
STRATEGY FOR THE SUPERVISION OF CARBON DIOXIDE AND NITROGEN OXIDES EMISSIONS TRADING

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SUMMARY

This paper presents a summary of a discussion paper of the same title, which was distributed at the 7th INECE Conference. The summary describes the problems that need to be addressed and of the strategy's limitations, as well as a discussion of the planned approach and an introduction to carbon dioxide and nitrogen oxides emission trading in The Netherlands.

1 BACKGROUND AND QUANTITATIVE CHARACTERISTICS

On 13 October 2003, the European Parliament and the Council passed a directive (2003/87/EC) to introduce a system of emission trading in greenhouse gasses in the European Union as of 1 January 2005. The directive is instrumental to the realisation of the Kyoto targets and must ensure that the industry and energy sectors deliver the emission reductions implied by the Kyoto Protocol. The directive requires that Member States enact the legal structure to implement the directive obliging Member States to issue emission permits to the larger industrial companies enabling them to participate in the emission trading scheme. All member states must draw up an allocation plan that determines the emission allowances to be issued to participating companies. All companies have to monitor their emissions in accordance with the permit requirements at the end of the year draft an emission report stipulating and specifying their total carbon dioxide emissions and hand over sufficient allowances to cover their total emissions.

Included in the Carbon Dioxide Emission Trading Scheme will be those

plants that are covered by the definitions in Annex 1 of the European Carbon Dioxide directive. These concern energy activities in which the installed thermal capacity of the combustion plants in the installation (facility) is above 20 MWth,¹ but also a number of other designated categories with or without a threshold as listed in the annex. Member States are obliged to submit national allocation plans (NAPs) for approval by the European Commission. According to Annex A of the Dutch national allocation plan 355 establishments in the Netherlands fall under the directive. However, this also includes 150 establishments with an annual emission of less than 25 kilotons of carbon dioxide. Early on, the Netherlands has flagged that the cost of participation of these installations in the trading scheme far outweighed the benefits, and with the approval of the Commission an out-out provision for these installations was created. Some 26 of these 150 establishments have opted to participate in the emission trading. A total of 206 establishments have been provided with an emission permit and have been issued with allowances in accordance with the approved national allocation plan.

In October 2001, the European

¹MWth signifies "Megawatt thermal," and is a measure of energy production.

parliament and the Council decided on the National Emission Ceilings directive (2001/81/EC), which imposes on each Member State ceilings for the national emissions of nitrogen oxides, sulphur dioxide, and particulates. The ceiling for the nitrogen oxides emissions in the Netherlands for 2010 is 260 kilotons. The Dutch government has decided to introduce a system of emission trading for nitrogen oxides emissions of the industrial installations as a cost effective instrument to realise the required emission reductions. In this context a target of 55 kilotons of nitrogen oxides has been set for the industrial installations to which the legislation on nitrogen oxides emissions apply. In general it means all industrial installations with a total thermal capacity of more than 20 MWth and installations with process emissions of the steel and other metal industry, cement and glass production, chemical industries etc. For each category of nitrogen oxides emitting industry, a performance standard rate has been defined that applies to all the establishments in the same way. The performance standard rate is expressed in grams per gigajoule (g/GJ) of energy used and for process emissions in gram or kilograms nitrogen oxides per ton produced in that process. The starting value is 68 g/GJ in 2005, decreasing with 5 or 6 gram annually to 40 g/GJ in 2010.

2 THE NETHERLANDS EMISSIONS AUTHORITY

Early during the first discussions in 1999 on the introduction of nitrogen oxides emissions trading it was learned that the aspects of proper monitoring, inspection and enforcement to comply with the legal requirements are most critical elements of any emissions trading programme, and that thereto the Dutch Government would have to set high standards and develop ambitious targets high.

From the very beginning, this ambition has been focused on setting up an effective structure and organisation that would be able to manage the application and issuance of emission permit most effi-

ciently and effectively, and would be equipped with sufficient staff and expertise to inspect, enforce and correct deviations from the permit conditions or between actual emissions and those reported by the establishments.

The Netherlands Emission Authority's ambition is to achieve a situation with a high compliance rate. The Netherlands Emission Authority has been set up as an independent administrative organisation that will act as the competent authority charged with the permitting, inspection and enforcement of emissions trading at the above mentioned establishments. During the last two years this authority has prepared itself for the tasks and responsibilities in respect of the implementation and execution of new legislation. One of the steps taken to prepare the Netherlands Emission Authority for its tasks and responsibilities concerned the formulation of the inspection and enforcement strategy to ensure that companies actually comply with the legal requirements. The inspection and enforcement strategy has been developed in a consultancy assignment whereby as much as possible knowledge and experiences from the UK and the USA has been taken on board. This strategy defines the tools that the Netherlands Emission Authority intends to use in order to achieve the high rate of compliance that is needed in an emissions trading environment.

