2023 Regional Standards Product Impact

Brandon Chase

Sr. Product Marketing Manager Cooling

- Updated Minimum efficiency standards
- New efficiency ratings
- Impact on product line

LENNOX INTERNATIONAL CORE VALUES

INTEGRITY

We are honest and accountable. That's how we do business.

RESPECT

We value our coworkers, customers, business partners, competitors, and the communities where we work and live. We champion diversity and inclusion.

EXCELLENCE

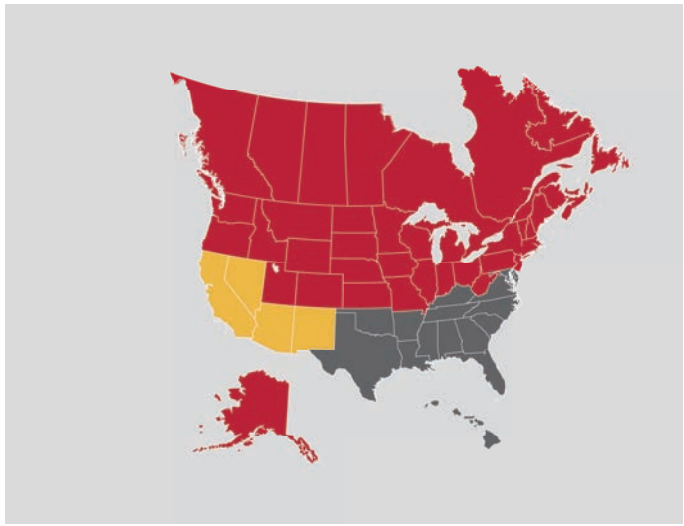
We expect high performance from our employees and business partners and high quality in our products and services. We deliver value to our shareholders and other stakeholders.

Why are efficiency standards changing?

- Department of Energy (DOE) – Energy Policy and Conservation Act (1975)
  - Reviews efficiency standards at least every 6 years
  - Max improvement that is "technically feasible and economically justified."
  - Reviews test procedures at least every 7 years
  - Must produce test results that measure the "energy efficiency during a representative average use cycle"

- Current Central AC and HP standards established:
  - Regional minimum efficiency standards (2015)
  - Appendix M Test Procedure (2007)

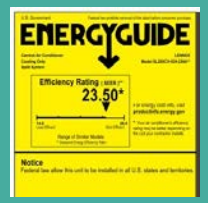
DOE's review justified increasing efficiency standards and determined current test procedure is not "representative" of average use cycle.



What is changing for 2023?

Min Efficiency for split AC/HP

SEER, EER, and HSPF for all products



Updated Energy Guide Labels

Install mandate

What isn’t changing for 2023?

