

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER [H4-25-002]

Variance from Prohibitions on Use of Certain Hydrofluorocarbons in Stationary Refrigeration, Stationary Air-Conditioning, and Other End-Uses Requirements

**LG Electronics, Inc.
LG PuriCare™ 50** Pint Dehumidifier with Drain Pump
(Models UD501KOJ5 and UD501KOG5)**

WHEREAS, pursuant to California Health and Safety Code sections 39730, 39730.5, and 39734, the California Air Resources Board (CARB) has established prohibitions on the use of certain hydrofluorocarbons (HFCs) in stationary refrigeration, chillers, aerosols-propellants and foam end uses, as described in California Code of Regulations, title 17, section 95371-95379 (HFC Regulation);

WHEREAS, pursuant to California Health and Safety Code section 39734, CARB has established a list of prohibited substances, as set forth in the HFC Regulation;

WHEREAS, under California Code of Regulations, title 17, section 95734 a manufacturer may not use a substance with a global warming potential (GWP) of greater than 750 in a "Residential Dehumidifier" after January 1, 2023;

WHEREAS, California Code of Regulations, title 17, section 95378 allows a manufacturer to apply for a variance from one or more use prohibitions;

WHEREAS, a manufacturer may submit a request to the Executive Officer for a variance from the requirements of sections 95374 and 95375;

WHEREAS, the Executive Officer may grant a variance if the Executive Officer determines that the Applicant has proven by clear and convincing evidence that the criteria for a variance in specified in section 95378, subsection (b) has been met and that the Applicant has complied with all application requirements specified in section 95378, subsection (c);

WHEREAS, under section 95378, subsection (b)(1), the Executive Officer may grant a variance for impossibility if the Applicant cannot comply with the regulatory requirements, and the Applicant can demonstrate all of the following criteria: (1) A lower-risk substitute is not currently or potentially available; (2) An exemption will not increase the overall risk to human health or the environment; and (3) The Applicant has used best efforts to anticipate and address the impossibility and any potential noncompliance;

WHEREAS, LG Electronics, Inc. (LG) applied on June 12, 2023, for a variance from the prohibitions on the use of certain HFCs in stationary refrigeration, chillers, aerosols-propellants and foam end uses for its LG PuriCare™ 50** Pint Dehumidifier with Drain Pump (Models UD501KOJ5 and UD501KOG5) (products);

WHEREAS on July 10, 2023 CARB Staff determined that the variance application was complete;

WHEREAS, CARB staff posted LG's variance application for public comment beginning July 25, 2023 and ending August 24, 2023, during which time public comment was invited, four comments were received, two of which in part expressed concerns of the climate impacts from the use of R-410a, one of which in part expressed concerns with the methodology that was used by LG to calculate their emissions, and one of which in part expressed general concerns with HFC emissions and a desire that LG develop systems that a refrigerant with a GWP much lower than R-32;

WHEREAS, LG presented evidence that they began development of a compressor for a compliant dehumidifier product using R32 in July 2022, and that product development, performance testing, product liability evaluation, and safety certification will continue through June 2024. Development began once R32 was proposed for use in this application under United States Environmental Protection Agency Significant New Alternatives Policy (US EPA SNAP) Proposed Rule 25, which was released in July 2022.

WHEREAS, CARB staff affirmed that the products meet the definition of a "Residential Dehumidifier" as described in section 95373 of the HFC Regulation, and is prohibited from containing refrigerants with a GWP of 750 or greater if manufactured after January 1, 2023 as described in Table 3 in section 95374 of the HFC Regulation;

WHEREAS, LG will need to redesign the products to bring them into compliance with the HFC Regulation, and the company presented evidence that in the absence of a variance it could not complete the redesign, testing, manufacturing, and certification process for compliance before model year 2025;

WHEREAS, LG stated that without a variance, it would incur at least \$6.5 million in lost sales;

WHEREAS, CARB staff did not dispute LG's assessment of the time LG would need to bring the products into compliance with the HFC Regulation and did not dispute LG's quantification of economic losses if a variance was not granted;

WHEREAS, LG proposed in its variance application to offset the increased emissions of R410a from their dehumidifiers during 2024 through the early adoption of R32 in their split air conditioners before the required January 1, 2025 compliance date;

WHEREAS, LG has demonstrated that without a variance it is impossible for LG to comply with California Code of Regulations, title 17, section 95734;

WHEREAS, LG has demonstrated that a lower-risk substitute is not currently or potentially available because a complete product redesign is required in order to change refrigerants and perform the required testing and certification procedures;

WHEREAS, CARB issued LG a variance from the HFC Regulation by Executive Order No. H-4-23-001 on October 19, 2023, which this Executive Order modifies.