2.1 Legislation For The Implementation Of Emission Trading And The Role Of The Netherlands Emission Authority

To be able to implement emission trading in the Netherlands the framework Environmental Management Act has been amended on the following elements.

A new chapter (Chapter 16), dealing specifically with emissions trading of carbon dioxide and nitrogen oxides has been added to the Environmental Management Act and two existing chapters have been amended.

Chapter 2 (Advisory bodies) allows for establishing of the Netherlands Emissions Authority as the legal body charged

with the issuing of emission permits, inspection and enforcement of emissions trading.

Chapter 18 (Enforcement) has been amended to provide for the penalties and other instruments to enforce effectively the various emissions trading requirements. The two schemes of emissions trading, i.e. nitrogen oxides and carbon dioxide require similar provisions for the monitoring, permitting, verification and inspection. The requirements in

Chapter 16 in the Act provides for one emission permit for nitrogen oxides and carbon dioxide, and for a monitoring protocol as an integral part of the emissions permit covering the equipment, management of data and the internal procedures to safeguard the proper monitoring of both emissions. The Netherlands Emission Authority is responsible for the issuance of the permit and the approval of the monitoring protocol. In the new set-up, the operator is to prepare just one emission report and to have it verified and hand it in according to the same procedures. In order to facilitate and to ensure a fully equal treatment and procedure for the implementation and enforcement of both trading schemes the Netherlands Emission Authority will supervise the legal requirements, the permitting, the inspection and the enforcement of the new legislative requirements.

2.2 The Principal Tasks

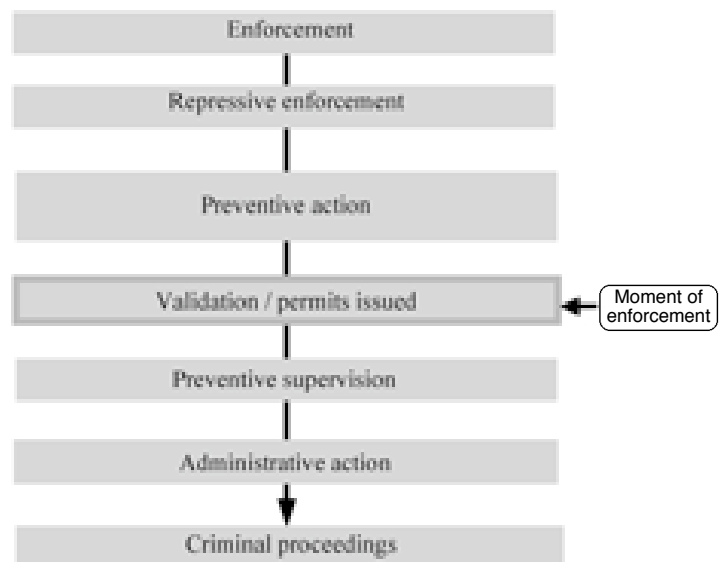
The principal tasks of the Netherlands Emission Authority include:

- Validation of monitoring protocols.
- Issuance of permits.
- Carrying out supervision and enforcing compliance.
- Keeping records of trading transactions.
- Publication of emission totals and outcomes.
- Imposing administrative sanctions.

In performing these tasks, the Netherlands Emission Authority will cooperate closely with the provincial authorities as the competent authorities for the Envi-

ronmental Management Act (Wm-BG), in particular on the validation and issuing of permits and supervising and enforcement of compliance. Furthermore, the Netherlands Emission Authority has established close working relationships with the Public Prosecutor to achieve effective coordination between criminal and administrative proceedings. To be able to guarantee reliable and accurate monitoring and reporting emission data a compliance and assurance system has been set up in cooperation with the industry and government and provincial authorities. It is set out in figure 1.

