

Tutor-Made NCGG reduction in the Netherlands

WERKPROGRAMMA SCHOON EN ZUINIG



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Ministry of Environment



Content

The mitigation challenge

The Dutch policy programme

Results

Future policy

International co-operation



The mitigation challenge

Cost effective opportunities

Dutch Kyoto objective: - 6 %

Objective for reduction of NCGG emissions: - 38 %



But

Great variety of sources

N_2O (agriculture, industry, other)

HFCs (aerosols, air conditioning, foams, HCFC-22 production)

PFCs (semi-conductors, aluminium)

SF_6 (electricity production and distribution)

CH_4 (waste disposal, agriculture, oil/gas industry)

Which policy opportunities?



A cow that doesn't release any methane?



Dutch NCGG policy programme

(ROB)

Dedicated and comprehensive NCGG policy programme

Three phases:

- Reducing uncertainty in emission levels
- Identifying mitigation options, costs and implementation conditions
- Implementation of reduction projects and measures



Sector-specific approach

Working groups with government, industry, science and other stakeholders

Specific phase for each sector

Waste sector, oil/gas industry, aluminium, semi-conductors, HCFC-22 production, nitric acid production and other industry (N_2O), cooling installations, foams and aerosols, agriculture, co-generation heat and power



Organisation

Coordination by Ministry of Environment

Other ministries (Economic Affairs, Agriculture)

responsible for sector-specific measures

Implementing agency SenterNovem

- ❑ Assignment of research
- ❑ Communication (working groups, workshops, information materials)
- ❑ Financial support R&D and demonstration



Results

NCGG emissions 2006: 35 Mton CO₂-eq. (= Kyoto objective)

Main contributions: permits and voluntary agreements with industry, waste policies, European dairy quota policy

Partly due to dedicated NCGG policy:

- Common policy framework
- Knowledge development and shared information
- Development of measures
- Financial support



Example 1

HFC afterburner in HCFC facility

Largest point source in Netherlands

Condition in environmental permit plus support from NCGG programme for implementation

Introduction of improved incinerator unit and spare unit for back-up

Additional HFC avoidance

Close co-operation permitting authority, NCGG programme, branche organisations, companies and technical experts



Example 2

Good Practice Guidance refrigeration and cooling

Guidance for warehouses, retail, airco in utility buildings
and ships on natural cooling agents

Stepwise approach to choose best option in terms of direct
(cooling agent) and indirect (energy efficiency) emissions

Developed with industry, science and consultants

NCGG subsidy to develop new approaches for market
introduction

Outreach and financial support to sectors



Example 3

'Seeing is believing' campaign

Focus on dairy production

Awareness raising in agriculture and dissemination of information on practical measures

Farmers work in groups supported by NCGG programme to discover which measures work best for them

Making the step to the third phase of the NCGG programme in agriculture: implementation of reduction measures



Future policy

Dutch national policy target: - 30 % in 2020 (cf. 1990)

Clean and Efficient programme released in September 2007

NCGG 2020 objective: 26 Mton (- 54 % cf. 1990)

a.o. abatement N_2O from nitric acid production, manure fermentation, precision agriculture, animal feed and housing, natural cooling agents, tightening agreements with landfill sites, limiting methane from co-generation



International co-operation

Wider exchange of information beneficial

Both on research results and implementation experiences

Survey on NCGG policies and measures around the world:
inspiration for realising NCGG reductions

Implementation policy: theme during fifth international

NCGG conference in the Netherlands: July 2009

NCGG reduction needs co-operation!



More information?

www.senternovem.nl/robinternational

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