

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

From: California Energy Commission
715 P Street
Sacramento, CA 95814

Project Applicant: Twelve Benefit Corporation

Project Title: Long Duration CO₂ Storage via CO₂-derived Cement Additives

Project Location – Specific: 1135 Atlantic Ave

Project Location – City: Alameda 94501 **Project Location – County:** Alameda

Description of Nature, Purpose and Beneficiaries of Project:

Twelve Benefit Corporation has developed a versatile technology platform for conversion of CO₂ emissions and renewable electricity to value-added chemical and fuel end products. This project conducts basic research and will result in scaled down prototype construction in a laboratory setting. One of the proposed end products is calcium formate, which can be incorporated into cement to enhance stability and drying in wet or low temperature environments. This project will optimize electrolysis technology, develop a pathway to calcium formate, demonstrate the ability to utilize CO₂ from cement plant flue gas, and test the product with an industrial partner. This project will explore the full lifecycle of renewable carbon: from industrial capture to conversion to long-duration storage in cement.

Name of Public Agency Approving Project: California Energy Commission

Name of Person or Agency Carrying Out Project: Twelve Benefit Corporation

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));
- Categorical Exemption. State type and section number
Cal. Code Regs., tit. 14, § 15301; Cal. Code Regs., tit. 14, § 15306
- 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, § 15301: A project that consists of operation, repair, maintenance, permitting, leasing, licensing, or minor alteration 2) of existing structure, facilities, or mechanical equipment, 3) which involves negligible or no expansion of use beyond that existing or former use is categorically exempt from CEQA. This project includes the fabrication and assembly of electrolyzer stacks and integration of those stacks into a commercial scale electrolyzer unit for testing. The commercial scale unit is designed to fit in a standard shipping container. The commercial scale electrolyzer

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

will be skid mounted for demonstration inside an existing facility used for research purposes. The project will not involve any construction activities such as excavation or digging. Therefore, this project is exempt from CEQA.

Cal. Code Regs., tit. 14, § 15306: The project includes conducting paper studies for LCA, TEA, and FEL-1 design, and conducting laboratory research on electrolyzer experiments, and design/planning work for CO2-to-formate pathway design and fits within the following criteria: Project consists of basic data collection, research, experimental management, and resource evaluation activities 2) Which do not result in a serious or major disturbance to an environmental resource. This project is exempt from CEQA under section 15306.

This proposed project does not impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies; does not involve any cumulative impacts of successive projects of the same type in the same place that might be considered significant; does not involve unusual circumstances that might have a significant effect on the environment; will not result in damage to scenic resources within a highway officially designated as a state scenic highway; the project site is not included on any list compiled pursuant to Government Code section 65962.5, and the project will not cause a substantial adverse change in the significance of a historical resource. Therefore, none of the exceptions to categorical exemptions listed in CEQA Guidelines section 15300.2 apply to this project and this project will not have a significant effect on the environment.

Lead Agency

Contact Person: Michael Lozano **Area code/Telephone/Ext:** 916-776-0788

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: Michael Lozano **Date:** Nov 3, 2023 **Title:** Sr Mechanical Eng.

Signed by Responsible Agency

Signed by Lead Agency

Signed by Applicant

Date received for filing at OPR: _____






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Final Audit Report

2023-11-03

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| Created: | 2023-11-03 |
| By: | Tiffany Solorio (tiffany.solorio@energy.ca.gov) |
| Status: | Signed |
| Transaction ID: | CBJCHBCAABAAAdVTaDYU00eyCWNRqLZL_yPHM8c-yrfoc |

"07_CEQA_NOE_EPC_23-015_TwelveBenefit_Signed" History

-  Document created by Tiffany Solorio (tiffany.solorio@energy.ca.gov)
2023-11-03 - 7:14:04 AM GMT- IP address: 104.220.185.59
-  Document emailed to Michael Lozano (Michael.Lozano@energy.ca.gov) for signature
2023-11-03 - 7:15:42 AM GMT
-  Email viewed by Michael Lozano (Michael.Lozano@energy.ca.gov)
2023-11-03 - 7:28:47 AM GMT- IP address: 104.47.64.254
-  Document e-signed by Michael Lozano (Michael.Lozano@energy.ca.gov)
Signature Date: 2023-11-03 - 7:29:37 AM GMT - Time Source: server- IP address: 102.129.252.108
-  Agreement completed.
2023-11-03 - 7:29:37 AM GMT