

Market-based instruments in environmental policy: the Dutch case

November 2012

Hans Vos¹ (hansbvos@gmail.com)

Introduction

2012 has been a turbulent political year in the Netherlands, and it has had some significant effects on the use of market-based instruments in environmental policy.

In 2011 the Ministry of Finance announced a streamlining of the fiscal system, including the removal of five “minor” environmental taxes – on waste, groundwater, tap water and packaging, and the Eurovignet - with a total revenues of about 0.7 billion Euros.

In April 2012 the estimated sovereign budget deficit for 2013 was calculated at 4.6% of GDP. Negotiations in the government coalition to push it below 3% failed and the government fell, just a few days before the European Commission deadline for notification. An ad-hoc majority coalition including opposition parties quickly reached a budget agreement for 2013 (called Spring agreement). It included a significant strengthening of the green tax shift, with almost 2 billion Euros. One of the new measures would remove the income tax freedom of travel expenses compensation for employees. It would imply introducing a commuter tax.

Coming new elections (September 2012) the Spring agreement parties changed their attitude in particular concerning the very unpopular commuter tax. Just days after the elections the commuter tax proposal was removed from the 2013 budget. In the near-final version² of the 2013 budget some important green taxes (or tax measures) have been saved, including removing the exemption of power plants as regards the coal tax and removing the tax reduction for “red” diesel.

In the remainder of this article I will briefly deal with recent developments in views and of the use of environmental taxes and charges and emissions trading systems. A complete overview of financial environmental support mechanisms goes beyond the purpose of this article. Besides, subsidies are subject to numerous changes, in particular in times of political changes and the overall need of developing austerity measures in all sectors of public life. A downward trend in the total sums is certain. According to the Netherlands Environmental Assessment Agency, up to 2015 subsidies for environmental and energy conservation purposes will be reduced by up to 200 million euro³.

¹ Independent; formerly with the European Environment Agency. The author is grateful for help received from Mariska de Bruijne (Ministry of Finance) and Akshay Patki (Ministry of Infrastructure and Environment); the text is the author’s responsibility alone.

² At the time of writing this article the 2013 budget still has to be approved by the First Chamber (the Senate).

³ Netherlands Environmental Assessment Agency (2012), Balans van de leefomgeving 2012 (Environmental Review 2012)

A changing fiscal climate

The Netherlands were a pioneer in the early days of discussing, testing and applying financial incentives in environmental policy. Overviews of the use of MBI from the last decades of the 20th century⁴ show invariably the Netherlands as one of the leading countries in this field. Not only leading in applying MBI, but also in discussing and promoting these tools, e.g. in relevant OECD and EU forums.

That image has started to fade somewhat after the turn of the century. Much of the low-hanging fruit had been picked and a further strengthening of environmental measures including market-based instruments is viewed with great cautiousness. The Netherlands is a small country densely packed with economic activities⁵, hence with a relatively high environmental burden per square kilometre. And it has an open economy – 70% of its national income is earned abroad – which forces the country to keep an eye on the competitiveness of its production sector.

In 2009 Bernard ter Haar, the former Deputy Treasurer-General, wrote a contribution for the Study Group on the Fiscal System, titled *New Paths for Greening*⁶. His essay is on the role the tax system may have in creating green growth and a sustainable economy in the next couple of decades. The government is a main player and has several instruments in his toolbox, including environmental taxes as behaviour-steering incentives. Focus is on climate change and the depletion of natural resources. Ter Haar discusses three packages of incentives: (1) Broadening and strengthening CO₂-related taxes in transport, agriculture and the built environment.; (2) abolishing non-sustainable fiscal subsidies; (3) a firm European agenda for greening.

The overall conclusions of his essay include the potential of a growth of environmental taxes to deliver a significant contribution to sustainability, without harming the stability of fiscal income for the government. In other words, on the fiscal stage play with Colbert and Ramsey as the main characters, there is a part for Pigou.

The Study Group on the Fiscal System published its report in 2010⁷. The report stipulates that two schools can be distinguished as regards the role national environmental taxes can play in helping to reduce CO₂ emissions. One school⁸ states national environmental taxes is not an appropriate instrument, due to transboundary problems and carbon leakage. Policy makers should use international agreements on emissions trading or taxes. The other school, represented by Ter Haar, stipulates the opposite, and points amongst others at the innovative effects of environmental taxes.

