

# **Implementing the EU 2020 Climate and Energy Package in the Netherlands**

## **Mixed Instruments, Mixed Results**

Lars H. Gulbrandsen and Jon Birger Skjærseth





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### **Abstract**

This report examines Dutch implementation of the 2009 EU climate and energy package, progress in implementing the EU 2020 targets, and consequences for short- and longer-term climate and energy policies in the Netherlands. A first observation is that the Netherlands supported the package and seemed well-prepared for implementing it; Dutch climate and energy policies presented in 2007 appeared largely compatible with the EU package. A second observation is that the EU package has provided greater stability for Dutch climate and energy policies. In the absence of the EU package, Dutch climate and renewables policies would have been rather low on the political agendas of recent government coalitions. A third observation is that there have been significant implementation problems concerning the Renewable Energy Directive and lack of political willingness to establish long-term strategies for a low-carbon economy. The Dutch energy mix is dominated by fossil fuels, and the share of renewables in final energy consumption was only 4.5% in 2013, a long way from its EU target of 14% by 2020. Three domestic politics explanations shed light on the Dutch implementation challenges. First, the oil and gas industry and the fossil-fuel dependent petro-chemical industry as well as other energy-intensive industries have strong interests in maintaining energy affordability, and can thus be regarded as industry interests that may slow down a transition to a low-carbon economy. Second, the Dutch consociational policy style and the key guiding principle of cost-effectiveness in climate and energy policy promote small, incremental changes rather than large-scale industrial transition. Third, strong local opposition has effectively blocked large windmill farms and onshore CCS demonstration projects, as well as shale gas exploration and test trilling in the case of fossil fuels.

### **Key Words**

Climate policy, energy policy, the EU climate and energy package, implementation, the Netherlands

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## 1 Introduction

In 2007, the European Council, comprising the heads of state and governments of the EU member states, established three climate and energy policy targets for 2020: a 20% reduction in EU greenhouse gas (GHG) emissions from 1990 levels, raising the share of EU energy consumption produced from renewable sources to 20%, and a 20% improvement in the EU's energy efficiency. These '20-20-20' targets were confirmed with the enactment of the EU climate and energy package in 2009. This package consisted of the revised EU ETS Directive, the Effort Sharing Decision, the Renewable Energy Directive and the CCS Directive.<sup>1</sup> These targets and policies were intended as a first step towards decarbonizing the EU. In October 2009, the European Council agreed to support an EU goal to reduce GHG emissions between 80 and 95% by 2050 compared to 1990 levels (European Council, 2009). In October 2014, the European Council adopted a 2030 climate and energy policy framework that will also serve as a basis for the EU's position at the upcoming climate summit in Paris in 2015.

In this report, we examine to what extent and how the EU climate and energy package has influenced Dutch climate and energy policies. The Netherlands supported the package and seemed well-prepared for implementing it. In 2007, the fourth Balkenende cabinet (centre-left coalition government) established objectives similar to and beyond those established by the European Council, specifically to reduce GHG emissions by 30% from 1990 levels by 2020; to increase the share of renewables in the energy mix to 20% by 2020; to achieve energy efficiency improvements of 20% by 2020; and to make a 'big step' in the transition towards a more sustainable energy system by 2020. In its coalition agreement, the Balkenende cabinet pledged €800 million additional spending on renewable energy.

The Netherlands has traditionally been perceived as an environmental frontrunner in the EU (Lieverink, 1997; Andersen and Liefferink, 1997), although climate policy was given rather low priority in Dutch policies during the 1990s (Faber et al., 2012). Our point of departure for the present study was the expectation that a good match between the EU package and national climate and energy policy priorities would facilitate implementation of the package as a first step towards a Dutch low-emission economy. However, this does not seem to hold for the Netherlands. Although some progress has been made towards a sustainable energy transition, the Dutch energy mix continues to be dominated by fossil fuels. Natural gas supplies 47% of the Netherlands' energy needs and oil 38%, up from 35% in 1990. The country has invested heavily in fossil power generation, particularly gas- and coal-fired capacity. In combination with sizeable power imports from Germany in recent years, this has led to overcapacity in electricity

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<sup>1</sup> Policies for reducing CO<sub>2</sub> emissions from new cars and for fuel quality, from 'well to wheel', were negotiated independently of the core package. Further policies on energy efficiency were adopted independently and according to a different time schedule.

generation, and Dutch gas power stations suffer from low profitability. By contrast, the Dutch renewable electricity sector has been developing rather slowly, and investments in renewables have been modest compared to other Western European countries like Germany, Denmark and the UK. The share of renewables in final energy consumption was only 4.5% in 2013, a long way from its EU target of 14% by 2020.

In this report we ask: Why does a traditionally environmental ‘leader’ in the EU have trouble with demonstrating significant progress in implementing an EU package that the country supported and that apparently matched national policies well? This question calls for a detailed assessment of Dutch implementation of the EU package to date with a view to long-term decarbonization.

We begin by introducing an analytical framework for assessing and explaining implementation. Then we examine Dutch climate and energy policies up to 2007 in order to establish the ‘baseline’ before the establishment of the EU 2020 targets by the European Council. Next, we review the Dutch role and positions in the negotiations over the EU package and assess the correspondence between the Dutch positions and the EU policymaking outcomes. In the following section, we examine Dutch implementation of the different components of the EU climate and energy package with a view to the EU 2020 targets and long-term decarbonization. We then turn to two explanations: EU adaptation pressure and the role of domestic politics, including ‘veto players’, in Dutch decisionmaking processes, the Dutch policy style, and the government’s administrative organization. We conclude with a summary of our findings and a brief discussion of their implications.

## 2 Analytical approach

Policy implementation means to ‘carry something into effect’ (Weale 1992:43). By domestic implementation of EU commitments we mean the process of converting EU commitments into domestic policy and behavioural change through the processes of *transposition* (adopting appropriate legal requirements, typically by primary or secondary legislation) and *application* (policies and measures and the resultant behavioural change among actors). Domestic policies and measures include initiatives undertaken by governments and subordinated agencies in response to joint EU commitments. Relevant actors comprise target groups that either cause the problem or provide solutions in order to fulfil joint commitments.

In order to assess implementation within countries or to compare level of implementation across countries, we need to relate what has been accomplished to some criterion that can serve as a baseline. Formal and explicit EU goals may serve as a criterion of goal attainment. Assessment of short-term goal attainment is, however, not necessarily the most relevant criterion in this case, because short-term policies are part of a longer-term strategy, with a view to 2050 decarbonization. Since the ultimate goal of implementing EU climate and energy commitments is to achieve a low-carbon economy (80–95% GHG reduction), we posit that providing more behavioural change than strictly required deserves a high ‘score’ on goal



achievement. Moreover, we maintain that achieving policies directed at ‘unlocking’ high carbon dependence is the ultimate purpose of the EU climate and energy policy. This means that we interpret implementation effects widely, including the consequences of policies and measures for energy technological ‘lock-in’, as well as national positions on the development of future EU decarbonization policies.

Research on the implementation of EU policies has developed through several phases since the 1980s (Treib, 2008). The first phase focused mainly on the effectiveness of administrative institutions. The second phase placed implementation research within the study of Europeanization, focusing on the consequences of integration for EU member states (Olsen, 2002). The locus of research was placed at the intersection between EU and national policies, where the degree of compatibility between EU policy and domestic institutions came in the spotlight. Adaptation pressure and misfit between the EU and national levels were cited in attempts to explain implementation failure (Knill and Lenchow, 2000; Knill 2001). In the most recent phase, the role of domestic politics gained a more prominent place. This study of the Netherlands will draw on insights from all phases, analysing transposition and application qualitatively. We seek to contribute to the EU implementation literature by exploring the consequences of adopting a *package* of EU legislation.