Min Efficiency for package products

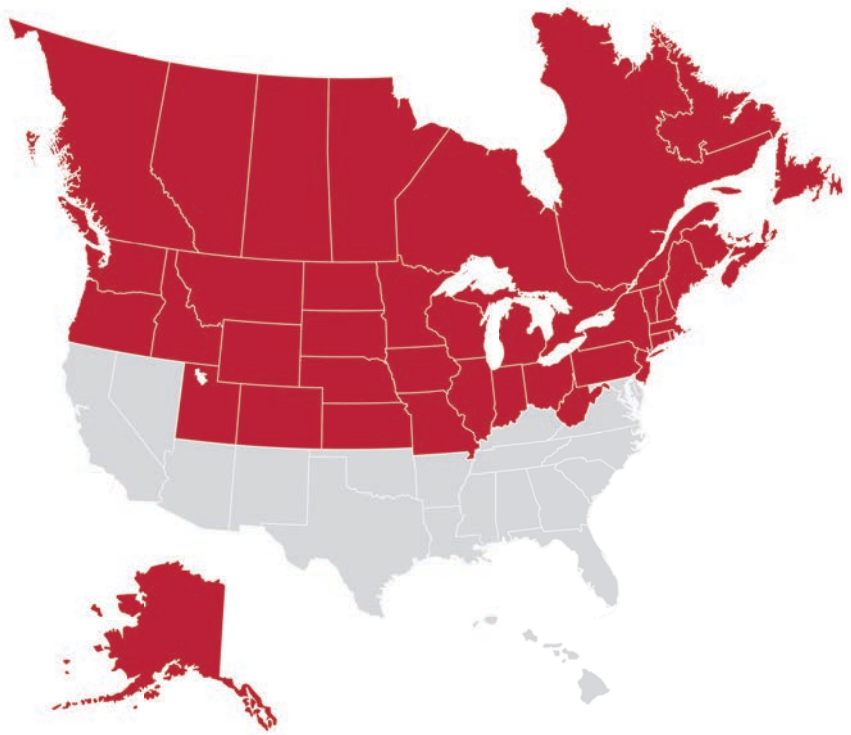
Regions for efficiency standards

Record keeping and enforcement

2023 Air Conditioner Min. Efficiency

North Region:

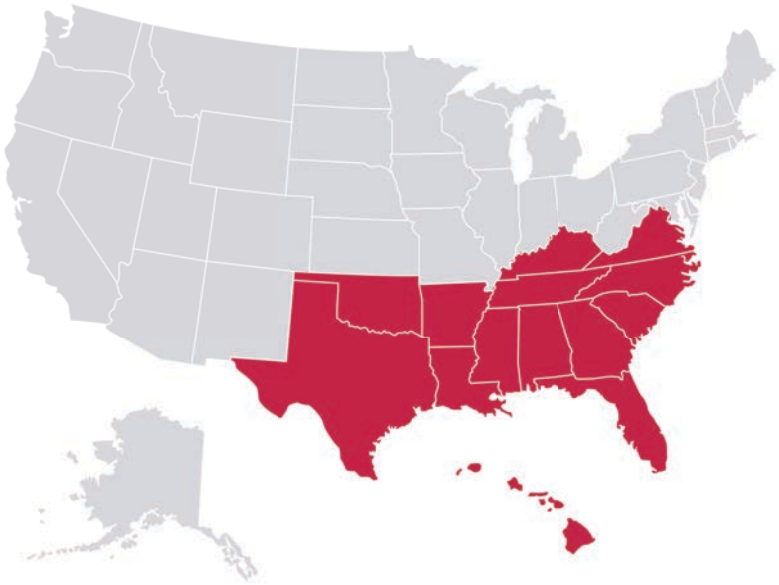
- All capacities
  - Increase 1 SEER
    - **From 13 to 14 SEER**
- When?
  - **Starting January 1, 2023**
  - 13 SEER units built prior to Jan 1, 2023, can be sold indefinitely



2023 Air Conditioner Min. Efficiency

South Region:

