

# Changing Policy Landscape

**Opportunities and Challenges for Private Sector**



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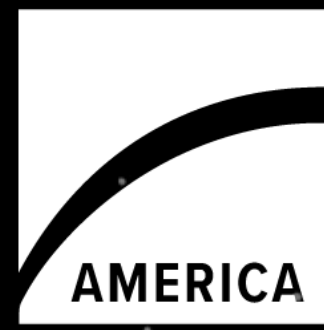
Climate Campaign Lead, EIA

**Environmental Investigation Agency**





# About EIA



# ATMO sphere



## THE NEED FOR SMARTER STANDARDS AND CODES IN COOLING



### EXECUTIVE SUMMARY

Several safety standards and building codes are blocking the uptake of low global warming potential (GWP) alternatives to hydrofluorocarbon (HFC)-based cooling around the world. This briefing provides an overview of some key standards organizations with respect to refrigeration and air conditioning, the commercialization of low-GWP alternatives, and how these standards can be modified to facilitate the use of natural refrigerants and continue to protect human health and the environment. Smarter standards and codes for the safe use of low-GWP alternatives should be based on valid assumptions backed by rigorous research into account the full range of modern safety technologies and warning systems.

### STANDARDS AND CLIMATE AMBITION UNDER AN HFC PHASE-DOWN

Most refrigerants used today are synthetic fluorinated super-greenhouse gases called hydrofluorocarbons (HFCs) and hydrochlorofluorocarbons (HCFCs), which are hundreds to thousands of times more damaging to the climate than carbon dioxide (CO<sub>2</sub>). In November 2015, the 197 countries of the Montreal Protocol agreed to negotiate an agreement to adopt a global phase-down of HFCs in 2016. An ambitious phase-down could avoid 100 GtCO<sub>2</sub>-equivalent HFC emissions by 2050 with up to an additional 100 GtCO<sub>2</sub> through potential energy efficiency improvements and prevent 0.5 degrees Celsius of warming by 2100. Several developing countries are using HCFCs as they phase-out HFCs. Standards and standards-making bodies are making low-GWP alternatives available to countries to leapfrog HFCs. These standards are being developed by the industry, not the governments, so the safety and quality aspect of designing, manufacturing, and installing low-GWP systems is critical.