Figure 1:



System for guaranteeing monitoring and reporting in context of emission trading

(Source: report "Strategy for the supervision of CO₂ – and NO_x – emission trading. Dutch Ministry of Environment, 29 April 2004)

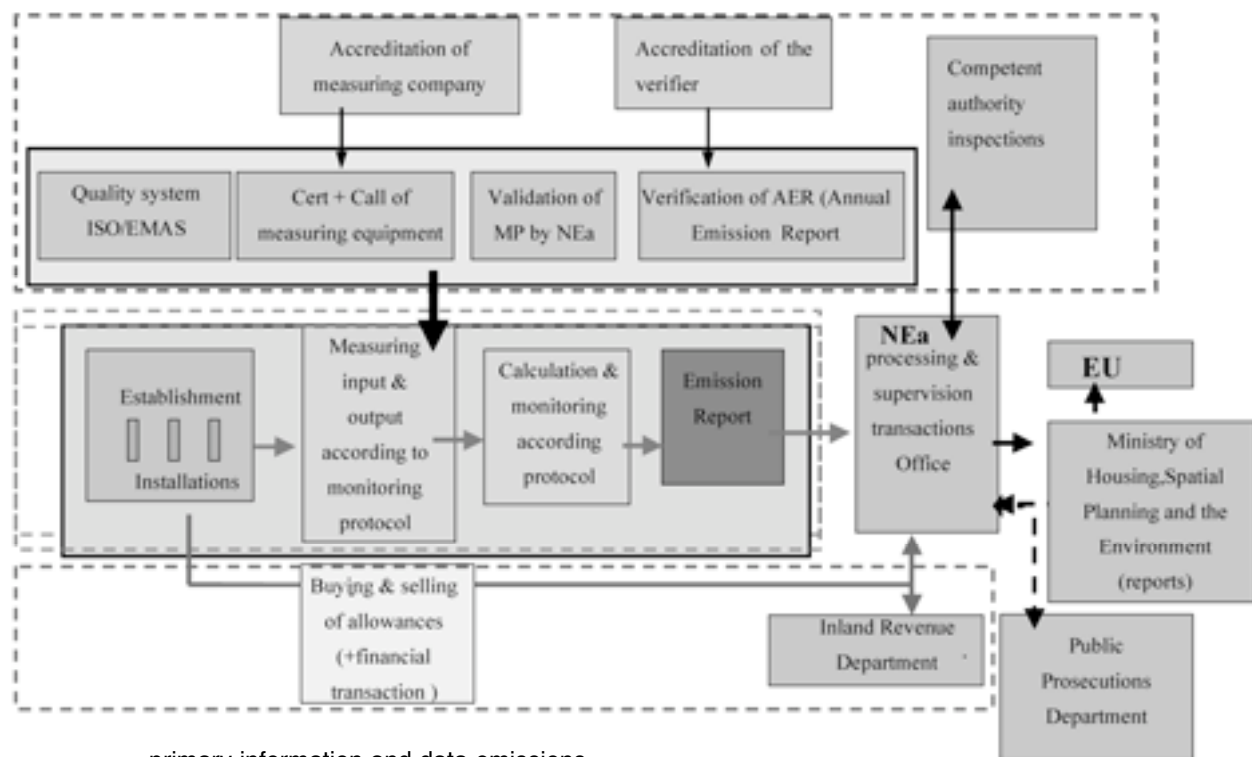
In order to assist the industry at an early stage in their preparations for drafting their monitoring protocols, a Programme of Requirements for the monitoring of carbon dioxide and nitrogen oxides emissions was being developed before the legislative requirements were in place. This Programme of Monitoring Requirements, which in the meantime has been translated into the ministerial order on monitoring for carbon dioxide and nitrogen oxides, sets out the monitoring and reporting requirements the companies must comply with.

The companies themselves must draw up a monitoring protocol based on the requirements laid down in this Programme of Requirements. The monitoring protocol is the main element of the permit application by the company. The Netherlands Emission Authority then validates the monitoring protocol by assessing whether it meets the relevant requirements and whether the description of the installation is a true reflection of the actual situation as covered by the Integrated Pollution Prevention and Control (IPPC) permit to the company.

On the basis of the validated monitoring protocol the emission permit is then issued. The company subsequently carries out its monitoring process in accordance with the monitoring protocol. In case changes occur in the monitoring or other relevant changes in the permitted situation, these must be reported and in certain cases also Netherlands Emission Authority's approval of the changes in the monitor-

ing protocol must be solicited. At the end of each year the company is to draw up an emission report that is to be verified by an independent verification body that is accredited to verify emission report under the emissions trading scheme. The verified emission report is then sent to the Netherlands Emission Authority. The Netherlands Emission Authority will accept the verified emission report and the emissions contained therein, but as her task and responsibility as competent authority the Netherlands Emission Authority will carry out independently various inspection and control activities to assess whether the emissions reported in the annual reports are indeed monitored and reported in conformity with the permit conditions. To that end, the Netherlands Emission Authority will carry out regular visits at the establishment aimed at auditing the emissions reported by the companies and carry out in-depth inspections to assess that the process of

Figure 2: Information Flows



----- = primary information and data emissions

----- = secondary information needed for the verification of quality and reliability primary information

- - - - - = tertiary data and information transactions

(Source: report "Strategy for the supervision of CO₂ – and NO_x – emission trading. Dutch Ministry of Environment, 29 April 2004)

monitoring, reporting and verification functions in line with the intentions of the legislator.