## 2.1 Fit/misfit and adaptation pressure

The first explanation focuses on degree of misfit and adaptation pressure. The point of departure is the assumption that some EU policies are more challenging to implement than others because they may expect states to do what they cannot or do want not to do. The basic argument is that differences between EU requirements and national institutions lead to ‘misfit’, which pressures member states to undertake a change from the status quo (Knill and Lenchow 2002; Knill, 2001). That may lead member states to respond differently to the same EU policy, depending on the degree of ‘misfit’.<sup>2</sup> The ‘distance’ between member states’ pre-existing policies, energy-economic situation, negotiating positions and the final EU outcome in terms of EU policies and goals expresses *adaptation pressure*.

We expect misfit of energy/economic situation, negotiating outcome, and final policies at EU and national levels to decrease the feasibility of successful policy implementation. Conversely, a good fit will increase the feasibility of successful policy implementation. As several EU policies were negotiated simultaneously as a package in 2008, issue-linkages that promote agreement at EU level may lead to varying adaptation pressures as regards the components of the legislative package. When unanimity is required, member states may trade concessions between policies according to differing national priorities. In turn, varying adaptation pressures

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<sup>2</sup> The ‘goodness of fit’ approach has been criticized for weak explanatory power, for excluding actor interests and for being static and top-down (Treib, 2008). It has been modified and operationalized in various ways and is still regarded as a powerful explanation (Di Lucia and Kronsell, 2010).

will then lead the Netherlands to implement the various package components – ETS, CCS, RES and ESD – differently.

## 2.2 Domestic politics

The second explanatory approach focuses on domestic politics. Given a certain level of compatibility between EU requirements and national positions, implementation may still vary, because of variation in domestic politics over time or between different policy areas. A simple ‘model’ of domestic politics explains responses to common EU policies by the state, or government itself, society and the relationship between the state and society where domestic institutions channel influence through the electoral and corporate channels. This perspective looks more deeply into internal political and administrative processes. New governments or administrative actors may bring in new priorities after EU policies have been negotiated and adopted. Governments may support radical change or oppose minor changes, depending on whether EU requirements conform to their political preferences. Societal actors may be strengthened or weakened by new policies, gaining or losing political influence. In the following, we focus on governmental and societal actors whose agreement is necessary to change the status quo, on policy style linking state and societies in various ways and administrative organization as possible explanations of implementation failure or success.

Implementation problems can arise because EU policies affect governmental or societal actors in a way that creates opposition. If such actors are ‘*veto players*’, they can block or slow down the adoption of policies necessary for implementing EU requirements.<sup>3</sup> The term ‘*veto players*’ refers to specific individuals or collective actors whose agreement is necessary to change the status quo (Tsebelis, 2002). We will first look for veto players in the relevant governments. We expect that *change* in Dutch (majority) government over time – from the EU negotiations to national implementation – will reduce the likelihood of support and implementation in line with EU goals.

Veto players may also be part of a societal sector. The question is how these sectors are affected, including the extent to which they are affected in the same way. When costs are concentrated to specific subgroups of society whereas benefits are widely distributed, there is reason to expect high incentives for opposing national policies. We expect alignment of veto-player interests with national policy to raise the likelihood of successful implementation. A package approach will tend to increase the scope of affected sectors and can level out costs by having the burden shared among several sectors. Alternatively: it may reinforce cost-concentration by targeting the same sectors with different EU instruments.

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<sup>3</sup> To be re-elected, lawmakers must respond to and promote affected constituency interests; hence such interests often influence policymakers’ positions on issues. This in turn can create veto players such as majority governments.

The second domestic explanatory factor is what is often referred to as *policy style*. Opposition from negatively affected actors in society does not necessarily equal political influence. How influence is channelled between the state and society in regulatory policies may be referred to as regulatory or policy styles (see e.g. Jänicke 1992). It is assumed that a *consensual* policy style during the policymaking phase will improve the feasibility of policy implementation. Such a consensual policy style may be characterized by open formal access for affected target groups. Concerning how target groups are included, we may distinguish between formal and informal participation and access. Some insiders may enjoy privileged status and represent the ‘core’, whereas others are more peripheral (Maloney et al. 1994). An exclusionary policy style will be characterized by limited formal access to decisionmaking for target groups. In a dynamic perspective, the key question is whether domestic actors with responsibility for implementation participated in shaping national positions in the EU negotiations on the package. We expect a consensual policy style during the negotiation and policymaking phase to improve the feasibility of implementation because target groups will have been able to influence the policy measures to be implemented and are likely to have a stake in successful implementation. Moreover, we expect that a package approach covering a wide range of sectors may affect national consultation processes by bringing in new constellations of public and private actors. This may open up for new alliances that enhance the probabilities for successful implementation. Conversely, a package may cement old alliances or bring together new clashing constellations of public and private actors, thereby opening up for new alliances that could reduce the likelihood of successful implementation.

Finally, even when affected societal actors are included and their interests are aligned with governmental priorities, implementation problems may arise due to fragmentation in *administrative organizations*. The need for administrative coordination is likely to be particularly high when complex policy packages are to be implemented at the same time. The basic assumption is that different regulatory actors will tend to perceive problems differently and apply different decision criteria for such problems. Perceptions and criteria can in turn be expected to be shaped by the formal roles of governmental agencies. This assumption is captured by Allison’s (1971:176) aphorism, ‘where you stand depends on where you sit’. If you sit in an agricultural ministry, you are likely to emphasize the interests of farmers. Conversely, representatives of an environmental ministry will typically focus on the environmental damage done by agriculture and the long-term costs of no regulatory action.

Fragmentation has both a horizontal and a vertical dimension. Horizontal fragmentation concerns the number of governmental agencies involved at each level of government, and the coordination between them. Vertical fragmentation concerns the number of levels involved: the distribution of competence between the state, provinces and municipalities. At the municipal level, problems may look very different compared to state level. In particular, what are seen as national ‘interests’ at state level will not necessarily match preferences at the regional or municipal level. Whenever local government perceptions of interests deviate from what the central government has defined as the ‘national interest’, local gov-

ernment opposition to national goals can be expected. If local government opposition goes hand in hand with decentralization of competence in the relevant sector, there is a risk of defection from national goals. In short, the risk of vertical and horizontal disintegration of policies between competent authorities tends to increase with increasing fragmentation of competence. We expect that fragmentation within the state apparatus itself (horizontal) or between various levels of government (vertical) will tend to lessen the likelihood of successful implementation. A package approach may counterbalance or deepen fragmentation to the extent that it contributes to improve vertical or horizontal coordination.

### **3 Dutch climate and energy policies up to 2007**

The Dutch economy is an open, trade-intensive economy, which has more than doubled in terms of economic activity since 1975. Carbon intensity has decreased steadily over the same period, largely as a result of increased energy efficiency. Due to the high use of natural gas, carbon intensity is relatively low in the Netherlands compared to other high-income OECD countries. CO<sub>2</sub> emissions and energy use seem to have become decoupled from GDP development, especially from 1996 onwards (PwC 2013: 114). In absolute terms, however, emissions have increased steeply from 1970 to 2009, largely as a result of rising emissions from the energy sector, which currently contributes about the country's 37% of total CO<sub>2</sub> emissions (PwC 2013: 114).

Natural gas has been the backbone of Dutch energy provision since the 1960s. Over the past 30 years, natural gas use has ranged between 50% and 60% of the fuel mix for electricity production. From the 1990s, renewables assumed a prominent place on the policy agenda due to growing concerns about the effects of carbon emissions on climate change. Dutch governments have used a range of instruments to stimulate renewable energy use, including tax exemptions, R&D programmes, a purchase and remuneration obligation (Electricity Act 1989) and subsidies, targeted mainly towards wind and biomass use.

The Dutch government began developing national climate policies in 1989, when it published the first National Environmental Policy Plan. This report noted climate change as one of the key environmental topics to be addressed. During the 1990s, however, climate policy enjoyed rather low priority, in terms of commitment to concrete policies as well as earmarking of government funds (Faber et al. 2012). However, as an EU member state, the Netherlands had to implement EU climate policies and comply with the 1997 Kyoto Protocol. Under the Kyoto Protocol and the EU burden-sharing agreement, the Netherlands had to reduce its GHG emissions by 6% over the period 2008–2012 compared to 1990 levels.