## Transitioning HFCs in India

Why Multinationals Must Support India's Kigali Amendment Goals



## PUTTING THE FREEZE ON HFCs:

### A GLOBAL DIGEST OF AVAILABLE CLIMATE-FRIENDLY REFRIGERATION AND AIR-CONDITIONING TECHNOLOGIES



## Bringing the U.S. Fridge Market into the 21st Century

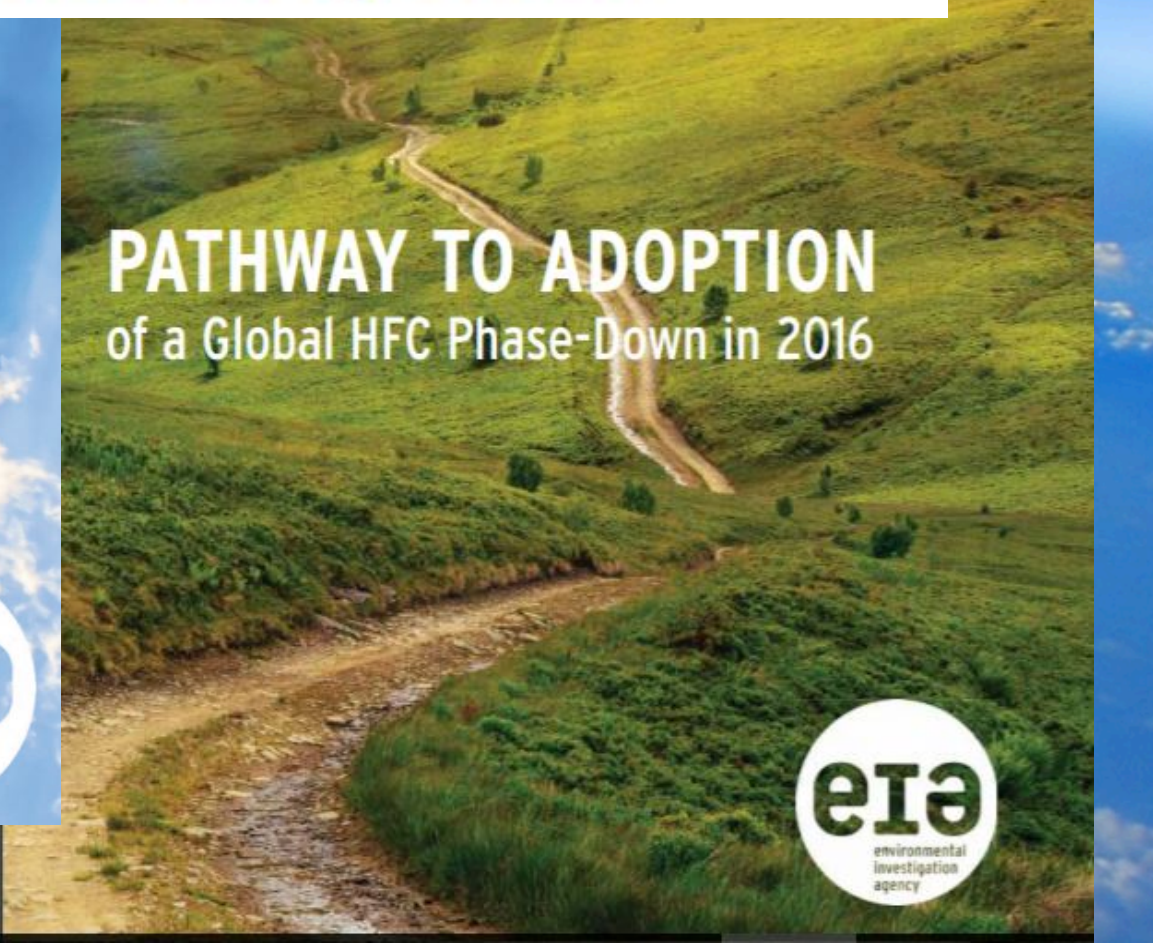