2.2.1 Information Flows

The reliability and correctness of the emission data provided in the emissions reports are Netherlands Emission Authority's central concern. The supervision strategy distinguishes therefore two levels on which emission data are generated usually.

On a secondary level the strategy is directed to information related to the measuring and production data cycle, the calculation and processing of these data and the resulting reports. On what is prob-

ably the highest level it concerns the processes aimed at quality assurance and quality control (QA/QC). The figure 2 below sets out the relevant information flows as far as the supervision is concerned.

As indicated above, the strategy for supervision focuses particularly on the primary and secondary information flows.

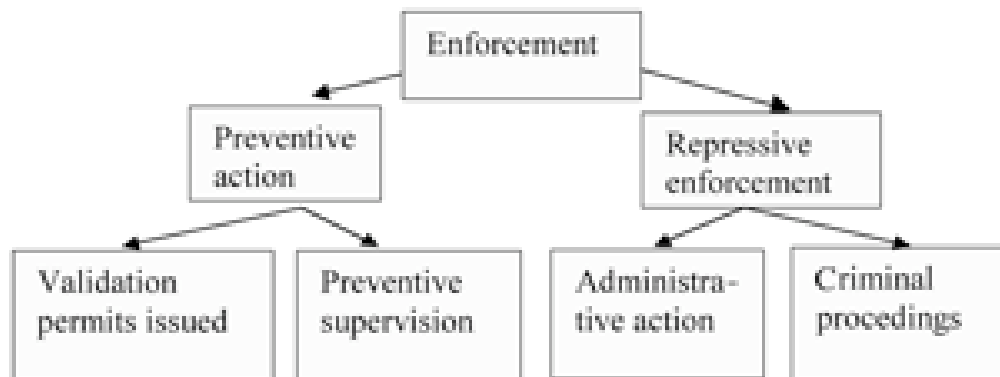
2.2.2 Limitations

The strategy for supervision is directly concerned with the inspection and enforcement of compliance with the regulations, in order to ensure the reliability and accuracy of the reported emission data. There is also the relationship with associated tasks such as validation, the issuing of

Figure 3: Concepts used in the context of supervision and enforcement

(Source: report "Strategy for the supervision of CO₂ - and NO_x - emission trading. Dutch Ministry of Environment, 29 April 2004)

Enforcement of the rules is intended to ensure compliance with the applicable regulations (regulations imposed by law as well as those that are part of a permit). It concerns activities carried out by the competent authority that are intended to achieve a certain degree of compliance or enforce it. These activities can be of a preventive or repressive nature and usually include general supervision and taking action in the case of infringements (see the diagram below).



The term 'enforcement' includes both the concept of preventive and repressive action.

Preventive activity on the part of the Netherlands Emissions authority (NEa) means the validation of the monitoring protocol, the issuing of permits and **preventive supervision**. *By preventive supervision is meant checking whether (permit) regulations are being complied with and whether the permit is adequate. If infringements are discovered this is followed by consultation and the NEa will indicate the nature and degree of the shortcomings. In this strategy for supervision preventive supervision will simply be referred to by the term supervision.*

In addition to consultation, the repressive phase of the enforcement may be started with the initiation of administrative steps (in the form of a penalty, an administrative fine) or criminal proceedings (charge, criminal prosecution). In this strategy for supervision the term **repressive enforcement** will be used to refer to the application of (administrative) sanctions.

When the supervision is aimed at uncovering offences, it takes on the form of an investigation. This requires prosecuting or **investigative** powers. This phase falls outside the scope of this strategy for supervision.

the permits and the evaluation of annual emission reports. The step involving action taken to correct infringements (repressive enforcement) is not part of this strategy. The action can consist of imposing or warning for legal sanctions, either of an administrative or penal nature. The strategy for punitive action and penalties will be developed by Netherlands Emission Authority as a separate line of enforcement. This strategy however does deal with the relationship between inspection and repressive enforcement.