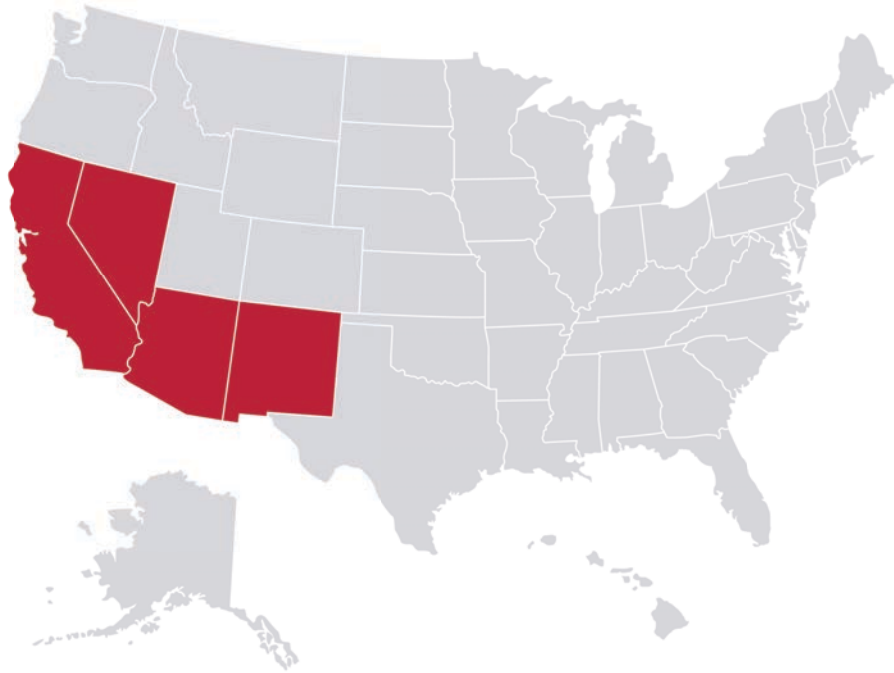
- 3.5 ton and under (<45,000 BTU)
  - Increase 1 SEER
    - **From 14 to 15 SEER**
- 4 ton and above (≥ 45,000 BTU)
  - Increase 0.5 SEER
    - **From 14 to 14.5 SEER**
- When?
  - **Starting January 1, 2023**
  - All units installed on or after Jan 1, 2023, must meet new efficiency levels (No sell through period)



2023 Air Conditioner Min. Efficiency

Southwest Region:

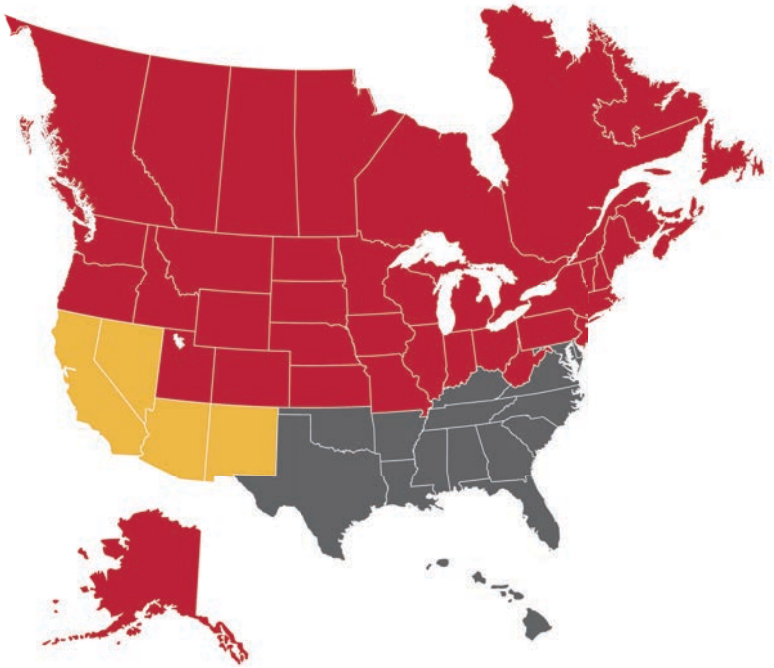
- 3.5 ton and under (<45,000 BTU)
  - Increase 1 SEER
    - **From 14 to 15 SEER**
  - EER must be ≥ 12.2
- 4 ton and above (≥ 45,000 BTU)
  - Increase 0.5 SEER
    - **From 14 to 14.5 SEER**
  - EER must be ≥ 11.7
- If SEER ≥ 16, Mininum EER reduces to 10.2 (all capacities)
- When?
  - **Starting January 1, 2023**
  - All units installed on or after Jan 1, 2023, must meet new efficiency levels (No sell through period)



2023 Heat Pump Min. Efficiency

All Regions (National Standard)

- Increase 1 SEER
  - **From 14 to 15 SEER**
- Increase 0.6 HSPF
  - **From 8.2 to 8.8 HSPF**
- When?
  - **Starting January 1, 2023**
  - 14 SEER/8.2 HSPF units built prior to Jan 1, 2023, can be sold indefinitely



New Efficiency Measurements

Lower duct static

Typical Higher Duct Static

DOE test procedure update (Appendix M1)

- Increased static pressure to be closer to typical home
  - **Increased from 0.1 -0.2 in. w.c. to 0.5 in. w.c.**
- Adjusted how to determine the building load for heat pump heating to calculate HSPF.

