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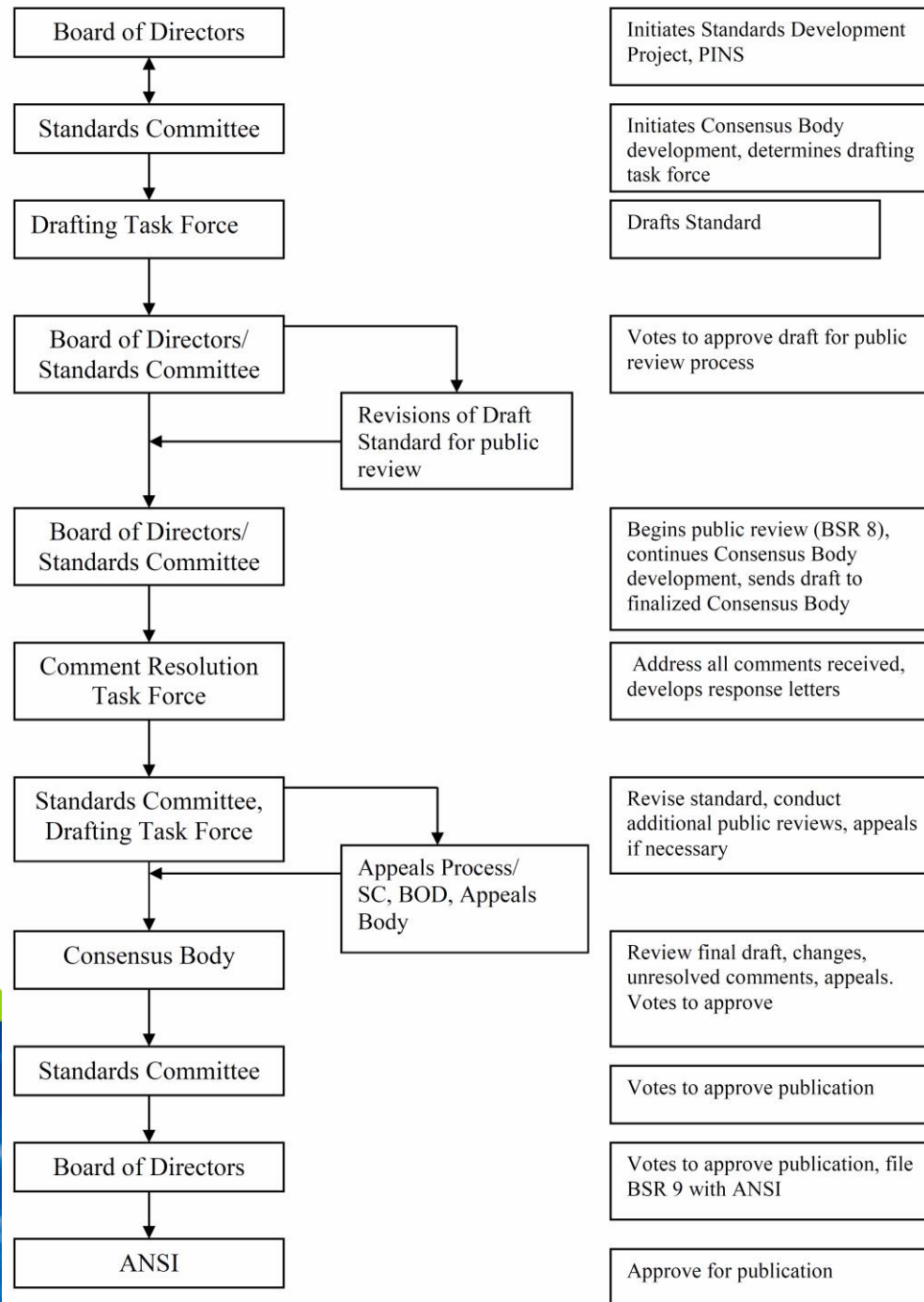
# United States Politics & Refrigeration

*Presented by David L. Rule, President*





Simplified Flow Chart:



# Procedures for the Development of IIAR Standards for ANSI Approval

SAFE AND SUSTAINABLE USE OF  
NATURAL REFRIGERANTS

# IIAR/ANSI Standards



- IIAR 1 – 2012** Definitions and Terminology Used in IIAR Standards
- IIAR 2 – 2014** Safe Design of Closed-Circuit Ammonia Refrigeration Systems
- IIAR 3 – 2012** Ammonia Refrigeration Valves
- IIAR 4 – 2015** Installation of Closed-Circuit Ammonia Refrigeration Systems
- IIAR 5 – 2013** Start-up and Commissioning of Closed-Circuit Ammonia Refrigeration Systems
- IIAR 7 – 2013** Developing Operating Procedures for Closed-Circuit Ammonia Mechanical Refrigerating Systems
- IIAR 8 – 2015** Decommissioning of Closed-Circuit Ammonia Refrigeration Systems

# IIAR/ANSI Standards Under Development

## **IIAR 6 – 20xx** *Maintenance, Testing and Inspection of Closed-Circuit Ammonia Refrigeration Systems*

- Address regulatory issue(s) to maintain ammonia systems

## **IIAR 9 – 20xx** *Recognized and Generally Accepted Good Engineering Practices for Closed-Circuit Ammonia Refrigeration Systems*