3 COMPLIANCE FACTORS FOR DETERMINING THE STRATEGY: THE TABLE OF ELEVEN

One of the tools which has been developed as a “thinking framework” is the so-called Table of Eleven. This Table of Eleven offers eleven factors from the target group's perspective that influence the causes of infringement or the motives for compliance with the regulations. A distinction has been made between spontaneous compliance factors and enforcement factors. At various levels, tools can be used that take into consideration and reflect the

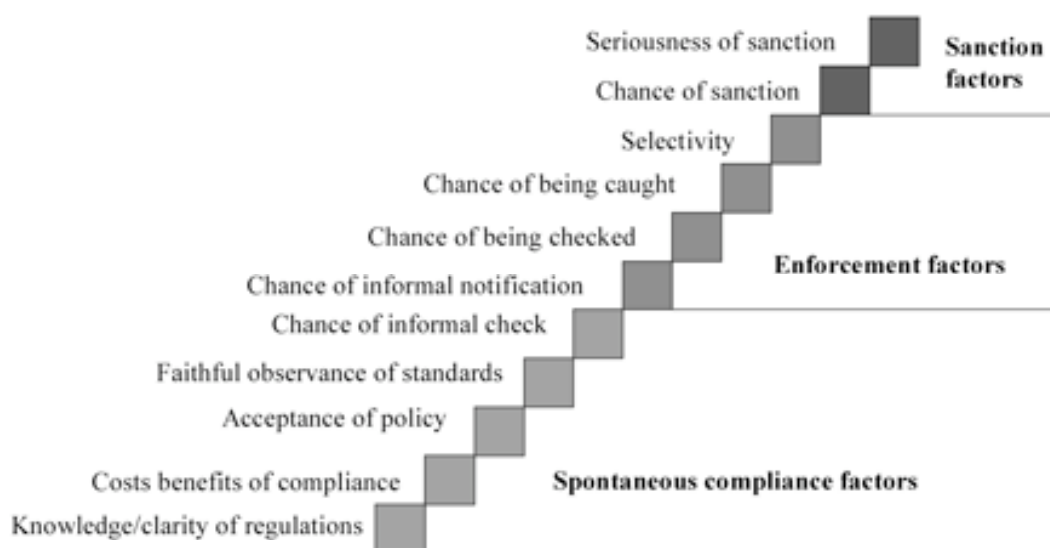
factors in spontaneous compliance as well as the enforcement factors. The following figure illustrates the Table of Eleven.

Another tool that is emphasized in the discussion paper is communication. Interviews held with experts from the USA showed that a proper communication is very important for encouraging spontaneous compliance. Making sure the parties concerned are well informed applies to increasing knowledge and the clarity of the regulation but also the degree of acceptance of the policy.

4 SANCTION STRATEGY

Netherlands Emission Authority has developed a sanction strategy to remedy in the situation that shortcomings are found during audits or depth-inspections. The sanction strategy sets out in detail how inspectors must act when different types of deviations are noticed. The strategy includes a “how to act” model. In this model there are four categories of various deviations classified and ranked by urgency and seriousness. By following a process-diagram inspectors know precisely which steps in response should be taken.

Figure 4: Compliance, enforcement and sanction factors.



5 GUIDE TO THE DISCUSSION PAPER

The most important conclusions regarding the strategy for supervision can be found in **Chapter 2**. Continuing on this, the background, justification and further elaboration of these conclusions are set out in a further four chapters. **Chapter 3** provides an elaboration of the objectives and the preconditions of this strategy for inspection. This chapter discusses the basic premises of the strategy and also deals with the impact of the time aspect on a changing strategy for supervision. **Chapter 4** provides a further elaboration of the strategy and the approach to the supervision. A description is given of the sources drawn on for determining the strategy and the instruments for the execution of the strategy (communication and two types of inspections), possible reasons why supervision is required and the relationship of the supervision with other steps in the process such as validation, the issuing of permits and assessment of emission reports. **Chapter 5** focuses on the various aspects of carrying out inspection. These include the required capacity and expertise for the

various instruments as well as the inherent risks of deviations. An indication is also given of what form the collaboration between the competent authority for the Environmental Management Act and the collaboration on an international level might take as part of the supervision. Finally, **Chapter 6** looks at the role evaluation and feedback play as part of the supervision. It also explains the role of building up dossiers and generating management information as part of the evaluation, as well as international possibilities for further fine-tuning and evaluation.

Note:

Participants of the conference who would like to receive a hard copy of the paper or the electronic version are invited to send a request by mail to:

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