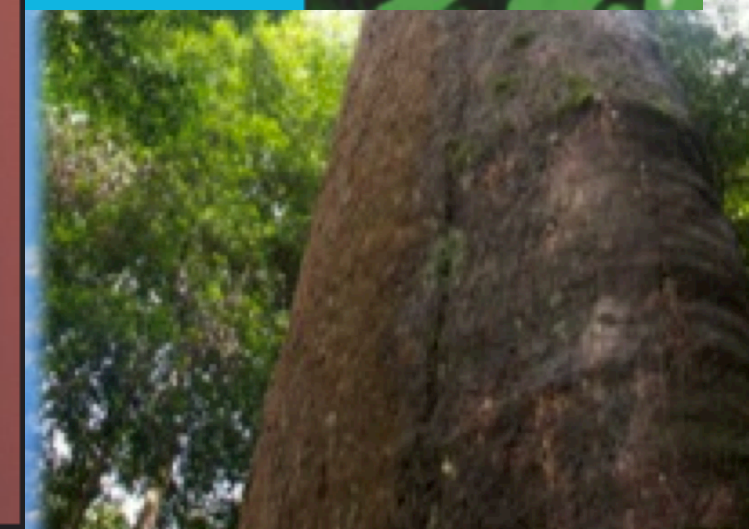
### Low-GWP Technology in Domestic Refrigeration

## BUILDING A STRONG FOUNDATION FOR CONTINUED SUCCESS

The Montreal Protocol in its 30th year



## PATHWAY TO ADOPTION of a Global HFC Phase-Down in 2016





# Uncertainty in the Policy Landscape

Ratification of Kigali  
Amendment is a ?

