

April 8, 2016

Structuring a High Ambient Temperature Exemption

Steve Seidel

37th Open-Ended Working Group



CENTER FOR CLIMATE
AND ENERGY SOLUTIONS

C2ES.ORG

Center for Climate and Energy Solutions

- An independent, nonpartisan, nonprofit organization working to advance strong policy and action to address our climate and energy challenges.
- Launched in 2011, C2ES is the successor to the Pew Center on Global Climate Change, long recognized in the United States and abroad as an influential and pragmatic voice on climate issues.

Read the full paper: ***Approaches to Structuring a High Ambient Temperature Exemption***

<http://www.c2es.org/docUploads/approaches-structuring-high-ambienttemperatures-exemption-03-2016.pdf>

From the very beginning exemptions have played a critical role in the success of the Protocol

- Recognizes that one size doesn't always fit all
- Provides flexibility and builds confidence
- Conditioned on lack of availability of alternatives
- Requires actions to minimize emissions
- Narrowly defined and time limited

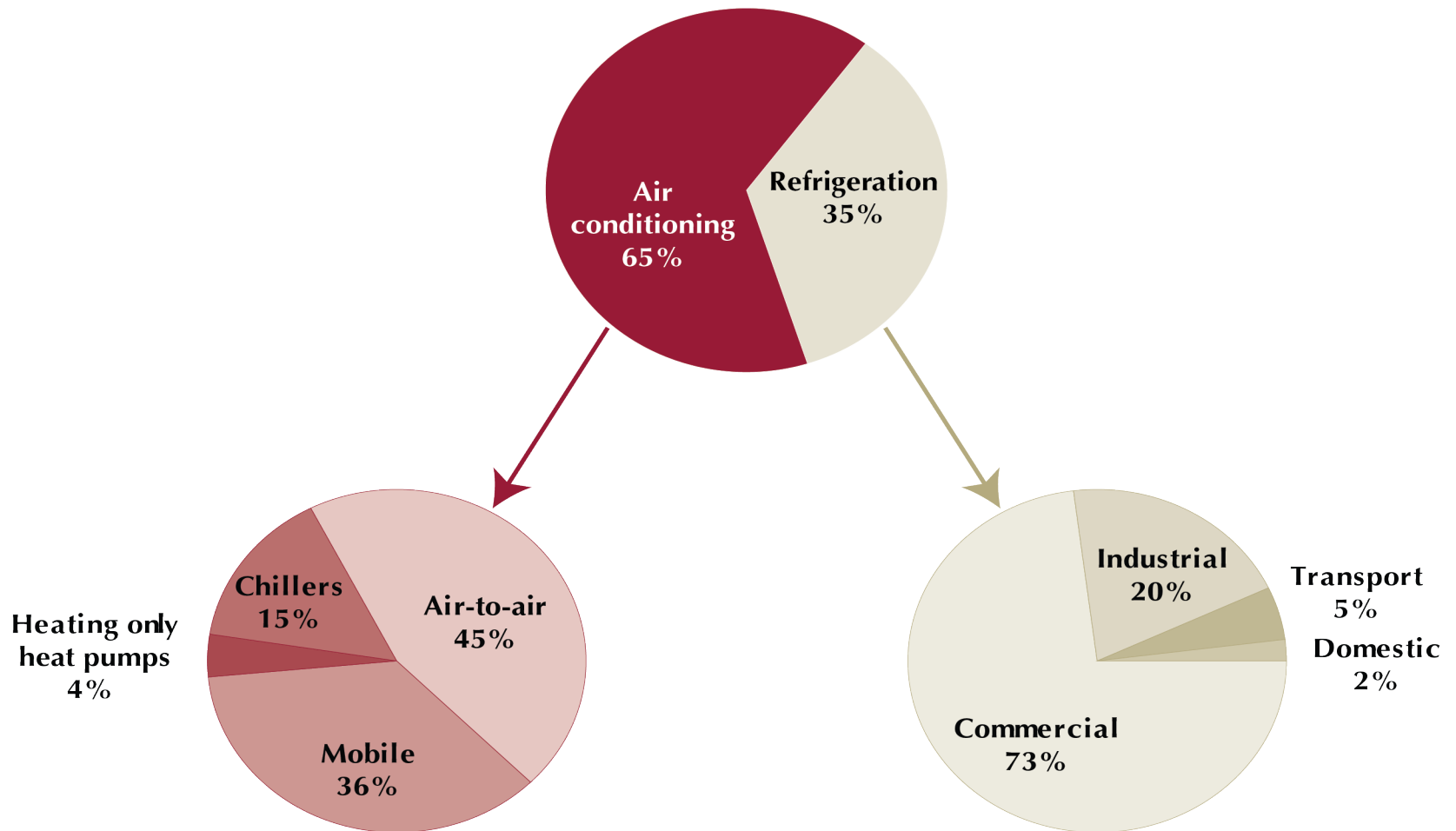
Process employed must be reasonable and manageable

- 1. Excluded from definition of controlled substances (process agents and feedstock application)**
- 2. Essential use exemptions (most ODS)**
- 3. Critical use exemptions (methyl bromide)**
- 4. Emergency use exemptions (limited in size)**
- 5. Laboratory and Analytical Uses (global exemption)**
- 6. Quarantine and preshipment (methyl bromide - global)**
- 7. [Deferred compliance for M Br use in high moisture dates]**

- **Air conditioning and refrigeration are critically important to functioning of society**
- **Concern that extreme temperatures impact cooling capacity, reliability and energy efficiency of equipment**
- **Alternatives under development and being tested, but not adequately demonstrated**

- **Clear basis for what constitutes high ambient temperature (HAT) conditions**
- **Limited to those end use sectors 1) impacted by HAT and 2) where no proven alternatives demonstrated**
- **Time limited (2-5 years)**
- **Simple process for parties to opt in to exemption**
- **Support for demonstration projects to prove technologies**
- **Timetable for parties to review exemption with support from TEAP on availability of alternatives**

Sectors Covered – Which subsectors within RAC



- **Within RAC sectors:**
 - Research projects focused on air-to-air stationary units; largest and fastest growing subsector
 - Alternatives demonstrated under HAT for some applications:
 - HFO-1234yf for vehicles
 - HC-600a for domestic refrigerators;
 - Subcritical CO2 systems for large supermarket systems, etc.
 - Parties will need define what subsectors should be covered

- **What constitutes a high ambient temperature condition?**
 - Temperature thresholds exceeded
 - Length or frequency that is exceeded
- **Should exemption apply to both Article 5 and non-Article 5 Parties?**
- **Should Parties opt in and reapply in 2-5 years?**



CENTER FOR CLIMATE
AND ENERGY SOLUTIONS

FOR MORE INFORMATION

C2ES.ORG

seidels@c2es.org