Office of Senate Floor Analyses
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THIRD READING

Bill No: AB 663
Author: McKinnor (D)
Amended: 7/14/25 in Senate
Vote: 27 - Urgency

SENATE ENVIRONMENTAL QUALITY COMMITTEE: 6-0, 6/18/25
AYES: Blakespear, Valladares, Dahle, Hurtado, Menjivar, Pérez
NO VOTE RECORDED: Gonzalez, Padilla

SENATE APPROPRIATIONS COMMITTEE: Senate Rule 28.8

ASSEMBLY FLOOR: 77-0, 5/12/25 - See last page for vote

**SUBJECT:** Hydrofluorocarbon gases: sale and distribution prohibition: exemptions

**SOURCE:** Hudson Technologies

**DIGEST:** This bill eliminates a reference to one set of federal regulations and replaces it with a reference to a different federal regulation to ensure reclaimed hydrofluorocarbons (HFCs) used in the state contain no more than 15% virgin HFCs.

*Senate Floor Amendments* of 7/14/25 make technical word changes and alter a reference to a federal regulation.

**ANALYSIS:**

Existing federal regulations:

1) Define, under the federal Clean Air Act, a reclaimed refrigerant based on a "level of purity" test to ensure it is free from certain contaminants, but this definition is not related to whether the refrigerant is recycled.

2) Prohibit, under the federal American Innovation and Manufacturing (AIM) Act of 2020, a person from claiming a refrigerant has been "reclaimed" or recycled if it contains more than 15%, by weight, of virgin material (Code of Federal Regulations Title 40: Chapter I: Subchapter C; Part 84: Subpart C: 84.112 (a)).

Existing state law:

1) Defines "hydrofluorocarbons" (HFCs) as fluorinated gases used primarily as refrigerants in refrigeration, air-conditioning equipment, foam expansion agents, aerosol propellants, solvents, and fire suppressants (Health & Safety Code (HSC) §39734).

2) Defines "global warming potential" (GWP) as a measure of how much energy the emissions of one ton of a gas will absorb over a given period of time, relative to the emissions of one ton of carbon dioxide (CO2) (HSC §39735).

3) Precludes a person from selling or distributing bulk HFCs or bulk blends containing HFCs that exceed a GWP of 2,200 as of January 1, 2025, a GWP or 1,500 as of January 1, 2030, and a GWP of 750 as of January 1, 2033 (HSC §39735).

4) Precludes, as of January 1, 2025, HFCs with a GWP greater than 750 that are not reclaimed from being used to replenish any leaks or to service stationary equipment owned or operated by the state (HSC §39735).

5) Exempts from the prohibition in (3) HFCs that are reclaimed (as defined by the federal Clean Air Act, not the AIM Act) and HFCs used exclusively in metered dose inhalers approved by the United States Food and Drug Administration for medical purposes (though this second exemption expires on December 27, 2030) (HSC §39735).

This bill:

1) Eliminates the exemption for "reclaimed hydrofluorocarbons" as defined under federal regulation found in the federal Clean Air Act (which relies on a purity standard) and replaces it with a new exemption for a "certified reclaimed refrigerant," which this bill defines as used refrigerant that:

a) Has been reclaimed by a refrigerant reclaimer certified by the United States Environmental Protection Agency (U.S. EPA) from a previously used appliance;
b) Meets all specifications of regulations developed under the AIM Act that are found in Appendix A to Subpart F (commencing with Section 82.150) of Part 82 of Title 40 of the Code of Federal Regulations, as those regulations existed as of October 1, 2024, as demonstrated by an analysis conducted to verify that it meets these specifications; and
c) Contains no more than 15% virgin HFC refrigerant by weight.

2) Defines a "virgin HFC refrigerant" as HFC refrigerant that has not been previously used.

3) Exempts "certified reclaimed refrigerant" from the current law prohibition on using unreclaimed HFCs with a GWP greater than 750 to replenish any leaks or to service stationary equipment owned or operated by the state.