Established federal  
regulations being  
weakened under the  
current administration

Market transition to  
mid-GWP refrigerants/  
blends

With few exceptions,  
U.S. lags behind rest of  
the world despite  
many technology  
options

U.S. standards more  
restrictive than rest of  
the world





## EPA SNAP

- SNAP Rule 20: Partial vacature by the federal court
- EPA short term guidance allows continued use of HFCs BUT stakeholders should be aware:
  - EPA is initiating a new rulemaking process, SNAP rules likely to still apply to use of HFCs in many situations
  - Rule 21 (not covered by court's vacature) is still in place
  - Sector specific stakeholder workshops scheduled for **June 26-28, July 16-18**

## Section 608 Refrigerant Management Rules

- EPA to issue revised rulemaking (under review with OMB)
- May re-visit applicability of 608 rules to HFCs entirely

# Federal Policy: Current Snapshot



## CARB Proposed Regulations

- SLCP strategy to reduce emissions of HFCs by 40% in 2030 and initiated a process to finalize new regulations by 2019 to meet these targets.
  - 150 GWP threshold for stationary refrigeration
  - Proposed measures on HFCs will mitigate 260 MMTCO<sub>2</sub>e by 2030 = taking 55 million cars off the road for a year

## California Cooling Act

- Incentive program for low-GWP refrigerants, full backstop of SNAP rules
- Other States can replicate these measures



# Internationall y

- Internationally, Kigali Amendment ratified by 38 Parties!
- Global transition already underway.

United States Senate  
WASHINGTON, DC 20510

June 4, 2018

President Donald J. Trump  
The White House  
1600 Pennsylvania Avenue NW  
Washington, D.C. 20500

Dear Mr. President:

We write to urge you to send the Kigali Amendment to the Montreal Protocol to the Senate for its advice and consent. The Kigali Amendment is intended to foster a smooth transition to commercially available next generation technologies developed by American industry. By sending this amendment to the Senate, you will help secure America's place as the global leader in several manufacturing industries, and in turn give American workers an advantage against their competitors in the international marketplace.

Under the framework of the Montreal Protocol, U.S. industry has for years positioned itself as a leader in the effort to develop beneficial technology transitions relating to the use of fluorocarbon technologies, including air conditioning and refrigeration technologies. In fact, the Montreal Protocol has its roots in the Reagan Administration and has enjoyed bipartisan support since its inception. This leadership is due in part to the active participation of U.S. industry members with the government over the 30-year history of the treaty and can only continue through Senate ratification of the Kigali Amendment.


Right now, American companies and their 589,000 employees are poised to significantly benefit from the transitions contemplated by the Kigali Amendment, transitions that other countries already have in place. The Kigali Amendment is projected to increase U.S. manufacturing jobs by 33,000, increase exports by \$4.8 billion, and improve the heating, ventilation, air-conditioning, and refrigeration industry (HVACR) balance of trade. The failure to ratify this amendment could transfer our American advantage to other countries, including China, which have been dumping outdated products into the global marketplace and our backyard. Thankfully, there is a clear path forward to protect American interests.


We urge you to send this amendment to the Senate for its consideration. The impacted industries in our country played a major role in shaping this amendment and are supportive of its ratification and implementation. The Kigali Amendment will protect American workers, grow our economy, and improve our trade balance all while encouraging further innovation to strengthen America's leadership role. We look forward to working with you on this important effort to support American jobs and technology.

