

Annual Walk-in Energy Factor



Natural Resources
Canada



What is AWEF?



AWEF REQUIRED FOR EACH COMPONENT



ANNUAL WALK-IN ENERGY FACTOR

$$AWEF = \frac{Btu}{W * h}$$

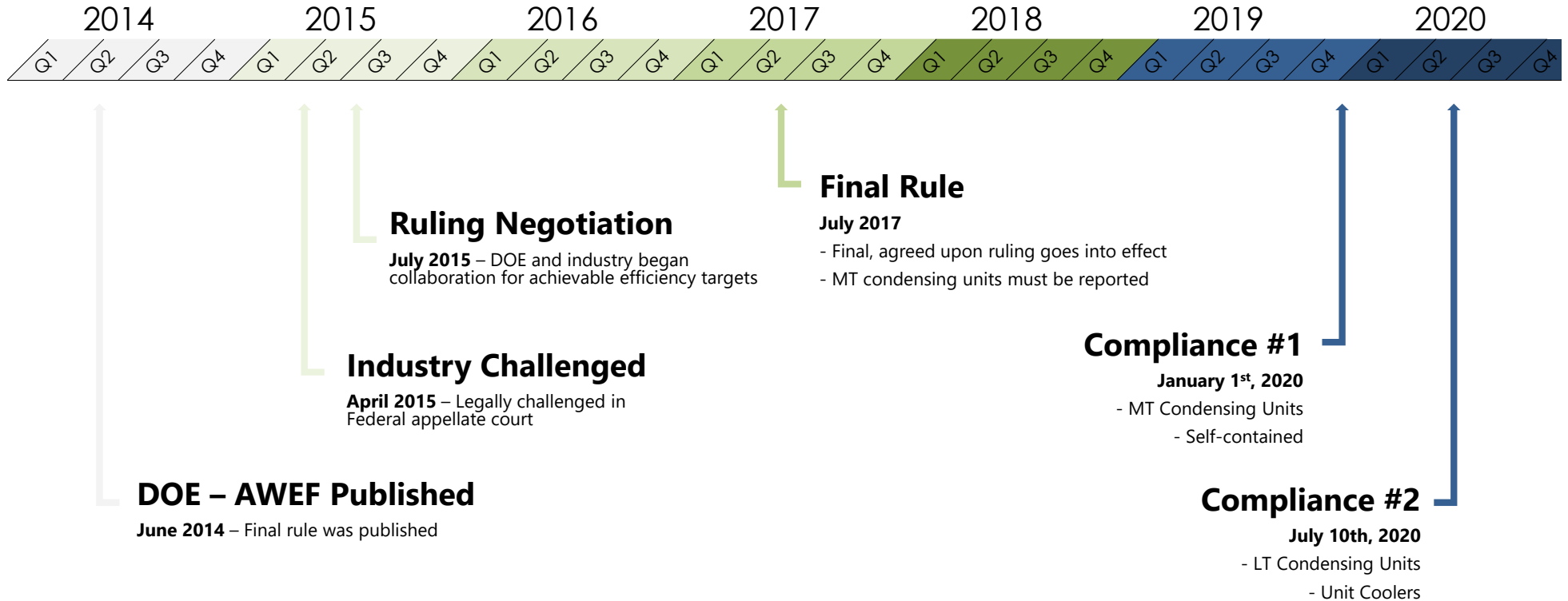
SEASONAL ENERGY EFFICIENCY RATIO

$$SEER = \frac{Btu}{W * h}$$

- > **The Annual Walk-In Energy Factor (AWEF) is a regulatory efficiency metric created by the Department of Energy (DOE) that measures electrical energy input versus the cooling capacity of the system.**
- > **Condensing Units and Evaporators used in commercial walk-in coolers and freezers under 3000 ft²**
- > **Compliance based on Date of Manufacture, not Sale Date or Install Date**

