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3rd June 2010

Public comment on proposed VCS meth "Greenhouse Gas Emission Reductions by Recovering and Destroying Ozone Depleting Substances (ODS) from Products"

Dear methodology assessor,

I would like to comment because I developed the CDM methodology AMS III.X (with Anne Arquit), submitted by the Proklima program of the german aid agency GTZ (www.gtz.de/proklima). This CDM methodology is the only CDM methodology currently in use for household refrigeration worldwide and it anticipates the voluntary market ODS destruction by imposing an eligibility criterion that replaced old refrigerators are destroyed according to the WEEE-Forum standard, see point 3.l on http://cdm.unfccc.int/UserManagement/FileStorage/CDM_AMSSCSSCXE8WJQOGZ1BVG4TTK6F0BOQO3
This eligibility criterion presently assures that the environmental standard in vigor in the EU is the minimum ODS destruction under which CERs are possible. Gains from energy efficiency are conditional on ODS destruction, in other words "leveraging" avoided GHG. Perhaps, a VCS methodology building on a CDM methodology increases the fungibility between different emission trading systems.

The proposed VCS methodology effectively weakens this level of environmental integrity in AMS III.X because it removes a verifiable approach for determining Recovery and Destruction Efficiency (RDE).

Certainly, RAL defining recovery rates is not a solution reflecting ISO 14064 principles or reflecting eligibility requirement #5 of the VCS Program Update for ODS (probably other comments reflecting RAL's record of behavior are made). Instead, the proposed VCS methodology should adapt the recovery calculation with appliance categories on <180l, 180l<x<350l, >350l (in WEEE-Forum standard), to the conditions in developing countries. Thereby equal treatment of different recycling technologies and a minimum recovery rate can be assured. This calculation can be effectively combined and improved in accuracy with other estimates of blowing agent content, notably from the Montreal Protocol TEAP data. For example, this recovery calculation can be used on 1,000 refrigerator samples with different size compositions as the refrigerators appear in a recycling plant over a year and the variation of the accuracy of the equation can be calculated. Establishing this variation effectively improves the RDE determination.

Furthermore, a VCS methodology might include fraud prevention such as the equation (4) in AMS III.X, verifying a maximum refrigerant volume recovered by controlling the relation to the volume of refrigerant lubricant recovered. POE is used as lubricant for HFC-134a and other specific lubricants are used in all CFC-12 containing refrigerators. Controlling a lubricant/refrigerant ratio would reflect requirement #6 of the VCS Program Update for ODS. Continuous monitoring of ambient air for traces of CFC in the recycling installation is also a means for fraud prevention. Without some fraud prevention controls, the 1,000 refrigerator test in RAL GZ-728 and WEEE-Forum Standard is open to easy manipulation. Manipulation is less probable for CFC-11 and CFC-12 than for HFC-134a (still produced) but could also be seeking to reduce operating cost.

Requiring ODS extraction to a concentrated form (both activated carbon and cryo-condensation) for foams imposes higher investment and operating costs but can not prevent manipulation, nor allows for more accurate monitoring.

Besides these two general points (use recovery calculation and fraud prevention), the proposed ODS methodology is marked by four assumptions creating an exceptionally high level of conservativeness in the emission reduction calculation. None of these four assumptions is warranted. Each of them builds on top of the other.

Conservativeness implies ascertaining that under no operational conditions the calculated GHG reduction overestimates the real impact. Beyond this level, reducing calculated GHG reduction is not conservative but actually gives a wrong signal. What this signal does depends on the economics of projects. Sometimes exaggerated conservativeness weakens incentives to choose the most advanced technology available. In ODS destruction, the overriding economic condition is the cost of gathering millions of appliances and extracting the foam blowing agents. This cost has been well established by the Montreal Protocol TEAP (Task Force Decision XX/7). The result is clear, a large part of the CFC in foams remaining worldwide can only be extracted with additional subsidies because the value of VCUs, CRTs and recyclable materials is significantly below the total cost. For this reason, excessive conservativeness is NOT in the interest of environmental integrity. Excessive conservativeness increases the CFC emitted to the atmosphere.

The four assumptions building up conservativeness are:

1. HFC-134a is the only substitute refrigerant in the project case
2. Transport and destruction emissions are 7.5 t CO_2e/t ODS, as a default with no other option, for instance measuring fuels and electricity for destruction.
3. Default factors for BAF4.1 and BAF4.2, the baseline with
   - ODS are decomposed in landfills and the decomposed substances have no GWPs,
   - the amount of decomposition assumed worldwide is what Kjeldsen measured on one landfill in North Carolina and three car shredders in Tennessee (US regulations effectively prohibit landfills to accept refrigerators, hardly the case in developing countries)
4. Refrigerant baseline in Article 5 countries to be 1, for VR_{refr}, which assumes that the product (appliance) would never be refilled, or in other words no more CFC would be available, perhaps reasonable for household refrigerators but not for many commercial refrigeration products

Finally, a minor technical issue, on page 8, a default of 1.3 t CO_2e/MWh. This default is not conservative as it is considerably above the highest emission factors in South Africa.

If these comments are helpful for the assessment I would be happy to provide more detail.

With best wishes,

Thomas Grammig