

# Update From the United States: Refrigerant Transition, Regulatory Update, Tax Incentives, and Other Issues

Stephen Yurek  
AHRI President & CEO



# Air-Conditioning, Heating, and Refrigeration Institute (AHRI)

Advocate for 330+ HVACR and  
water heating manufacturers

Developer of 100+ international  
industry standards and guidelines

Administrator of 40+ certification  
programs



# Our Members are Manufacturers

Cooling and heating products for  
residential, commercial and industrial applications

central AC &  
heating equipment

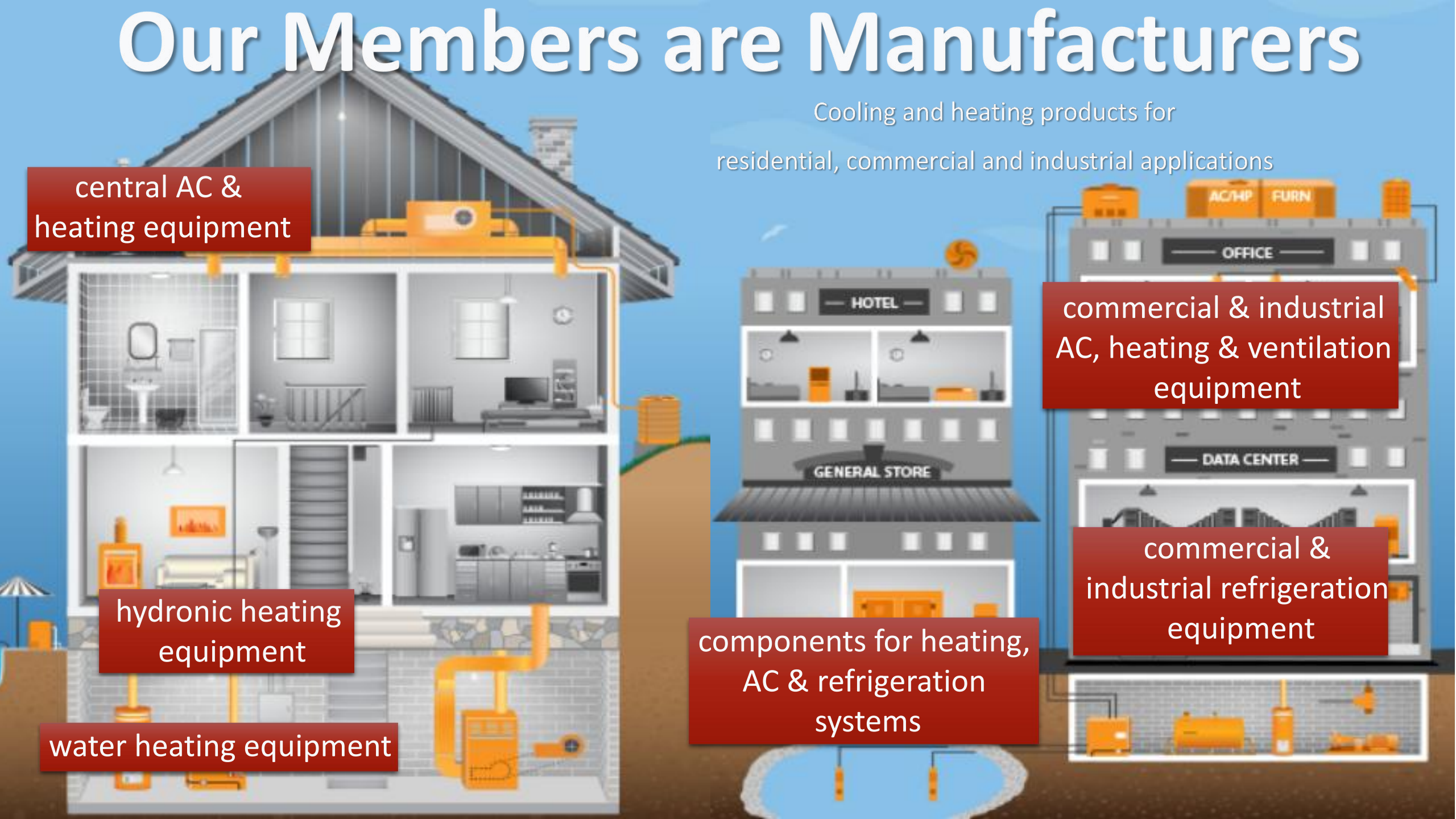
hydronic heating  
equipment

water heating equipment

components for heating,  
AC & refrigeration  
systems

commercial & industrial  
AC, heating & ventilation  
equipment

commercial &  
industrial refrigeration  
equipment





# Headquarters Office: Arlington, Virginia USA

## Global Offices:



China (Hefei)



