

Update From the United States: Refrigerant Transition; Sustainability Path

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

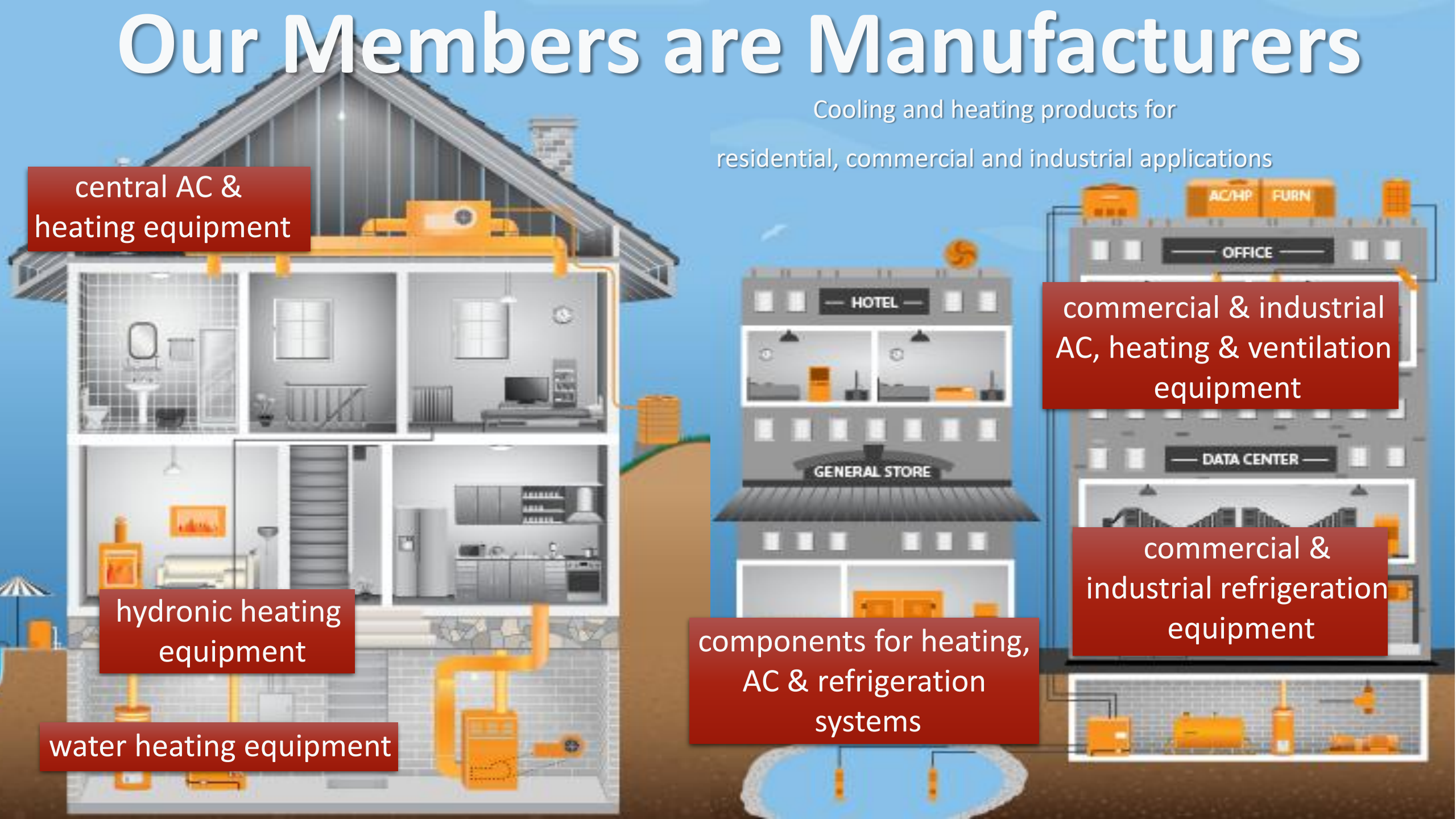
hydronic heating
equipment

water heating equipment

commercial & industrial
AC, heating & ventilation
equipment

commercial &
industrial refrigeration
equipment

components for heating,
AC & refrigeration
systems



Headquarters Office: Arlington, Virginia USA

Global Offices:



China (Hefei)



MENA (Dubai)



Latin America (Mexico City)



India (Mumbai)



Canada (Toronto)



Singapore

For Discussion Today



State of the Refrigerant Transition

- AIM Act Implementation
- A2L State Building Code Initiative
- Refrigerant Reclaim

Credible Path to Sustainability



Our Shared Commitment

- For decades, our industry has worked toward a cleaner environment and the lowest possible emissions. During that time, we have:
 - 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

