

# CHECKLIST FOR PROCUREMENT OF RACHP EQUIPMENT USING LOW GWP ALTERNATIVES

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The checklist is provided by the REAL Alternatives 4 LIFE<sup>(1)</sup> project based on the results of an international survey conducted on Market Needs to support the more widespread take up of equipment using low GWP refrigerants in 2017, and a resurvey conducted in 2020. Although most specialist refrigeration, air conditioning and heat pump (RACHP) businesses are involved in the purchasing processes carried out by the end users of such equipment, they are mainly guided by the end users' purchasing policies and procedures for compliance. There is no standardised set of purchasing policies used across the EU countries. The recommendations below are provided based on the survey of key elements of procurement to provide a checklist which support a more consistent approach to purchasing across the EU.

With due consideration for sustainability, systems efficiency and cost effectiveness, it is recommended that purchasers identify the highest quality of equipment/components and of available delivery, installation and operational services, at the most competitive available market prices. Other factors to be taken into account include clearly defining and identifying cooling needs, sourcing relevant supplier(s), negotiating terms and contracts, building and maintaining relationships with suppliers, performance quality assurance, analysing and reporting on cost savings and profit margins of the products.

## **Energy Efficiency**

Procurement processes should comply with EU Minimum Energy Performance Standards (MEPS) to ensure that the most appropriate level of efficiency of equipment/components are utilised for the equipment type. The raising of the acceptable MEP threshold will encourage the use of higher efficiency equipment and drive purchasing and manufacturing in the future. Moreover, a cities cooling initiative through the cool coalition, the global covenant of mayors and mission innovation is striving to establish better procurement practices in 10,000 cities worldwide for sustainable cooling and consequently driving the need for high efficiency natural refrigerants. It should be noted that, as we decarbonise the electricity supply, in use energy/carbon will become much less significant and embodied emission will start to dominate. Therefore, we recommend that future practices should focus on this aspect in order to encourage the more sustainable use of zero or low GWP refrigerant systems.

## **Choice of refrigerant**

Low GWP Alternative refrigerants must be listed in ISO 817.

The procurement of low GWP Alternative refrigerants based RACHP equipment shall comply with relevant safety and environment standards and statutory requirements in each the relevant country. These standards include but not limited to; ISO 50001, ISO 5149-1:2014, ISO 5149 2:2014, ISO 5149 3:2014, and ISO 5149 4:2014. Others include EN 378-1:2016, EN 378-2:2016, EN 378-3:2016, EN 378-4:2016 and ISO 26000:2010

Please note that, the above standards do address the following aspects: conformance and performance specifications, services and system quality, pay-pack periods, functionality, risk assessment and management, general safety, components and systems reliability, skills of workforce, design problems, ease of containment, cost of replacements, cost of maintaining, cost of purchase and use of equipment, health and safety, choosing manufactures/suppliers and procurement training to increase knowledge and awareness of good business practice.

## **Personnel competency**

In order to ensure the safe, efficient and reliable installation, maintenance and operation of equipment containing low GWP refrigerants an essential part of the procurement process should be ensuring the competency of technical personnel involved and their ability to assess and mitigate risk factors. Due regard should be taken of national safety requirements, the EU ATEX (Explosive Atmospheres Regulation), Pressure Equipment Directive and F Gas Regulation in this respect as well as BS 13313:2010 - Refrigerating systems and heat pumps. Competence of personnel.

## **How to use this checklist**

Due to the importance and far-reaching environmental, social and economic effects of procurement processes in all businesses, each end user should employ or seek the advice of procurement consultant(s) to address technical aspects associated the items in the check list overleaf.

## Checklist for Procurement – Technical Aspects

<input type="checkbox"/>	Selecting of the most suitable suppliers who are able to deliver high quality RACHP equipment using low GWP Alternatives at competitive prices.
<input type="checkbox"/>	Negotiating with suppliers on lead-time, cost and quality so as to obtain the maximum benefit for the end user.
<input type="checkbox"/>	Managing suppliers to meet objectives related to cost, delivery performance, schedule and quality standards.
<input type="checkbox"/>	Developing purchasing strategies based on market analyses and preferred supplier's preferences.
<input type="checkbox"/>	Developing, implementing and driving the procurement strategies in order to meet carbon and cost savings targets.
<input type="checkbox"/>	Performing regular performance review with equipment suppliers in order to drive continuous improvements.
<input type="checkbox"/>	Ensuring RACHP equipment/components are meeting conformance and performance ISO standards.
<input type="checkbox"/>	Ensuring compliances in all the procurement transactions.
<input type="checkbox"/>	Periodic training on effective procurement processes and strategy.
<input type="checkbox"/>	Communicating and ensuring alignment of specific projects and expectations of the stakeholders.
<input type="checkbox"/>	Risk identification and mitigation and anticipating supply chain challenge
<input type="checkbox"/>	Competency of personnel

- (1) REAL Alternatives 4 LIFE is a project whose aim is to produce new learning materials and practical training programmes for Refrigeration Air conditioning and Heat Pump (RACHP) technicians with the ambitious scope to extend awareness of the use of alternative refrigerants with low Global Warming Potential (GWP) across Europe.
- (2) Disclaimer: This report does not reflect the opinion of the European Commission. The Partners of the Project bear all the responsibility of its content.
- (3) Please contact the REAL Alternatives 4 LIFE project team if you have queries about this document – [www.realalternatives.eu](http://www.realalternatives.eu) [ior@ior.org.uk](mailto:ior@ior.org.uk)

## Recommended Standards for Procurement of Low GWP Refrigerating Systems & Heat Pumps

