Working group on Strategies and Review (CLRTAP)

Voluntary Agreement to reduce mercury emissions in Chlor-Alkali sector

Géneve 1 July 2014
MAIN OBJECTIVE OF THE STRATEGY

Main Objective:
Reduce mercury emissions from Chlor-Alkali Sector

How? With Voluntary Agreements
In 1999 and 2006, specific voluntary agreements were signed among:

.- Spanish Chlor-alkali sector
.- Regional governments where companies are located
.- Spanish Environment Ministry.

Signing these agreements, the Spanish Chlor-alkali sector committed itself to reduce their Hg emissions.

Taking into account the successful results of the first agreement, one second agreement has been implemented for the period 2006-12.
Spanish Chlor-Alkali Sector Background

In 1999, there were in Spain 9 chlorine production sites:
  8 installations with mercury technology
  1 installation of mercury and membrane technology

In 2012 there were also 9 production sites but:
  1 installation of mercury and membrane technology
  2 installation of membrane technology
  1 installation converting to membrane
  5 installations with mercury technology
Description of Voluntary Agreements (1)

Voluntary agreements:

• Set up multiannual mercury emission limit values for the whole sector, allowing some flexibility inside it, depending on the size and characteristics of the plants.

• Include also complementary objectives like: Investments to update installations, training staff, safety and hygiene issues.

• Emissions and other commitments should be verified by a external accredited body and reported annually to the Ministry.

• Each year a follow-up meeting takes place, with the participation of all parties involved in the agreement.
Description of Voluntary Agreements (2)

• Annual meeting is key, because:
  – It involves all the stakeholders
  – It allows reviewing the achievements of the previous year as a sector and for each plant
  – It allows the sector explaining: plans, investments, actions to improve, concerns, training plans, safety measures …etc.
  – It allows the authorities having the opportunity to suggest, promote, demand… actions in order to improve the performance of the plants.
RESULTS

- 48% of reduction of Hg emission to air in the first agreement and one additional 43% in the second.

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<th>Year</th>
<th>t Cl2</th>
<th>g/t Cl2</th>
<th>kg Hg</th>
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<th>Kg. Hg</th>
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RESULTS (2)

Emissions mercury to air

- kg Hg
RESULTS (4)

The whole sector investment has been:

- First agreement (1999-2006)
  53% emissions reduction  22,8 M€

- Second agreement (2007-2012)
  52% additional reduction  15,6 M€