WHEREAS, LG on April 19, 2024 posted a notice on its online brand store that sales of LG PuriCare™ 50** Pint Dehumidifier with Drain Pump products (Models UD501KOJ5 and UD501KOG5) are prohibited in California, and notified its retailers in May 2024 to immediately cease sales of these models.

WHEREAS, LG has demonstrated that an exemption will not increase the overall risk to human health or the environment because LG will either sell 1,000 Multi Heat Pumps and 500 Single Heat Pumps using R32 refrigerant (GWP of 675) in 2024 or LG will purchase 3,920 metric tons of carbon offset credits from a reputable provider by January 31, 2025, to completely offset the increased emissions from the dehumidifier products.

WHEREAS, LG has demonstrated that it has used best efforts to anticipate and address the impossibility and any potential noncompliance;

NOW, THEREFORE, I, Michael FitzGibbon, based on materials submitted by LG, find that:

1. LG cannot meet the HFC Regulation for LG PuriCare™ 50** Pint Dehumidifier with Drain Pump products (Models UD501KOJ5 and UD501KOG5) for reasons beyond its control, including the lead time required to design, test, manufacture, and bring to market fully compliant products;
2. Requiring LG to comply with the HFC Regulation for LG PuriCare™ 50** Pint Dehumidifier with Drain Pump products (Models UD501KOJ5 and UD501KOG5) would result in extraordinary economic hardship;
3. LG will mitigate the HFC Regulation noncompliance to the maximum extent feasible either by LG selling 1,000 Multi Heat Pumps and 500 Single Heat Pumps using R32 refrigerant in 2024 or LG will purchase 3,920 metric tons of carbon offset credits from a reputable provider by January 31, 2025, to fully offset any excess emissions from the noncompliance as specified further in the approval conditions below;

4. LG has submitted a compliance plan that can reasonably be implemented and will achieve compliance as expeditiously as possible, which is full compliance with the HFC Regulation for LG PuriCare™ 50** Pint Dehumidifier with Drain Pump products (Models UD501KOJ5 and UD501KOG5); and
5. Based on the entire record, LG has proven by Clear and Convincing Evidence that it has met the criteria for issuance of a variance to LG for models specified below with the conditions specified below because: LG has demonstrated: (a) A lower-risk substitute is not currently or potentially available; (b) An exemption will not increase the overall risk to human health or the environment; and (b) The Applicant has used best efforts to anticipate and address the impossibility and any potential noncompliance.

IT IS ORDERED AND RESOLVED that LG is granted a variance through December 31, 2024 so that the following products do not need to comply with the HFC Regulation requirements in Table 3 in section 95374:

LG Electronics, Inc.
LG PuriCare™ 50 Pint Dehumidifier with Drain Pump**
(Models UD501KOJ5 and UD501KOG5)

This Executive Order modifies, replaces and supersedes Executive Order No. H-4-23-001 issued by CARB on October 19, 2023.

This variance is granted subject to LG’s compliance with each of the following conditions of approval, and the variance will cease to be effective if any of the following conditions are not met, as provided in California Code of Regulations, title 17, section 95378, subdivision (f).

IT IS FURTHER ORDERED that LG implement as its compliance plan the following schedule for bringing the products into compliance with the HFC Regulation:

Development Phase	Time Period
1. Development of a new compressor for R32	October 15, 2023
2. Design a new product and conduct performance testing	November 1, 2023
3. Evaluate product liability	January 1, 2024
4. Acquire safety certification	March 1, 2024
5. Begin sales of R32 Split Heat Pumps	November 1, 2024

This paragraph specifies increments of progress necessary to assure timely compliance with the HFC Regulation. CARB staff may authorize in writing minor deviations from this schedule if staff determines that LG has shown good cause for the deviation and demonstrated to staff’s satisfaction that the deviation will not delay the final compliance date, as set forth in the compliance plan.

IT IS FURTHER ORDERED that if LG does not sell 1,000 Multi Heat Pumps and 500 Single Heat Pumps using R32 refrigerant by December 31, 2024, then by January 31, 2025 LG will purchase 3,920 metric tons of carbon offset credits from a reputable provider.

IT IS FURTHER ORDERED that LG shall maintain records substantiating its timely compliance with this Executive Order. Records of LG’s timely compliance with this Executive Order must be made available to the Executive Officer, or their delegee, upon request.

IT IS FURTHER ORDERED that the final date that LG will complete this compliance plan is January 31, 2025.

Executed in Sacramento, California this 30th day of October, 2024.

Mike FitzGibbon

Michael FitzGibbon, Chief
Atmospheric Science and Climate Strategies Branch
Research Division
CALIFORNIA AIR RESOURCES BOARD