



Joint statement concerning the proposed TEAP GWP classification of refrigerants

By: Greenpeace International, Green Cooling, BeyondHFCs, TheNaturalVoice

The groups above welcome the Technical and Economic Assessment Panel 2010 Progress Report. However, we have several reservations regarding TEAP's proposed classification of the global warming potential of refrigerants.

GWP classification enables policy makers to set levels of environmental ambition when it comes to choosing, limiting or banning the use of given substances. It also assists companies in choosing the most sustainable, and therefore business wise options.

To be functional, the classification needs to be simple and science-based.

Concern 1: The TEAP Report states that the proposed classification system is based on "current use patterns", in other words on current commercial realities.

Recommendation 1: The GWP classification should reflect the actual global warming contribution of a quantity of a given substance relative to the global warming contribution of an equal quantity of CO₂, which of course is the baseline reference.

It is important that the GWP classification does not try to accommodate market realities (namely production patterns) but instead points to the most appropriate climate-friendly substances.

Concern 2: The proposed seven tiered classification system by TEAP is too complicated and could lead to confusion and blurring of the real climate impact differences between substances.

For example, until now HFC-134a, with a GWP of 1430 (100 year) has been generally considered to be a high GWP HFC. Under the new classification, it could be perceived as being close to "moderate", which makes it seem more acceptable.

Similarly, the TEAP classification of "low" paves the way for the uptake of HFC 32 (GWP of 650 over 100 years, but 2100 over 20 years), and HFC-152a (GWP of 140 over 100 years but 460 over 20 years.) Clearly, the objective impact that these substances can have on the environment could be misinterpreted.

Recommendation 2: The GWP values need to be classified in a user-friendly manner, enabling an easy and quick assessment of the warming impact of the substance. A two tiered system of high GWP and low GWP best provides such functionality.

Recommendation 3: A GWP threshold of 50 accurately differentiates between high and low GWP substances. Such two-tiered classification reflects the level of environmental ambition that only some substances could satisfy. Indeed, almost all natural refrigerants like ammonia, carbon dioxide and hydrocarbons fall below the level of 50 GWP, while the majority of the fluorocarbon synthetic refrigerants are far above.

A single demarcation threshold of 50, established on the basis of commonly accepted criteria, would point the efforts of the international community in the right direction: GWP values that exceed 50 are objectively harmful for the environment, whereas values below 50 are objectively harmless.

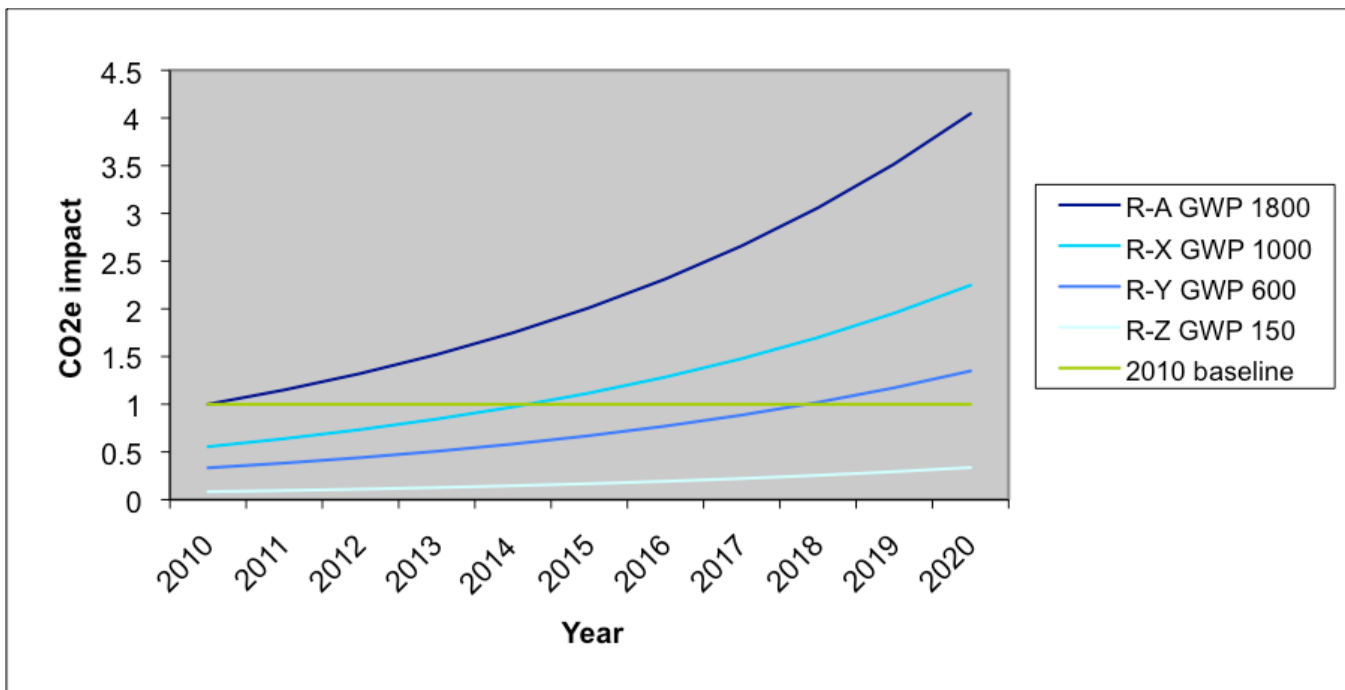
Future-proof classification

The TEAP Report is the first time where a systematic approach is put in place to establish a common acceptance of how low and high GWP terminology should be understood by everyone.

Since the 2007 accelerated HCFC phase out agreement the Parties have repeatedly expressed their desire to avoid the large-scale uptake of high GWP HFCs as HCFC replacements.

Regardless of how they are classified, substances with a GWP of over 50, when used in applications where there are genuinely low GWP alternatives, will unnecessarily contribute to global warming.

Recognizing future trends towards massive growth in the use of refrigerants, the Montreal Protocol needs to adopt a GWP classification system that most readily facilitates the uptake of genuinely low GWP alternatives.



Any definition of 'high' and 'low' GWP must take into account soaring refrigerant growth rates in developing countries. This graph plots the carbon dioxide equivalent (CO₂-e) impact of refrigerants with various GWPs. the CO₂-e impact of refrigerant 'a' consumption (GWP of 1800) in 2010 is given a value of one and is used as a baseline/index to which the CO₂-e impacts of three other refrigerants with varying GWPs are compared. The graph assumes continued refrigerant growth rates of 15% up to 2020, as documented in developing countries between 2002 and 2008. The graph compares the CO₂-e impacts of adopting various refrigerants given current growth rates. the purpose is to assess how much benefit will be accrued from a reduction in GWP before the CO₂-e impact exceeds 2010 emissions by the baseline/ index for refrigerant 'a' with a GWP of 1800. Using this tool it is apparent that based on current growth rates, an immediate reduction to a refrigerant with a GWP of 1000 in 2010 would allow just 4 years before CO₂-e impacts levels return to baseline. for a refrigerant with a GWP of 600 it is 8 years. a significant difference is evident when a refrigerant with a GWP of 150 is used. in this case, baseline levels do not return until 2036, some 26 years later. Clearly there are significant and detrimental climate impacts associated with so-called "moderate" or "low" GWPs of 1000 and 300 respectively.

[Source: Environmental Investigation Agency]

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