⁴ See e.g. the OECD reports *Economic instruments in environmental policy* (1989) and *Managing the environment: the role of economic instruments* (1994), and the EEA reports *Environmental taxes: recent developments in tools for integration* (2000) and *Using the market for cost-effective environmental policy: market-based instruments in Europe* (2006).

⁵ In the European Union country rankings (27 countries) the Netherlands ranks 6th as regards national GDP volumes and 6th but last as regards country surface.

⁶ B. ter Haar, *Nieuwe paden voor vergroening* (New Paths for Greening), essay for the Studiecommissie Belastingstelsel, 22 December 2009.

⁷ the Studiecommissie Belastingstelsel, *Continuïteit en Vernieuwing* (Continuity and Innovation), 2010

⁸ The report refers to an essay for the work of the Study Group by B. Jacobs, *Een economische analyse van een optimaal belastingstelsel voor Nederland* (An economic analysis for an optimal fiscal system for the NL), 2010

The Study Group, in conclusion, leans towards the views of the first school: significant CO₂ emissions reductions should primarily be achieved via internationally coordinated actions. It furthermore recommends that the CO₂ component in transport taxes should be reinforced. Other “small” environmental taxes⁹ have insignificant effects and could be removed, or (tax on packaging) be considerably increased.

Environmental taxes and charges

Following the conclusions of the Study Group, the Ministry of Finance accepts the idea that fiscal taxes may have a steering effect, but they want to focus on their revenue-raising function. The Fiscal Plan 2012 announced the abolishment of five environmental taxes. Major taxes on energy and transport will remain. Fiscal advantage for efficient passenger cars will be reduced and partly terminated.

Originally, policy practice followed these recommendations. The Fiscal Agenda (setting out the fiscal principles of the present government) and the 2012 Fiscal Plan (concrete measures for the fiscal year)¹⁰ presented a renewed fiscal philosophy, based on three principles: (1) a simpler (2) more robust and (3) more fraud resistant fiscal system.

The number of different central government taxes would be reduced from 22 to 15. Five out of the seven taxes under termination are environmental taxes. These are taxes with a relatively low revenue, and should disappear to simplify the fiscal system. They were:

1. Waste tax (terminated 01.01.2012). This tax basically was a tax on waste to landfills. With the growing capacity of incinerations the role of landfills has diminished. Revenue in 2008 was € 118 mln, in 2009, 2010 and 2011 about € 45 mln per year.
2. Groundwater tax (terminated 01.01.2012). Revenues amount to about € 175 mln. The grounds for termination are said to lie in provincial water licensing that provides enough certainty for efficient groundwater use. Interesting to note that the Fiscal Plan 2012 calls the environmental purpose of this tax of secondary importance, although the Fiscal Agenda (published three-quarters of a year earlier) speaks of parataxis, or equivalence of goals.
3. Tap water tax (to be terminated 01.01.2013). Revenues amount to about €125 mln. In explaining the termination the Plan points at measures to be taken by the European Commission to reduce the use of water by 30%. It is interesting to note that both water taxes may come back as charges, as a consequence of the implementation of the Water Framework Directive. The WFD stipulates the principle that all costs of water services should be recovered including environmental and resources costs.
4. Packaging tax (to be terminated 01.01.2013). The biggest “small” tax, the packaging tax has a revenue of about €300 mln. The environmental effects of the tax are reported to be small¹¹. The termination will save about € 16 mln in the administrative burden for government and industry. The termination could be cancelled when the packaging industry fails to comply with take-back obligations.

⁹ Fuel taxes excluded

¹⁰ Ministry of Finance, De fiscale agenda (Fiscal Agenda; publ. 14.04.2011), and, Belastingplan 2012 (Fiscal Plan 2012; adopted 21.12.2011)

¹¹ CE Delft, De milieueffecten van de verpakkingenbelasting (The environmental effects of the packaging tax), 2010

5. The Eurovignet (to be terminated 01.01.2013). The Eurovignet is a coordination between Belgium, Denmark, Luxemburg, the Netherlands and Sweden. The tax amount to € 750 per annum on average, based on the number of axels and environmental characteristics (euro standard) of the lorry. A vignette bought in the NL gives drivers access to the roads in all of these countries. Belgium and Denmark plan to introducing kilometre charges¹². Moreover, the proceeds are relatively small (€ 115 mln in 2010) and the operating costs are high. The annual road tax would be increased.