- RAGAGEP – The “Grandfather” issue for system updates

## **IIAR C2 – 20xx** *CO<sub>2</sub> Refrigeration Systems*

- *Safety design, maintenance & operation*



SAFE AND SUSTAINABLE USE OF  
NATURAL REFRIGERANTS

# Politics of Change

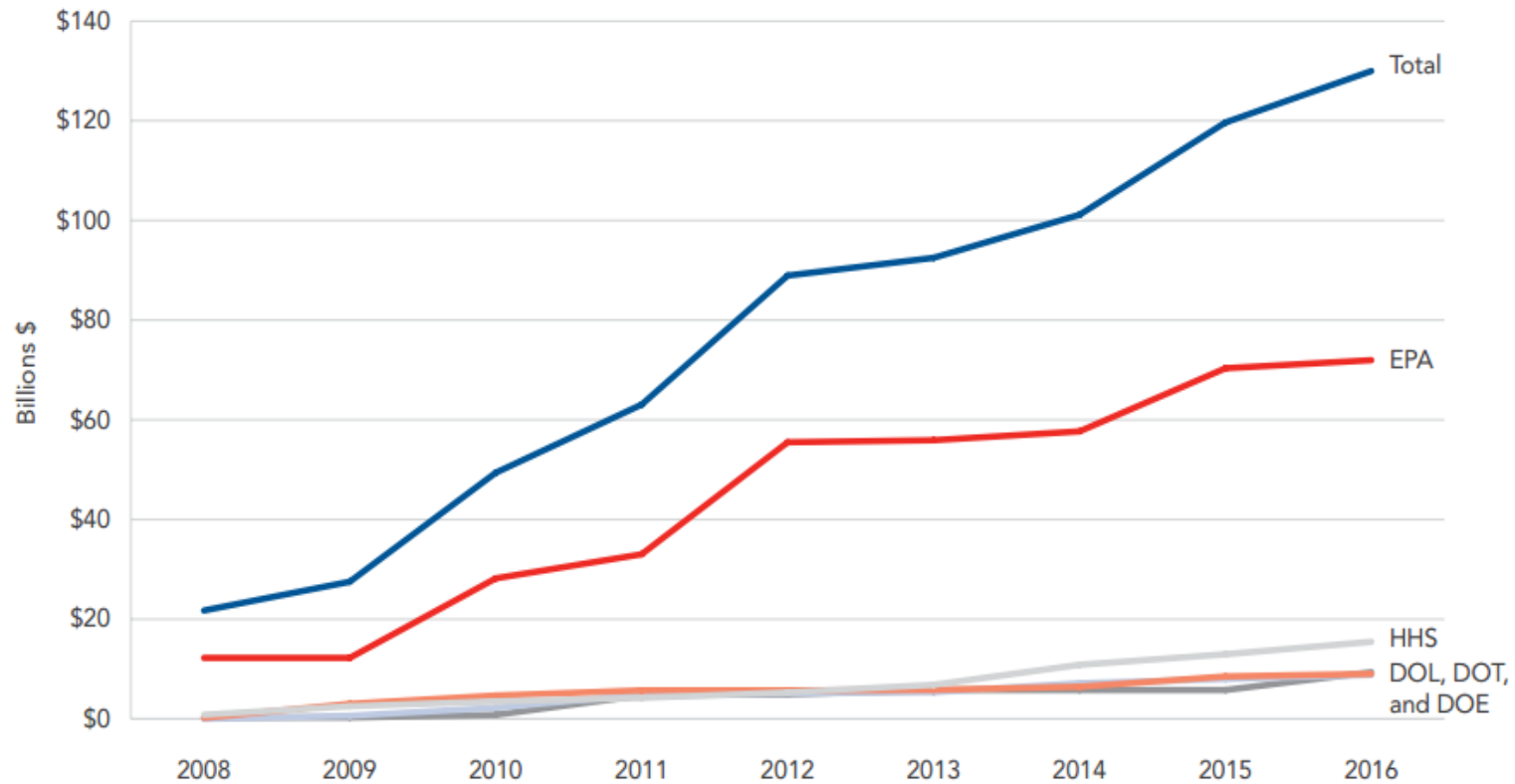
Refrigeration and AC industry in the U.S.A. driven by two quite different political forces

1. Climate change
  2. Health and safety laws
- 
3. EPA Risk Management Program – *RMP*
  4. Significant New Alternatives Policy – *SNAP*
  5. Process Safety Management - *PSM*



# CUMULATIVE ANNUAL COST OF \$100 MILLION PLUS RULES

Cumulative Costs by Agency for Top Five Executive Branch Agencies



Source: U.S. Chamber of Commerce – “Taming the Administrative State”

# Ammonia and Building Codes



- IIAR-2 has recently been adopted by US building codes for ammonia.
- ASHRAE 15 will soon refer to IIAR-2 whenever ammonia is used.
- IIAR-2 has become the de facto industry standard for ammonia installations.
- Academy of Natural Refrigerants will address regulatory concerns for documented education.



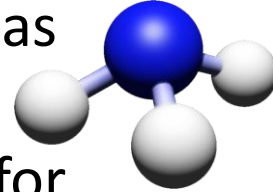
SAFE AND SUSTAINABLE USE OF  
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# CONCLUSIONS

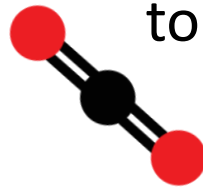


public safety still limits application of ammonia and hydrocarbons.

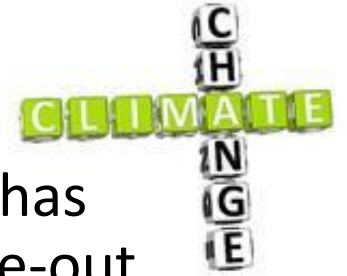
Low charge technology has expanded applications for ammonia.



CO<sub>2</sub> systems are expanding to industrial & commercial sectors.



The politics of climate change has driven the phase-out of HFCs by EPA SNAP rule.



The “Donald Effect” on regulations and/or enforcement is unclear.







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Thank you very much!