MENA (Dubai)



Latin America (Mexico City)



India (Mumbai)



Canada (Toronto)

# For Discussion Today



## State of the Refrigerant Transition

AIM Act Implementation  
A2L State Building Code Initiative  
Refrigerant Reclaim



## Tax Credits for Highly Efficient Equipment (Inflation Reduction Act)





## Our Shared Commitment

- For decades, our industry has worked toward a cleaner environment and the lowest possible emissions.
  - Increased the overall efficiency of our products and equipment more than 50 percent over the past 30 years.
  - Undergone three refrigerant transitions for the sole purpose of environmental protection.

# Refrigerant Transition Update

# Refrigerant Transition: Where We Are Today

✓  
AIM Act Passed

✓  
Kigali Amendment  
Ratified

✓  
Refrigerant Research  
and Testing Completed

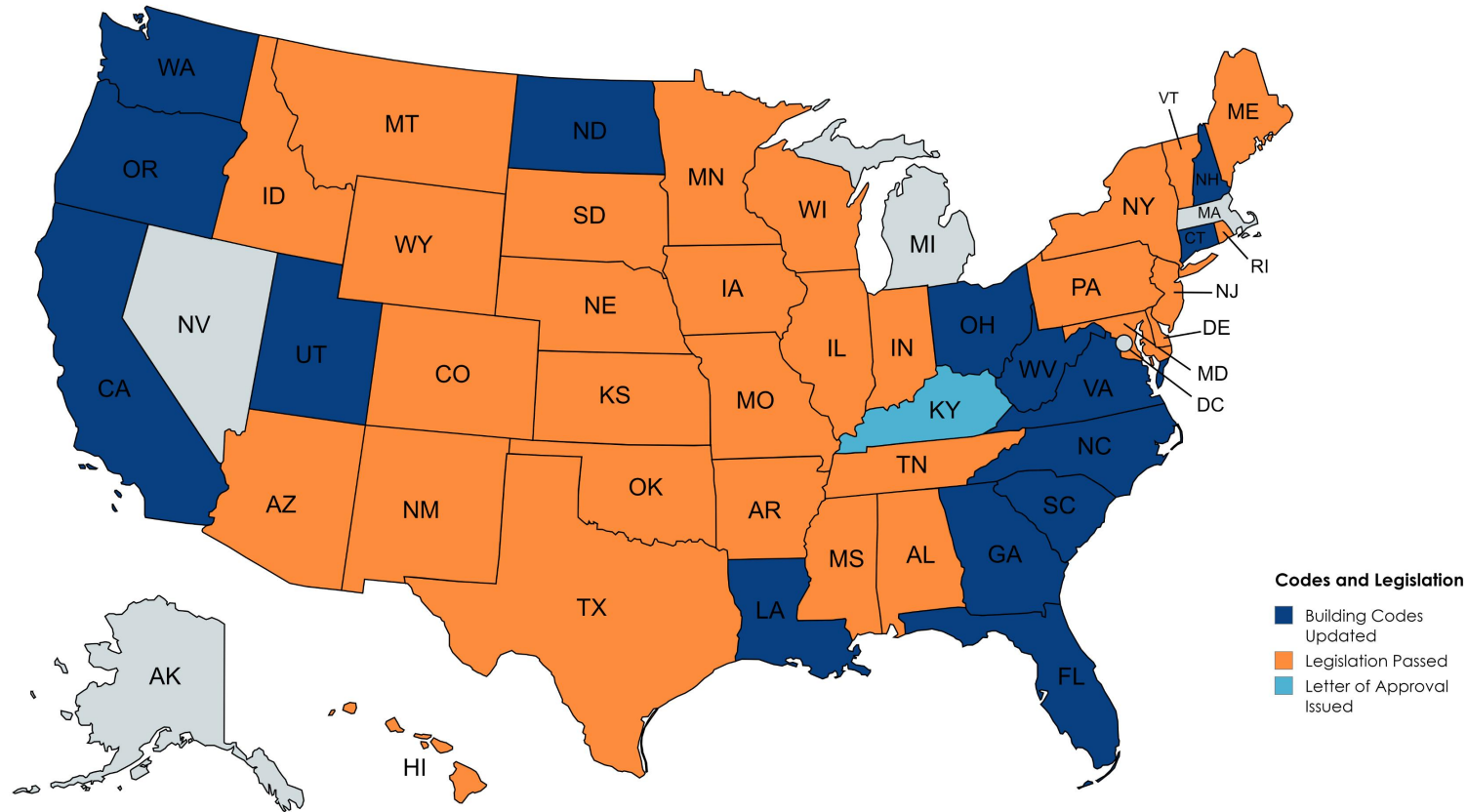
✓  
State Building Codes  
Updated – Only Three  
States Left!

