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Support funding for transition to low-GWP technologies

Additional submitted attachment is included below.

NORTH AMERICAN SUSTAINABLE REFRIGERATION COUNCIL

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April 6, 2017

California Energy Commission
Research and Development Division
1516 9th Street
Sacramento, CA 95814

Docket #: 17-EPIC-01
Re: Comments on the EPIC 2018 – 2020 Triennial Investment Plan

The North American Sustainable Refrigeration Council (NASRC) is pleased to offer comments on the EPIC 2018-2010 Triennial Investment Plan. We strongly encourage the Commission to support the adoption of low Global Warming Potential (GWP) refrigeration technologies. Funding for low-GWP refrigeration technologies will not only substantially reduce harmful emissions but can have additional benefits to scale the adoption of these technologies to drive market transformation, reduce energy use in supermarkets, and support California small business owners and disadvantaged communities.

NASRC is a 501(c)(3) nonprofit working to lessen the environmental impact of supermarket refrigeration though the widespread adoption of natural refrigerants. We are taking action to address the challenges that are slowing transition to more climate-friendly refrigeration technology, especially in the supermarket and grocery sector.

The adoption of low-GWP technologies has substantial long-term effects on avoided emissions and will help California meet its greenhouse gas reductions goals. Specifically, the installation of new low-GWP refrigerant systems in place of the high-GWP refrigerant systems, that are standard in supermarkets today, represents significant reduction in emissions. A typical supermarket today uses a refrigerant that has a direct greenhouse gas impact of 7 to 15 million pounds of CO2 equivalent while a low-GWP refrigerant has an impact as low as 2 to 4 thousand pounds CO2 equivalent.

The primary barriers to the adoption of low-GWP technologies are the increased upfront cost when compared to traditional systems and the familiarity with these systems. Funds from the EPIC program could help to remove these barriers not only by reducing initial cost but helping to build experience with these technologies, thereby supporting the increase in scale and driving widespread market adoption to help low-GWP systems become standard in the supermarket sector.

503.869.4191 • 15 Loring Ave • Mill Valley CA • 94941
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There exists a short window of time to influence and accelerate the transition of refrigeration equipment to low-GWP refrigerants. Supermarkets are currently building new stores and remodeling aging systems. Each system that is installed leaves another generation of high-GWP equipment in place for the next 15 to 20 years, the average lifetime of this equipment.

The urgency of this timing is also driven by the approaching deadline for the phase-out of HCFS-22 refrigerants in 2020. Our preliminary discussions with store representatives indicate that HCFC-22 refrigeration systems are being converted to high-GWP refrigerants instead of low-GWP refrigerants, primarily due to cost constraints. Supporting the transition to low-GWP refrigeration technologies will effectively prevent the installation of even higher GWP systems that are eminent with the phase-out of HCFS-22.

Refrigeration technologies that use low-GWP refrigerants can also be more energy efficient than traditional systems. The equipment required for a low-GWP system, such as electronic expansion valves and controllers, allow for the optimization of the system's energy use. Therefore, the installation of low-GWP refrigeration systems can provide a reduction of direct greenhouse gas emissions from the refrigerants and an indirect reduction of emissions through reduced energy use.

In addition, funding for low-GWP refrigeration technologies will help California small business, in that smaller stores suffer from a lack of available capital to carry out a refrigerant retrofit to transition out of HCFCs or high-GWP systems. Further, the funding could have positive impact on disadvantaged communities by fostering job creation for building new stores in these communities.

The EPIC program funds can make it affordable for California supermarkets to install low-GWP refrigeration technologies, thereby securing early and permanent emissions reductions and help drive market transformation. As installation companies and service technicians gain experience with these systems, a growing installed base of low-GWP equipment will spur further investment in training and education for these types of systems. We hope the Commission will prioritize funding for the adoption low-GWP technologies to support the reduction in emissions and drive market transformation for the benefit not only of California residents but the entire world population.

Sincerely,

Danielle wright
Executive Director, NASRC
Danielle.wright@nasrc.org