



ATMOsphere ROADMAP FOR NATURAL REFRIGERANTS

European 10 Point Action Plan for 2012-2013

This Roadmap is the result of thorough industry consultation to set concrete and achievable targets addressing the educational, technological, financial and information barriers challenging the use of natural refrigerants - air, ammonia, carbon dioxide, water and the group of hydrocarbons:

- **1000** responses were received to a global HVAC&R industry survey between February and September 2011 to identify the market potential for natural refrigerants, and outline main barriers to be overcome. This Roadmap takes account of major concerns within the natural refrigerants industry.
- **100** organisations were meeting at the international workshop "ATMOsphere Europe" on 11-12 October 2011 in Brussels. This Roadmap is the result of workshop discussions to select and prioritise initiatives that can serve best to advance the use of natural refrigerant solutions in Europe.
- **10** actions are the outcome of this process. While it is of voluntary nature, the signatories of the ATMOsphere Roadmap will join forces in putting into practice these 10 Key Actions that require strong leadership and co-operation:
 - 1. Technician Certification:** Introduce a mandatory European quality certification for technicians handling natural working fluids. Created and surveyed by an independent expert group, this will help increase safety in the development, transportation, installation, maintenance and disposal of these systems.
 - 2. Training Network:** Provide a platform for public and private training bodies to list available courses and facilitate access to training on natural refrigerants for individuals, other educational bodies and corporate end-users.

- 3. Safety Guidelines:** Compile peer-reviewed safety guidelines endorsed by authoritative bodies on how to handle, store and transport natural refrigerants and translate these into local languages.
- 4. Standards:** Map all EU natural refrigerant installation standards and codes of practice. Harmonise across the EU to facilitate end-user adoption.
- 5. Ecolabels:** Adapt current and upcoming product categories under the European Ecolabel - a voluntary scheme to market products & services kinder to the environment - to reflect the environmental benefits of natural refrigerant products.
- 6. Building Codes:** Reflect the environmental benefits of natural refrigerant HVAC&R applications in the EU Energy Performance of Buildings Directive, BREEAM, LEED, and other national building schemes.
- 7. Funding Sources:** Provide a mapping tool with possible funding sources Europe-wide.
- 8. Warranties:** Shape a voluntary industry agreement to provide longer warranties on systems and components using natural refrigerants, to prove the technology's reliability.
- 9. Life Cycle Cost Studies:** Prove that installations based on natural refrigerant technologies can be operated at the same (or less) cost and that the energy efficiency of those installations is similar (or better) than standard technology. Disseminate this information through reliable sources.
- 10. Technology Tour & Awareness Campaigns:** Organise technology tours, endorsed by end-users, to educate management staff, installers and other relevant stakeholder groups per sub-sector. Work on public awareness-rising campaigns.