Following the first National Environmental Policy Plan, various policy instruments and agreements were introduced to reduce dependency on fossil fuels and improve energy efficiency. The Dutch government's strategy for meeting its obligations under the Kyoto Protocol was established in the National Climate Policy Implementation Plan (NCPIP), issued in two parts in 1999 and 2000. According to the NCPIP, half of the

Dutch commitment is to be met through domestic policies, and the other half through use of the flexibility mechanisms in the Kyoto Protocol. The 1999 part of the plan (NCPIP I) lays out the domestic targets, while the 2000 part (NCPIP II) concerns the Dutch strategy for use of the Kyoto flexibility mechanisms.

In 1997, the government introduced an energy investment tax deduction (EIA) as a fiscal subsidy for companies, to stimulate renewable energy and energy efficiency. Under this tax deduction scheme, part of the investment costs for certain renewable energy technologies could be deducted from taxable profits. The scheme stimulated various renewable energy sources, primarily wind and biomass installations. In 1999, after the liberalization of the electricity market, the scheme was replaced with an energy tax exemption for energy distribution companies. A system for trade in green certificates was also introduced, to ensure the authenticity of renewable energy supply.

Annual government expenditure on Dutch climate and energy policy increased sharply towards the end of the millennium (Faber et al. 2012). The next decade saw many attempts to switch to a low-carbon energy system while improving security of supply and maintaining affordability. In 2003, the feed-in premium scheme MEP (*Milieu kwaliteit Elektriciteitsproductie*) replaced the energy tax exemption introduced in 1999. This subsidy scheme stimulated renewable energy and co-generation or combined heat and power (CHP) in electricity production. CHP involves using a power station (or a heat engine) to generate electricity and useful heat simultaneously, and the Dutch government included subsidies for co-firing of biomass in coal-fired power plants in the scheme. A fixed premium was earned on top of the revenue gained on the wholesale market through the sale of electricity for a maximum of ten years for renewable energy and one year for CHP. The scheme helped the Netherlands become a European and global leader in CHP, but it was terminated already in 2006 because of budget constraints. ‘Not in my backyard’ feelings among the Dutch population have been reflected in limited political support for renewables. Equally important, changing policies and support schemes for renewables have resulted in an uncertain investment climate for renewable energy. The MEP scheme primarily stimulated CHP and co-firing of biomass in fairly large coal-fired plants, but did little to stimulate technological innovation and the transition to a more climate-friendly energy system in small and medium-sized enterprises.

The EU Emissions Trading Systems, initiated after the adoption of the Kyoto Protocol in 1997, was proposed by the Commission in 2001 and adopted in 2003. The Netherlands was one of the few member states that actively supported emissions trading in the EU (Skjærseth and Wettstad, 2008). The Netherlands has been characterized as a kind of theoretical frontrunner with regard to tradable permits in Europe (Zito et al. 2003). As early as in 1983, the Dutch government sent a delegation to the USA to explore the idea of tradable permits. During the 1990s, emissions trading was discussed as a possible policy instrument for NO<sub>x</sub> and SO<sub>2</sub>. In 1998, the Confederation of Netherlands Industry and Employers and the Dutch government anticipated that flexible mechanisms would be

needed to meet national commitments. In spring 2002, the Dutch government announced its plans for a domestic emissions trading scheme, on the basis of recommendations from a Trading Commission composed of representatives from government, industry and ENGOS.

CCS has been an integral element in Dutch climate policy since 2007, when the fourth Balkenende centre-left cabinet established objectives similar to and beyond those established by the European Council. In the 2007 *Clean and Efficient* programme, CCS was for the first time explicitly mentioned in a Dutch policy document. Reference was made to EU policy ambitions for CCS (Ministry of Housing, Spatial Planning and the Environment 2007: 30).<sup>4</sup>

Dutch climate policies were given higher priority when the Kyoto Protocol entered into force in 2005 and in the run-up to the first Kyoto commitment period 2008–2012 (Faber et al. 2012). The 2005 Climate Policy Review concluded that Dutch climate policy had a significant impact; 2003 emissions were around 5% lower than they would have been in the absence of a national climate policy (Faber et al. 2012). The review showed that the Netherlands had been a first mover in using the flexibility mechanisms Joint Implementation (JI) and the Clean Development Mechanism (CDM), and had thus apparently contributed to the creation of an international market for emission cuts (Faber et al. 2012). This reflects the fact that the Netherlands was looking for solutions abroad, due to high carbon reliance at home. The Netherlands has also been seen as a frontrunner in setting sustainability criteria for biomass, as seen, for example, in the ‘Cramer Criteria’ in 2006.

While subsidy schemes for renewable energy have resulted in moderate increases in renewables, the share of renewables in the total energy mix has remained low, due to the growth of energy consumption and natural gas and coal supply. Dutch dependency on fossil fuels did not decrease and energy consumption continued to rise during the past decade. One explanation for this slow development of renewable energy and new technologies might be the lack of stability and long-term visions in Dutch climate and energy policies (Rathmann et al. 2010: 61). Hence, a key question we will take up is whether the EU package has provided better stability and long-term visions for Dutch climate and energy policies.

Some factors have contributed to a decline in the overall cost of climate policy, including lower estimated costs for renewable energy and renewables incentivization policies. However, other factors have increased the costs associated with new investments in climate policy measures, including the exhaustion of numerous low-cost measures to improve energy efficiency and reduce emissions up until 2005 (Faber et al. 2012).

Summing up, the Netherlands had implemented various climate and energy measures before the EU 2020 targets were established by the European Council in 2007, but short- and long-term domestic targets

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<sup>4</sup> [www.rijksoverheid.nl/documenten-en-publicaties/richtlijnen/2007/09/18/werkprogramma-schoon-en-zuinig.html](http://www.rijksoverheid.nl/documenten-en-publicaties/richtlijnen/2007/09/18/werkprogramma-schoon-en-zuinig.html)

were lacking. The Netherlands tried to increase the use of renewables during this period, but this proved difficult. Natural gas and coal continued to be the primary energy sources, despite the increasing efforts devoted to the development of national climate policies since 1989. The Netherlands favoured the EU ETS, was positive to CCS and adopted various programmes for the non-ETS sectors. Still, Dutch climate and energy policies remained rather fragmented and unstable up to 2007, partly as a result of the lack of targets or long-term visions for a low-carbon economy.

## 4 Negotiating the package: 2007–2008

### 4.1 Background

In 2007, the new centre-left government (the fourth Balkenende cabinet) clearly had ambitions of being a European frontrunner in the transition towards a more climate-friendly and sustainable energy system by the year 2020. Partly in response to the EU 20-20-20 targets adopted by the European Council in March 2007, the Dutch government issued a White Paper in December 2007 that established four primary targets under the *Clean and Efficient* programme:

- reduce GHG emissions by 30% from the 1990 level by 2020
- increase the share of renewables in the energy mix to 20% by 2020
- achieve energy efficiency improvements of 20% by 2020
- make a ‘big step’ in the transition towards a more sustainable energy system by 2020.

The Dutch climate targets were clearly influenced by the EU 2020 targets, but the 30% emissions reduction target was more ambitious than the corresponding EU target (although equal to the conditional EU target of 30% emissions reduction if an international climate agreement can be achieved).

The March 2007 European Council conclusions were based on two key Commissions communications prepared jointly by DG Energy and DG Environment that framed the package in a synergistic way: an ambitious climate policy would contribute to the achievement of energy goals; and an ambitious energy policy would contribute to the achievement of climate-policy goals (European Commission, 2007a; 2007b). Synergies between EU-level and Dutch climate and energy policy were debated before and just after the EU package was proposed. In 2006, the Dutch environmental assessment agency MNP published a report showing that tough climate policies at EU level would improve air pollution, energy security and competitiveness in the Netherlands.<sup>5</sup> This was followed up by an MNP analysis published in July 2007 showing that the costs of attaining the 30% target would be halved if the targets for renewable

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<sup>5</sup> ENDS (5 May 2006) Benefits of Climate Change Policies Assessed.

energy and energy efficiency could be scrapped. Finally, a report published by MNP in April 2008 showed that a more centralized EU climate policy (particularly the ETS) would reduce the costs of attaining Dutch climate targets and increase the focus on non-ETS sectors. Seen from a Dutch cost perspective, an ambitious and centralized EU climate policy based mainly on the EU ETS would be most advantageous for Dutch climate-change ambitions.