The revenues foregone by terminating these five taxes (about € 700 mln) would be compensated elsewhere in the tax plan.

Taxes still applied in the Netherlands are found in the area of energy and transport. These are most important anyway in terms of the revenues they generate for the government with a share of over 90% of all environmentally related taxes.

Intermezzo: political developments in 2012

Political developments have changed the original intentions of the 2012 Fiscal Plan. Three stages could be discerned.

Stage 1: Crisis and an ad-hoc solution

A 4.6% sovereign budget deficit for the year 2013 was estimated. The Commissioner for Economic and Financial Affairs O. Rehn, has extended competences to force compliance of the EU Member States government budgets with the Growth and Stability Pact requirements. Lenience from his side to be flexible on the 3% could not be expected. The Dutch themselves have pointed out over and over again that Member States should obey these rules.

Hence an extra cut of about 14 billion euro was needed to get down to 3%. After seven weeks of negotiations the minority government (liberals (VVD) and christian-democrats (CDA)) and the supporting Freedom Party of Geert Wilders could not reach a solution, and the Prime Minister had to announce the end of the coalition (Saturday 21 April).

Crisis! With the European Commission requesting a proper budget proposal by 30 April.

On Tuesday 24 April, three smaller opposition parties decided to support VVD and CDA to come up with such a – majority-supported - budget: Green-Left, the Social Liberals (D66) and the Christian Union (CU), best described as a traditional Christian, socially and environmentally responsible party. In particular the latter championed the attempt.

On Thursday 26 April, a deal was struck. The minor three got some of their wishes (many of which turning back very unpopular social welfare measures implemented under pressure of the Geert Wilders party) accepted in exchange of harsh cuts elsewhere. The Green-Left party managed to force a significant step towards greening the economy.

This result is known as the Spring Agreement

Effects on the Fiscal Plan 2013:

- The Eurovignet and the tax on tap water will not be abolished (€ 240 mln).

¹² Kilometerheffingen worden niet verwacht vóór 2015 in Denemarken en 2016 in België.

- Energy taxes will increase:
 - Tax on natural gas:
 - Consumption < 5000 m3 (basically households): + 9.3%
 - 5000-170.000 m3 (basically SME): +26.3% (levelling the tariff with the lowest bracket)
 - 170.000-1 mln m3: +7.5%
 - 1 mln-10 mln mm3: +23.6%; >10 mln m3: +36.1%
 - Total extra revenue: € 365 mln
 - Tax on coal: termination of the tax freedom for power plants (€ 115 mln)
- Excise duty on "red" diesel, used by off-road industrial vehicles): termination of the tax advantage of € 0.17/litre (€ 250 mln)
- The VAT tariff on "luxury" products increased from 19 to 21% (by 1 October 2012; € 4.1 billion). This measure was presented under the chapter "Greening" because the lower-income classes will be partly compensated through lower income tax and income dependent compensations, hence a shift from labour tax to consumption.
- Extra subsidies for intensifying the sustainable economy (€200 mln) and nature policy (€200 mln)
- Compensation for workers' travel costs for car use and public transport: revenue: termination of income-tax freedom: (€ 1.3 billion euro)
- Fiscal measure company cars: revenue: termination of tax waiver for home-work trips (€75 mln euro)

A green budget improvement of about € 2.4 billion (subsidies and VAT tax change excluded)¹³.

Stage 2: Coming new elections

One of the substantial government income raising elements in the Spring Agreement is the abolishment of tax freedom for commuter travel cost compensations (income tax free up to €0.19 per km for private cars and no income addition of commuter kilometres for company cars). It would raise 1.3 billion euro, or about 0.2 %-point in the deficit reduction.

In the period May to September 2012 – coming elections - it appeared that all parties behind the Spring Agreement hesitated to fully back this measure. Left-wing parties chose to preferring keeping the tax freedom for public transport cost compensations, and right wing parties wanted to protect the (company) car commuter.

On 3 September the government decided to design a separate law instead of trying to including a more definitive arrangement for the commuter tax plans in the Fiscal Plan 2013. Including it in the Fiscal Plan would have jeopardised the full Plan – already highly sensitive in the then political circumstances - and rejecting a separate law would not formally create an extra hole in the Budget as designed in the Fiscal Plan.