New Efficiency Metrics

SEER2

SEER → SEER2

15 → 14.3

Higher duct static

~95% of SEER

EER2

EER → EER2

12.2 → 11.7

Higher duct static

~96% of EER

HSPF2

HSPF → HSPF2

8.8 → 7.5

Higher duct static

New calc method

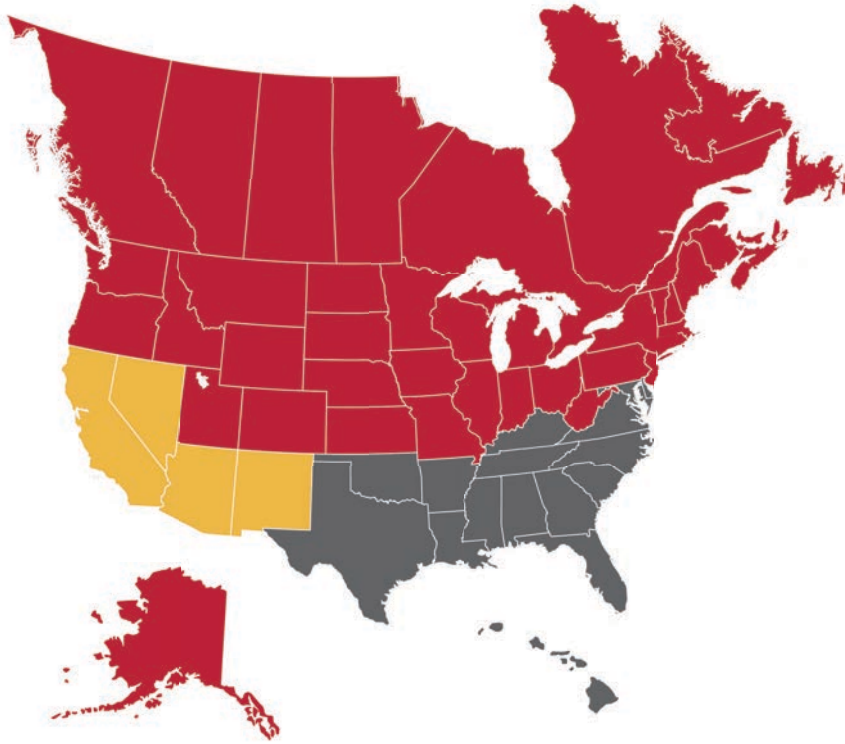
~85% of HSPF

New certified efficiency metrics. All products must be re-tested and re-rated.

Regional Standards 2.0

Product Class	North (National)				South		Southwest			
	SEER2		HSPF2		SEER2		SEER2		EER2	
	Current	New	Current	New	Current	New	Current	New	Current	New
Air Conditioners (≤ 3.5 ton)	12.4	13.4	-		13.4	14.3	13.4	14.3	11.7	11.7*
Air Conditioners (≥ 4 ton)	12.4	13.4	-		13.4	13.8	13.4	13.8	11.2	11.2*
Heat Pump	13.4	14.3	7.0	7.5						
Package Unit	13.4		6.8		13.4		13.4		10.6	
Implementation Date	Manufacture by Dec. 31, 2022				Install by Jan 1, 2023					