The Netherlands has been one of the few EU member states to have supported emissions trading ever since the inception of the EU ETS, and emission trading has remained a key priority for new government coalitions with backing from the political parties in the Parliament and the business community. A coalition of trade unions and green groups even proposed that emissions trading be extended to other sectors, like construction and transport. A new feed-in premium system was proposed, to stimulate less mature renewable technologies. This system would replace the MEP system that had ended so abruptly in 2006 because of budgetary constraints. The new government also planned measures to step up CCS and energy efficiency.

When the fourth Balkenende government took office in 2007, the climate and energy policy responsibilities among the ministries were changed. The Ministry of Housing, Spatial Planning and the Environment (VROM) retained primary responsibility for the overall climate, energy efficiency, and renewable energy goals. But every sector ministry was given responsibility for implementation of the climate policies in its own sector.<sup>6</sup> In addition to this inter-ministerial division of responsibilities for meeting domestic targets, the central government signed an agreement with the regional and local governments. While the regional and local governments retain authority to establish their own climate policy ambitions, these ambitions are outlined in light of the new, national climate targets in this agreement.

In line with Dutch tradition, a key component of the climate plan was also to sign agreements, or 'sustainability accords', with all key sectors of the economy, in order to bring target groups on board. The first plan was presented by the construction sector pledging to cut energy use by 30% in approximately half of all existing buildings by 2020.<sup>7</sup> The agreement signed with Dutch industry in November indicated a trade-off between ambitiousness and participation when five ministers and the three main employers' associations reached an agreement to cut GHG emissions by 20% between 1990 and 2020. The agreement was criticized by the green

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<sup>6</sup> The Ministry of Finance was responsible for green taxation policy; The Ministry of Transport, Public Works and Water Management as well as the Ministry of Housing, Spatial Planning and the Environment were responsible for implementation of policies in the transport sector; The Ministry of Housing, Spatial Planning and the Environment was responsible for the implementation of policies in the building sector; The Ministry of Agriculture, Nature and Food Quality was in charge of all measures in the agricultural sector; The Ministry of Economic Affairs was responsible for all policies and measures that cover industry and energy sectors.

<sup>7</sup> ENDS (28 June 2007) Dutch built sector presents energy saving plan.



group SNM for failing to deliver on the 30% national ambition, but was defended by the government as adequate in view of uncertainties about EU policies and the need for Dutch industry to remain competitive.<sup>8</sup> Nevertheless, the Netherlands had appeared well-positioned before the package was proposed by the European Commission in January 2008.

## 4.2 Negotiations

The main structure of the Commission's proposed climate and energy package involved two cross-sector instruments. The first was a revised EU ETS aimed at reducing emissions in the ETS sectors (mainly electric power producers and energy-intensive industry) by 21% below 2005 emission levels. The proposal included a transition from a decentralized system based on National Allocation Plans to an EU-wide cap, to be reduced annually by 1.74%. Allocation procedures were altered, from free allowances to a system with payment by auctioning as the main principle. The second cross-sectoral instrument was an effort-sharing decision (ESD) based on differentiated national targets, to yield a 10% reduction for sectors not covered by the ETS. In addition, the core package contained two technology-specific directives: one on the promotion of renewable energy sources (RES) based on differentiated national targets, and a proposal for a legal framework for safe storage and capture of carbon (CCS).

The package was well received by the European Parliament and the Council of Ministers. This can largely be understood in light of the pre-set EU 2020 targets and the integrative nature of the package, promoting cost-effectiveness, fairness in burden-sharing and mutually reinforcing climate and energy goals. In January, the Dutch government responded by stating that the Netherlands would meet all EU targets. Two key negotiation priorities were indicated: competitiveness and stringent/robust sustainability criteria for biofuels. The ministry responsible for energy (Ministry of Economic Affairs) followed up in February by welcoming the Commission proposal and by re-stating its concerns for biofuels criteria and competitiveness – specifically, that 2011 was too late to identify industry sectors that would qualify for free allowances.<sup>9</sup> Common response from the ministries in charge of energy and climate policy indicates that their positions were aligned in the negotiations. The Netherlands supported the main structure of the package, which remained intact throughout the 2008 negotiations. This included the reduction targets for ETS and non-ETS sectors, and different national targets in the ESD and RES Directives.

The legislative proposals were complex and the schedule for their development was tight. The EU needed an ambitious package to show its 'leadership by example' before the international climate negotiations in Copenhagen, and the June 2009 elections could result in a less supportive European Parliament. Deliberations commenced with informal negotia-

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<sup>8</sup> ENDS (5 November 2007) Dutch industry and government sign climate deal.

<sup>9</sup> ENDS (24 January 2008) Political leaders welcome EU climate proposals; ENDS (28 February 2008) Energy ministers welcome climate and energy package.

tions among high-level representatives from the Commission, the Parliament and the Council. The major climate-policy element was the proposal for revising EU ETS. One main area of disagreement was the demand for more free allowances from energy-intensive industry, to reduce the risk of their moving out of Europe (Skjærseth and Wettestad 2010). The issue of allocation was also linked to the prospects of reaching an ambitious international agreement at the December 2009 Copenhagen summit. If the negotiations did not succeed, the EU would have to protect its energy-intensive industries by free allowances or a border tax to level the playing field.

The demand for free allowances corresponded with declared Dutch interests and was voiced with increasing intensity in autumn 2008, fuelled by the unfolding global economic crisis and rising concerns about the costs of the package. The Netherlands, together with Germany and the UK, prepared an informal proposal in the summer, setting out detailed criteria for identifying industrial sectors at risk of carbon leakage. The proposal, based on quantitative assessment of increases in product prices and exposure to international trade, was initially well received by governments and MEPs, and the Commission applied the criteria for the first analysis of exposed sectors in September.<sup>10</sup> The proposal was later modified by including qualitative assessments; in the end, most energy-intensive industry sectors were granted free allowances based on benchmarks. A study from CE Delft indicated that the Netherlands had no reason to worry – a shift from free allowances to auctioning would have minor impact on the Dutch economy. The study also proposed that auctioning revenues be used to subsidize energy efficiency.<sup>11</sup>

In autumn 2008, France assumed the EU presidency after Slovenia. French leadership proved extremely important in forging compromise by the end of that year. One institutional tool the French used was the introduction of a more demanding decisionmaking procedure, replacing qualified majority voting in the Council of Ministers with unanimity in the European Council (Skjærseth and Wettestad 2010). Because the elements of the package were mutually reinforcing, decisionmakers were pressured to negotiate and adopt *all* legislative proposals simultaneously: in practice, each member state plus the Parliament would have a veto position.

The negotiations on the CCS proposal introduced significant changes in how to incentivize CCS. The only incentive provided in the Commission proposal had been the expected ETS carbon price, as operators would not have to purchase stored emissions. The Parliament Rapporteur for the CCS dossier – Chris Davies – managed to shift the focus towards financing and how to make CCS commercially viable (Chiavari 2010). Davies worked closely with Avril Doyle – Rapporteur for the proposal on revising the ETS. Doyle presented an amendment to set aside 500 million carbon allowances from the New Entrants' Reserve – emission rights for new entrants under the ETS – to co-finance CCS demonstration plants.

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<sup>10</sup> ENDS (11 September 2008) Carbon leakage concerns dominate EU ETS debate.

<sup>11</sup> ENDS (23 July 2008) Holland 'unlikely to suffer from ETS auctions'.

The Netherlands was the only country besides the UK that supported setting aside 500 million allowances, reflecting its emphasis on CCS.<sup>12</sup> After lengthy negotiations, in return for accepting more free allowances for energy-intensive industry the Parliament got 300 million allowances from the ETS New Entrants' Reserve to co-finance up to 12 CCS demonstration projects and other renewable technologies.