✓  
EPA AIM Act  
Implementation Well  
Underway

Members On Cusp of  
Widespread Production  
and Distribution of New  
A2L Equipment



# Low-GWP Building Code Status



Created with mapchart.net



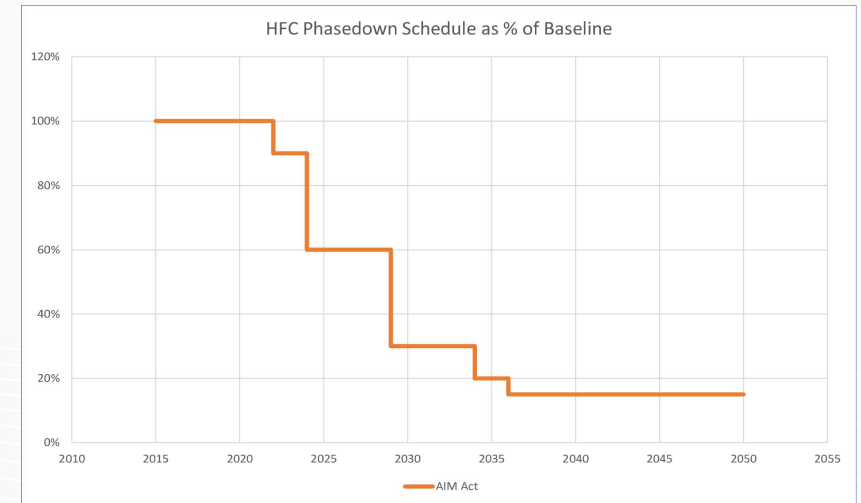
## HFC Regulatory Outlook

- HFC production and consumption phase down
- Technology Transitions (TT) Final Rule
- Refrigerant management (Subsection (h)) Proposed Rule
- SNAP approvals and use conditions
- California, Washington, and New York

# American Innovation and Manufacturing Act of 2020

## U.S. EPA Implementation

- Mandates production and consumption phasedown of HFCs
  - Allocation rule sets baselines and allocation methodologies
- Allows sector transitions (Technology Transitions rule)
- Refrigerant management including recovery and reclaim (Subsection (h) rulemaking)



### 2011-2013 baseline:

- 2022: 10% reduction
- 2024: 40% reduction
- 2029: 70% reduction
- 2034: 80% reduction
- 2036: 85% reduction



# Technology Transitions



Prohibitions on manufacture, import, installation of equipment based on GWP or specific refrigerant



A three year “sell through” period for products manufactured/imported prior to applicable compliance date



Annual reporting beginning January 1, 2025, for all entities, with reports due 90 days after end of reporting period



Compliance dates ranging from January 1, 2025, to January 1, 2028, depending on the subsector



Labeling, reporting, recordkeeping for refrigerant, charge, date of manufacture or installation, and other details