Besides, an assessment by the Netherlands Economic Assessment Agency – preliminary data for the yearly Macro-Economic Assessments - projected the budget deficit for 2013 at 2.7 % of GDP, due to slightly higher economic growth than earlier expected. That would have created room for dropping the tax freedom plans, without risking exceeding the 3%-level.

Stage 3: The new government

¹³ Total government income from environmentally related taxes is about € 20 billion

Opinion polls predicted an extremely scattered political landscape after the 12 September national elections. No plausible majority government of less than five parties would be possible. They were very wrong. The Dutch voters massively turned their backs to extreme right and left wing parties (and to the traditional, conventional power block of the christian-democrats, CDA) and gave the (also traditional, opposing) labour (PVDA) and liberals (VVD) parties a majority together. Their leaders took the challenge and started negotiations to build a coalition.

They very quickly reached an agreement (known as the Autumn Agreement) on the 2013 Fiscal Plan. This agreement facilitates the continuation of the regular parliamentary process of establishing the Budget for the coming year. The agreement was accepted without difficulty.

Two important changes have rendered the Autumn Agreement less green than the Spring Agreement:

- 1) The abolishment of income tax freedom for commuter travel cost compensation has been cancelled. This “perverse” subsidy, newly assessed to be worth 1.6 billion euro, continues.
- 2) A package of green subsidies (solar panels, insulation of buildings and other measures; worth 155 million euro) has been abolished.

Other green measures (coal tax for power generation, increased tax rates for natural gas, tax on red diesel, tax on tap water, eurovignet) have not been affected.

As a result a green budget improvement of about € 1 billion will remain.

Energy taxes

As an EU Member State the Netherlands complies with the requirements of the Energy Tax Directive. This directive is under revision. The most important proposal for change¹⁴ is a breakdown of the minimum tariffs in (1) a CO₂-related tax based on the CO₂ emission of the energy product, and (2) a general tax on energy use based on the energy content of the energy product.

The proposed tariff for the CO₂-tax is € 20/tonne CO₂, and the minimum tariff for the general tax component is € 9.6/GJ for transport fuels, and € 0.15/GJ for heating fuels. Contrary to the current situation, the energy part of the new tariffs should be adapted automatically to economic conditions, such as inflation, whereas the CO₂ part of the tariffs will take changing market conditions (EUETS) into account. The method should be based on the developments in the market for allowances under the EU Emissions Trading System in phase III.

The implications of the proposal for the minimum tariffs are given in **table 1**.

The Dutch tariffs are mostly well above the present minimum levels. For example, the tax on unleaded petrol amounts to € 737/1,000 litre, in 2012) against a minimum level of € 359/1,000 litre) and is one of the highest in the EU.

¹⁴ COM (2011) 168

Table 1 Minimum tariffs in the Proposal for a new Energy Tax Directive (ETD)

Energy product	Current minima	Minima proposed in current ETD units to be reached by 2018
<i>Motor fuels</i>		
Petrol	359 (€ per 1000 l)	360 (€ per 1000 l)
Gas oil	330 (€ per 1000 l)	390 (€ per 1000 l)
Kerosene	330 (€ per 1000 l)	392 (€ per 1000 l)
LPG (liquefied petroleum gas)	125 (€ per 1000 kg)	500 (€ per 1000 kg)
Natural gas	2,6 (€ per GJ)	10,7 (€ per GJ)
<i>Heating fuels and motor fuels used for the purposes set out in Article 8(2) of the ETD (indicated with a *)</i>	Current minima	Minima proposed in current ETD units applicable as of 2013
Gas oil*	21 (€ per 1000 l)	57,37 (€ per 1000 l)
Heavy fuel oil	15 (€ per 1000 kg)	67,84 (€ per 1000 kg)
Kerosene*	0 (€ per 1000 l)	56,27 (€ per 1000 l)
LPG (liquefied petroleum gas)*	0 (€ per 1000 kg)	64,86 (€ per 1000 kg)
Natural gas*	0,15 (€ per GJ)	1,27 (€ per GJ)
Coal and coke	0,15 (€ per GJ)	2,04 (€ per GJ)
	Current minima	Minima proposed in current ETD units applicable as of 2013
<i>Electricity</i>	0,5 (€ per MWh)	0,54 (€ per MWh)

Table 2 shows the changes of the Dutch tariffs following the proposal under a scenario where budget neutrality was the main criterion¹⁵. CE Delft, a consultancy, developed several scenarios including a scenario where minimum tariffs for the CO₂ component are applied, whilst budget neutrality is achieved by adapting the energy content component of the tax.