Throughout the negotiations on the RES proposal, both the national targets and the 10% minimum target for renewable energy in the transport sector were upheld. When presenting the RES proposal, Energy Commissioner Piebalgs underlined that target-setting would end after 2020, thus sweetening the pill for RES sceptics.<sup>13</sup> However, several details as to how these targets were to be calculated were changed (Howes, 2010). For example, only biofuels that met sustainability criteria would count towards the target. This was in line with the Dutch position. Besides pushing for stringent biofuels criteria throughout the negotiations, the Netherlands was apparently reluctant to the RES Directive – together with France, it was actually accused of undermining the Directive.<sup>14</sup> The Dutch environmental assessment agency PBL (formerly MNP) followed up by warning that the Netherlands would not be able to attain the renewable target due to shortcomings with the new feed-in system.<sup>15</sup>

The Netherlands also paid significant attention to the link between international and EU climate policies due to its concern about the competitiveness of Dutch industries in the absence of ambitious international commitments. Early in the negotiations, the Netherlands argued – unsuccessfully – that effort sharing should be specified in advance if the EU decided to increase ambition level to 30%.<sup>16</sup> The prospects of an ambitious international agreement were directly related to the EU's climate target (20% cut in emissions, upped to 30% if other developed countries follow suit) and revision of the EU ETS with regard to allocation methods. If a new agreement was concluded, the EU would adjust its targets to ensure an overall 30% reduction in ETS and non-ETS sectors. In the absence of international progress, energy-intensive industries would be protected from carbon leakage by free allowances based on benchmarks.

To summarize, the Netherlands supported the EU package, and Dutch positions during the negotiations matched well with most of the EU outcomes although the RES Directive was not particularly favoured. Equally important, Dutch climate and energy policies presented in 2007 appeared largely compatible with the EU package. Hence, we would expect any pressure on the Netherlands to change policies significantly to have been rather low, and that Dutch implementation of the EU package would be fairly straightforward. In the next section, we assess actual implementation of the package in the Netherlands.

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<sup>12</sup> ENDS (21 October 2008) Still no consensus in sight on EU climate plans.

<sup>13</sup> ENDS (24 January 2008) Political leaders welcome EU climate proposals.

<sup>14</sup> ENDS (3 October 2008) France accused of 'attacking' EU renewables goal.

<sup>15</sup> ENDS (7 November 2008) Dutch agency issues warning over climate goals.

<sup>16</sup> ENDS (3 March 2008) EU states urge more flexibility in climate plans.

## 5 Progress towards the EU 2020 targets: Implementing the package

### 5.1 Introduction

Since 2008, the Netherlands has continued to implement climate and energy policies under the *Clean and Efficient* programme and the Energy Transition Framework. The country's policies are based on the EU climate and energy package and the EU 20-20-20 targets. As noted, the Netherlands had more ambitious climate targets than those established with the EU 20-20-20 targets. However, the Dutch right-centre coalition minority government that took office in 2010 (the first Rutte cabinet), lowered the targets for the level of GHG emissions and the share of renewable energy to the EU-required level. In its Climate Letter 2050 (*Klimaatbrief 2050*) of 18 November 2011, the Rutte cabinet set out four core elements for achieving a climate-neutral economy by 2050: CO<sub>2</sub>-free electricity supply, sustainable use of biomass, energy savings and CCS (Ministry of Infrastructure and Environment 2011).

Another key policy document is the Energy Report, prepared by the Dutch government every four years to establish energy and climate policies. In 2011, the government presented the latest version of the Energy Report, which outlined the ambition of the Netherlands to become more sustainable in energy and less dependent on fossil fuels in the transition to a low-carbon economy by 2050 (Ministry of Economic Affairs, 2011). As presented in this report, the three pillars of the Dutch energy strategy are to ensure reliable energy supply at competitive prices and green growth as primary economic objectives, while maintaining an international approach in the long-term transition to a sustainable energy supply.

Observers noted that the Dutch energy transition policy (the Energy Transition Framework), which was largely an industrial policy, had stagnated and suffered from the short-term priorities of changing government coalitions (see e.g. Rathmann et al. 2010). The coalition agreement 'Building Bridges' (29 October 2012) of the Rutte–Asscher government (second Rutte cabinet) made energy efficiency a key priority, and raised the ambition for the share of renewable energy to 16% by 2020 (in the EU Renewable Energy Directive, the target for the Netherlands is 14% by 2020).

In September 2013, a society-wide Energy Agreement for Sustainable Growth (the 'Energy Agreement') was adopted by 40 Dutch organizations and institutions. Initiated by the Social and Economic Council (SER), the Energy Agreement is a comprehensive climate and energy deal involving central, regional and local government, employers' associations and unions, nature conservation and environmental organizations, and other civil society organizations and financial institutions. The focus is on achieving climate and energy objectives for 2020.

In October 2013, the Climate Agenda for 2030 reaffirmed the Dutch commitment to achieve a CO<sub>2</sub> reduction of 80% to 95% by 2050 compared to 1990, and the need to strengthen action on climate mitigation

and adaptation. The Climate Agenda confirmed the government's support for a European GHG emissions reduction objective of at least 40% below 1990 levels by 2030, low-carbon technology innovation and reform of the EU ETS to match the pathway of the EU low-carbon roadmap (Ministry of Infrastructure and Environment 2013). The Climate Agenda builds on the 2011 Climate Letter and the 2013 Energy Agreement, but takes a longer-term view as to measures for achieving the 2050 emissions reduction objectives.

How, then, has the Netherlands performed in implementing the EU 2020 targets, compared to other member states? According to an assessment by the European Environment Agency (2013a), the Netherlands has been neither a leader nor a laggard. The report showed that:

- in 2012, non-ETS emissions were below 2013 ESD targets for the Netherlands and 12 other member states, but Dutch 2020 non-ETS emissions are projected to be lower than the 2020 ESD target only if planned additional measures are implemented;
- the share of renewable energy sources (RES) in 2011 remained below the interim 2011–2012 trajectories for the Renewable Energy Directive (RED) and national renewable energy action plans (NREAPs) for the Netherlands and five other member states;
- some progress has been made in improving energy efficiency, but further improvements are necessary in order to develop policies further or better implement existing ones in the Netherlands, as well as in most other member states.

As can be seen from this summary, the Netherlands emerges with a middle-range score on progress towards national GHG targets under the ESD and energy-efficiency improvements, but has been a rather slow implementer of national targets on the RES share in gross final energy consumption. Indeed, several assessments confirm that the Netherlands has been lagging behind neighbouring countries like Denmark and Germany in RES development (Rathmann et al. 2010; Climate Policy Tracker 2010, 2011). As highlighted in one report, 'its once strong position in the areas of RES research and product development is weakening, and the chances for Dutch entrepreneurs to obtain leading market positions are declining' (Rathmann et al. 2010: 61).

The Netherlands shows stronger performance in progress towards national GHG targets under the ESD and improvements in energy efficiency, but has been lagging behind several comparable member states. In the following, we examine progress in Dutch implementation of the EU climate and energy package and the various package components in greater detail.

## **5.2 The EU ETS Directive**

The Netherlands has transposed the revised ETS Directive fully, but there was a delay in the timetable for implementation. By September 2012, all the necessary legal documents had been amended and had entered into force. The ministry in charge is the Ministry of Infrastructure and Environment.

The Netherlands has 447 installations covered by the EU ETS, representing just over 40% of total GHG emissions in the country (EEA 2013b). All the major international oil companies, with Royal Dutch Shell in the lead, operate in the Netherlands and are among the biggest allowance holders. By definition, installations falling under the EU ETS meet the current European emissions target (EEA 2013b). Most climate-related mitigation actions in the Netherlands are included within the Environmental Management Act (1993), intended as the central legislative framework in the field of environmental law (Peeters, 2011: 128). Chapter 16 of this act sets out the national legal framework for implementation of the EU ETS.