# Transition Dates

Systems	GWP	Compliance Date
Residential and Light Commercial Air Conditioning and Heat Pumps	700	January 1, 2025
Variable Refrigerant Flow Systems	700	January 1, 2026
Chillers	700	January 1, 2025
Data Centers	700	January 1, 2027
Residential Dehumidifiers	700	January 1, 2025
Household Refrigerators and Freezers	150	January 1, 2025
Retail Food Refrigeration – Stand Alone Units – Vending Machines	150	January 1, 2025
Commercial Refrigeration (various systems)	Various	January 1, 2025 to January 1, 2028

# Refrigerant Management



EPA proposed new refrigerant management rules in 2023



Leak detection/repair rules for commercial equipment



Reclaim mandates for initial charge and servicing



No new certification standards for technicians



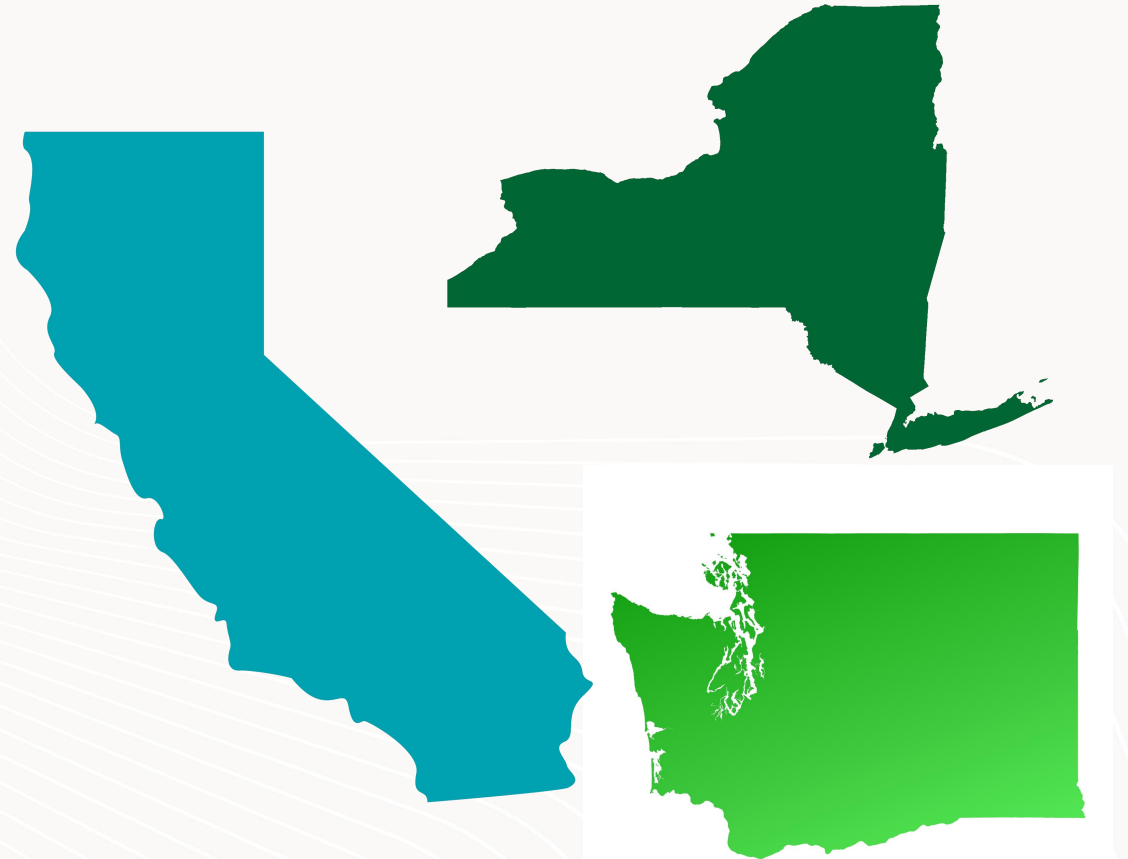
Wide range of views on recovery/reclaim policy goals



# States

*AIM Act does not prevent states from differing from Federal Regulation.*

- *California, New York, and Washington are implementing or looking to adopt their own HFC regulations*
- *Other states are not currently active on direct HFC restrictions*





