HVAC REGULATORY CHANGES

HOW TO NAVIGATE CHANGES TO EQUIPMENT, REFRIGERANT, AND TRAINING PROTOCOLS

Significant regulatory changes related to HVAC equipment and energy standards will affect the multifamily industry in 2023 and beyond. Chadwell Supply is closely monitoring these changes and the impact they will have on our customers. This breakdown should help you plan your strategy.

TIMELINE

- **January 1, 2022:** Hydrofluorocarbon (HFC) refrigerants, such as 410A, start a 10% phase down.
- **Late 2022:** New equipment will be manufactured to meet new SEER2, EER2, and HSPF2 energy efficiency standards, causing inventory to be replaced with the newer style units.
- **January 1, 2023:** New higher rated SEER2/EER2/HSPF2 units will be required as you purchase and install new systems. Current inventory of 14 SEER units will be limited and can only be installed in the North region.
- **2024:** HFCs will face a 40% phase down.
- **2024-2025:** A2L class refrigerants (such as R-32 or R454B) will become the new standard. Re-training will be required for the use of these mildly flammable A2L refrigerants.

SEER2/EER2/HSPF2 COMPLIANT UNITS:

- ***Have a larger footprint*** *– needing more space to install*
- ***Use different replacement parts from current units*** *– resulting in additional parts inventory*
- ***Are more expensive to produce and ship*** *– which will impact pricing*
- ***Use ECM motors and TXV valves*** *– for maximum efficiency*

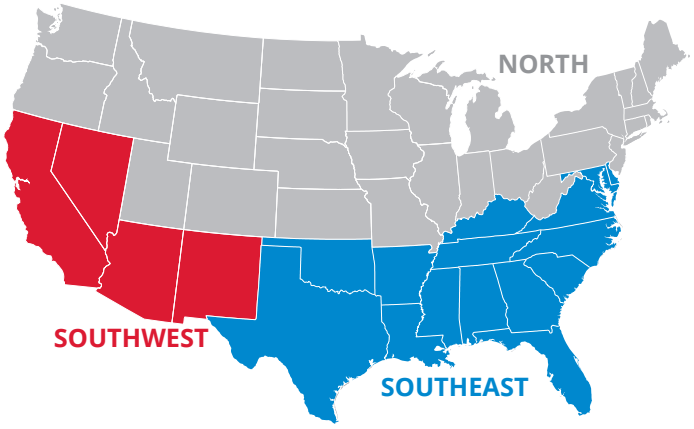
EQUIPMENT CHANGES - EFFECTIVE JANUARY 1, 2023

- SEER, EER, and HSPF terms are being replaced with SEER2, EER2, and HSPF2.
- New efficiency requirements will require changes to both condensing units and air handlers.
- **Non-compliant SEER equipment CAN NOT be sold or installed in the Southwest and Southeast**, as it will not meet new SEER2 requirements.

*Energy Efficiency Changes**

SEER	to SEER2	EER	to EER2	HSPF	to HSPF2
13	n/a	11.7	11.2	8.0	6.8
14	13.4	12	11.5	8.2	7.0
14.5	13.8	12.2	11.7	8.5	7.5
15	14.3	13	12.5	9.0	7.7

**Approximate values*



2023 MINIMUM EFFICIENCY STANDARDS AND COMPLIANCE DATES BY REGION FOR SPLIT SYSTEMS‡

NATIONWIDE	SIZE	SEER 2		HSPF2
Heat Pump Split System	ALL	14.3	&	7.5

COMPLIANCE IS BASED ON THE DATE OF MANUFACTURE.
Non-compliant heat pump equipment can be purchased and installed as long as it was manufactured prior to 2023.

NORTH	SIZE	SEER 2
Straight Cool Split System	ALL	13.4

COMPLIANCE IS BASED ON THE DATE OF MANUFACTURE.
Non-compliant straight cool equipment can be purchased and installed as long as it was manufactured prior to 2023.

SOUTHWEST	SIZE	SEER 2		EER 2
Straight Cool Split System	1.5-3.5 Ton*	14.3	&	11.7
Straight Cool Split System	4-5 Ton**	13.8	&	11.2

Non-compliant equipment CAN NOT be purchased or installed after December 31, 2022.

SOUTHEAST	SIZE	SEER 2
Straight Cool Split System	1.5-3.5 Ton*	14.3
Straight Cool Split System	4-5 Ton**	13.8

Non-compliant equipment CAN NOT be purchased or installed after December 31, 2022.

*Less than 45,000 BTUs ** Greater than 45,000 BTUs

‡Single Package Systems have different standards that are not covered in this document, as they are not usually installed in multifamily applications.

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REFRIGERANT CHANGES

As the use of Hydrofluorocarbon (HFC) refrigerants are phased down, users need to be aware of the switch to a new standard of A2L refrigerants with global warming potential (GWP) of 750 or less. While it is good to know this change is coming, the compliance requirement for the lower GWP does not take effect until January 2025.

This means, **A2L refrigerants will probably not be used in standard residential/multifamily HVAC equipment till mid-2024.** This is the anticipated time frame for the new equipment that works with the lower GWP refrigerants to be introduced. *Note: The exception is mini-split units; these are used in limited capacity within the multifamily industry and many of these already use A2L refrigerants.*

As HFCs are phased down:

- Prices will increase on ALL HFC blends as supply decreases.
- Do NOT expect to see replacements for 410A (as seen with R-22).
- Recovering and reusing 410A refrigerant will be more imperative than ever. *Note: refrigerant is only allowed to be reused by the same equipment owner.*

As A2Ls are phased in:

- **Re-training will be needed due to the potential for flammability and new processes for evacuation and brazing.**
- New equipment may be needed:
  - HVAC gauges that read A2L refrigerants
  - Recovery equipment (cylinders, reverse thread adapters, etc.)
  - Larger recovery hoses for faster triple evacuation
- It is recommended that systems must be triple pressure tested with nitrogen followed by a triple evacuation.

SCHEDULE FOR HFC PHASE DOWN

YEAR	REDUCTION
2022-2023	10%
2024-2028	40%
2029-2033	70%
2034-2035	80%
2036 & Beyond	85%

HFC Refrigerants in phase down:

- R-410A
- R-134A
- R-22 replacements
  - R421-A
  - NU-22B
  - R-422B+
  - MO99 & R-438A
  - R-407C

A2L Refrigerants to be used:

- **R-32**
  - Selected by Goodman, Amana & Daikin
  - Single ingredient (similar to R22)
  - 675 GWP AR4
- **R-454B**
  - Selected by Carrier & Honeywell
  - Patented blend of refrigerants
  - 466 GWP AR4

TRAINING REQUIREMENTS

A2L refrigerants are flammable, and for this reason alone, training to create awareness of this danger will be necessary to ensure that the refrigerant is handled safely. While A2Ls are in the lower flammability class and could burn when exposed to an ignition source, they will probably not explode into flames, as other Class 2 or 3 refrigerants may.

These refrigerants will also have different temperatures and pressures than HFC refrigerants, will require use of different gauges, have different evacuation procedures, and should have brazing with nitrogen in order to work effectively.

Chadwell Supply is prepared to update your team in the use of A2L refrigerants through Chadwell University. E-mail learn@chadwellsupply.com for information on scheduling an A2L class for your team.

SCAN TO VISIT INDUSTRY ALERT PAGE ONLINE>

To stay up to date on changes impacting the repair and maintenance of multifamily properties, including HVAC equipment and refrigerants, visit: **ChadwellSupply.com/industry-alert**

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