The ePee GaPometer
An innovative tool to show ways achieving the HFC phase-down in Europe

The 3 core actions to achieve phase-down

1. New Equipment
   ✴ Use lower GWP alternatives
   ✴ Design for less refrigerant charge and low leakage

2. Existing Equipment
   ✴ Leak prevention
   ✴ Retrofit with lower GWP alternatives

3. Reclaimed Refrigerant
   ✴ Recovered from equipment at end-of-life
   ✴ Recovered during retrofit of existing equipment

Short Term priority: Commercial Refrigeration

Cuts in MT CO₂

<table>
<thead>
<tr>
<th>Category</th>
<th>2018</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Refrigeration</td>
<td>-47</td>
<td>-51</td>
</tr>
<tr>
<td>Industrial Refrigeration</td>
<td>-12</td>
<td>-15</td>
</tr>
<tr>
<td>Mobile AC</td>
<td>-15</td>
<td></td>
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<tr>
<td>SAC</td>
<td>-14</td>
<td></td>
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<tr>
<td>Non RAC</td>
<td>-20</td>
<td>-15</td>
</tr>
<tr>
<td>Chillers Transport</td>
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</tbody>
</table>

Million tonnes CO₂ equivalent
**Key actions by 2021**

**New Equipment**
- Early move away from R-404A
- Introduction of new lower GWP fluids for new equipment and products
- Wider use of flammable refrigerants (both A3 and A2L)

**Existing Equipment**
- Early retrofit of R-404A
- Leak prevention
- Proper implementation of rules in the EU F-Gas regulation

**Reclaimed Refrigerant**
- Compliance with mandatory recovery rules
- Setting up a good infrastructure for reclaim & recycling

**Other issues**
- Safety codes & legislation and training issues must be addressed
- The 2018 phase-down step cannot be achieved if everyone waits for bans

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**EPEE - The European Partnership for Energy and the Environment**

EPEE is composed of members who produce, design and install heating, cooling and refrigeration technologies. EPEE’s mission is to promote a better understanding of our industry in the EU and to contribute to the development of effective European policies to reduce the environmental impact of our products.

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**Average GWP of refrigerants in new commercial refrigeration**

**Average annual leakage rate from equipment bank**

**By 2018 we need average leakage from commercial refrigeration below 10%**

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