

Ozone-Depleting Substances  
(ODS) Requirements

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# 1 | Introduction

Many of the ozone-depleting substances (ODS) controlled by the Montreal Protocol have high global warming potential in addition to their ozone-depleting potential, and whilst the Montreal Protocol controls the consumption, production and international trade of ODS, it does not directly control the emissions of such substances. Thus, releases of ODS residing in banks (such as refrigeration equipment, foams and stockpiles) are not controlled by the Montreal Protocol and reducing these emissions could make a significant future contribution to addressing climate change.

This document provides the specific requirements for the development of ODS projects and methodologies. The intention is to assist project proponents, project developers, methodology developers and validation/verification bodies in developing and auditing ODS destruction projects and methodologies.

In addition to the requirements set out in this document, ODS destruction projects and methodologies shall comply with all applicable VCS rules and requirements. In particular, readers are referred to the *VCS Program Guide* and the *VCS Standard*.

This document shall be updated from time-to-time and readers should ensure that they are using the most current version of the document.

## 2 | Project Requirements

### 2.1 GENERAL

**2.1.1** Where ODS is recovered from products that have been imported specifically for their disassembly (ie, the products have not been collected in the host country), the following shall apply:

- 1) The products shall not originate from any country in which any law, statute or other regulatory framework requires the recovery and destruction of the relevant ODS from such products.
- 2) The project proponent shall provide documentary evidence, such as shipping manifests, bills of lading and evidence of collection of the products in the originating country, to demonstrate the origin of such products.

**2.1.2** Documentary evidence shall be provided to verify the origin of all ODS destroyed by the project. Evidence may include, inter alia, shipping manifests, bills of lading, other commercial documentation, and addresses of households, commercial premises and other evidence of collection of the products. Such evidence shall be appropriate to the nature and scale of the project.

## 2.2 PROJECT START DATE

**2.2.1** The project shall comply with at least one of the following in relation to project start date:

- 1) The project start date shall not be before the Montreal Protocol production phase-out deadline (except for critical/essential uses) for the relevant ODS as it applies to the host country and/or any country from which ODS destroyed by the project is imported (as applicable); or
- 2) The project start date shall not be before the date the host country and/or any country from which ODS destroyed by the project is imported (as applicable) implements the production phase-out, or consumption phase-out where such country does not produce the relevant ODS, of the relevant ODS (critical/essential uses exempted). Such phase-outs shall be implemented in combination with an import ban on the relevant ODS (critical/essential uses exempted). This project start date requirement accounts for countries that phase-out the relevant ODS in advance of their Montreal Protocol production phase-out deadline.

Note – The project can destroy ODS that has not been phased out under either of the two options in above (eg, if one ODS has contaminated another), but it shall receive no credit for the destruction of such ODS. Note also that the relevant production phase-out deadlines are those of the individual substances and not the substance groups.

Note – The relevant production phase-out deadlines are those of the individual substances and not the substance groups.

**2.2.2** Where the project imports ODS, it shall provide documentary evidence, such as shipping manifests and bills of lading, to demonstrate that the ODS originates from a country meeting with the above.

# 3 | Methodology Requirements

## 3.1 GENERAL REQUIREMENTS

**3.1.1** Methodology elements for ODS destruction projects are categorized under sectoral scope 11, fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride.

**3.1.2** ODS projects are eligible for immediate crediting of future avoided emissions and methodology elements may use such a crediting model. The requirements for such crediting are set out in the *VCS Standard*.

Note - Crediting shall still be in relation to the baseline scenario. In many cases, methodology elements will credit projects for all of the ODS destroyed by the project (minus any project

emissions and leakage). However, it is possible that projects could destroy ODS from existing stockpiles and only a portion of the ODS would have been emitted under the baseline scenario. For example, if the baseline scenario includes use of the ODS to service existing equipment and a certain proportion of such ODS would be recovered and destroyed at the end of that equipment's life (whether voluntarily or due to regulation), then the volume of credits granted to the project shall reflect this.

## 3.2 ELIGIBLE ODS

**3.2.1** ODS residing in stockpiles or ODS recovered directly from any of the products set out in Section 3.2.2 are eligible. The following ODS controlled by the Montreal Protocol for which the IPCC publishes a global warming potential (100-year time horizon) are eligible:

- 1) Annex A, Group I
- 2) Annex B, Group I
- 3) Annex C, Group I

**3.2.2** The destruction of ODS recovered from the following products are eligible:

- 1) Refrigeration equipment, systems or appliances;
- 2) Air conditioning equipment, systems or appliances;
- 3) Fire suppression equipment or systems; and
- 4) Thermal insulation foams.

**3.2.3** The destruction of ODS recovered from pre-polymers, aerosol products or other products is not eligible. The project shall use a destruction technology that meets the screening criteria for destruction technologies set out in the UNEP April 2002 Report of the Technology and Economic Assessment Panel (TEAP), Volume 3b, Report of the Task Force on Destruction Technologies<sup>1</sup>, as may be updated from time to time. The report sets out, inter alia, requirements for Destruction and Removal Efficiency (DRE).

**3.2.4** For concentrated sources (eg, refrigerants), projects shall use a destruction technology with a minimum verified DRE of 99.99 percent.