Sincerely,

  
John Kennedy  
United States Senator

  
Susan M. Collins  
United States Senator

  
Bill Cassidy, M.D.  
United States Senator

  
Lindsey O. Graham  
United States Senator

  
Lisa Murkowski  
United States Senator

  
Johnny Isakson  
United States Senator

  
Lamar Alexander  
United States Senator

  
Marco Rubio  
United States Senator

  
Jerry Moran  
United States Senator

  
Tim Scott  
United States Senator

  
Roy Blunt  
United States Senator

  
John Boozman  
United States Senator

  
Todd Young  
United States Senator







# Sub-National Actors Step Up

## US Climate Alliance

- Bi-partisan coalition of 17 (and growing) Governors founded by California, NY, and Washington
- New #SLCPChallenge announced this month, including new commitments on HFCs

## America's Pledge

- Aggregating the actions of states, cities and businesses and other non-national actors in the United States to drive down greenhouse gas emissions



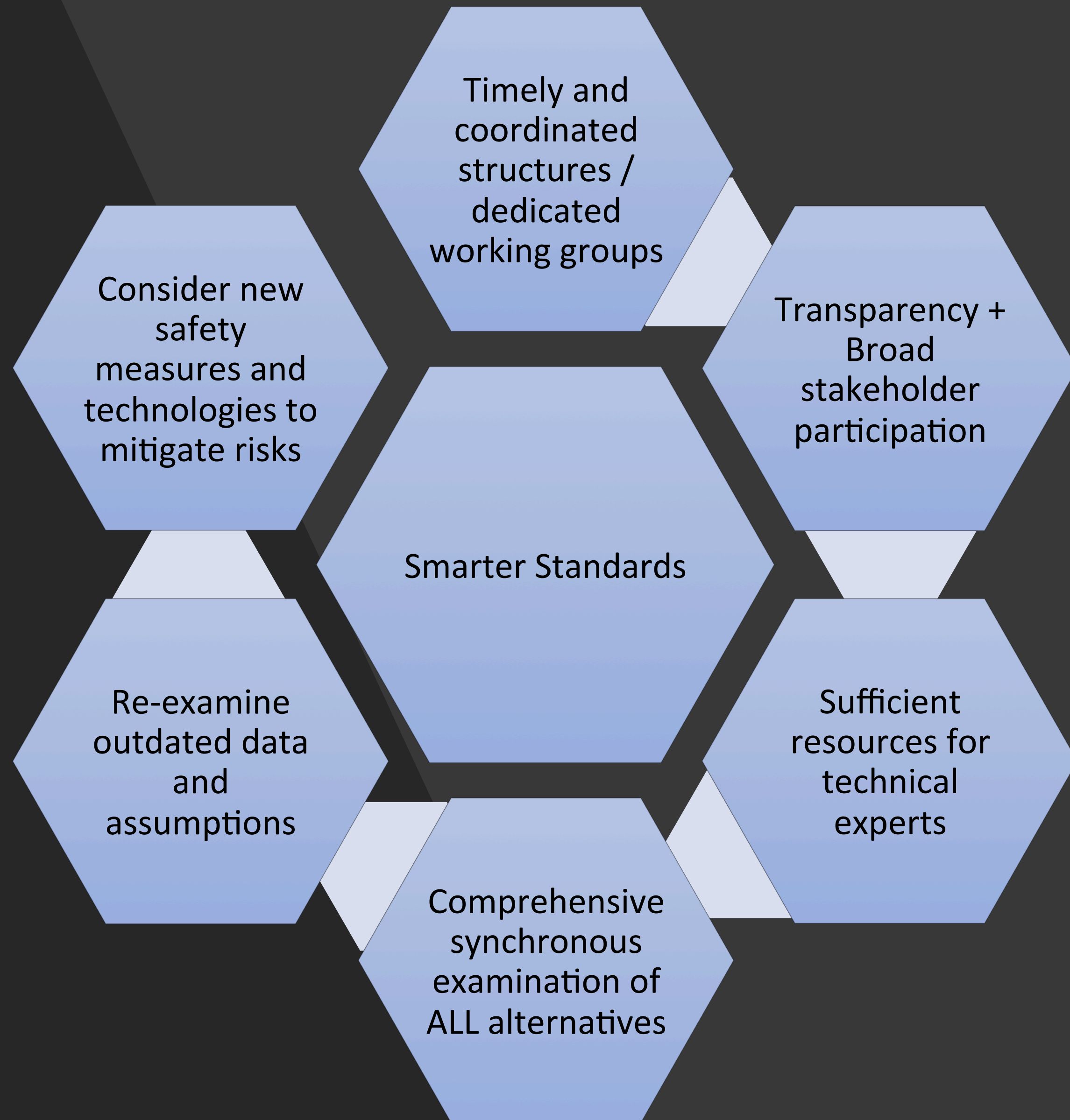
# GLOBAL CLIMATE ACTION SUMMIT

September 12-14, 2018  
San Francisco, CA

HEALTHY ENERGY SYSTEMS	INCLUSIVE ECONOMIC GROWTH	SUSTAINABLE COMMUNITIES	LAND AND OCEAN STEWARDSHIP	TRANSFORMATIVE CLIMATE INVESTMENT
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# Smarter Standards