¹⁵ According to CE Delft, Belastingen op energieproducten, elektriciteit en CO₂ – Gevolgen van de herziening van de energierichtlijn voor Nederland (Taxes on energy products, Electricity and CO₂ – Consequences of the revision of the energy tax directive for the Netherlands), 2011.

Table 2 Adapted tariffs in the Netherlands under a budget-neutral scenario

	Present tariff (2012)	Adapted tariff
Motor fuels		
Petrol (€/1,000 litre)	737	497
Diesel (€/1,000 litre)	437	532
Kerosene (€/1,000 litre)	429	550
LPG (€/1,000 kg)	173	378
Bio-ethanol (€/1,000 litre)	737	292
Bio-diesel (€/1,000 litre)	437	451
Heating fuels		
Gas oil (€/1,000 litre)	260	305
Heavy fuel oil (€/1,000 kg)	34	68
Natural gas < 5,000 m ³ (€/m ³)	0.167	0.148
Natural gas (non-ETS) >1,000,000 (€/m ³)	≤0.0127	0.053
Coal (€/1,000 kg)	13.73	48.86

Source: CE Delft (tariffs adapted for 2012)

The implications of this scenario show important shifts in the tax burden on the various energy products. As regards motor fuels, petrol would be significantly reduced, whilst diesel, kerosene and LPG would all increase, in line with their respective energy and carbon contents. Bio-ethanol sees a significant reduction; bio-diesel a small reduction in the tax tariffs.

As regards heating fuels, only the lowest bracket of the natural gas tax would become lower, from which households and small enterprises will benefit. The other tariffs would increase, coal almost fourfold.

In a first reaction to the Commission proposal, the Dutch government has expressed mixed feelings about the many changes that would follow¹⁶. It agrees with the Commission that modernisation of the Directive is due and it welcomes the upward adjustments of a number of tariffs in the direction of the Dutch values. On the negative side the Dutch government points at the large number of changes in the energy tax and excise system and the possibly substantial negative implications for several sectors of the Dutch economy. Moreover, the impact assessment shows that the impact of the package on the European policy of CO₂ reduction, energy conservation and renewable energy would be small.

The Dutch government is in principle in favour of a shift of the car costs from fixed to variable components (*variabilisation*). An increase of fuel taxes and a reduction of car registration and annual motor vehicle taxes would promote such a shift. However the government sees no options to follow that intention because of expected negative border effects. The neighbouring countries Belgium and Germany have no plans to raise their (presently lower) fuel taxes.

¹⁶ Fiche no 2, Directive proposal regarding revision of the energy tax directive (Richtlijn voorstel betreffende de herziening van de energiebelastingrichtlijn), Annex to Fiche document.

Car taxation

Three tax measures are affecting the cost of new cars and of driving: (1) Registration tax on cars and motorcycles (BPM), (2) annual motor vehicle tax (MRB), and (3) an income tax component for company cars¹⁷. A fourth tax, on motor fuels, has been dealt with in the previous section.

Fiscal measures have greatly stimulated the sales of very efficient cars¹⁸, from a negligible number in 2007 to about 30% of all new cars in 2011¹⁹. For very efficient cars, no BPM and MRB is due. For efficient cars²⁰ a discount on BPM and MRB is granted. The normal income tax addition for a company car is 25% of the catalogue price. For very efficient cars the addition is reduced to 14% and for efficient cars to 20%. For zero-emission cars (electrical cars in practice) no addition is due.

These measures have led to a drastic reduction of average CO₂ emissions of new cars, from 164 gr/km in 2007 to 136 gr/km in 2010, and even 128 gr/km by mid-2011, lower than the EU-agreed level of 130 gr/km by 2015. However, such a large part of car sales supported by the government is not considered as sustainable and efficient in the longer term. In the so-called *Autobrief*²¹ the Ministry of Finance has reviewed and reconsidered fiscal policy directed at the sales and use of cars in the Netherlands.

