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January 17, 2017

Mr. Richard Corey

Executive Officer

California Air Resources Board

1001 I Street

Sacramento, CA 95814

**Submitted via:** www.arb.ca.gov/board/comments

**Re: Lennox Comments on California Air Resources Board Proposed Short-Lived Climate Pollutant Reduction Strategy.**

Lennox International Inc. (Lennox) hereby submits comments regarding the, *Revised Proposed Short-Lived Climate Pollutant Reduction Strategy* that was published by the California Air Resources Board (CARB) on November 28, 2016.

Lennox is a leading provider of climate control solutions for the heating, air-conditioning, and refrigeration equipment markets. Lennox is a publicly-traded company focused on the HVACR industry and has thousands of employees. Lennox manufactures Residential and Commercial Air Conditioning and Commercial Refrigeration products that will be impacted by California regulations as an outcome of the proposed strategy and potential California regulatory actions.

Lennox supports California and national efforts to reduce climate pollutants to improve human health, help to preserve natural resources and protect our environment. This is exemplified by Lennox’s tradition of innovation and product efficiency leadership in the HVACR industry. Lennox appreciates the opportunity to work with CARB to develop reasonable, practical regulations that help to further California’s climate improvement initiatives.

**Revised Short Lived Climate Pollutant Strategy**

Lennox provided comments to the initial Short Live Climate Pollutant Strategy (SLCP published April 2016) in our May 26, 2016 comments. The core tenants of these comments remain applicable to the recent Revised SLCP published on November 28, 2016 which included:

* National Approach
* Development of Low GWP Alternatives
* EPA SNAP Approval
* Manufacturing Impacts
* Safety Training and Upgrades of Manufacturing Facilities
* Accelerating the transition to lower GWP refrigerants will increase product cost
* Purchase Incentives

Lennox strongly recommends that the impacts in these areas be fully considered as CARB moves to finalize its Short Lived Climate Pollutant Strategy (SLCP). Further, Lennox has reviewed the Revised Short Lived Climate Pollutant Strategy and has actively participated in recent CARB Public Workshops and Board Meetings regarding the SLCP strategy. Lennox understands reductions in SLCP emissions are an integral part of an overarching goal for California to reduce Green House Gas emissions. While, Lennox is generally supportive of CARB’s effort to reduce emissions of high global warming potential (GWP) HFC refrigerants as part of this strategy we emphasize that the mechanics to accomplish these objectives must be aligned with National interest while minimizing the consumer and industry impacts.

**National Approach**

Lennox is supportive of CARB’s efforts to reduce the climate impact of HFCs but only supports actions toward an effective National approach that is consistent with global efforts. All actions must be done in an orderly fashion which allows companies to continue to fulfill consumers need for products which are vital to public health, safety, energy conservation and comfort. As stated in our prior comments, Lennox finds that federal requirements through the US EPA and international agreements through the Montreal Protocol provide the most effective way to reduce emissions of high GWP refrigerants. Lennox has maintained a key leadership role and actively participated in the negotiations leading to the recent landmark Kigali Agreement to the Montreal Protocol. The Kigali Amendment now provides great potential to achieve significant world-wide HFC reductions moving the needle toward an improved global climate.

Lennox strongly supports a uniform federal mandate connected to a global approach as opposed to a patchwork of state-by-state efforts. A federal and global solution avoids a patchwork of policies which will lead to inconsistent requirements between regions and significant added costs of compliance which will be passed directly to consumers. It is understood that CARB is currently assessing the expected impact of the Kigali Amendment in terms of HFC emissions reductions regarding the SLCP strategy. If the results of this assessment indicate the need for additional HFC policies by California, Lennox encourages CARB to go beyond a peer-review of the assessment and initiate a formal opportunity for stakeholder review and input. This is particularly important as the results of assessment will not be available prior to the January 17, 2017 closing of the comment period for the SLCP strategy. This assessment needs to be fully vetted by all stakeholders prior to a final recommendation at the March 23, 2017 Public Board meeting.

As CARB proceeds from toward finalizing the SLCP strategy toward regulatory action, Lennox recommends strongly recommends that CARB consider all the industry actions to support the Montreal Protocol and increased DOE minimum efficiency standards in process in support of California’s climate goals. Lennox emphasizes that a patchwork approach will detract from support for National and Global climate and energy efficiency efforts.

While, Lennox appreciates CARB further evaluation of the GWP limit of 150 for commercial refrigeration equipment and 750 for air conditioning products and their effective dates the full scope of research, codes and standards, DOE regulatory actions and compliance timelines must be considered in the SLCP strategy prior to taking further regulatory action.

The industry has been researching alternative refrigerants for several years, and while alternatives have been identified, due diligence must be taken to insure the performance and safety aspects of these refrigerants and application processes are clearly established before implementation into consumer and commercial equipment. As CARB is aware most of the alternative refrigerants being considered are flammable. The use of flammable refrigerants in air conditioning and refrigeration products is significantly increased in complexity because it requires the update of product and application safety standards which then need to be included in building codes across the US. This presents unique challenges as the codes and standards must be in place prior to initiating redesigns required to safely use these refrigerants.

While industry has mobilized to accelerate the update of these safety codes, significant research must be completed to ensure that risk are thoroughly assessed and mitigation methods developed to allow these refrigerants to be used safely in air conditioning and refrigeration equipment. While significant effort and progress is ongoing, the safety standards will not be available for use before 2018 and are unlikely to be included in model building codes prior to 2021. Given that equipment cannot be redesigned before the completion of safety standards manufacturers are unlikely to start to transition product lines to low GWP alternative refrigerants until well after 2021.