## Education and Awareness

AHRI is committed to working with other organizations to raise awareness of the updated model codes

- Interactive State Map on AHRINet.org
- Partnering with ICC, PHCC, HARDI, and ACCA to produce a series of short videos on the refrigerant transition
- Creating a new website to serve a hub of A2L refrigerant information
  - [www.saferefrigeranttransition.org](http://www.saferefrigeranttransition.org) (includes state map)





# There is more work to do...

## Building Codes

- Have Model Building Codes adopt latest standards (UL - 2-40, UL-2-89, ASHRAE 15)
- All states adopt latest building codes enabling use of new refrigerants – there are only three left!

## Shipment and Transport

- Have U.S. Department of Transportation update regulations regarding shipping of chillers, horizontal cylinders, and mid-sized systems
- OSHA/Department of Labor must finalize the update to the Hazard Communication Standard (Purple Book 7)

Harmonization with Canada and Mexico (in process)



# Regulatory Update

# Open DOE Rulemakings

- Test procedure for Residential Central Air Conditioners and Heat Pumps
  - *Awaiting Final Rule publication*
  - *DOE is “working to finalize as soon as is feasible” but unable to share specifics regarding timeline*
  - *Just released Spring Regulatory Agenda indicates a December release of the Final Rule*
- Also awaiting:
  - *Final Rule for Certification, Compliance, and Enforcement (expected September 2024)*
  - *Direct Final Rule for Adjudication and Civil Penalty Procedures Under EPCA*

# 2024 DOE Energy Conservation Standard Rulemakings

- Proposed Rules

- Water-Source Heat Pumps
- Consumer Furnace
- Commercial Air-Cooled Unitary Air Conditioners and Heat Pumps
- Evaporatively-Cooled Commercial Unitary Air Conditioners (ECUACs) and Water-Cooled Commercial Unitary Air Conditioners (WCUACs)

- Final Rules

- Automatic Commercial Ice Makers
- Commercial Refrigeration Equipment (Court Decree: November 30, 2024)
- Consumer Water Heaters
- Consumer Boilers
- Walk-In Coolers and Freezers
- Commercial Fans and Blowers
- Extended Scope Electric Motors



# 2024 DOE Test Procedure Rulemakings

- Pre Rules
  - Commercial Packaged Boilers
  - Pool Heaters
- Final Rules
  - Residential Central Air Conditioners and Heat Pumps
  - Packaged Terminal Air Conditioners and Heat Pumps
  - Water-Source Heat Pumps

# Energy Efficiency Incentives

# Incentives for Energy Efficient Equipment: Inflation Reduction Act of 2022

A 10-year extension and expansion of Energy Efficient Home Improvement Tax Credit