## Challenges

Ensuring standards work is timely and comprehensive

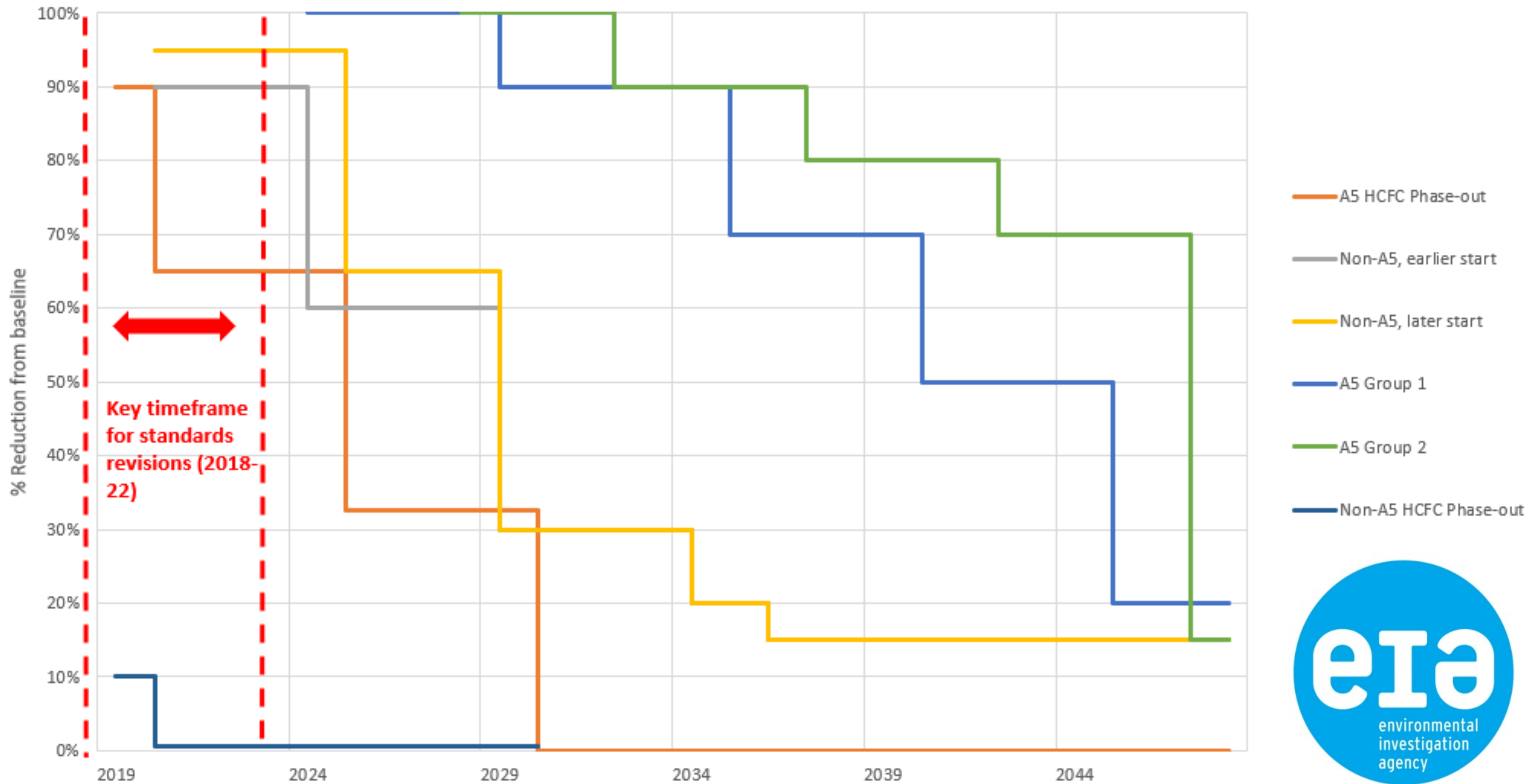
Limited participation by A5 countries

Insufficient resources for experts

Limited scope of work of certain standards bodies

Prioritization of certain refrigerants over others







# Key UL Standards: Snapshot



## UL 60335-2-24 (household fridges)

- 150 gram charge size approved
- EPA SNAP rule revision pending (proposed)

## UL 60335-2-40 (room and unitary air conditioners)

- CANENA WG to be initiated once IEC WG16 reaches CDV stage (Sept 2019 expected)

## UL 60335-2-89 (commercial refrigeration)

- CANENA/UL proposal to be finalized (this year?) once IEC WG4 vote finalized



# ASHRAE and ICC Building Codes



## ASHRAE 15

- Requirement on flammable refrigerants >150 grams to receive approval of AHJ (local jurisdiction)
- Once UL 60335-2-89 proposal has been finalized, need to carry this over to ASHRAE 15 and ICC / state building codes to fully eliminate barriers

## ICC Model Codes

- Next ICC code cycles are 2021, 2024
- Is it time for an overhaul of the code-change process? Many say yes
- Can state codes change ahead of ICC cycle based on UL approval?