✓
EPA AIM Act
Implementation
Well Underway

✓
Widespread
Production and
Distribution of New
A2L Equipment



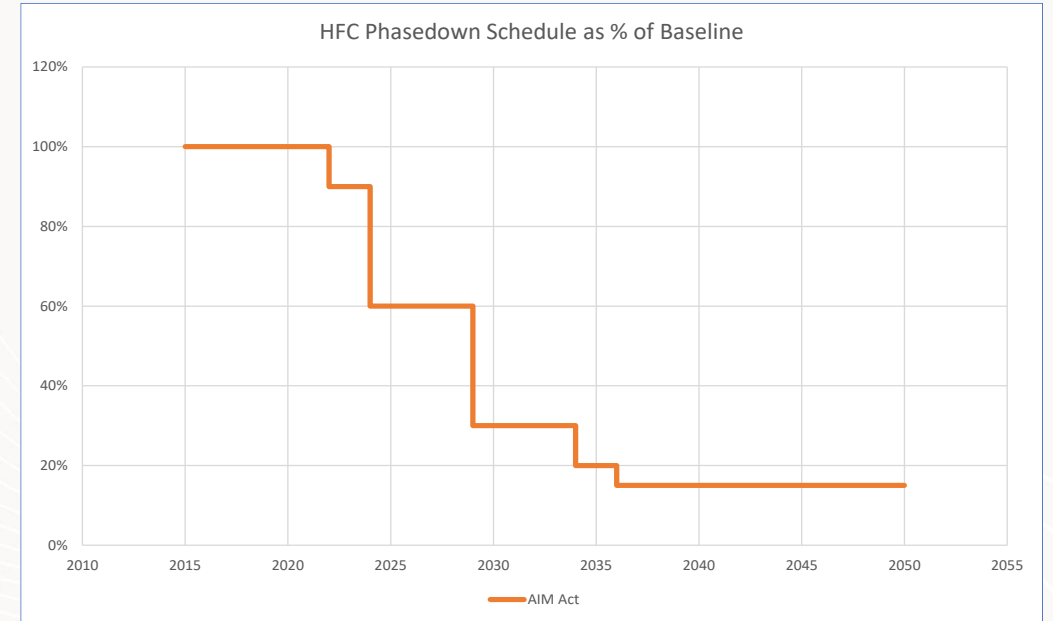
HFC Regulatory Outlook

- 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

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

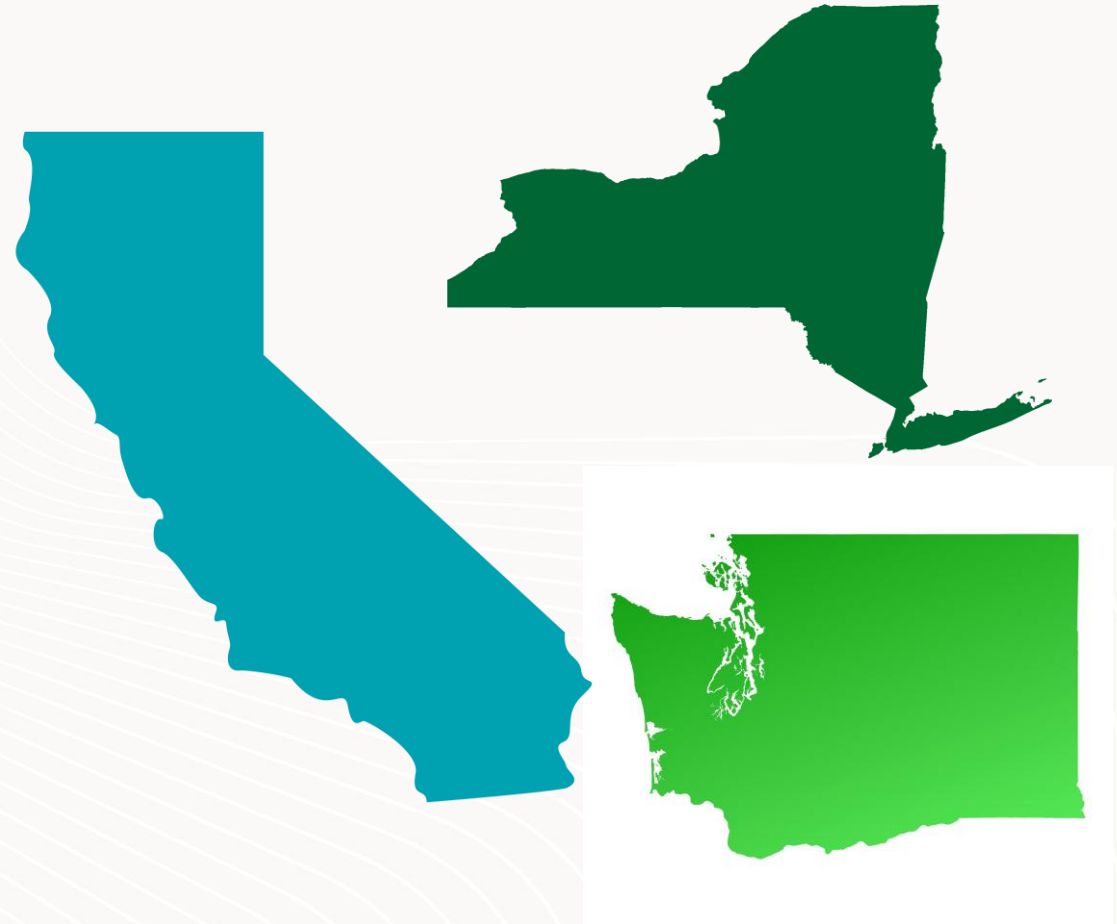
Any Changes Expected By Trump Administration?

