The Montreal Protocol on Substances that Deplete the Ozone Layer is a global agreement, in which UAE is a signatory, to protect the Earth's ozone layer by phasing out the chemicals that deplete it. This phaseout plan includes both the production and consumption of ozone depleting substances. By eliminating or restricting the usage of ODS, global warming impacts are reduced.

APPLICABILITY

This regulation is applicable to all building types. Refer to Table 101.07(1) in Section One - Administration for detailed applicability levels.

IMPLEMENTATION

This regulation intents to reduce the use of ozone depleting substances. Project team must select refrigerants with zero ozone depletion potential (ODP) or with global warming potential (GWP) less than 100. ODP is defined as the ratio of the amount of degradation to the ozone layer caused by a particular substance relative to the calculated depletion for the reference gas CFC 11 (ODP=1.0). GWP is the potential for global warming that a substance has relative to 1 unit of carbon dioxide, the primary greenhouse gas. In determining the GWP, the Intergovernmental Panel on Climate Change methodology using a 100-year Integrated Time Horizon should be used. Table 701.05 (1) provides the ODP and GWP values for commonly used Refrigerant. Manufacturer datasheet conforming the refrigerant ODP and GWP values should be submitted as proof of compliance.

Fire suppression systems must not contain any ozone depleting substances and clean agent fire extinguishing systems such as FM-200, Novec 1230, INERGEN or similar systems with no ozone impact should be used to meet the compliance.

Table 701.05(1): ODP And GWP Values For Commonly Used Refrigerant Gases (100-year Potential)

Refrigerant	ODP	GWP	Common Building Applications
Chlorofluorocarbons (CFCs)			
CFC-11	1.0	4,680	Centrifugal chillers
CFC-12	1.0	10,720	Refrigerators, chillers
CFC-114	0.94	9,800	Centrifugal chillers
CFC-500	0.605	7,900	Centrifugal chillers, humidifiers
CFC-502	0.221	4,600	Low temperature refrigeration
Hydrochlorofluorocarbons (HCFCs)			
HCFC-22	0.04	1,780	Air conditioning, chillers
HCFC-123	0.02	76	CFC-11 replacement
Hydrofluorocarbons (HFCs)			
HFC-23	~0	12,240	Ultra low temperature refrigeration
HFC-32	0	675	Air Conditioning
HFC-134a	~0	1,320	CFC-12 or HCFC-22 replacement
HFC-245fa	~0	1,020	Insulation agent, centrifugal chillers
HFC-404A	~0	3,900	Low-temperature refrigeration