# UL484 Task Group on Flammable (A2/A3) Refrigerants in Air Conditioning

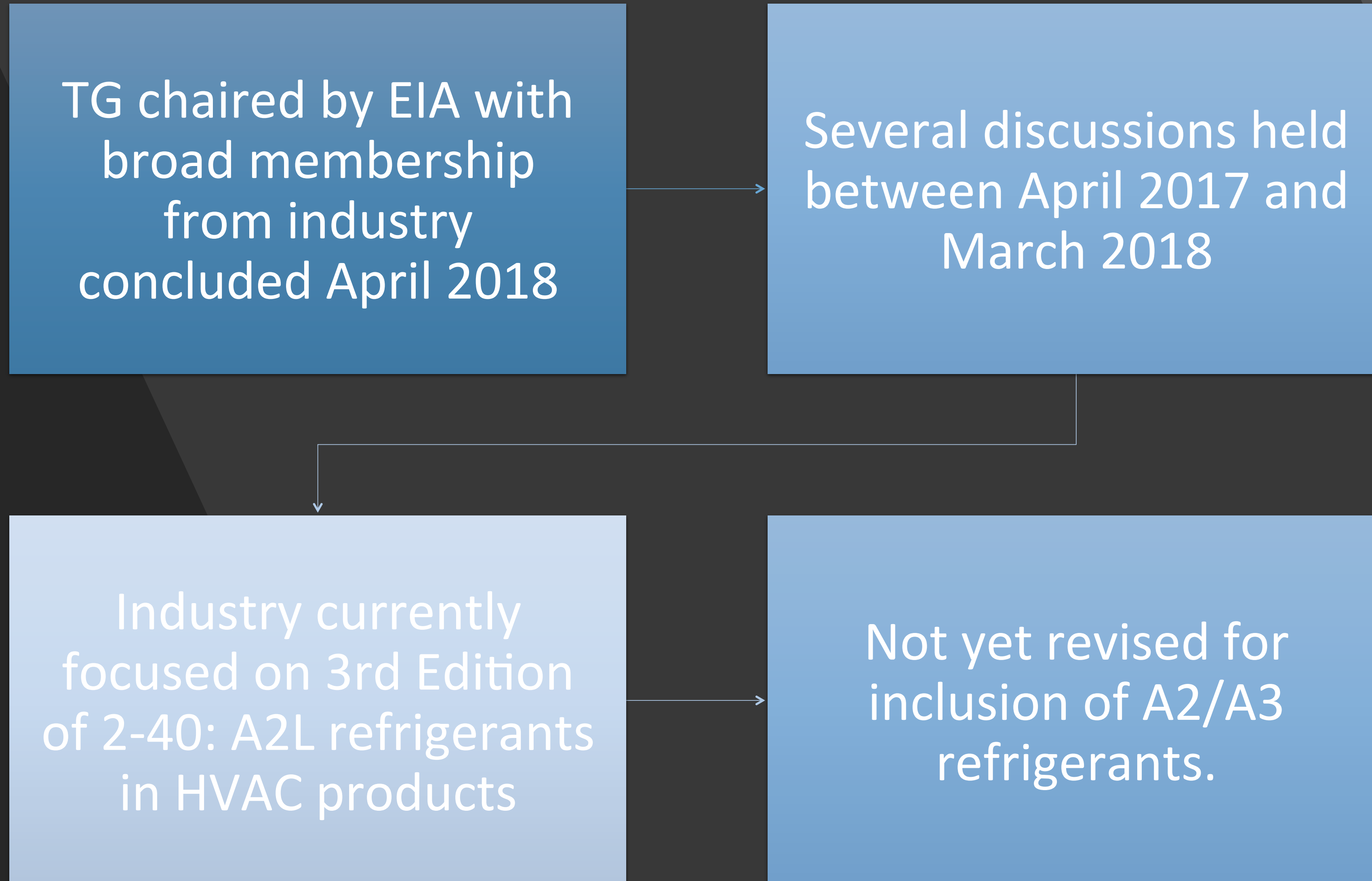


TG chaired by EIA with broad membership from industry concluded April 2018

Several discussions held between April 2017 and March 2018

Industry currently focused on 3rd Edition of 2-40: A2L refrigerants in HVAC products

Not yet revised for inclusion of A2/A3 refrigerants.





# Consensus Recommendations of UL 484 TG



The USNC and industry remain actively engaged in IEC SC61D/WG16.

AHRI, AHAM, and ASHRAE expedite on-going and planned research on A2/A3 refrigerants.

Once IEC WG16 proposal reaches an appropriate level of maturity (CDV stage) -> form new CANENA WG to adopt those concepts into UL 60335-2-40/ CAN CSA 22.2 No. 60335-2-40.

