

DOCKETED

Docket Number:	24-OPT-02
Project Title:	Compass Energy Storage Project
TN #:	262173
Document Title:	Theresa Ford Comments - GREENHOUSE GAS EMISSIONS
Description:	N/A
Filer:	System
Organization:	Theresa Ford
Submitter Role:	Public
Submission Date:	3/13/2025 10:41:46 AM
Docketed Date:	3/13/2025

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Submitted On: 3/13/2025
Docket Number: 24-OPT-02*

GREENHOUSE GAS EMISSIONS

Additional submitted attachment is included below.

California Energy Commission
1516 9th Street Sacramento, CA 95814
24-Opt-02 The Compass Project

March 13, 2025

Subject: Concerns Regarding Regulatory Gaps for Battery Energy Storage Systems

Dear Commissioners,

I am writing to express my concerns about a regulatory gap that allows developers of emerging technologies, such as Battery Energy Storage Systems (BESS), to utilize environmentally harmful substances like R-134a refrigerant by exploiting the lack of explicit regulatory provisions for these applications.

BESS technology and large-scale facilities are relatively new, and current regulations have not kept pace with these advancements. This gap allows potentially harmful practices to go unchecked, as demonstrated here in the Compass Energy Storage Project.

In the most recent report submitted by Engie in response to the California Energy Commission's (CEC) request—REV 2 DR AQ-GHG-PH Response (dated March 5, 2025)—the company outlined its use of R-134a refrigerant in its BESS thermal management system. Specifically, section 1.5 of the report states: "The liquid cooling system utilizes approximately 380 liters (100 gallons) of the ethylene glycol-water solution, and the vapor compression portion of the cooling cycle utilizes 1.5 kilograms (3.3 pounds) of R-134a refrigerant. The R-134a refrigerant is a gas at atmospheric pressure, but the MP2XL does not condition air as all components in the liquid thermal management system use the coolant specifically as a working fluid."

The report goes on to reference the California Air Resources Board (CARB) regulation "Prohibitions on Use of Certain Hydrofluorocarbons (HFCs) in Stationary Refrigeration, Stationary Air-conditioning, and Other End-Uses (17 Cal. Code Regs., § 95371 et seq.)," which prohibits the use of R-134a in numerous applications, including retail food refrigeration, vending machines, cold storage warehouses, household refrigerators and freezers, foams, and aerosols. However, Engie asserts that this prohibition does not apply to the Compass BESS project due to the specific applications listed in the regulation.

This case exemplifies how a lack of regulatory foresight creates loopholes that can undermine California's environmental goals. While the use of R-134a by Compass Energy Storage may technically comply with current regulations, it highlights a significant gap in addressing the environmental risks associated with emerging technologies like BESS.

Hydrofluorocarbons such as R-134a are widely recognized for their high global warming potential (GWP), and their use has been restricted in many industries for good reason. Allowing their use in novel applications without proper regulatory oversight conflicts with California's leadership in sustainability and climate change mitigation.

I urge the Commission to recognize this regulatory gap and consider how reviews and discussions for projects such as Compass BESS could proactively address environmental risks posed by emerging technologies. The absence of explicit regulatory provisions for BESS applications must not serve as a rationale for allowing practices that would otherwise be prohibited in well-established industries.

In closing, I would like to think that BESS facilities, which represent the future of energy storage and our fight against climate change, should be held to even more stringent environmental standards than a business such as Albertsons Grocery Store, which is already subject to these prohibitions.

Thank you for your attention to this matter.

Sincerely,

Theresa Ford