**EPA SNAP Approval**

The GWP limits proposed by CARB require the use of alternative refrigerants that are not yet approved under the EPA SNAP program for several of the air conditioning and refrigeration sectors. EPA’s approval of these refrigerants is contingent upon the availability of safety codes and standards that properly address their use. With the expected delivery of the necessary safety codes and standards beginning with the 2021 code cycle at the earliest, it is unclear that SNAP approval will be in place to support potential CARB plans that exceed the requirements of the Montreal Protocol.

**Manufacturer Impacts and Alignment with DOE regulatory Actions**

The HVACR industry is a highly regulated industry and the impacts of several recent DOE rulemakings should be considered in the conversion process to low GWP alternatives. Many of the products that will be impacted by the CARB plan are burdened with layers of regulation.

Lennox strongly recommends that transitions to low GWP refrigerants be aligned with federal efficiency standard changes to streamline the development process and reduce the associated burdens that ultimately impact consumers and end-users. Lennox recommends CARB plan for low GWP refrigerant regulations on these products to start no sooner than the new standard dates. Several of the new DOE efficiency regulations were developed within the federally promoted negotiated rulemaking process sponsored the DOE Appliance Standards and Rulemaking Advisory Committee (ASRAC) to reach consensus agreements. Lennox has participated in working group negotiations for Residential Central Air Conditioning, Commercial Air Conditioning and Walk-in Cooler and Freezers along with representatives from California regulators and utilities. Each of these working groups successfully reached consensus term sheet. A key factor in the discussion during these negotiations was the coordination of the new efficiency standard to the transition to low GWP alternatives for these products. It was the consensus of the stakeholder groups that this alignment is critical to a successful transition. These key DOE regulatory actions are summarized in the following table:

|  |  |  |
| --- | --- | --- |
| DOE Covered Product | Regulatory Action | Effective Date |
| Commercial Package Unitary Air Conditioners | Direct Final Rule Pertaining to Small, Large, and Very Large Air-Cooled Commercial Package Air Conditioning  [EERE–2013–BT–STD–0007](http://links.govdelivery.com:80/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTYwNTEzLjU5MDE5ODExJm1lc3NhZ2VpZD1NREItUFJELUJVTC0yMDE2MDUxMy41OTAxOTgxMSZkYXRhYmFzZWlkPTEwMDEmc2VyaWFsPTE3NjkyNDQ3JmVtYWlsaWQ9ZGF2ZS53aW5uaW5naGFtQGFsbGllZGFpci5jb20mdXNlcmlkPWRhdmUud2lubmluZ2hhbUBhbGxpZWRhaXIuY29tJmZsPSZleHRyYT1NdWx0aXZhcmlhdGVJZD0mJiY=&&&106&&&http://www.regulations.gov/#!docketDetail;D=EERE-2013-BT-STD-0007) | January 1, 2023 |
| Residential Central Air Conditioners and Heat Pumps | Direct Final Rule Pertaining to Energy Conservation Standards for Central Air Conditioners and Heat Pumps  [EERE-2014-BT-STD-0048](http://links.govdelivery.com:80/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTYxMjA1LjY3MjA4ODAxJm1lc3NhZ2VpZD1NREItUFJELUJVTC0yMDE2MTIwNS42NzIwODgwMSZkYXRhYmFzZWlkPTEwMDEmc2VyaWFsPTE3Nzk2NDg4JmVtYWlsaWQ9ZGF2ZS53aW5uaW5naGFtQGFsbGllZGFpci5jb20mdXNlcmlkPWRhdmUud2lubmluZ2hhbUBhbGxpZWRhaXIuY29tJmZsPSZleHRyYT1NdWx0aXZhcmlhdGVJZD0mJiY=&&&105&&&https://www.regulations.gov/docket?D=EERE-2014-BT-STD-0048) | January 1, 2023 |
| Commercial Walk-In Coolers and Freezers | Final Rule Pertaining to Energy Conservation Standards for Walk-in Coolers and Walk-in Freezers  [EERE-2015-BT-STD-0016](http://links.govdelivery.com:80/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTYxMjI4LjY4MTUzODgxJm1lc3NhZ2VpZD1NREItUFJELUJVTC0yMDE2MTIyOC42ODE1Mzg4MSZkYXRhYmFzZWlkPTEwMDEmc2VyaWFsPTE3ODAzMDgzJmVtYWlsaWQ9ZGF2ZS53aW5uaW5naGFtQGFsbGllZGFpci5jb20mdXNlcmlkPWRhdmUud2lubmluZ2hhbUBhbGxpZWRhaXIuY29tJmZsPSZleHRyYT1NdWx0aXZhcmlhdGVJZD0mJiY=&&&105&&&https://www.regulations.gov/docket?D=EERE-2015-BT-STD-0016) | 3 Years after Final Rule publication in Federal Register. (Pre-publication December 28, 2016) |

While Lennox has focused our comments on the recent ASRAC negotiated standards, many other HVACR products are in cycle for minimum efficiency standards changes. CARB should review all these actions closely, including direct dialogue with manufacturers in an effort to refine CARB’s strategy to reduce the burden of federal and California regulatory actions.

***In summary, Lennox appreciates the opportunity to provide these comments on the further development of the CARB SLCP strategy. While Lennox supports CARB’s intent to reduce SLCP emissions, we recommend proceeding with a plan aligned with National and global efforts to streamline the process and maximize the environmental benefits while reducing potential negative consumer, end-user and manufacturer impacts. If you have questions regarding this submission, please do not hesitate to contact me.***

Sincerely,



Dave Winningham,

Sr. Engineering Manager – Regulatory Affairs