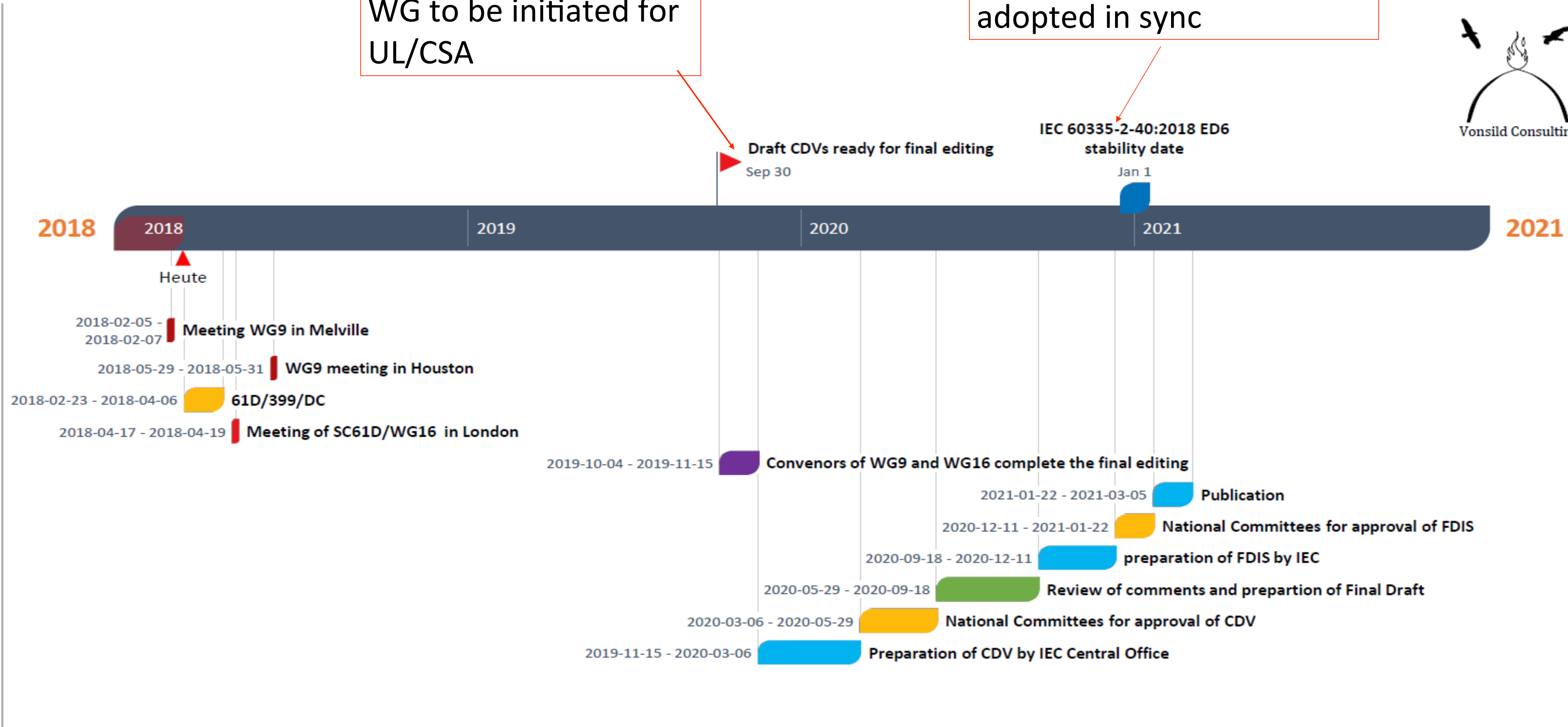


# U.S. Timing within IEC WG9/16 context



Sept 2019: CANENA WG to be initiated for UL/CSA

2021: A2L and A3 changes adopted in sync



Draft CDVs ready for final editing  
Sep 30

IEC 60335-2-40:2018 ED6  
stability date  
Jan 1

2018

2018

2019

2020

2021

2021

Heute



# Opportunity for Companies re UL AC standards

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Join your National Committee to actively engage in IEC SC61D/WG16

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Follow ongoing research outputs; provide feedback to AHRI and UL

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Companies that are members of AHRI and AHAM identify experts to actively engage in the new CANENA WG (Sept 2019)







Participate actively or facilitate funding for experts' participation

Examine potential for state building codes to advance proposed changes faster than national codes

Enable outside oversight and engagement by strengthening and expanding coalition of stakeholders

Ensure revision of safety standards to allow safe use of flammable refrigerants

❖ Engage with the Montreal Protocol process to raise awareness

Work with suppliers and contractors to build capacity in the servicing sector to deal with natreps

Urge your government to incentivize a one-time transition to low-GWP and avoid the phase-in of medium-GWP HFC blends

What can we do?





**ATMO**  
sphere

Business Case for  
Natural Refrigerants

June 12-14, 2018 – Long Beach

Thank you very much!

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