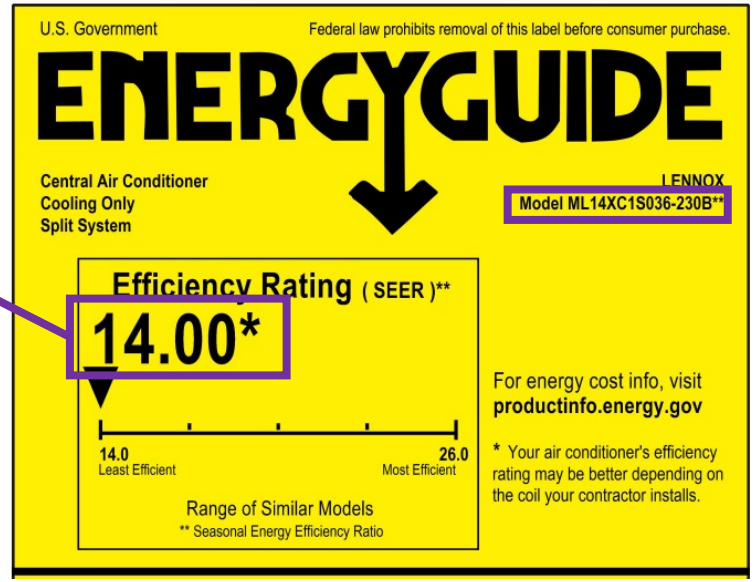
* 9.8 EER2 if SEER2 ≥ 15.2



Minimum Efficiency requirements enforced with new measurements starting Jan. 1, 2023

What determines if product meets min requirements?

Least Efficient Published Match

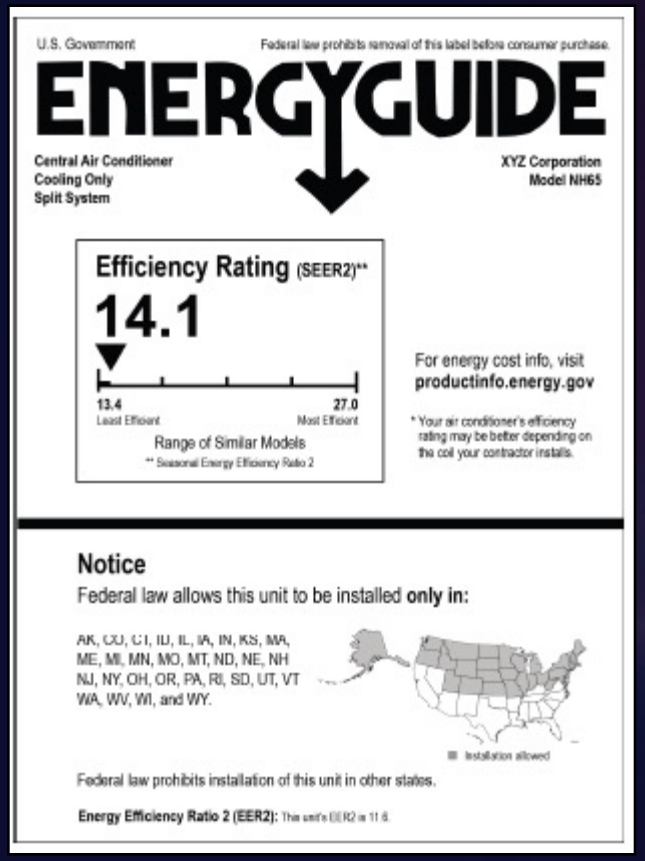


- Least efficient published system match for AC/HP
  - Must met min requirements for AC/HP to be eligible to sold in region
  - Single and two stage AC must have coil only match published
    - Coil only match typically dictates what region it can be sold in

Question: ML14XC1S036 has many system matches that meet 16 SEER so can those still be sold in the South on or after Jan 1, 2023, if the system combination is greater than 15 SEER?

Answer: No, since the least efficient system match published is 14 SEER, the ML14XC1S036 can not be installed in the South on or after Jan 1, 2023.

Is the Energy Guide Label changing?


U.S. Government

Federal law prohibits removal of this label before consumer purchase.

