



## 1. What is the Ruling?

On June 3, 2014 the Department of Energy (DOE) issued a final rule regarding energy conservation standards for Walk-In Coolers and Freezers (WICF) (10 CFR, Part 431, Docket Number EERE-2008-BT-STD-0015). This ruling establishes minimum efficiency levels for both the walk-in enclosure and the associated refrigeration equipment.

## 2. What is the scope of the ruling?

The ruling includes enclosed walk-in coolers and freezers used for general storage which can be walked into, with a floor space of 3,000 ft<sup>2</sup> or less. The ruling also includes unit coolers used for walk-ins attached to multiplex refrigeration systems serving multiple refrigeration loads, as are frequently used in grocery stores.

## 3. What products are not covered?

- Equipment intended solely for scientific, medical or research purposes.
- Condensing units solely designed and marketed to serve multiple WICFs or other pieces of refrigeration equipment (e.g., FlexPak).
- Water cooled condensing units or systems.
- WICF with floor space in excess of 3,000 ft<sup>2</sup>.
- Compressorized racks that serve multiple refrigeration loads.
- Remote air-cooled condensers and fluid coolers not used for WICF.
- Reach-in units.

## 4. What is the effective date?

The effective date of the final rule was August 4, 2014. All equipment manufactured on or after June 5, 2017 must be compliant.

## 5. What are my responsibilities as wholesaler or installing contractor?

The DOE requires that the equipment manufacturer certify to DOE all equipment meeting the minimum efficiency regulations.

The individual who selects or installs this equipment must only use equipment which has been certified compliant by the DOE.

## 6. Does this regulation impact replacement equipment?

Yes, it will impact all equipment manufactured on or after June 5, 2017 for both new and replacement applications.

## 7. Does the DOE ruling impact cold storage applications?

The DOE ruling only applies to WICF with a floor space of 3,000 ft<sup>2</sup> or less. Cold storage applications with floor space of 3,000 ft<sup>2</sup> or less will require compliant products. Cold storage applications with a floor space in excess of 3,000 ft<sup>2</sup> will not be impacted.

## 8. What is the efficiency metric used by the DOE?

The efficiency will be measured with the Annual Walk-in Efficiency Factor (AWEF) as defined by AHRI Standard 1250. AWEF is a measure of the annual efficiency of the refrigeration system and includes the impact of seasonal temperature changes as well as different WICF box loads. It is the ratio of annualized capacity divided by input power (BTUH/Watts).



### **9. Do Heatcraft products meet this standard today?**

Some products currently meet the minimum AWEF today. Some products will meet the minimum AWEF with energy saving options currently in production. Other products will have to be redesigned to achieve the minimum AWEF values and may require new technology not currently on the market. Some models or options may be discontinued in order to meet the new efficiency regulations.

Heatcraft will only sell products which are compliant to all applicable regulations.

### **10. How will the DOE ruling impact the cost of products I purchase?**

It is too early to predict. Heatcraft will focus on minimizing the cost impact while still attaining the DOE minimum efficiency levels.

### **11. Is the ruling based on the date of sale, installation or date of manufacture?**

The ruling is based on the date of manufacture. All products manufactured by commercial refrigeration equipment manufacturers after June 5, 2017 must comply with the ruling.

### **12. How will this impact what I sell to my customer?**

- The ruling will only go into effect on June 5, 2017. Until that date there will be no impact to your business.
- After June 5, 2017 a product that is not compliant to the ruling and was manufactured before June 5, 2017 can still be sold to customers.
- Commercial refrigeration equipment manufactured by Heatcraft or other manufacturers after June 5, 2017 must be compliant in order to be sold in the United States.
- As such, Heatcraft can ship customers' products that are not in compliance to the ruling after June 5, 2017; as long as the product was manufactured prior to this date.

### **13. I am based outside the US and buy directly from Heatcraft, will this impact what I buy?**

- The DOE ruling only impacts products for sale in the United States. As such, products sold to Canada, Mexico, Latin America or other regions outside of the United States are not required to comply with the DOE ruling.

### **14. How do we determine the energy efficiency on a field built up system?**

- For systems that are selected as independently matched condensing units and unit coolers, the DOE WICF efficiency standard allows for certification of the unit cooler and condensing unit as independent components of a refrigeration system.
- Each model of unit cooler and condensing unit impacted by the standard must meet the minimum AWEF standard to be used in the covered applications.
- The manufacturer of the unit cooler or condensing unit is responsible for the equipment's AWEF certification.
- The appropriateness of the match of the field built system will be the responsibility of the contractor/distributor just as it is today.



**15. Do the standards require a matched unit cooler and condensing unit selection with a specified expansion device?**

- No, the DOE standard only stipulates that the impacted unit cooler and condensing units have manufacturer's AWEF certification. The standard does not require a specific expansion device for certification.
- The control scheme of the condensing unit (reduced head pressure for example) may require changes in how the expansion device is sized or the style of expansion device.

**16. How do we evaluate efficiency on a system with variable operating conditions and critical varying load?**

- The AWEF calculation for outdoor equipment is based on an average range of ambient conditions (BIN Data) as prescribed by DOE.
- Indoor equipment is rated at typical indoor rating points as specified in the WICF standard.

**17. Does the new DOE WICF standard require moving to a packaged system?**

- While packaged systems used in Walk Ins are impacted by the standard and would be evaluated as a pre-matched system; the DOE standard does not mandate use of package systems. The standard allows for use of split systems with unit coolers and condensing units that meet the minimum AWEF values.
- From an AWEF standpoint, there does not appear to be an advantage in using a pre-matched split system or packaged system vs selecting separate split system components.

**18. Does the new DOE WICF standard require the use of specific refrigerants?**

- While the DOE WICF standard is based on the use of R404A in the calculations, the standard does not enforce or require the use of this refrigerant exclusively.
- As a result, the application of other refrigerants in the system is allowed and does not change the DOE AWEF rating.