

MAY 2022

Energy Star Now Includes Global Warming Potential



Would you like to minimize the impact your laboratory freezers have on the environment? These energy-intensive appliances have benefitted greatly from reduced energy consumption over the past few years, largely due to the introduction of the Energy Star label for this product category. On January 26, 2022, the Environmental Protection Agency (EPA) announced the Energy Star label will now include considerations for the Global Warming Potential (GWP) of the refrigerants used in some product categories, such as laboratory grade freezers and refrigerators.¹ Many refrigerants are greenhouse gases (GHGs) that trap solar radiation within the Earth's atmosphere to cause global warming. GWP reflects the ability of a gas to trap radiation by considering its radiative efficiency and its lifetime in the atmosphere. A higher GWP means a greater impact on global warming.

Cold storage equipment like freezers and refrigerators cycle refrigerant through a closed-loop system to remove heat and produce a temperature-controlled environment. Refrigerant is intended to remain within a closed loop. However, seal degradation and equipment breaks can result in leaks to the environment. The refrigerants used within cold storage equipment have been improved over many decades to mitigate the effects of leaks. Older refrigerants, such as R22, deplete ozone in the stratosphere and also have a significant GWP.² These refrigerants were phased out and replaced with alternatives that do not deplete ozone, however these refrigerants have a high GWP (such as R508B with a GWP of 13,396).³ These refrigerants are also undesirable. To overcome this problem, natural refrigerants with a much lower GWP (such as R290 with a GWP of 3) were developed for use by many new freezers and refrigerators.⁴ These natural refrigerants have a significantly reduced impact on the environment.

Energy Star has earned buyer's trust and international recognition through reliable testing. Energy Star products are tested by 3rd party laboratories and the results are reviewed by a certification body. This system prevents manufacturers from overstating their product's capabilities, thus providing buyers with reliable and comparable data. The addition of GWP of refrigerants into the Energy Star Certification represents a significant evolution of the label towards sustainable procurement.

Sustainable procurement is a focus of the Biden-Harris Administration. Executive Orders 14030 and 14057 include requirements for federal agencies to put a renewed emphasis on sustainable acquisitions.⁵ An effective method for ensuring sustainable equipment acquisitions is to choose Energy Star Certified equipment. In fact, the Federal Acquisition Regulation (FAR) 23.203 requires federal agencies to purchase Energy Star or Federal Energy Management Program (FEMP) designated products when available.⁶

The new changes to the Energy Star label make it easy to select products that have a low GWP. When viewing a product category on the [Energy Star website](#), such as laboratory refrigerators, simply select the "Lower impact on global warming (635)" filter on the left-hand side of the screen. This same process can also be used when shopping for new appliances for your home! The NIH is home to thousands of freezers and refrigerators and many new purchases will be made over the coming years. By purchasing appliances with the Energy Star label and the new GWP considerations, we now have the option to reduce GHG emissions even further!

SPOTLIGHT



NIH Winners from the HHS Kids' Earth Day Poster Contest

There were 56 submissions from the NIH for the HHS Kids' Earth Day Poster Contest. A winner from each of the four age groups was selected to compete with the other HHS OPDIVs.

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TAKE ACTION



2022 Bike to Work Day

Bike to Work Day will be held on May 20, 2022. A pit stop will be setup near Building 1 on the Bethesda campus. Register for Bike to Work Day to receive your free t-shirt at the pit stop of your choosing!

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NEMS TRAINING

Did you know? Energy Star covers products ranging from heating and cooling, household and lab appliances, lighting, office equipment, electronics and more! To learn more about energy use at the NIH, please visit the [NEMS Training webpage](#) to view a short (20 minute) NIH environmental awareness training video.