In the first trading period (2005–2008) emissions allowances were allocated for free. In 2010, the Netherlands started auctioning allowances, and auctioned a total of 16 million EUAs for the second period (EEA, 2013a). For the third period, starting 2013, energy-intensive industry exposed to international competition and at risk of ‘carbon leakage’ will continue to receive free allowances until 2020 and beyond. Free allocation is to be carried out on the basis of product benchmarks that reward best practices in low-emissions production. Member states must calculate the number of free allowances to be allocated to each installation in National Implementation Measures (NIMs). In January 2012, the Dutch Ministry of the Environment published the first National Implementation Plan (NIM) for the free allocation of allowances for sectors exposed to ‘carbon leakage’. According to the EU ETS Directive, member states may allow permit-granting authorities to impose obligations with regard to the energy efficiency of carbon-emitting utilities. The Dutch legal framework for the EU ETS scheme has excluded that possibility: instead, the government has entered into voluntary agreements with representatives from several industrial sectors who have committed to develop and execute energy-efficiency plans (Peeters 2011: 129).

Article 10 (3) of the revised ETS stipulates that member states are to determine the use of the revenues generated – at least 50% of these revenues should be used to reduce GHG emissions, develop low-carbon technologies, forestry activities, low-emission transport, R&D, energy efficiency and administrative management of the EU ETS. This provision is not legally binding, although Germany has declared that 100% of its revenues will go to climate and energy projects. The Dutch legal framework for the EU ETS scheme applicable from 2013 onwards does not propose any binding rule on the use of auction revenues: the government has full discretion to spend them as it wishes.

The Commission also designed state-aid rules for energy-intensive industries facing rises in indirect electricity costs under the ETS. Member states can compensate companies at risk of carbon leakage for up to 85% of the cost increase faced by the most efficient installations in 2013–15, dropping gradually to 75% by 2019/2020. The Dutch government plans to cap compensations at €78 million annually, with any unspent funds from one year to be transferred to the next. The Dutch scheme works retroactively: companies can seek compensation for the indirect costs occurring in one year in the next year.

Long-term agreements (or LTAs) have been part of Dutch energy policy since 1992. These are negotiated agreements aimed at promoting energy savings in industry, service and the agricultural sectors. The first agreements (LTA1), which ended in 2000, focused primarily on the efficiency of production processes for energy-intensive industries. The energy-intensive companies were later covered by the Dutch Benchmarking Covenant. Since 2005, a large share of these companies has been covered by the EU ETS. Established as a follow-up to the Benchmarking Covenant is a long-term agreement aimed at ETS enterprises called the MEE Covenant (Long-Term Agreement on Energy Efficiency for ETS Enterprises). This was signed in 2009, just after the EU climate and energy package, and is to run until 2020, just like the EU package. Each participating company is required to create an Energy Efficiency Plan and to implement all profitable measures (with payback periods of five years or less). The Plan includes a soft target of 2% annual energy-efficiency improvement but no binding targets, since companies already have emission reductions obligations under the EU ETS.

The Energy Agreement (2013) highlights that a properly functioning EU ETS is a crucial factor in the long-term transition to a sustainable energy system. The parties to the agreement have committed themselves to a joint lobby in Brussels to press for implementation by 2020 of the following improvements to the ETS:

- tightening up of the reduction path for the ETS cap, aimed at achieving the long-term goal of an 80 to 95% reduction in GHG for the whole economy by 2050;
- securing the position of companies exposed to international competition and the challenge of ‘carbon leakage’ by means of a 100% free allocation of permits based on realistic benchmarks and actual production, based on the best performance in the sector;
- compensation of the indirect (electricity) costs, based on best performance in the sector (Energy Agreement 2013).

While the Netherlands wants to tighten the annual reduction in the cap on emissions from ETS sectors, it aims to secure the position of energy-intensive companies exposed to international competition through free allocations (based on benchmarks) and compensate the industry for indirect costs from EU emissions trading (higher electricity prices). Moreover, and although this is not official policy, it appears that Dutch policymakers would like to see, and are considering the political feasibility of, a move from a cap-and-trade system – an absolute target approach – towards a more flexible baseline-and-credit system – a relative target approach that would take increases in production into account. From an environmental perspective, this could result in a weakening rather than a strengthening of the EU ETS.

Concerning the 2030 climate and energy framework (European Commission 2013), the Netherlands has remained a faithful supporter of EU emissions trading. In its communication to the meeting of the Council (Environment) on 12 June 2014, the Netherlands maintained that the ETS ‘is the most important building block of the climate policy as it is cost-

effective and ensures a level playing field' (Council of the European Union: 11 June 2014). The Netherlands also stated that it supports the Market Stability Mechanism 'as part of the total package to strengthen the ETS' (ibid.). However, the Dutch proposals for securing the position of companies exposed to international competition and the challenge of carbon leakage could imply a weakening of the EU ETS, in environmental terms.

Thus, the Netherlands has fully transposed and applied the revised EU ETS. However, concerns for a level playing field for energy-intensive industry have led to a position in favour of allocations based partly on actual production. This may weaken the cap, and lead to increased emissions if production increases.

### 5.3 The Effort Sharing Decision (ESD)

For installations outside the ETS sectors, the national target for the Netherlands under the Effort Sharing Decision (ESD) is a 16% reduction in GHG emissions from 1990 levels by 2020. The Dutch government that came to power in 2010 intends to follow this target only, and has distanced itself from the more ambitious targets established by the fourth Balkenende cabinet in 2007.<sup>17</sup> Although the targets are not entirely comparable, the ESD target is clearly the less ambitious of the two. The non-ETS sectors in the Netherlands represented 55% of GHG emissions in 2011.<sup>18</sup> This included transport, housing, waste disposal, agriculture and forestry, aquaculture and some areas of industry.

The 16% reduction target is binding on the Netherlands, but the ESD does not require transposition. Although 2012 non-ETS emissions were below the Dutch 2013 ESD target, national projections indicate that the Netherlands will need to implement additional measures, still in the planning stage, to achieve its 2020 ESD target. Implementation of currently planned additional measures is projected to reduce 2020 emissions slightly below the target level (EEA 2013a: 108). According to all our interviewees, achieving the ESD target will be fairly easy for the Netherlands because of measures already implemented and the 2008 financial crisis, as well as some skilful accounting measures that made it possible for some Dutch non-ETS sectors to be re-classified as ETS sectors.

By the end of the first Kyoto commitment period, a gap between average 2008–2012 non-ETS emissions and the emissions budget remained in the Netherlands, which had to purchase international emission credits to close this gap. The Netherlands is among the three EU countries (the other two being Spain and Austria) that acquired the largest quantities of units.

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<sup>17</sup> A key difference between the 30% target established by the Balkenende cabinet and the 16% target established for the Netherlands by the ESD is that the former applies to all GHG emissions, whereas the latter applies only to non-ETS emissions.

<sup>18</sup> [www.emissieregistratie.nl/erpubliek/erpub/ets.aspx](http://www.emissieregistratie.nl/erpubliek/erpub/ets.aspx).



Regarding domestic mitigation measures, the Dutch government in 2011 established a *Strategy on climate policy en route to 2020* (Parliamentary Documents 2012–2013, 32813, no. 41), which included policy measures in all non-ETS sectors. For agriculture, a CO<sub>2</sub> cap-and-trade system in the country's sizable greenhouse horticulture sector has been established; for transport, CO<sub>2</sub> standards for passenger cars and vans have been set by the EU (Regulation (EC) 443/2009). The Netherlands has established sectoral CO<sub>2</sub> emission ceilings for 2020 in the following non-ETS sectors: industry, transport, buildings, agriculture and horticulture, non-CO<sub>2</sub> emission ceilings for GHG from agriculture, and non-CO<sub>2</sub> emission ceilings for GHG from other sectors.

The Dutch government also prepared a Sustainability Agenda (*Agenda Duurzaamheid*) in 2011, advocating 'green growth' through such measures as smart and efficient regulations and improved financial incentives. Two key policy instruments – the National Roadmap Climate 2050 and the Local Climate Agenda 2011–2014 – will help in achieving the GHG reduction targets for 2020 and beyond. These policy instruments focus on sustainable buildings, mobility, companies, production and climate-neutral cities/regions. According to a country profile produced by the European Environment Agency (2013b), other priorities include decentralized sustainable energy production, natural gas, increased energy efficiency in the buildings sector and the promotion of electric vehicles.

