

Insight: U.S. EPA SNAP Final Ruling on HFC Refrigerants

JOHNSON CONTROLS QUESTION & ANSWER

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Monday, September 26, 2016, the U.S. EPA (Environmental Protection Agency) announced the much anticipated SNAP (Significant New Alternatives Policy) final ruling for chillers that use HFC refrigerants. The Final Rule can be accessed [here](#). Here is a quick summary of the ruling, its impact, and what to do today.

WHAT DOES THE US EPA SNAP PROGRAM REGULATE?

Through SNAP, the U.S. EPA lists and de-lists the use of specific refrigerants in new equipment identifying them as acceptable and unacceptable. The U.S. EPA has already identified bans on the use of certain refrigerants in some sectors, such as automotive, in the ruling announced July 2015. And in certain cases the bans have already taken effect, such as supermarket refrigeration.

Back in September 2015, the U.S. EPA announced they were starting discussions around HFC refrigerant regulation in chillers. Johnson Controls was a key author in the NRDC/AHRI agreement letter that was submitted to the U.S. EPA February 2016. The letter suggested a proposal of no new chillers sold after January 1, 2025 with HFC refrigerants. Although this proposal was not completely aligned with the final ruling, it shows the industry was involved in the discussions around how to manage HFC refrigerants that typically have a higher GWP (global warming potential) refrigerant value.

WHAT DOES THE NEW RULING STATE? WHAT IS AND ISN'T IMPACTED?

In addition to other changes that impact various sectors, specific to HVAC, the ruling very simply identifies that after January 1, 2024 no **new** chillers (any style/design/compressor/capacity) in the United States shall be **sold** with HFC refrigerants (such as R-410A and R-134a). Some other clarifications about the ruling:

- R-134a and R-410A chillers can continue to be specified and purchased up until January 1, 2024.
- R-134a and R-410A chillers can continue to operate, be serviced and maintained indefinitely—the SNAP ruling does not affect chillers installed before the effectivity date.
- R-134a and R-410A refrigerant can continue to be produced, imported or exported without restriction—the SNAP ruling does not govern refrigerant production.
- R-134a can continue to be produced as an ingredient in HFO blends (i.e. R-450A, R-513A)
- SNAP does not determine a GWP limit for refrigerants.

WHAT SHOULD I DO TODAY?

The U.S. EPA SNAP ruling will not go into effect until over 7 years from now so it has no impact on existing chillers or today's chiller purchases. There is no need to do anything differently today. Although some HFC alternative refrigerants are starting to appear in the market, all of these refrigerants have trade-offs, some with concerns around flammability and toxicity, some that negatively impact capacity and/or performance and all that are more expensive.

The best approach is to invest in real world energy efficiency to have the greatest reduction on global warming potential. When considering a chiller's total global warming impact, 95% or more of its emissions come indirectly from the production of the energy used to operate the chiller, while only 5% or even less is from the global warming potential of the refrigerant used in the chiller. Selecting a chiller that impacts the 95% indirect effect drastically reduces the chiller impact to the environment. It's best to invest in energy efficiency, and even better when the chiller comes standard with the ability to easily convert to a low-GWP alternative in the future.

To learn more about refrigerants, visit www.johnsoncontrols.com/refrigerants