- In March, Environmental Protection Agency Administrator Lee Zeldin announced that his agency would “reconsider” the Technology Transitions Rule, a key component of U.S. compliance with the Kigali Amendment
- If this occurs (a big IF), it is unlikely to fundamentally change our path forward – the manufacturing lines are already changed over, the new equipment is on trucks and being installed every day. There is no realistic path to go back.
- In addition, such an action would embolden states to enact their own – potentially differing – regulations, which would severely impact manufacturers’ ability to provide economic equipment to consumers in a timely manner. (See next slide)

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



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



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
- Interactive Canadian 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 (includes state and Canadian maps)



There is more work to do...

Building Codes

- Have states that allowed A2L refrigerants also update their building codes to avoid regulatory confusion

Storage

- Most states must still adopt the 2024 model fire codes to allow storage of A2L quantities

Harmonization with Canada and Mexico (in process)

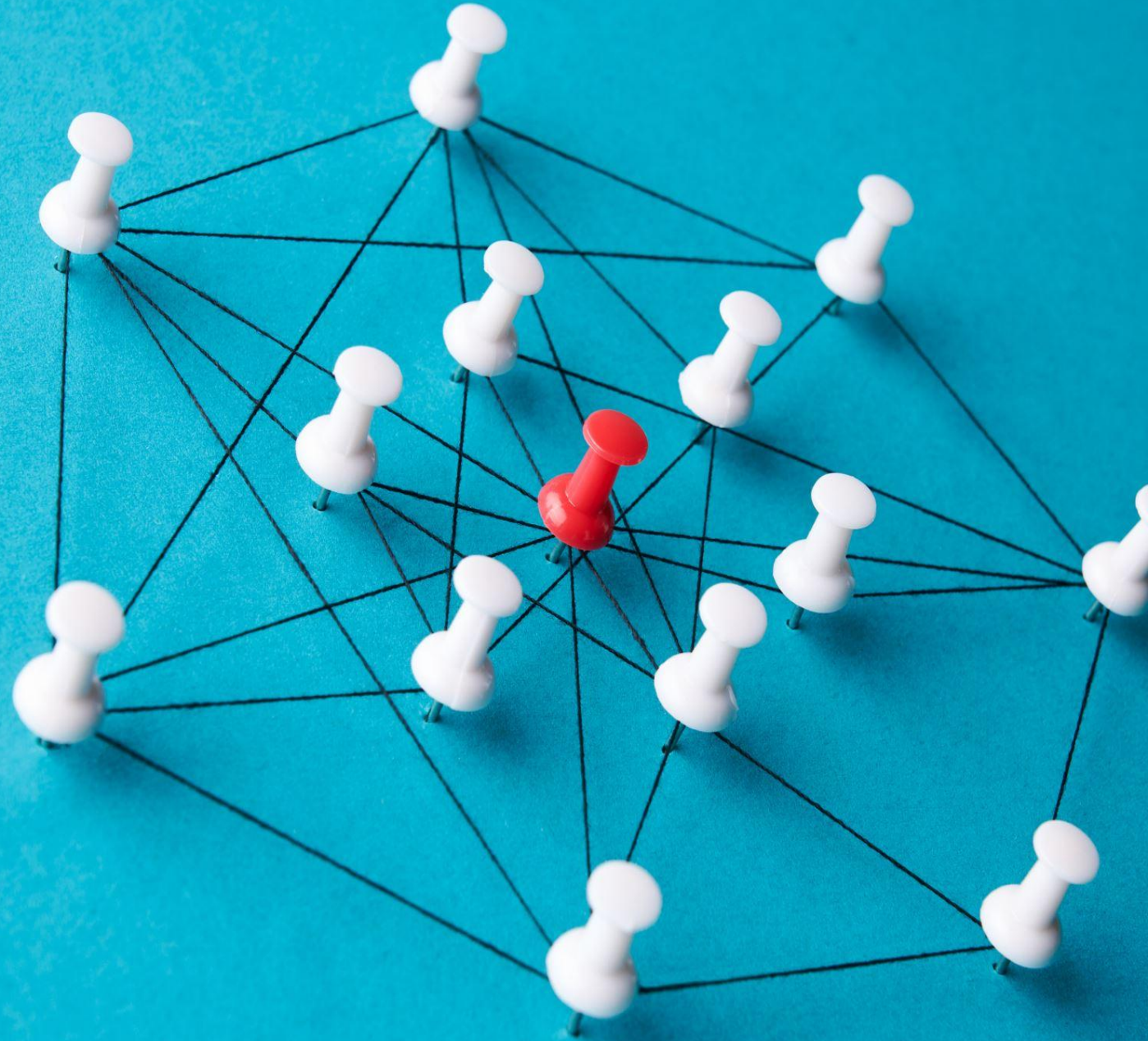
A Credible Path to Sustainability



The Challenges of Sustainable Sustainability

- Everyone wants a clean environment
- Everyone wants affordable, reliable, efficient heating, cooling, and water heating equipment
- To be successful, all nations must have reliable and affordable energy
- **Heating, cooling, water heating, and commercial refrigeration are not luxuries - they are necessities for health, safety, productivity, and comfort**

How to make all those desires and realities mesh into coherent, successful policies **that end - users accept and can afford?**



Impact of Aspirational Regulation

- In the previous U.S. administration, environmental policy was developed by a small number of people with little or no economic experience, who would bear few if any consequences of the policies they espoused.
 - The concept of trade-offs was either not understood or was ignored.
 - Likewise, cause-and-effect was either not understood or was ignored.
- Italy, Netherlands, Germany, Argentina, United Kingdom, and the United States are only the latest to experience political upheaval in large measure because of bureaucratic indifference and arrogance.
- Others will surely follow.

Focus Shift: Affordability vs Decarbonization

