

UNEP TEAP TF report and other UNEP efforts related to safety standards for flammable low GWP refrigerants

-a status report-

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presentation given in a personal capacity

Introduction

- The Technology and Economic Assessment Panel (TEAP) gives technical advice to the Parties for the implementation of the Montreal Protocol
- Several technical committees (TOCs) operate under TEAP, one being the RTOC (on R/AC), which is the most important one where it concerns the total HFC use (80% of total amount of HFCs consumed is used in R/AC)
- Task Forces report often (as for XXVIII/4 – Safety Standards Task Force)
- One now looks at refrigerants and refrigeration with a “Kigali” background

Decision XXVIII/4

- *Noting* that **parties recognize the importance of the timely updating of international standards for flammable low-global-warming-potential (GWP) refrigerants, including the International Standard IEC 60335-2-40** of the International Electrotechnical Commission (IEC), and support the promotion of actions that allow for the safe market introduction, manufacturing, operation, maintenance and handling of zero-GWP and low-GWP refrigerants that are alternatives to HCFCs and HFCs,
- *Aiming to support the timely revision of relevant standards in a manner that is technology-neutral* to enable the safe use and market penetration of low-GWP alternatives,

Decision XXVIII/4 - 2

To request the Technology and Economic Assessment Panel to establish a task force that includes outside experts, as needed:

To liaise and coordinate with standards organizations, including IEC, to support the timely revision of IEC standard 60335-2-40 and ensure that the requirements for the A2, A2L and A3 categories **are revised synchronously using a fair, inclusive and scientifically sound approach;**

To submit to the Open-ended Working Group at its thirty-ninth meeting* **a report on safety standards relevant for low-GWP alternatives, including on the following:**

*preparatory OEWG-39 meeting in Bangkok, 10-14 July 2017

Decision XXVIII/4 - 3

1. Progress in the revision of international safety standards by the IEC, the International Organization for Standardization (ISO) and other international standards bodies;
2. Information concerning tests and/or risk assessments and their results relevant to safety standards;
3. Assessment of the implications of international standards for the implementation of the decisions of the Meeting of the Parties to the Montreal Protocol on the accelerated phase-out of HCFCs and HFC control measures, and recommendations to the parties;

To provide relevant findings to the standards bodies;


Decision XXVIII/4 - 4

- **To request the Ozone Secretariat to organize a workshop on safety standards relevant to the safe use of low-GWP alternatives** back to back with the thirty-ninth meeting of the Open-ended Working Group, within existing resources;
- To urge parties to consult and work with their industries and standards bodies to support the timely completion of the developing, harmonizing and revising current standards
- To invite parties to submit to the Ozone Secretariat by the end of 2016 information on their domestic safety standards
- To encourage parties to strengthen connections and cooperation between national and regional standards committees and national ozone units.

Safety standards report

- The Task Force (TF) on safety standards was established January 2017
- The TF has 24 members including 2 RTOC co-chairs, 13 RTOC members, 1 HTOC member and 8 outside (standards) experts
- The TF report has an Executive Summary, 6 chapters and concluding remarks, as well as recommendations to parties
- The report was reviewed by the TF and by the TEAP
- Last revisions were then discussed and decided by the TF and the report was submitted to UNEP late June 2017

Safety standards report - contents

1. ExSum
2. Introduction
3. International standards for R/AC and HP equipment 
4. General composition and working procedures of international standards
5. Risk assessment and other technical work applicable to standards development
6. Assessment of the implications of international standards for the implementation of Montreal Protocol decisions
7. Concluding remarks and recommendations to parties



Standard Type		International	Europe	USA (others)
Refrigerant Classification		ISO 817	Follows ISO 817	Follows ISO 817
Safety in use	General	ISO 5149	EN 378	
	Equipment specific	IEC 60335-2-24	EN 60335-2-24	UL 60335-2-24
		IEC 60335-2-40	EN 60335-2-40	UL 60335-2-40
		IEC 60335-2-89	EN 60335-2-89	UL 60335-2-89
				Various ASHRAE ANSI/ASHRAE (other)


