**Notice of Exemption** **Form D**

**To:** Office of Planning and Research
PO Box 3044
1400 Tenth Street, Room 113
Sacramento, CA 95812-3044

**From:** California Energy Commission
1516 Ninth Street, MS-48
Sacramento, CA 95814

**Project Applicant:** The Regents of the University of California on behalf of the Los Angeles Campus

**Project Title:** Direct Solar Conversion of Biogas to Hydrogen and Solid Carbon: A Novel, Zero-Carbon Process

**Project Location:**

| Address | City | County |
|---|---|---|
| 62950 20th Ave | Palm Springs 92262 | Riverside |
| 570 Westwood Plaza Building 114 | Los Angeles 90095 | Los Angeles |

**Description of Nature, Purpose and Beneficiaries of Project:**

Under grant Agreement PIR-21-004, the California Energy Commission will provide a grant of $749,999 to the Regents of the University of California on behalf of the Los Angeles Campus (UCLA) to design, build, test, and run a pilot demonstration of a technology that produces hydrogen and solid carbon from biogas.

In more detail, the purpose of this Agreement is to fund the development and demonstration of a novel hydrogen production pathway that converts 100% renewable biogas into hydrogen and high-value graphitic carbon. Relying on concentrated solar energy as a heat source, the system increases reactor temperature to above 1,000 degrees Celsius. The ultra-low, carbon-negative process results in hydrogen gas for various purposes and graphitic electrode material for use in the rapidly expanding Li-ion battery market. The proposed system is intended to on site for a period of up to one year and operate for a small fraction of that time, estimated as up to several weeks.

Beneficiaries will include users of hydrogen and lithium-ion battery manufacturers who use graphitic carbon. The technology, when commercialized, is intended to lead zero-carbon technology development, increase domestic jobs, and the produce clean hydrogen at a very low cost.

Utility ratepayer benefits include: 1) Greater electricity reliability by developing a new technology capable of producing: low-carbon hydrogen that can be stored and subsequently used to power backup or resiliency power generation systems. 2) Lower costs for renewable hydrogen production by developing a new, low-carbon, low cost hydrogen production technology capable of converting biogas to hydrogen while further offsetting production costs through co-product sales. Hydrogen generated by the system can be subsequently used for a variety of end uses including transportation, high-temperature heating for industrial processes, and electricity generation in fuel cells or otherwise to support high-efficiency and reduced cost electricity production based on stored renewable energy.

**Name of Public Agency Approving Project:** California Energy Commission

**Name of Person or Agency Carrying Out Project:** The Regents of the University of California on behalf of the Los Angeles Campus

**Exempt Status:** (*check one)*

- ☐ Ministerial Exemption (Pub. Resources Code § 21080(b)(1); Cal. Code Regs., tit. 14, § 15268);
- ☐ Declared Emergency (Pub. Resources Code § 21080(b)(3); Cal. Code Regs., tit. 14, § 15269(a));
- ☐ Emergency Project (Pub. Resources Code § 21080(b)(4); Cal. Code Regs., tit. 14, § 15269(b)(c));

Authority cited: Sections 21083 and 21110, Public Resources Code. Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

☒ Categorical Exemption. State type and section number

Cal. Code Regs., tit. 14, § 15306; Cal. Code Regs., tit. 14, § 15303

☐ Statutory Exemptions. State code number.

☐ Common Sense Exemption. (Cal. Code Regs., tit. 14, §15061(b)(3))

**Reasons why project is exempt:**

Cal. Code Regs., tit. 14 Section 15306 provides that projects which consist of basic data collection, research, experimental management, and resource evaluation activities, and which do not result in a serious or major disturbance to an environmental resource are categorically exempt from the provisions of the California Environmental Quality Act. Under this grant, first, the technology will be developed and tested at existing laboratory facilities at UCLA in Los Angeles, California. (California Nanosystems Institute, 570 Westwood Plaza building 114, Los Angeles.) Second, the technology will be moved to an existing wind farm for testing at a larger scale, using solar thermal power. There are no sensitive environmental resources at the demonstration site. For these reasons, the proposed work will not have any significant effect on the environment and is exempt under Cal. Code Regs., tit 14, Section 15306,

Section 15303, "New Construction or Conversion of Small Structures," covers construction and location of limited numbers of new, small facilities or structures; and installation of small new equipment and facilities in small structures. The demonstration phase of the project includes preparing and deploying a pilot technology demonstration consisting of at least two skid-mounts or shipping containers holding the technology, a trailer, a parabolic solar collector, a tank truck for renewable biogas, a tank or tanks for hydrogen gas, and appurtenances, with a total area of 5.000 square feet or so, on up to an acre of land. These components will sit on disturbed land at a wind turbine farm within the existing property boundary. After testing, the components will be removed. Hydrogen gas storage safety protocols will be followed. Based on these characteristics, the project is exempt under Section 15303.

**Lead Agency**
**Contact Person:** **Baldomero Lasam** **Area code/Telephone/Ext:** 916-776-0784

**If filed by applicant:**
1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? ☐ Yes ☐ No

**Signature:** B. Lasam **Date:** 05/12/2022 **Title:**

☒ **Signed by Responsible Agency**

☐ **Signed by Lead Agency**

☐ **Signed by Applicant** **Date received for filing at OPR:**

Authority cited: Sections 21083 and 21110, Public Resources Code. Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.