

▪ EU Energy Efficiency Labelling Scheme

If other labelling schemes are used, evidence describing how the appliances meet or exceed the equivalent requirements under the Energy Star or EU labelling scheme must be submitted and may be accepted after formal verification from Estidama.

The following provides guidance on the typical appliances that are required to be covered by the energy rating scheme. This list is not exhaustive and all appliances purchased should be rated for energy efficiency where available:

- Refrigerators and freezers
- Ovens
- Ice Machines
- Cookers
- Fryers
- Televisions
- Washing Machines or washer/dryers
- Computers
- Monitors
- Printers, scanners and all-in-ones
- Water coolers/heaters

The ozone depleting potential (ODP) of various refrigerants is given below:

Chlorofluorocarbons	ODP	GWP	Common Building Applications
CFC-12	1.0	10,900	Refrigerators, chillers
Hydrochlorofluorocarbons			
HCFC-22	0.055	1,810	Air-conditioning, chillers
HCFC-123	0.02	77	CFC-11 replacement
Hydrofluorocarbons			
HFC-134a	0	1,430	CFC-12 or HCFC-22 replacement
HFC-245fa	0	1,030	Insulation agent, centrifugal chillers
HFC-407c	0	1,700	HCFC-22 replacement
HFC-410a	0	1,900	Air-conditioning
HFC-417a	0	1,950	HCFC-22 replacement
Natural Refrigerants			
Carbon Dioxide (CO ₂)	0	1.0	
Ammonia (NH ₃)	0	0	
Propane (C ₃ H ₈)	0	3	
Isobutene	0	3	
Air	0	0	
Water	0	0	

References

- ANSI/ASHRAE/IES (2013) *ASHRAE Standard 90.1-2013 - Energy Standard for Buildings except Low-Rise Residential Buildings*. Atlanta, USA.
- *Addenda Supplement (2015) to ANSI/ASHRAE/IES Standard 90.1-2013. Energy Standard for Buildings except Low-Rise Residential Buildings*. Atlanta, USA.
- ANSI/AHRI (2008) *ANSI Standard 210/240 Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment*. Arlington, USA.
- Pearl Villa Rating System U-value Calculator. www.estidama.upc.gov.ae.
- UPC (2011) *Estidama Pearl Rating System: Information Bulletin #3 - Definition of Buildings requiring compliance with the PBRs*. Abu Dhabi, UAE.
- ASHRAE (2013) *ASHRAE Handbook-Fundamentals*. Atlanta, USA.
- Energy Star: www.energystar.gov.
- EU Energy Efficiency Labelling Scheme: <http://ec.europa.eu>.