**3.2.5** For dilute sources (ie, foams), projects shall use a destruction technology with a minimum verified DRE of 95 percent. In addition, a minimum Recovery and Destruction Efficiency (RDE) of 85 percent shall be achieved. RDE describes the proportion of blowing agent (ODS) remaining in the

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<sup>1</sup> UNEP, 2002, UNEP April 2002 Report of the Technology and Economic Assessment Panel, Volume 3b, Report of the Task Force on Destruction Technologies. Available at: [http://ozone.unep.org/teap/Reports/Other\\_Task\\_Force/TEAP02V3b.pdf](http://ozone.unep.org/teap/Reports/Other_Task_Force/TEAP02V3b.pdf)

foam immediately prior to decommissioning that is recovered in the overall end-of-life management step, including ultimate destruction. For a full specification of RDE, see the *UNEP May 2005 Report of the Technology and Economic Assessment Panel, Volume 3, Report of the Task Force on Foam End-of-Life Issues*.<sup>2</sup>

Note - The May 2005 TEAP report provides a theoretical model for calculating RDE and methodology elements will need to specify a practical approach for determining RDE, such as those provided in RAL GZ 728 (*Quality Assurance and Test Specifications for the Demanufacture of Refrigeration Equipment, 2007*), the WEEE Forum standard (*Requirements for the Collection, Transportation, Storage, Handling and Treatment of Household Cooling and Freezing Appliances containing CFC, HCFC or HFC, 2007*) or another appropriate approach.

### 3.3 BASELINE SCENARIO AND ADDITIONALITY

- 3.3.1** The project shall not be mandated by any law, statute or other regulatory framework applying in the host country that was implemented on or before 11 November 2001, or the compliance rate of any such law, statute or other regulatory framework during (part of) the project crediting period shall be below 50 percent.
- 3.3.2** Where the destruction of the ODS by the project is mandated by law, statute or other regulatory framework applied in the host country, the baseline shall be the gradually increasing compliance with such law, statute or other regulatory framework, and the baseline emissions shall be calculated as follows:

$$BE_{y,a} = BE_y * ( 1 - CR_y )$$

Where:

$BE_{y,a}$  = The baseline emissions to be used for the calculation of GHG emission reductions in year y.

$BE_y$  = The baseline emissions in year y.

$CR_y$  = The host country-level compliance rate of the law, statute or other regulatory framework in the year y. Calculation of the compliance rate shall exclude other projects implemented under GHG programs. If the compliance rate exceeds 50%, the project shall receive no further credit.

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<sup>2</sup> UNEP, 2005, *UNEP May 2005 Report of the Technology and Economic Assessment Panel, Volume 3, Report of the Task Force on Foam End-of-Life Issues*. Available at: [http://ozone.unep.org/teap/Reports/TEAP\\_Reports/TEAP-May-2005-Vol-2-Forms-End-of-Life.pdf](http://ozone.unep.org/teap/Reports/TEAP_Reports/TEAP-May-2005-Vol-2-Forms-End-of-Life.pdf).

## 3.4 LEAKAGE

**3.4.1** The methodology shall establish criteria and procedures to quantify and account for GHG emissions associated with any substitute substances that can be assumed to be used to provide the service previously provided by the ODS destroyed by the project. For example, where a project destroys ODS that under the baseline would have been recovered and reused, the project shall account for the GHG emissions associated with substitute substances, since the market demand that was being serviced by the ODS can be assumed to be supplied from alternative sources. Conversely, where a project destroys ODS that under the baseline would have leaked or been released to the atmosphere, the ODS was not meeting any market demand and accounting for GHG emissions associated with substitute substances is not applicable. Such quantification and accounting shall be done using one of the following options:

- 1) Identify the actual type and quantity of substitute substances used to provide the service previously provided by the ODS destroyed by the project, calculate or monitor the GHG emissions associated with such substances that arise during the project crediting period, and deduct such GHG emissions from the GHG emission reductions;
- 2) Identify the actual type and quantity of substitute substances used to provide the service previously provided by the ODS destroyed by the project, assume 100 percent of such substances leak or are released to the atmosphere during the project crediting period, and deduct such GHG emissions from the GHG emission reductions;
- 3) Identify, based on conservative assumptions using appropriate data, the type and quantity of substitute substances used to provide the service previously provided by the ODS destroyed by the project, assume 100 percent of such substances leak or are released to the atmosphere during the project crediting period, and deduct such GHG emissions from the GHG emission reductions claimed by the project; or
- 4) The project shall not claim GHG emission reductions for the ODS destroyed by the project that under the baseline would have been recovered and reused.

## 3.5 MONITORING

**3.5.1** The methodology shall establish procedures for monitoring the chemical composition and quantity of the ODS destroyed by the project.

**3.5.2** Where projects destroying ODS contained in products or mixed with other substances are eligible under the methodology, the methodology shall establish procedures for monitoring the mass of ODS contained in such products or other substances. This shall be achieved using a mass balance analysis and/or other approach (based on conservative assumptions), as appropriate to the nature and scale of the project.

## APPENDIX 1: DOCUMENT HISTORY

Version	Date	Comment
v3.0	8 Mar 2011	Initial version released under <i>VCS Version 3</i> .
v3.1	19 Oct 2011	Sections 3.2.3 and 3.2.4 moved to Sections 2.1.1 and 2.1.2, respectively, to reflect that they are project-level requirements (effective on issue date).

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