Environmental NGOs have pushed for the establishment of a specific climate act (or climate protection act) with carbon targets and control mechanisms for compliance with such targets, but this idea has not been adopted by the Dutch government. Such a national climate act could be a stand-alone national act or it could be integrated, as a separate chapter for instance, into the Environmental Management Act (1993) – intended, as noted, to serve as the central legislative framework in the field of environmental law (Peeters 2011: 128).

Despite the lack of a national climate act in the Netherlands, the Environmental Management Act contains several core instruments relevant for GHG reduction. These include not only the national legal framework for implementation of the EU ETS mentioned above, but also a legal framework for fluorinated gases; a permit regime for industrial installations, which includes greenhouse gases as far as they can be regulated in addition to the EU ETS and is meant to implement the EU Directive on Integrated Pollution Prevention and Control (IPPC Directive, replaced by the Industrial Emissions Directive); and the competence to issue 'general rules' for installations not covered by the integrated permit regime (Peeters 2011: 128).

The use of covenants – negotiated agreements between the government and various stakeholders – is a typical feature of Dutch climate and energy policy, as well as in other policy areas. In 2011, the government introduced voluntary 'Green Deals' as a scheme for promoting energy efficiency and energy saving among the population, companies, local councils and stakeholder organizations. The government enters into such negotiated agreements with various stakeholders on, for example, energy

saving, local generation of renewable energy, efficient energy use, and sustainable transportation. The aim is to remove some of the barriers – like confusion about licenses, lack of collaborative partners, and ambiguous regulations – that may prevent stakeholders from investing in energy saving and sustainable energy consumption. A first round of Green Deal proposals was opened in 2011, resulting in several such deals that were approved, and many additional ones have been concluded since this round.

The Energy Agreement (2013) promotes 1.5% energy-efficiency savings each year until 2020. There are also policy measures in place and long-term voluntary agreements on energy efficiency for specific sectors, such as buildings. In 2009, an innovation programme for the built environment was launched, aimed at speeding up the application of renewable energy concepts in the built environment. The specific objectives of the programme are to achieve energy-neutral new building practices by 2020 and to halve energy consumption of the built environment 2030 compared to 1990. Development and implementation of the programme involves developing new technologies, building concepts and building processes; realizing the concepts on a relatively small scale with a view to later upscaling; and transferring proven concepts to the construction sector at large.

In agriculture, the covenant ‘Clean and Efficient Agriculture Sectors’ was agreed between the Dutch government and various interest organizations in 2008. It requires the agricultural sectors to increase energy efficiency by 2% per year in the period 2011–2020, increase energy production from renewables to 212 petajoule (PJ) by 2020 (including approximately 12 PJ of wind energy), and reduce emissions of non-CO<sub>2</sub> greenhouse gases by 25–30% by 2020 compared to 1990 levels. It also includes detailed plans that build on earlier agreements for specific sub-sectors and/or link up to other specific policy instruments.

There are currently two types of long-term agreements in place, aimed at ETS and non-ETS enterprises. Above, in the section of implementation of the ETS Directive, mention was made of the agreement aimed at ETS enterprises. The agreements aimed at non-ETS companies are referred to as LTA3 (The Long-Term Agreement on Energy Efficiency for non-ETS enterprises). These cover the period 2001–2020 for large and medium-sized companies and institutions in industry, agriculture and the service sectors. They aim at achieving a 30% improvement in energy efficiency between 2005 and 2020, equivalent to an improvement of 20% within plant borders and 10% outside. In turn, the government has agreed not to impose additional specific national measures aimed at energy conservation or CO<sub>2</sub> emission reductions on companies participating in LTA3. Moreover, industrial companies that have agreed to the covenants are largely exempt from economy-wide energy/carbon tax and are automatically granted compliance with the energy-related provisions of their permits under the Environmental Management Act.

With regard to the transport sector, the Netherlands has adopted ambitious objectives for reducing CO<sub>2</sub> emissions. The national target for the transport sector is to reach a CO<sub>2</sub> emissions ceiling of 35.5 Mt CO<sub>2</sub> by

2020. In 2012, transport accounted for almost 19% of total energy-related CO<sub>2</sub> emissions (IEA 2014: 40). On the basis of the Energy Agreement (September 2013) and the Climate Agenda (2013), the Netherlands reaffirmed its ambition to reduce CO<sub>2</sub> emissions in the transport and mobility sectors by 17% by 2030 and by 60% by 2050. The most important policy measures implemented to reach emission reduction objectives in the transport sector are fiscal measures, electrification in the transport sector and initiatives encouraging biofuel blending and sustainable mobility.

Regarding average CO<sub>2</sub> emissions from new cars, the Netherlands ranks among the best three EU member states, with emissions around 120 g/km (EEA 2013). The Netherlands benefits from Regulation (EU) No 443/2009, which has established a binding target of 130 g CO<sub>2</sub>/km by 2015 and forces all car manufacturers to reduce CO<sub>2</sub> emissions from new cars. The strong Dutch performance compared to other member states is due to tax incentives for the purchase of low-emission and more fuel-efficient cars, as well as the highest petrol taxes in the EU. In 2009, the government initiated an Action Plan to stimulate electrification in the transport sector. With more than 70,000 electric cars, the Netherlands leads European efforts, but there is still a long way to go to reach the domestic goal of one million electric cars by 2020. In line with EU requirements, all new passenger cars in the Netherlands must have an energy label stating fuel consumption, level of CO<sub>2</sub> emissions and efficiency category. Beyond EU requirements, these efficiency ratings are used in arrangements that provide favourable tax treatment for buyers of more efficient cars. A tax levied on the purchase of new cars is differentiated by the weight of the car. Tax exemption is provided until 2015 for cars emitting less than 110 g CO<sub>2</sub>/km and thereafter for cars emitting less than 50 g CO<sub>2</sub>/km. Although the share of road freight in the Dutch transport sector has remained constant since the 1990s, the government has decided not to introduce road pricing.

To conclude, the Netherlands replaced the 30% GHG reduction target from 2007 with a 16% target for non-ETS installations only, because of the EU ETS and the ESD. Hence, the Netherlands went from having domestic GHG targets to joining the EU ETS and adopting the EU targets for the country under the ESD. It is expected that the Netherlands will reach the target with the help of existing domestic measures and the financial crisis, which made it much easier to meet the GHG target. However, the Netherlands will also need to adopt and implement additional measures to achieve the 16% national ESD target. At present, domestic measures appear overlapping and fragmented, with various different programmes partly affecting the same sectors.

#### **5.4 The Renewable Energy Directive**

The Netherlands has transposed the EU's Renewable Energy Directive fully, with only a small delay in the timetable for implementation. In March 2011, all the necessary legal documents had been amended and had entered into force. The ministry responsible is the Ministry of Economic Affairs.

The National Renewable Energy Action Plan (NREAP) is the core element of reporting, as set out in the EU's directive on the promotion of the use of energy from renewable sources (Directive 2009/28/EC) – the Renewable Energy Directive, RED. Article 4 of this directive requires member states to submit action plans by 30 June 2010. RED includes individual binding targets for each member state in order to achieve the EU target of 20% renewable energy share by 2020. The renewable energy target for the Netherlands is set to 14% by 2020. The Dutch NREAP (Ministry of Economic Affairs 2010) describes how the Netherlands intends to achieve this target.

The share of renewables in final energy consumption in the Netherlands was only 4.5% in 2013, a long way from its 2020 EU target. Biomass accounts for more than 70% of all renewable energy, and windpower for almost 20% (Energy Agreement 2013: 6). As biomass is used primarily for co-firing in coal-fired power plants in the Netherlands, the country has a long way to go in developing sustainable renewable energy sources. Hydropower, solar energy, geothermal energy and others make only a small contribution to the share of renewables in final energy consumption.