OEWG-39 Bangkok

- The Standards TF Report has been presented to parties at OEWG-39 Bangkok, 11 July 2017
- Discussions have taken place on the findings and recommendations
- Any decisions that will be drafted by parties “on the ways forward” will be decided at the MOP-29* meeting in Montreal, November 2017
- The discussion on the standards report **has been preceded by a one day workshop on standards**, organized by UNEP, 10 July 2017

*MOP-29 – Twenty-ninth Meeting of the parties to the Montreal Protocol

Workshop on standards at OEWG-39

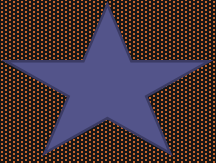
On 10 July 2017 (one whole day), a workshop with 4 panels discussed

- Standards, overall issues and specific ISO and IEC international standards
- Revision procedures for international standards
- National standards and implications 
- Standards and regulations

There has been one concluding session

The **workshop report** has been presented to the OEWG-39 meeting

(Standards information is **already available via UNEP briefing notes**)



2.30 p.m. – 3.40 p.m.

Session III: Relationship between international and national safety standards

Some countries adopt the international safety standards directly while others develop national or regional safety standards and regulations that are adjusted to their own domestic situation. Sometimes, these standards are stricter than the international safety standards. In other cases, national or regional safety standards refer to superseded international standards and it can take a number of years for harmonization revisions to be completed. The national implementation of safety standards into laws can be considered a policy instrument. On the other hand, national implementation is needed to prescribe acceptable procedures in manufacturing, handling, servicing and maintenance of RACHP equipment. In this session, case studies from countries and regions will be presented. The issues to be addressed by the presenters include:

- countries with sometimes stricter national standards, legislation and/or regulations than existing international safety standards;
- the development and adjustment of national safety standards;
- the time difference between the setting of safety standards at the international level versus the national level, including for their harmonization;
- the implications for the market accessibility of goods in the RACHP sectors.

Briefing note 1

Safety standards relevant to refrigeration, air conditioning and heat pump equipment

1. Introduction
2. General background to safety standards
3. Overview of the main international RACHP safety standards
4. Safety standard requirements affecting refrigerant selection
5. Stages in product lifecycle
6. Standards related to retrofit of existing systems
7. Using RACHP standards
8. Lists of safety standards (references)

Briefing note 2

Updating the refrigeration, air conditioning and heat pump (RACHP) safety standards

1. Introduction
2. Background to the international standards development process
3. Entities involved with ISO and IEC standards development
4. Basic steps for the development of a standard
5. Status of the most relevant RACHP safety standards
6. Options for interventions of interested parties
7. Annex – List of Technical Committees and Sub-committees and their participating countries

Briefing note 3

Application of safety standards to refrigeration, air conditioning and heat pump equipment – a lifetime perspective

1. Introduction
2. Background on RACHP equipment lifetime stages
3. Examples of RACHP applications and associated international safety standards:
 - ❑ **Air cooled chiller**
 - ❑ **Split air conditioner**
 - ❑ **Plug in display cabinet**
4. Final remarks

Conclusions – time schedule

- Safety report has been published
- Briefing notes have been published
- Workshop has been completed, held 10 July 2017
- Conclusions of the workshop have been presented to parties, 11 July 2017
- Parties will further discuss standards issues at MOP-29 in November 2017
- The MOP-29 in November will show whether there will be taken a decision (a) establishing the status quo, and/or (b) requesting further work involving standards bodies etc.

Thank you !!

Information all available (both standards report and briefing notes):

www.ozone.unep.org (under Meetings, Bangkok Thailand, Workshop, 10th July, and 39th OEWG meeting, 11-14 July 2017, including the standards workshop report and 39th OEWG meeting report)