**Background**

1) *Global Warming Potential.* Global warming potential, or GWP, is a relative measure of how much energy one ton of a greenhouse gas (GHG) traps in the atmosphere when compared to a one ton of CO2. The GWP of CO2 is standardized to one, so any GHG will be above one and the higher the number, the worse the GHG is for the environment because it means it will likely trap that much more energy (heat) in the atmosphere over a given time frame.

   GWP is typically calculated over a specific time interval, commonly 20, 100, or 500 years and the California Air Resources Board (CARB) uses GWPs calculated by the Intergovernmental Panel on Climate Change (IPCC) that are considered over a 100-year timeframe.

   Here's an example to illustrate how GWP works: CFC-11, or trichlorofluoromethane, is a chlorofluorocarbon that was once widely used as a refrigerant, aerosol propellant, and foam-blowing agent. It has a GWP of 5,000 – meaning when comparing one ton of CFC-11 to one ton of CO2, the CFC-11 will trap 5,000 times more energy in the atmosphere than CO2 over a 100-year timeframe.

2) *Hydrofluorocarbons 101.* Hydrofluorocarbons, better known as HFCs, are used in a number of different places in our society, most notably in refrigerators and

air conditioning units, and comprise approximately 10% of California's GHG emissions.

HFCs are man-made chemical organic compounds that contain fluorine and hydrogen atoms and are usually a gas at room temperature. They are short-lived pollutants with high GWP potential and when released into the atmosphere, they absorb outgoing infrared radiation which traps heat in the atmosphere and contributes to global warming. They usually have a much shorter life (on average 15 years) in the atmosphere than CO2 (100s of years) – but despite their short lifespan, one molecule of HFC will absorb significantly much more infrared energy than CO2 because of its carbon-fluorine bonds. Most HFCs have GWPs in the 1,000s – meaning that every ton of HFCs emitted is equal to releasing 1,000 tons or more of CO2 for the purposes of global warming.

According to CARB, "Fluorinated gases – especially HFCs – are the fastest-growing source of GHG emissions both in California and globally. More than three-quarters of HFC emissions in California come from the use of refrigerants in the commercial, industrial, residential, and transportation sectors."

3) *SB 1206 (Skinner, Chapter 884, Statutes of 2022).* SB 1206 limited the use of HFCs in equipment owned or operated by the state by requiring reclaimed – not virgin – HFCs be used to replenish leaks in any stationary equipment using HFCs. Properly reclaimed materials can be treated and reused to help avoid the production of new HFCs while also making older units more efficient.

4) *Two Federal Definitions of "Reclaimed."* SB 1206 relied on the definition of "reclaimed" found in federal regulations created under the federal Clean Air Act and incorporated it into state law by reference. That definition states a reclaimed refrigerant is based on a "level of purity" test to ensure it is free from certain contaminants – something that is unrelated to whether the refrigerant is recycled or reclaimed.

   That is in contrast with the federal definition created by the U.S. EPA pursuant to the AIM Act of 2020 that a "reclaimed HFC" is one that contains no more than 15% virgin materials.

**Comments**

1) *Purpose of this bill.* According to the author, "Hydrofluorocarbons have been found to have a dramatic negative impact on air quality and climate change when released into the atmosphere. These gases, called 'HFCs,' are used in a

variety of applications, including aerosols, refrigeration and air conditioning, among others.

"AB 663 would establish state standards for the recapturing of hydrofluorocarbon gases. Properly reclaimed gases can be treated and reused to help avoid the production of new HFCs while also restoring older units toward higher levels of efficiency. As these units reach their lifecycle end, newer technologies utilizing less-damaging materials are available, helping to move toward the state's air quality and emission reduction goals."

2) *Using The Right Definition To Promote HFC Reclamation and Recycling.* As noted in the "Background" section, state law references a definition of "reclaimed" in the federal codes that – because it is based on a level of purity, not a level of reclaimed or recycled HFCs – may or may not lead to an increase in HFC reclamation and a decrease in the use of virgin HFCs.

