How France avoided 45 millions t CO$_2$ eq with the CFCs, HCFCs and HFCs reclaim?
A partnership between science, industry and government is the magic formula for success

M. Achim Steiner
OEWG 38 Preparatory note
§147

Create a contact group on the feasibility and ways of managing HFCs

OEWG 36

Mandate to resolve challenges by generating solutions to manage HFC

27th MOP
Decision Dubai pathway on HFC

Issues for discussion:
Agenda item 11
Destruction of banks ODS

OEWG 38 (UNEP/OzL.Pro27/13)

BANK MANAGEMENT, A GROWING CONCERN...
HOW TO DEAL WITH THE BANK?

DEFINITION « BANK »:

“*The global consumption of a substance minus the global emissions and destruction of that substance*”

*Special report of the Intergovernmental Panel on Climate change (IPCC) and Technology and Economic Assessment (TEAP 2002)*
HOW TO DEAL WITH THE BANK?

«BANK AND USE»:

... Managing Banks are mainly dealing with the total amount of substances contained in existing equipment.

Improve equipments’ cycle to reduce emissions.
Solutions to avoid and reduce greenhouse gas emissions in equipment

**Major opportunities to reduce of greenhouse direct and indirect GHG emissions:**

- **improved containment** of equipment
- **reduced charge** of substances in equipment
- **increased use of low** GWP substances

**End-of-life equipment with Recovery, Recycling or monitored Destruction of substances**
FRENCH EARLY INITIATIVE…

Success story of a French Partnership between Industries Sector and Government

1989
Declaration of intent
From the industry sector

1993
Voluntary commitment to ensure a recovery process and go beyond existing regulations

93 - ...
Development of the mechanism

Circular Economy System
CIRCULAR ECONOMY process ...

ADC3R:
- Distribution
- Conditioning
- Recovering

Producers

Equipment Holders

Operators / Installers

Wholesalers
- Component distributor

HFC supply chain

Recovering supply chain
RECOVERY PROCESS:

- **COLLECTION**
  - by a certified operator

- **CONDITIONING**
  - specifications compliance

- **ANALYSIS**
  - specifications checking

- **REFRIGERANT**

- **RECEPTION**
  - Recovery packagings

- **DOCUMENTARY CHECK**
  - waste tracking document

- **WEIGH STATION**

- **ANALYSIS**
  - composition, purity, acidity ...

- **PRODUCT TREATMENT AND PURIFICATION PROCESS**

- **Regenerate**

- **DESTRUCTION**
  - Impossible to regenerate

**Paths:**
- Destruction
- Recovery/Recycle/Regeneration Process
From the database created by ARMINES, CITEPA was able to translate emissions prevented each year between 1993 and 2013 into global warming potential (GWP).

This assessment translated tonnages of refrigerant gases recovered into "tonnes of CO$_2$ equivalent" by using equivalence ratios established by the IPCC.

Avoided emissions assessment
1993-2013 $\approx$ 45 Mt CO$_2$eq

Avoided emissions financial assessment for the society
1993-2013 $\approx$ 2.5 B euros
2016: NEW CHALLENGES AND ROADMAP...

**PHASE DOWN ROADMAP**
- support transition through recovery efficiency -
  « gapometer »

**REFRIGERANT BANK MANAGEMENT**
- foster reclaim and transition to low GWP -
  « incentive »

**EVOLUTIVE FRAMEWORK**
- new goals towards new issues -
  « from Montreal to Kyoto »

**F-GAS ALIGNEMENT**
- integrate new regulations and new standards -
  « t eq CO₂ »
Strengthen and renew a commitment in terms of reduction of F-Gas emissions.

Building best practices and promoting the transition to low GWP alternatives.

Support in the whole cold chain in a substitution process.

Bring solution to control and reduce F-Gas emissions throughout the chain.

Continue to improve the collection and improve regeneration of used F-Gases.

Go beyond current regulations through a voluntary commitment to enhance CO2 emissions control.

CORE ACTIONS
An upstream based cost sharing system

including up front treatment cost, around 3.49 €/kg

A downstream incentive based mechanism

rewarding recovery and transition to low GWP fluids
GES CAPTURE : EXPECTED RECOVERY AND SUCCESS...

... in t eq CO₂

Around 2 years without cars in France

2016 - 2030

≈

68 millions t CO₂eq
WHO is ADC3R?

... ADC3R

meaning ....

« the Association of companies Distributing, Conditioning (ADC) Recovering and Reclaiming Refrigerants* (3R) »

... ACTIONS:

ADC3R’s aim is to represent companies and/or groups of commercial companies in France which distribute, condition, recover and recycling refrigerants.

ADC3R EARLY ACTIONS...

Around 200 000 collecting packagings to recover unwanted gases

500 collect points around French territory

Investment in storage tank and waste treatment technology installation/plant

400 000 à 600 000 waste tracking documents per year

Introduction of conformity check and analysis
Thank you very much for your attention

For further information, please contact:

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