Johnson Controls Commitments to the Council on Environmental Quality

JOHNSON CONTROLS FACT SHEET - WHITE HOUSE ROUNDTABLE | OCTOBER 2015

JOHNSON CONTROLS AND LOW GWP REFRIGERANTS

Building mechanical systems are the largest consumer of energy in the built environment. The most effective way to minimize the CO_2 equivalent emissions over the useful life of these systems is using equipment that is highly efficient over its entire operating range, properly maintained, and controlled in an optimal manner.

In addition, we feel a significant reduction in direct emissions from the refrigerants contained in this equipment can be made through a holistic approach that employs a combination of: charge reduction using advanced heat exchanger technology, improved maintenance and refrigerant management practices, and the use of low-GWP refrigerants, where practical (safe, efficient, available, and affordable). This effort should not be focused solely on new equipment--significant reductions are possible through the retrofit of installed equipment.

In developing this approach, Johnson Controls considers safety as the top priority. Existing practices in the majority of commercial buildings are limited to non-flammable refrigerants. The drive to lower GWP for many applications will introduce the need to apply flammable refrigerants where their use is not commonplace. In many sectors, equipment safety standards, building codes, and operator training must be updated to enable the safe use of flammable refrigerants prior to these fluids becoming mandated.

Johnson Controls has a proud history of technological innovations that have resulted in significant reductions in emissions from equipment and from building mechanical systems. We will continue to support the efforts of this administration to reduce greenhouse-gas (GHG) emissions in a way that fosters this innovation, allows market drivers to determine optimal solutions, and that focuses efforts on sectors that have an environmental impact commensurate to the resources and capital required by industry to achieve it.

JOHNSON CONTROLS' COMMITMENTS

Last year, we met our commitment and invested over $15 million dollars in research and development on equipment containing low-GWP refrigerants. We will exceed that amount in each of the next two years and meet our three-year target of $50 million dollars.

In addition to our significant investment, over the next twelve months we will make the following new commitments:

1. We will expand the availability of high efficiency, low-GWP refrigerant options in our commercial air conditioning and industrial refrigeration product portfolio.
2. We will offer equipment that can be readily retrofitted with high-efficiency, low-GWP options in the future to ensure that our customers will receive the full economic and environmental benefit over the entire life of their equipment.
3. As the market leader in commercial and industrial systems with equipment that has a service life typically exceeding 25 years, we will develop aftermarket retrofit services for customers that desire to convert their existing equipment to low-GWP refrigerants.
4. We pledge up to $100,000 to accelerate and fund independent 3rd-party,peer-reviewed, research to help develop practical, fact-based safety standards related to the use of mildly flammable (A2L) refrigerants. We invite our industry partners to join us in-kind.
5. We commit to support and to participate in the development and standardization of service technician and operator training for the safe use of mildly flammable low-GWP refrigerants.

Johnson Controls