability, or drainage changes because the project site is not susceptible to these hazards.

Mandatory Findings of Significance:

The MND noted that impacts to biological and cultural resources would be mitigated to less than significant with the incorporation of mitigation measures included in the MND.

The MND also notes that the project does not have impacts that are individually limited, but cumulatively considerable, but with implementation of mitigation measures the project would not result in a cumulatively considerable contribution to cumulative impacts.

The project does not have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly with the implementation of the mitigation measures included in the MND.

VI. Conclusion.

Pursuant to my work in developing the proposed project, I have reviewed the Initial Study, MND including mitigation measures, Scope of Work, CUP, Site Plan, filed Notice of Determination and related documentation.

Based on my review and consideration of the above documents, it is my independent and 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 have occurred. Furthermore, I have not identified any new information which would change the conclusions of the City's CEQA documents or render those conclusions inadequate. It is also my independent and professional opinion that the work to be performed under the proposed project falls within the scope of the IS and MND, and that the proposed project will not result in any new significant environmental impacts. Finally, I have not identified any new mitigation measures, within the Commission's authority, that would lessen or further mitigate the impacts of the proposed project.

The reasons for my conclusions are as follows:

As discussed above, the project analyzed in the MND included the facilities and equipment (administrative/control and warehouse building, pumps, boilers, compressors, power generation, oxygen-blown fixed bed gasification island, ground level flare, wastewater treatment system, flare stack, emergency generator, cooling tower, deaerator vent, oil-water separator, PSA, ASU, hydrogen processing, storage and transportation) for the proposed project. Additionally, the City approved the Site Plan and CUP for the proposed project. The renewable hydrogen fuel to be produced by the proposed project will have a low carbon intensity that will provide a substantial decrease to GHG emissions by displacing gasoline and/or diesel use in fuel cell vehicles.

California Environmental Quality Act

Initial Study/Mitigated Negative Declaration and City of Lancaster Notice of Determination

Title of project: Lancaster Waste to Renewable Hydrogen

Follow the links below to view the documents listed above:

City of Lancaster's Initial Study and Mitigated Negative Declaration; and the City's Conditional Use Permit No. 21-06:

<https://www.dropbox.com/t/sJDGweajprhEZLoo>

City of Lancaster's CUP 21-06: Approval letter, approved conceptual grading, approved elevations, approved site plan, filed and posted Notice of Determination, Negative Declaration.

<https://www.dropbox.com/t/Kgi2et6frym7N3hZ>