In 2010 a restructuring had already started to bring the registration tax (BPM) better in line with the CO₂ emissions. In four steps the share of the tax based on the catalogue price of the car is reduced from 27% in 2010 to 0% by 2013, when the full BPM will be based on CO₂ emissions alone.

By 1 July 2012, a reduction of the thresholds for a zero or lower BPM has started. By 2015 the threshold for BPM exemption is 83 gr/km, both for petrol and diesel cars. It is expected that the share of cars with a full BPM waiver will drop from 33% in 2011 to 12% by 2015.

Because diesel fuel has a lower tax than petrol, compensation has been found in a higher BPM. When the BPM reduction thresholds for petrol and diesel cars will converge, a diesel surplus on the BPM for diesel cars will be applied. The diesel surplus is applied to the amount of CO₂ over 70 gr/km and will increase from € 40 per gram in 2012 to € 80 per gram by 2015. One fiscal advantage will remain. To compensate for the larger weight of electrical cars due to the battery pack, a reduction of the weight for the calculation of the MRB-base of 125 kg is already applied. The intention is to fine-tune this correction in the near future.

By 2014 the annual motor vehicle tax (MRB) will be based on weight alone, hence the waiver for very efficient cars will be abolished. The waiver will be abolished by 2015 for cars with a CO₂-emission of less than 50 gr/km.

¹⁷ Known as "The addition" (De bijtelling)

¹⁸ Petrol cars: <111 gr/km; diesel cars: < 96 gr/km

¹⁹ Total sales in 2011 amounted to 555.000 new cars.

²⁰ Petrol cars: < 140 gr/km; diesel cars < 116 gr/km

²¹ Car letter – Fiscal stimulation of (very) energy conserving cars and a couple of other subjects in the area of car taxation (Autobrief – Fiscale stimulerings van *zeer) zuinige auto's en enkele andere onderwerpen op het gebied van autobelastingen), 1 June 2011

As regards the income tax addition for company cars, the thresholds for the reduction has been adapted on 1 July 2012. The thresholds for the 14%-tariff follow those of the BPM exemption. Hence also here the requirements for petrol and diesel cars will converge. By 2015 all cars with an emission of less than 110 gr/km will fall under the 20%-tariff. Up to and including 2015 cars with an emission of less than 50 gr/km (electrical cars) are exempt from tax income addition (0%-tariff) up to 2015. A 7% addition will be valid thereafter.

Emissions trading

Two schemes of emissions trading are active in the Netherlands: 1) the EUETS 2) NOX-emissions trading system.

European Union Emissions Trading Scheme

As a Member State of the EU the Netherlands participates in the European Union Emissions Trading Scheme. The latest monitoring results²² show relatively stable emission levels in the period 1990-2009. Average 2008-2010 emissions were 3.9% lower than in 1990. This is above the burden-sharing target of -6% for 2008-2012. The Dutch government will make use of the Kyoto mechanisms to reach the agreed target.

NOx emissions trading system

The national NOx emissions trading system established in 2005 aims to help larger sources to reach their targets under the National Emissions Ceilings Directive in flexible and cost-effective ways. The system however is not very effective. DHV BV and Van der Kolk Advies²³ give two main reasons.

First, the trading system is limited by the effects of the implementation of the IPPC Directive. IPPC prescribes the use of Best Available Techniques (BAT) that binds sources to apply advanced techniques and leaves them no choice either to do just that or to compensate a short position by buying NOx rights. The allowance of individual rights has been based on the Performance Standard Rate (PSR) in the base year. The PSR is 40 gram per GJ. However it appears that technological innovation has pushed the BAT requirement down to 37 gram per GJ. This leaves sources not much incentive to go to the market to avoid higher investment costs. The market is long on balance.

Second, the number of market players is small and most are, as a consequence of the first reason, either net buyers or sellers in a long market. Under such conditions, it is difficult for trade to become lively and prices stay at a low level.

It is not expected that the market will turn short before 2015 (according to the source of footnote 23).

²² EEA (2011) Greenhouse gas emission trends and projections in Europe 2011 - Tracking progress towards Kyoto and 2020 targets, EEA report no 4/2011. The author refers to this report for further, extensive information on the Dutch performance under the EUETS.

²³ DHV BV and Van der Kolk Advies (2011) Marktstudie NOx emissiehandel – Raming markt- en prijsontwikkeling (Market study NOx emissions trading – An estimation of market and price developments)