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# **CALL FOR PUBLIC INPUT**

## **regarding the AMS-III-AJ small-scale methodology**

### **“Recovery and recycling of materials from solid wastes”**

**Submitted by: Technical Scientific & Sustainable Development Department of Veolia Environmental Services**

#### **1. CONTEXT**

The CDM EB 53 published the small- scale methodology AMS-III-AJ “Recovery and recycling of materials from solid wastes”. This methodology enables plastic (HDPE, LDPE and now PET) recycling and recovery into semi-finished or finished products that will replace semi-finished or finished products produced out of raw virgin materials. In order to simplify its applicability, the methodology only considers energy consumption<sup>1</sup> to evaluate the emission reductions which represents the majority of the carbon impact.

The Call for Public Input is an opportunity to enlarge the scope of AMS-III-AJ and discuss alternative ways of calculating emission reductions from recycling activities.

#### **2. INPUT**

##### **(1) Recyclable Materials**

Regarding Municipal Solid Waste (MSW) composition and recycling potential for each material, it would be possible to extend the AMS-III-AJ methodology to the following materials:

- Glass
- Paper/cardboard
- Ferrous Metals
- Non Ferrous Metals
- Wood

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<sup>1</sup> Energy consumption is restricted to actual production. Raw materials extraction, transformation and transportation are not included.

## **(2) Default Values**

The existing methodology gives several default values for emission calculations. We would have liked to provide such default values for each material proposed above.

However, the current method of calculating the “avoided emissions” from recycling and material recovery is based on emission factors established through Life Cycle Assessments (LCAs). (See referenced documents below).

## **(3) Methodology**

The existing methodology stipulates that “For recycling of PET, the project participants shall prove the chemical equivalence of the recycled PET to that of PET made from virgin inputs by the comparison of intrinsic viscosities to ensure that the recycled PET replaces virgin inputs”.

The Call for public input asks for “Methods to show product equivalence of recycled and virgin materials”. With regard to the quality of the recyclables, there is another way to consider this point:

If the recyclables are sold (except for combustion), it means there is a market for the semi-finished products, i.e. their intrinsic quality is good enough to replace virgin raw materials in another product type. We believe that the market is a good way to ensure that recyclables are of the required quality.

### **3. GENERAL REMARK**

As noted above, the studies published today about waste recycling emission factor are based on a LCA approach. Material recycling has many positive environmental impacts. It enables both preservation of resources (energy and water) and raw virgin materials.

LCA have a cradle to grave approach, considering every environmental impact related to the material.

In this perspective, to evaluate the recycling benefits more fully, the following two aspects could be considered in future CDM methodology for recyclables:

- Enlarging the scope of energy consumption to take into account raw materials extraction.
- Considering the benefit of recycling from a material point of view as it preserves natural resources (trees for paper, silica for glass, oil for plastic, etc.).

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For additional information and current practice of how to consider avoided emissions from recycling activities in the waste sector, we would like to refer to the EpE Protocol.

EpE (Entreprises pour l’Environnement) is a French business association and the French partner of the World Business Council on Sustainable Development. A protocol, compatible with the GHG Protocol, for the quantification, reporting and verification of GHG emissions from waste management activities was produced by Veolia Environmental Services, Suez Environnement and Séché Environnement. The



Protocol is already being used by several organizations like the French « National Federation of the Activities of Decontamination and Environment » (FNADE), the Dutch Waste Management Association or the ESA (UK).

The Protocol includes an excel tool to calculate a carbon footprint of waste management activities. As previously noted, the proposed emission factors are established through Life Cycle Assessments. The referenced studies are recognized nationally and internationally. Concerning recycling, emission factors used for calculation are mostly default values, since it would be too complicated and costly to conduct LCAs for every site.

It might be possible and interesting to consider default values (tCO<sub>2</sub>e avoided/ t of material recycled) for future methodologies. It may require some adaptations to ensure that the default values are coherent with the geographical zone for which they are used.

The EpE Protocol (presentation and excel tool) can be downloaded at:

EpE's website: [www.epe-asso.org](http://www.epe-asso.org)