DOCKETED	
Docket Number:	03-AFC-02C
Project Title:	Los Esteros Phase II Compliance
TN #:	266964
Document Title:	ROC - CEC and CARB HFC Reduction Team
Description:	ROC between CEC STEP AQ unit staff and CARB's HFC Reduction team
Filer:	Andres Perez
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	10/31/2025 12:14:51 PM
Docketed Date:	10/31/2025

Siting, Transmission and Environmental Protection Division

		FILE: Docket	
	PROJECT TITLE: Los Esteros Phase II Compliance		**Docket:** 03-AFC-02C
TECHNICAL AREA(s): *Greenhouse Gases*			
☐ **Telephone**	☒ **Email**	☐ **Meeting Location:** N/A	
NAME(s):	Winston Potts, Air Resources Engineer, CEC	**DATE:** March 27-April 9, 2025	**TIME:** Various
WITH:	*HFC Reduction Team, California Air Resources Board*		
SUBJECT:	*Classification of BESS Cooling Systems under CARB's HFC Regulation*		

COMMENTS:

Winston Potts, CEC AQ Unit Staff, corresponded via email with representatives from the California Air Resources Board's (CARB) Hydrofluorocarbon Reduction team between March 27, 2025 and April 9, 2025 to discuss how BESS cooling systems would be classified under CARB's HFC Regulation (17 CCR Section 95371, et seq.).

cc:	**Signed:** _____|s|_____ **Name**: Andres Perez, STEP Air Quality, Public Health and TLS&N Unit Staff

Outlook

FW: HFC Prohibition Regulation

From Qian, Wenjun@Energy <Wenjun.Qian@energy.ca.gov>
Date Wed 4/9/2025 3:28 PM
To Chu, Ann@Energy <Ann.Chu@energy.ca.gov>; Ding, Yifan@Energy <Yifan.Ding@Energy.ca.gov>; Jiang, Tao@Energy <Tao.Jiang@energy.ca.gov>; Perez, Andres@Energy <Andres.Perez@Energy.ca.gov>; Potts, Winston@Energy <Winston.Potts@Energy.ca.gov>; Qian, Wenjun@Energy <Wenjun.Qian@energy.ca.gov>; Record, Jacquelyn@Energy <Jacquelyn.Record@energy.ca.gov>; Wang, Tianyi@Energy <Tianyi.Wang@energy.ca.gov>

FYI. CARB response regarding refrigerant use for BESS cooling.

Wenjun

From: ARB RD HFCReduction <HFCReduction@arb.ca.gov>
Sent: Wednesday, April 9, 2025 3:26 PM
To: Potts, Winston@Energy <Winston.Potts@Energy.ca.gov>
Cc: Qian, Wenjun@Energy <Wenjun.Qian@energy.ca.gov>
Subject: Re: HFC Prohibition Regulation

Good Afternoon Winston,

Following our discussion this morning, we have determined that the Thermal Management System for the BESS unit will be classified as “chillers – industrial process refrigeration” under our HFC Regulation, effective January 1, 2024. The GWP limits for industrial process refrigeration chillers depend on the temperature of the chilled fluid leaving the chiller. For your equipment, it is likely that the chilled fluid temperature exceeds 2 degrees Celsius (or 35 degrees Fahrenheit), which makes it subject to the 750 GWP limit.

Please note that the 50-pound charge threshold exemption in section 95375(c)(2)(B) applies only to refrigeration equipment, not chillers.

Thank you,

HFC Reduction Team
Please note that the regulation may include additional requirements. The regulation prevails when there is an apparent or actual inconsistency between staff’s instructions and regulatory text.

From: ARB RD HFCReduction <HFCReduction@arb.ca.gov>
Sent: Monday, April 7, 2025 1:48 PM
To: Potts, Winston@Energy <Winston.Potts@Energy.ca.gov>
Cc: Qian, Wenjun@Energy <Wenjun.Qian@energy.ca.gov>
Subject: Re: HFC Prohibition Regulation

Good Afternoon Winston,

We can not provide specific guidance on your equipment without additional information. Would you be able to provide a spec sheet of the product? If it's easier, you can call my desk (279-208-7144) for a quick chat.

Thanks,

Chris Martinez

Air Pollution Specialist

F-Gas Reduction Strategy Section

Research Division

CALIFORNIA
AIR RESOURCES BOARD

From: Potts, Winston@Energy <Winston.Potts@Energy.ca.gov>
Sent: Thursday, March 27, 2025 1:10 PM
To: ARB RD HFCReduction <HFCReduction@arb.ca.gov>
Cc: Qian, Wenjun@Energy <Wenjun.Qian@energy.ca.gov>
Subject: HFC Prohibition Regulation

Dear CARB Staff,

We have a situation involving the Opt-In Certification of a battery energy storage system (BESS). A BESS stores and releases electricity to help balance supply and demand, stabilize the grid, and support renewable energy use in California. The applicant is proposing the use of R-134a in each of the battery enclosures as part of the Thermal Management System (TMS) which will be a liquid cooling system cooled by R-134a in a vapor compression cycle. The amount of refrigerant in each TMS is 1.5 kilograms (3.3 pounds). From examining the site plan, there appear to be in excess of 100 battery enclosures with one of these cooling systems installed. This would indicate an aggregate refrigerant charge in excess of 300 pounds.

The CARB regulation “Prohibitions on Use of Certain Hydrofluorocarbons (HFCs) in Refrigeration, Stationary Air-conditioning, and Other End-Uses (17 Cal. Code Regs., § 95371 et seq.),” 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, the application in this battery cooling situation does not seem to fall under these regulatory applications.

If this equipment is considered new “industrial process refrigeration”, then it would appear to be exempted under 95375(c)(2)(B) because the refrigeration equipment contains 50 pounds or less of refrigerant. Under the definition for Refrigeration Equipment or Refrigeration System, multiple independent circuits are considered a separate article of equipment. In this case, each circuit contains 3.3 pounds.

In summary, it appears that this regulation may not apply to this facility. I have attached the public comment letter concerning this matter. We look forward to hearing from you.

Sincerely,

Winston Potts

California Energy Commission