- Only 37 percent of registered voters considered climate change a “very important” issue, according to a [Pew Research Center survey](#) conducted in August and September 2024. This was the lowest score of any issue. Washington Post, November 20, 2024
- We are reversing policies that force consumers to pay more for clothes washers and dryers, hot water heaters and dishwashers that deliver inferior performance. Our goal is lower cost and higher performance. -- *Secretary of Energy Chris Wright, March 10, 2025*
- Energy efficiency rules have restricted consumer choice in many home appliances. If we do not act, the last administration’s actions will make new home appliances more expensive and contribute to a higher cost of living for Americans. – *Environmental Protection Agency Administrator Lee Zeldin, February 14, 2025*

To Be Successful, Environmental Policies Must Be:



Attainable – Not Aspirational



Economically Justified –
Affordable



Based on a sound assessment
of current and future needs,
supplies, and demands

If policies do not meet those criteria:

Backtracking, confusion, uncertainty, higher costs, and political turmoil ensue

Why Does Affordability Matter?

- “Over 20 percent of Americans struggle to pay their energy bills and roughly 10 percent have received a utility disconnection notice in the past 12 months.” -- Secretary of Energy Chris Wright, March 10, 2025
- “The public is exhausted,” said New York Assemblymember John McDonald. “At the end of the day, they don’t want to see their bills go up. We have to be sensitive to that.”
- “What is the cost? I can’t do things without knowing the cost on consumers...the goals are still worthy, but we have to think about the collateral damage.” – New York Governor Kathy Hochul, January 29, 2025
- 59 percent of Americans (in the wealthiest nation on Earth) do not have enough in the bank to cover a \$1,000 emergency expense. – Bankrate Poll, January 2025

Where we are:

Aspiration is good

Policy by aspiration can be bad

Sustainability is good

Sustainability *that is not sustainable* is bad

Half a loaf, three-quarters of a loaf is better than no loaf

Bottom Line



Sustainability can be achieved, but it must be realistic, incremental, intelligently planned, and affordable



One step forward, two steps back does not help achieve goals (Reducing nuclear power while increasing coal use doesn't make sense in anybody's book)



Ignoring the needs, wants, and cost of consumers is a recipe for political trouble

**We have the solutions, but the market
(consumers, contractors) must be sold on the
solution because for most:**

primary concern is cost
followed by comfort
followed by environmental impact

謝謝