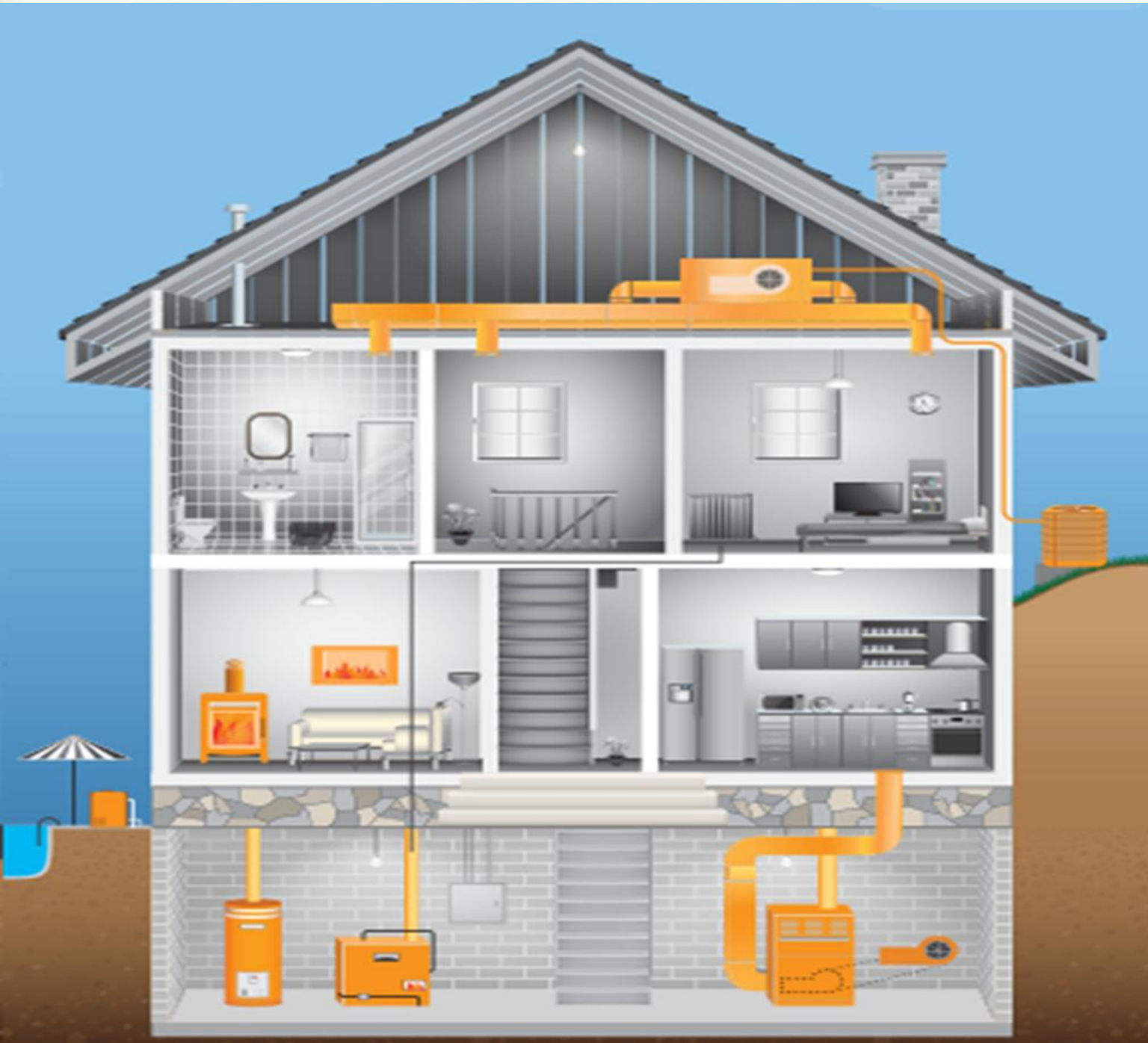
An expansion and 10-year extension of residential tax credits for geothermal equipment

New point-of-sale rebates for the purchase of efficient electric heating and cooling equipment

An expansion of the investment tax credit to include thermal energy storage technology

\$250 million in Defense Production Act funding for increasing heat pump manufacturing capacity





## Energy Efficient Home Improvement Tax Credit (25C)

- Up to 30 % Tax Credit on installation cost of HVACR and water heating products, up to:
  - \$600 per air conditioner
  - \$600 per furnace
  - \$600 per boiler
  - \$2,000 per heat pump
  - \$2,000 per heat pump water heater
- Equipment must meet the highest CEE efficiency tier (but not advanced)

# High Efficiency Electric Home Rebate Program

Administered by state energy offices –  
\$9.6 billion in Federal funds available  
until expended.

- Low-income household: 100% of costs with a maximum benefit for items listed below:
- Moderate-income household: 50% of costs, with a maximum benefit for items listed below:
  - \$8,000 for heat pump
  - \$1,750 for heat pump water heater
  - \$4,000 for electrical service upgrade
  - \$1,600 for insulation, air-sealing, and ventilation improvements
  - \$2,500 for electric wiring changes
  - Max rebate total: \$14,000





# Inflation Reduction Act Implementation

- IRA Implementation at Treasury and DOE (25C and electric appliance rebate programs)
  - 17 states have filed applications to distribute IRA funding tied to energy-efficient appliances: Arizona, California, Colorado, Georgia, Hawaii, Indiana, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Mexico, New York, Oregon, Rhode Island, Washington and Wisconsin
    - State applications are due in January 2025
- Awaiting final rule/guidance on 25C Unique Product Identification Numbers



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