

September 19, 2008

Mary D. Nichols, Chairwoman
California Air Resources Board
1001 I Street
Sacramento, CA 95812

**RE: COMMENTS OF DAIKIN AC (AMERICAS), INC. ON THE DRAFT AB 32
CLIMATE CHANGE DRAFT SCOPING PLAN'S REGULATION FOR
MANAGEMENT OF HIGH GLOBAL WARMING POTENTIAL
REFRIGERANTS**

Dear Chairwoman Nichols:

Daikin AC (Americas), Inc. (Daikin) respectfully submits the following comments in response to the California Air Resources Board's (CARB) request for public input on the Regulation for Management of High Global Warming Potential Refrigerants for the Draft AB 32 Climate Change Scoping Plan, which CARB released on September 8, 2008 at the public meeting held at the Air Resources Board in Fresno, CA. Daikin is a supplier of central air conditioning systems in the United States that all employ inverter technology, a mature, non-proprietary technology that is widely available to HVAC manufacturers, and that can significantly reduce energy consumption in all residential and commercial HVAC systems.

I. Introduction.

This draft scoping plan on climate change that includes high-global warming potential gas measures presents CARB with an opportunity to reduce California's greenhouse gas emissions to 1990 levels by 2020. Daikin intends to submit information on selected issues and participate in the course of this draft scoping plan on which CARB has solicited comments.

II. CARB Should Add a Requirement for Certified Technicians or Contractors to Certify that New Stationary Refrigeration or Air-Conditioning System With a Full Charge Greater Than 50 Pounds of High GWP Refrigerant Has Been Installed In Accordance With The Manufacturer's Installation Manual.

The draft proposed regulation order has general requirements for stationary refrigeration and air-conditioning system registration and leak repair. One of the proposed measures is, on or

after January 31, 2010, the owner or operator of a new stationary refrigeration or air-conditioning system with a full charge greater than or equal to 50 pounds of high-GWP refrigerant must register to operate with the local Air District or the Executive Officer. A properly installed equipment in the long run will have a lesser chance of leaking and is key to reducing greenhouse gas emissions. CARB should add a requirement for Certified Technicians or Contractors to certify during the registration process that the New Stationary Refrigeration or Air-Conditioning System with a full charge greater than 50 pounds of high GWP refrigerant has been installed in accordance with the Manufacturer's installation manual. Furthermore, any Certified Technician or Contractor must either demonstrate or acknowledge that they have the necessary factory training and the knowledge to install such equipment.

III. Annual Leak Inspection Is Not Required For New Systems Holding a Full Charge Greater Than or Equal to 50 Pounds, But Less Than 200 Pounds, of High GWP Refrigerant if New Refrigeration or Air-conditioning System Has a Diagnostic Function Incorporated In the Design of The Equipment That Can Check for Shortage of Refrigerant Charge Volume.

Daikin has made substantial technical advances in reducing greenhouse gas emissions that we would like to bring to CARB's attention in this scoping plan. One such significant development involves a check for shortage of refrigerant within the system.

One can judge if a system has leaks by operating the equipment and testing for the degree of refrigerant shortage within the system by means of an algorithm that can compute and compare the volume of refrigerant charge it currently holds to the total charge of refrigerant that was put in the system when the system was commissioned. If the algorithm points to a shortage of refrigerant, that may be an indication that the system has leaks which the owner or operator should investigate. Also, system may not operate optimally with a shortage of refrigerant and that can affect energy efficiency.

Daikin encourages CARB to consider the use of this detecting option for new systems holding a full charge greater than or equal to 50 pounds, but less than 200 pounds, of high GWP refrigerant and make annual leak inspection necessary only if optionally incorporated refrigerant charge volume detection system detects shortage of refrigerant. An owner or operator of stationary refrigeration or air-conditioning system should not have the burden to bear any cost

for an annual leak inspection if optionally incorporated refrigerant charge volume detection system does not detect shortage of refrigerant and if system is operating optimally.

IV. Installation of New Interconnecting Refrigerant Piping Joints or Leak Repairs on Existing Piping Joints With Low Nitrogen Flow During Brazing Can Reduce Leaks.

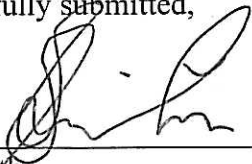
Leak repairs are often conducted on existing refrigeration or air-conditioning systems and on the interconnecting piping joints. But leaks can be prevented if new refrigeration or air-conditioning system is installed properly. Nitrogen purging during brazing of interconnecting joints for new installations as well as for leak repairs on existing system will purge atmospheric oxygen from the joints thus virtually eliminating the formation of copper oxide scaling in the joints, a best practice that Daikin recommends to its installers, is another key to reducing leaks.

V. A 50 Pound Refrigerant Charge Is an Appropriate Regulatory Threshold for New Air-Conditioning Systems.

CARB requested for public input on whether a 50 pound refrigerant charge for a system is an appropriate regulatory threshold. Daikin recommends that CARB continue to use the 50 pound refrigerant charge as an appropriate threshold for air-conditioning systems. At this threshold, facilities would not only find it wise to monitor and do repairs but they are also influenced in their decisions by their social and environmental performance. Anything lower than this threshold would just become a substantial cost burden to facilities to comply with the leak repair provisions that are mostly applicable for large systems.

Daikin thanks CARB for considering these comments on the scoping plan, and we look forward to working with CARB in later stages of the scoping plan.

Respectfully submitted,



Lee Smith
Director – Product, Engineering and Applications
Daikin AC (Americas), Inc.