ENERGYGUIDE

Central Air Conditioner
Cooling Only
Split System

XYZ Corporation
Model NH65

Efficiency Rating (SEER2)**

14.1

13.4 Least Efficient — 27.0 Most Efficient

Range of Similar Models

** Seasonal Energy Efficiency Ratio 2

For energy cost info, visit
productinfo.energy.gov

* Your air conditioner's efficiency rating may be better depending on the coil your contractor installs.

Notice

Federal law allows this unit to be installed only in:

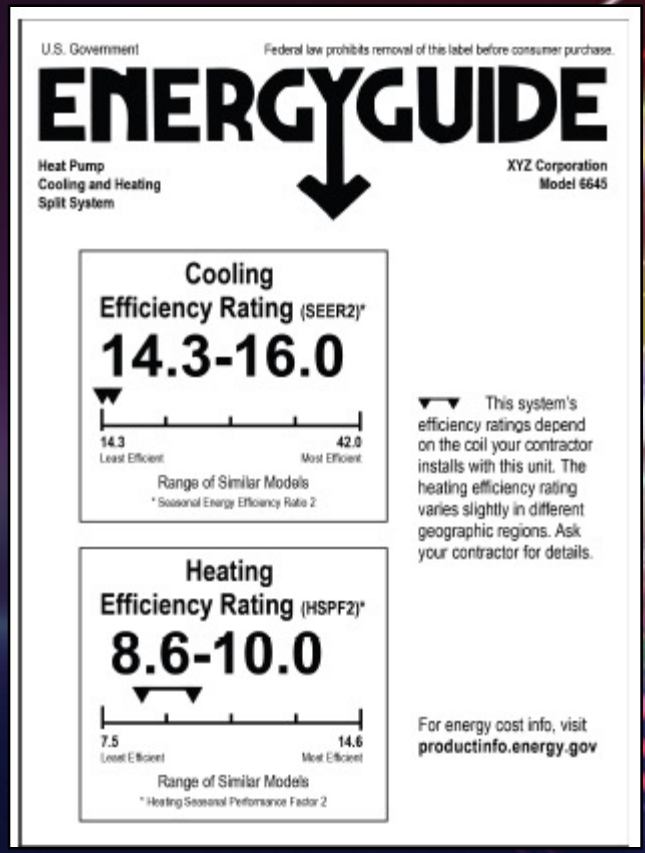
AK, CO, CT, ID, IL, IA, IN, KS, MA, ME, MI, MN, MO, MT, ND, NE, NH NJ, NY, OH, OR, PA, RI, SD, UT, VT WA, WV, WI, and WY.

Installation allowed

Federal law prohibits installation of this unit in other states.

Energy Efficiency Ratio 2 (EER2): This unit's EER2 is 11.8.

Air Conditioner


U.S. Government

Federal law prohibits removal of this label before consumer purchase.

ENERGYGUIDE

Heat Pump
Cooling and Heating
Split System

XYZ Corporation
Model 6645

Cooling
Efficiency Rating (SEER2)*

14.3-16.0

14.3 Least Efficient — 42.0 Most Efficient

Range of Similar Models

* Seasonal Energy Efficiency Ratio 2

Heating
Efficiency Rating (HSPF2)*

8.6-10.0

7.5 Least Efficient — 14.6 Most Efficient

Range of Similar Models

* Heating Seasonal Performance Factor 2

▼▼ This system's efficiency ratings depend on the coil your contractor installs with this unit. The heating efficiency rating varies slightly in different geographic regions. Ask your contractor for details.

For energy cost info, visit
productinfo.energy.gov

Heat Pump

Starting Jan. 1, 2023 Energy guide labels must be updated to show SEER2, EER2, and HSPF2.

How will regional standards affect the product line-up?