TIMELINE

DOE - AWEF



Annual Walk-In Energy Factor

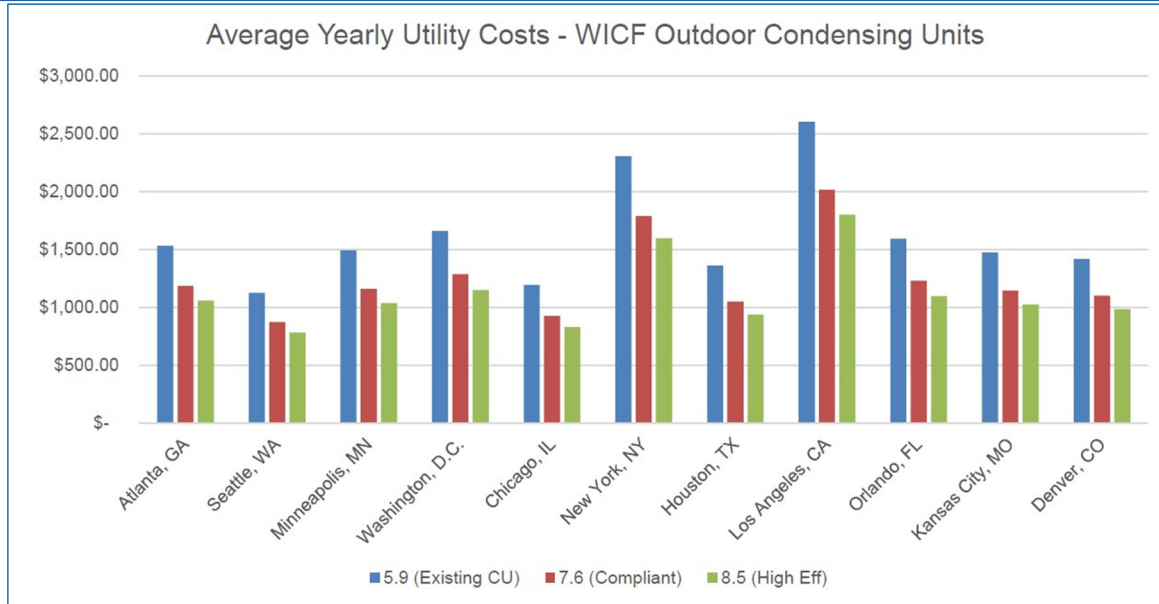
> January 1, 2020

- Medium temperature (MT) air-cooled **Condensing Units**
- Units manufactured after December 31, 2019 must be compliant. Non-compliant condensing units manufactured prior to December 31, 2019 can be sold through.

> July 10, 2020

- Low Temperature (LT) air-cooled **Condensing Units**
- Units manufactured after July 10, 2020 must be compliant. Non-Compliant Units manufactured up to July 10, 2020 can be legally sold through.
 - Medium Temperature (LT) & Low Temperature (LT) **Evaporators**
- Evaporators manufactured after July 10, 2020 must be compliant. Non-compliant evaporators manufactured up to July 10, 2020 can be legally sold through.

AWEF Saves Operating Costs



- **5 HP Outdoor Condensing Unit Medium Temp**
- **Analysis using weather BIN data and state EIA state energy rates 2017**
- **Average payback is <1 year**


AWEF Regulation Exclusions

> **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**
- **Water cooled condensing units or systems**
- **WICF with floor space in excess of 3,000 ft²**
- **Compressorized racks that serve multiple refrigeration loads**
- **Remote air-cooled condensers and fluid coolers not used for WICF**
- **Reach-in units**

What you need to know

- **All Walk-Ins (<3,000 sqft) will need to meet AWEF standards**
- **Every component of a Walk-In must be compliant AND is based on Date of Manufacture, NOT install or sell**
- **Compliance required on equipment whether it's for retrofit or new installs**



Equipment Class		
Dedicated Condensing System – Medium, Indoor		} Jan 1st 2020
Dedicated Condensing System – Medium, Outdoor		
Dedicated Condensing System – Low, Indoor with a Net Capacity (q_{net}) of	< 6,500 Btu/h	} 2020
	\geq 6,500 Btu/h	
Dedicated Condensing System – Low, Outdoor with a Net Capacity (q_{net}) of	< 6,500 Btu/h	
	\geq 6,500 Btu/h	
Unit Cooler – Medium		
Unit Cooler – Low with a Net Capacity (q_{net}) of	< 15,500 Btu/h	
	\geq 15,500 Btu/h	

What you need to know

➤ **Responsibilities:**

- **Manufacturer – Build, Certify, Label Compliant Equipment**
- **Wholesaler / Salesman / OEM – Ensure correct equipment is selected**
- **Contractor – Ensure equipment installed is compliant**

Product Changes

> **Product Changes could include:**

- **1 Speed, 2-Speed or Variable speed EC Motors**
- **Oversized Condenser / Chassis size changes**
- **Evaporator dimensional changes**
- **Lower Floating Head Pressure settings / controls (TXV Valve Sizing?)**
- **MODEL Number Changes**

Manufacturer Changes

> **Trenton**

- Have Released A New Generation Of Condensing Units Up To 15hp
- Less Efficient Models Will No Longer Be Offered

> **Heatcraft**

- Have Released New Condensing Unit Models With New Nomenclature
- Less Efficient Models Will No Longer Be Offered

> **Copeland**

- Will Continue To Offer A Line Of Indoor & Outdoor Scroll Condensing Units
- Hermetic Condensing Unit Line In Development

SUMMARY

- > **AWEF Required For Walk-in Equipment Installed On Boxes Less Than 3000 ft.²**
- > **MT Condensing Units Began January 1st, 2020**
- > **LT Condensing Units & All Evaporators Began July 10th, 2020**
- > **Be Prepared For Manufacturer Changes To Condensing Units & Evaporators**
- > **Lower Head Pressure Settings, EC Motors & More**
- > **Record Jobsite Information To Properly Cross Equipment**
- > **Help Us Help You!**



Extensive Inventory

Supported by 8 nationwide distribution centers.



Technical Support

Experts to answer all your questions.