EPP Technical Hearing
Wednesday 6, October 2010

Pascal Faidy

Marcel Vandennoort

The miracles of science™

Last revised 7-5-10

DuPont actions on Climate Change

In 1991 internal goals were set to reduce greenhouse gas emissions, voluntarily, unilaterally and on a global basis

Goals were published in 1994 and increased in 1999

Results :

- **Global Greenhouse gas emissions decreased by 72% (absolute reductions expressed in CO2 equivalent) between 1990 and 2004**
- **In 2004, DuPont announced a new goal of an additional 15% decrease in GH gas emissions from a revised baseline reflecting major business portfolio changes.**
- **DuPont also set a goal to expand production and sales of products that reduce GH gas emissions at customers or consumers**
- **HFC emissions reductions are an important part of both accomplishments to date and 2015 achievement**

HFCs emission reduction

- **Success in addressing climate change requires concerted engagement by the world's governments along with technical innovation and individual actions by all citizens. DuPont supports concerted global action on greenhouse gases.**
- **DuPont supports the Clean Development Mechanism which is one step in the direction of global engagement**
  - **Bring developing countries onboard**
  - **Help achieve maximum reductions at lowest cost**
- **DuPont supports a Cap an Allocation for HFCs based on their GWP / CO2 equivalent through the Montreal Protocol process**

HFCs emission reduction

- **HFCs - HFC-23 in particular – are a unique challenge for the CDM and this is good timing for a review**

  High GWP of HFCs can lead to CDM values for destruction (of HFC-23) that are greater than the market value of the products intentionally produced (HCFC-22)

- **HFC-23 is a special case . It is an unavoidable by-product of HCFC R-22 (refrigerant and feedstock for fluoropolymers)**
- **Historically HFC-23 was produced at a rate of approximately 3% of the HCFC-22 production. Some operators have improved dramatically, with HFC-23 production reduced to less than 1.5% of HCFC-22 production.**
- **Most of HFC-23 CDM projects have a baseline for crediting near the maximum 3 % HFC-23/HCFC-22 production ratio allowed under the CDM methodology**
- **The Technical and Economic Assessment Panel (TEAP) indicates that crediting at this 3% ratio brings CERs for HFC-23 destruction that are worth more than HCFC-22 historical market values**

  Such values for CERs provide an incentive to inefficient production, encouraging facilities to produce and destroy the full 3% of HFC-23

  It creates very large subsidies to R-22 production unrelated to environmental benefits, leading to distortion in downstream (FluoroPolymer-) markets.

DuPont and HFC-23 CDM

- **DuPont has 2 HCFC-22 facilities : Louisville (USA) and Dordrecht (NL)**

  Achieving voluntary and unilateral goals to reduce the emission of HFCs have been a significant part of our corporate GH gas emissions reductions

  Reductions achieved via a combination of process optimization and incineration

- **At Louisville, DuPont achieved a production ratio of HFC-23 to HCFC-22 of 1.37% through process optimization**

  DuPont believes that such optimization can be achieved at most if not all HCFC-22 sites. We conveyed this information to CDM Methodology Panel in 2004

- **At Dordrecht we have an in-line incinerator where virtually all HFC-23 by-product is destroyed at a cost between $ 2.13 and $ 3.15 per kg of HFC-23 (based on production volume of HCFC-22)**

- **Our experience supports the IPCC/TEAP estimate of $ 0.20 per ton of CO2 equivalent in developing countries**

This compares to typical CDM credit values of $ 15 to 20 /ton. The result has been billions of dollars in CDM credits for HFC-23 destruction, most of which has gone to developing countries.

Conclusions

- **CDM has been a valuable tool for encouraging coordinated global efforts to reduce greenhouse gas emissions**
- **HFCs are unique because of their status as a product and their relatively high GWP. Their GWP means that at times the value of CDM credits for their destruction can exceed their market value as a product - a situation that has the potential to lead to undesirable behaviors in order to generate CDM credits such as overproducing HFCs in order to destroy them, thus distorting the market**
- **Accordingly, in implementing CDM for these gases we encourage appropriate care in how credits are granted to avoid creating inappropriate motivation**
- **We would also like to bring to your attention another significant opportunity to reduce emissions of HFCs; the US, Mexico and Canada have put forward an amendment to the Montreal Protocol to address HFCs for their GWP using the structure of the Montreal Protocol, which has proven successful. We see opportunity here and support similar approach as already expressed as an option by EU Commission**