AC & HP

- Larger sized coils
- New compressors
- More ECM fans
- Less 2-stage
- More variable speed

AHU & Coils

- Larger coils
- More ECM fans
- More TXV SKUs
- Less RFC SKUs

System Matches

- Discontinued matches
- Less coil only matches
- Less PSC matches
- Less RFC matches

100% of AHRI Ratings Change / ~10 to 25% increase in min. efficiency system cost

Introducing the EL17XC1

- Up to 17 SEER (16.2 SEER2)
- 15 SEER (14.3 SEER2) coil only
- Single-stage compressor
- Quantum Coil
- Energy Star rated
- 70-71 dBs

Introducing the ML17XC1

- Up to 17 SEER (16.2 SEER2)
- 15 SEER (14.3 SEER2) coil only
- Single-stage compressor
- Quantum Coil
- Energy Star rated
- 72-73 dBs

Introducing the ML18XC2

- Featuring 2-stage compressor
- Up to 18 SEER (17.1 SEER2)
- Sound as low as 72dBs
- Quantum Coil Technology

PRODUCT LINE UP – NORTH REGION

AIR CONDITIONERS

Air Conditioners	Single	Dual	Variable
LENNOX			SL28XCV 
LENNOX ELITE	 EL16XC1  EL17XC1 N 		EL18XCV  XC20 
LENNOX	 ML14XC1  ML17XC1 N 	 ML18XC2 N 	

N NEW Offering (Second Half 2022)

Phase out due to regional standards

PRODUCT LINE UP – NORTH REGION

AIR CONDITIONERS

Air Conditioners	Single	Dual	Variable
LENNOX			SL28XCV
LENNOX ELITE	EL16XC1, EL17XC1 N		EL18XCV, XC20
LENNOX	ML14XC1, ML17XC1 N	ML18XC2 N	

N NEW Offering (Second Half 2022)

PRODUCT LINE UP – S AND SW REGIONS

AIR CONDITIONERS

Air Conditioners	Single	Dual	Variable
LENNOX			SL28XCV 
LENNOX ELITE	 EL17XC1 N 		EL18XCV  XC20 
LENNOX	 ML17XC1 N 	 ML18XC2 N 	

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PRODUCT LINE UP – S AND SW REGIONS

AIR CONDITIONERS

Air Conditioners	Single	Dual	Variable
LENNOX			SL28XCV 
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LENNOX	ML17XC1 N 	ML18XC2 N 	

N NEW Offering (Second Half 2022)

Phase out due to regional standards

2022 PRODUCT LINES (ALL REGIONS)

HEAT PUMPS

Heat Pumps	Single	Dual	Variable
LENNOX			SL25XPV 
LENNOX ELITE	 EL17XP1 N 		EL18XPV  XP20 
LENNOX	  ML17XP1 N 		

N NEW Offering (Late 2022)

Phase out due to regional standards

2022 PRODUCT LINES (ALL REGIONS)

HEAT PUMPS

Heat Pumps	Single	Dual	Variable
LENNOX			SL25XPV 
LENNOX ELITE	EL17XP1 N 		EL18XPV  XP20 
LENNOX	ML17XP1 N 		

N NEW Offering (Late 2022)

Phase out due to regional standards

Key Takeaways

Minimum efficiency standards are increasing in 2023

- Split AC/HP
- + 0.5 – 1 SEER
- + 0.6 HSPF

New efficiency ratings will be implemented

- SEER2
- EER2
- HSPF2

Product line ups and all system ratings will be updated to comply

- New minimum efficiency units
- Phase out non-compliant units
- All new system ratings

Call to Action

Get comfortable with the change:

- Understand how your region and different customers will be impacted in 2023

Educate your customers:

- Inform your customers of the upcoming changes

Ask Questions?

- Need clarification reach out to the product team:
  - **Brandon Chase:** Brandon.chase@lennoxind.com
  - **Tim Brizendine:** Tim.brizendine@lennoxind.com
  - **Amy Gebrian:** Amy.Gebrian@lennoxintl.com
  - **Justin Huntington:** Justin.huntington@lennoxind.com

More to come!!!

Thank You