   This bill eliminates the reference to the federal "purity standard" regulation established under the federal Clean Air Act and replaces it with a reference to the definition of "reclaimed" found in the regulations developed under AIM as those regulations existed on October 1, 2024, which define "reclaimed" as containing no more that 15% virgin materials.

   By referring to the regulations as they existed at a certain point in time, it ensures any future changes to those regulations will have no impact in California that could – due to an increased use of reclaimed HFCs that don't meet the current 85% reclaimed/15% virgin standard – increase the level of GHG emissions in the state and undermine California's ability to meet its GHG reduction goals.

**Related/Prior Legislation**

SB 1013 (Lara, Chapter 375, Statutes of 2018), adopted analogous HFC regulations in state law and offered financial incentives to help businesses transition to the use of reclaimed HFCs.

SB 1206 (Skinner, Chapter 884, Statutes of 2022), prohibited the sale or distribution of bulk HFCs that exceed GWP limits of 2,200 by 2025, 1,500 by 2030, and 750 by 2033. SB 1206 requires the use of reclaimed HFCs when replenishing leaks or servicing equipment with HFCs with GWP greater than 750.

**FISCAL EFFECT:** Appropriation: No Fiscal Com.: Yes Local: Yes

**SUPPORT:** (Verified 7/15/25)

Hudson Technologies (Sponsor)
350 Humboldt: Grassroots Climate Action
California Product Stewardship Council
Californians Against Waste
Coalition for Clean Air
National Stewardship Action Council

**OPPOSITION:** (Verified 7/15/25)

None received

**ARGUMENTS IN SUPPORT:** According to this bill's sponsor, Hudson Technologies:

"Leaks from air conditioning and refrigeration units are a major source of emissions. It is estimated that an average grocery store refrigeration system leaking 25 percent of its total refrigerant charge results in an average of 1,780 metric tons of carbon dioxide equivalent, or emissions from nearly 400 passenger cars.

"AB 663 seeks to build upon SB 1206 (Skinner) of 2022, which sought to reduce the impact and use of HFCs in California. The bill limited the use of HFCs with specified global warming potential in state facilities by requiring the use of reclaimed HFCs to replenish leaks. However, the bill did not specifically define what levels of reclaimed materials meet the standard.

"AB 663 provides a clear definition of "reclaimed" by referring to federal standards that exist in law and are well understood by all players in the sector. The federal standard calls for at least 85 percent of the HFCs to be reclaimed to be labeled as such. This bill refers to that standard, thereby giving the State of California clear direction in implementing and meeting the requirements intended by SB 1206."

**ARGUMENTS IN OPPOSITION:**

None received.

ASSEMBLY FLOOR: 77-0, 5/12/25
AYES: Addis, Aguiar-Curry, Ahrens, Alanis, Alvarez, Arambula, Ávila Farías, Bains, Bauer-Kahan, Bennett, Berman, Boerner, Bonta, Bryan, Calderon, Caloza, Carrillo, Castillo, Chen, Connolly, Davies, DeMaio, Dixon, Elhawary,

Ellis, Flora, Fong, Gabriel, Gallagher, Gipson, Jeff Gonzalez, Mark González, Hadwick, Haney, Harabedian, Hart, Hoover, Irwin, Jackson, Kalra, Krell, Lackey, Lee, Lowenthal, Macedo, McKinnor, Muratsuchi, Nguyen, Ortega, Pacheco, Papan, Patel, Patterson, Pellerin, Petrie-Norris, Quirk-Silva, Ramos, Ransom, Celeste Rodriguez, Michelle Rodriguez, Rogers, Blanca Rubio, Sanchez, Schiavo, Schultz, Sharp-Collins, Solache, Soria, Ta, Tangipa, Valencia, Wallis, Ward, Wicks, Wilson, Zbur, Rivas

NO VOTE RECORDED: Garcia, Stefani

Prepared by: Evan Goldberg / E.Q. / (916) 651-4108.
7/15/25 16:21:42

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