The main policy instrument for stimulating the use of renewable energy is a feed-in premium scheme, introduced as a successor to earlier schemes in 2011. With the adoption of the EU climate and energy package, the 2010 right-centre coalition government announced that it aimed to meet the Dutch renewable energy target primarily through a new feed-in premium scheme, to replace the SDE arrangement (*Stimulerend Duurzame Energieproductie*) introduced in 2008. By providing a bonus payment to renewable producers on top of the electricity market price, the SDE scheme was the key financial support instrument for electricity, biogas and co-generated heat. The SDE arrangement had replaced the old feed-in premium scheme MEP (*Milieukwaliteit Elektriciteitsproductie*), described in section 3 of this report. In the SDE scheme, as with its predecessor MEP, the premiums were paid from the government budget. According to critics, this feature made the scheme vulnerable to changes in government priorities and budget constraints (Rathmann et al. 2010: 58).

In 2011, the government replaced the SDE scheme with a new feed-in premium scheme, SDE-plus. This new arrangement promotes competition among technologies and projects. For each technology an estimate of the cost price (*basisprijs*) is made, and the difference between this cost price and the actual market price is subsidized for up to 15 years. Hence, the SDE offers long-term financial support for the production of renewable energy (electricity, gas or heat) by covering the unprofitable component of projects. The main difference between SDE and the new SDE-plus is that the latter optimizes short-term implementation and has a strong focus on cost-effective technologies.

According to the Dutch government, the SDE-plus scheme is focused solely on attaining the binding renewable energy target of 14% by 2020, which the EU renewables directive established for the Netherlands. Key components are an annual budget, for which all technologies compete; an annual phasing-in of the scheme to allow the most cost-effective tech-

nologies to apply first for the available budget (the scheme will close and reopen next year when the budget has been allocated to the first-movers); and the introduction of a ‘free category’ that allows frontrunners to apply for support in an earlier phase. Each year, the Ministry of Economics publishes the list of technologies eligible for funding and the basis amounts per technology. In 2012, for example, the following technologies were covered by the scheme: wind energy (on and off shore), solar PV (certain types of applications), waste incineration, biomass fermentation, incineration and thermal conversion, hydropower, geothermal energy and solar thermal energy. Unlike the scheme it replaced, the SDE plus scheme is financed through a surcharge on the energy bill of households and industry. This makes the scheme less vulnerable to changes in government budgets and priorities.

Most projects funded by the SDE plus scheme are either biomass projects (though not biomass co-firing projects) or onshore wind projects, reflecting their cost-effectiveness. Renewable energy technologies such as offshore wind, tidal and wave energy and solar are on average more expensive than the SDE plus maximum cost price. However, these technologies may compete for funding in the ‘free category’, which encourage innovative options, because individual projects may be less expensive than the average cost price for offshore wind, tidal and wave energy or solar (when they have access to additional financing, for example).<sup>19</sup>

Other key components in the Dutch NREAP include:

- A tax relief for companies investing in renewable energy source (RES) projects. The tax relief contributes substantially to the economic viability of RES projects, but annual budgets are limited and often exhausted for some technologies and underexploited for others.
- A Decree that gives grid priority to renewables in cases of grid congestion
- Two laws are designed to improve and speed up planning permission procedures for large-scale and small-scale RES projects.

Although the assessment by the European Environment Agency (2013a) estimated that the share of renewable energy sources in 2011 remained below the interim 2011/2012 trajectories for the renewables directive, the Dutch government claims that the Netherlands is on track to meet its 14% renewable energy target by 2020 (Ministry of Economic Affairs 2013: 37). The government has earmarked a budget for renewable energy spending for the period up to 2020, set to increase from €900 million in 2013 to €3.8 billion by 2020. Given the increased spending on renewable energy, the Dutch government maintains that the more ambitious target of 16% renewable energy in 2023 is feasible (Ministry of Economic Affairs 2013: 37).

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<sup>19</sup> [www.government.nl/issues/energy/documents-and-publications/leaflets/2011/03/25/renewable-energy-in-the-netherlands.html](http://www.government.nl/issues/energy/documents-and-publications/leaflets/2011/03/25/renewable-energy-in-the-netherlands.html) (Accessed 5 November 2013).

In the NREAP, the Dutch government highlights wind and biomass co-firing in power plants as areas of high priority (Ministry of Economic Affairs 2010). One of the cheapest renewable options is co-firing of biomass in coal-fired power plants, but sustainability is a concern because most biomass is imported. Moreover, subsidies for biomass co-firing do not stimulate technological innovation or the transition to a low-carbon economy. On the contrary, such subsidies could extend the use of coal-fired power plants and provide undesired technological lock-in effects. In the old feed-in premium scheme MEP, which ended in 2006, plants could get subsidies for biomass co-firing. Several plants still receive subsidies from long-term contracts under this scheme, but some plants that no longer receive the old MEP subsidy have now stopped co-firing. There are no subsidies for co-firing in the SDE-plus scheme. The parties to the Energy Agreement (2013) agreed that biomass co-firing in coal-fired power stations will not exceed 25 PJ. The parties also agreed to develop methods for including the 25 PJ restriction on biomass, the type of support and the possible use of a procurement procedure in the SDE-plus scheme. Overall, biomass co-firing in coal-fired power plants is apparently becoming less important as a renewable energy source in the Netherlands.

Wind *onshore* is also one of the cheaper renewable options, but local opposition and long planning processes are obstacles to rapid, large-scale realization. The target in the Energy Agreement is 6000 megawatts installed power capacity from onshore wind turbines by 2020. Wind *offshore* can be realized more quickly and with greater societal acceptance, but it is a far more expensive option (Rathmann et al. 2010: 61). As of June 2014, existing and planned offshore wind power capacity amounts to a total of around 1000 megawatts. The Energy Agreement target is 4450 megawatts installed power capacity from offshore wind turbines by 2023. The parties also agreed to make subsidies for offshore windpower contingent on a cost reduction of 40% in the development and construction of offshore wind farms by 2023 (Energy Agreement 2013). According to a market analysis from July 2014, the falling costs of renewable energy technologies mean that offshore wind is likely to be the only major source of green electricity in Europe that will still need to be supported by subsidies after 2020.<sup>20</sup> Other sources of renewable energy in the Netherlands are solar and geothermal energy, but these do not hold the same potential as bio-energy generated from organic material (biomass) and onshore as well as offshore wind power.<sup>21</sup>

In addition to setting binding renewables targets for member states, the renewables directive establishes a mandatory target for all member states, of at least 10% for the share of renewable sources (not just biofuels) in transport petrol and diesel consumption by 2020. In order to achieve this

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<sup>20</sup> Bloomberg New Energy Finance, European renewable energy investment set to surge by 2030 on back of nearly \$1 trillion of investment, 1 July 2014. Available from: <http://about.bnef.com/press-releases/european-renewable-energy-investment-set-surge-2030-back-nearly-1-trillion-investment/>

<sup>21</sup> [www.government.nl/issues/energy/sustainable-energy](http://www.government.nl/issues/energy/sustainable-energy) (accessed 4 November 2013).

target, fuel suppliers in the Netherlands are under legal obligation to blend their transport fuels with a certain proportion of sustainable biofuels. For biofuels to be allowed to count towards the target they must meet certain sustainability criteria; moreover, contributions made by certain biofuels (waste, residues, non-food cellulosic material and ligno-cellulosic material) are considered to be twice that made by other biofuels. The Netherlands introduced legislation to stimulate the use of biofuels in 2003, following the EC Biofuels Directive (2003/30/EC). A partial exemption in fuel taxes was introduced for imported biofuels in 2006, and since 2007 fuel suppliers have been required to blend their sold transport fuels with a certain percentage of biofuels.

To summarize, the renewables sector has developed very slowly in the Netherlands. In 2013, the RES share was only 4.5%, dominated by co-firing of coal and biomass. Co-firing promotes continuation of coal; moreover, it does not lead to new 'green' jobs, innovation or transformation towards a low-emissions economy. However, the feed-in premium scheme SDE-plus and the Energy Agreement are likely to speed up the development of this sector.

## 5.5 The CCS Directive

The Netherlands has transposed the CCS Directive fully, with only a small delay in the timetable for implementation. In September 2011, all the necessary legal documents had been amended and entered into force. The first CO<sub>2</sub>-storage license (P18-A field on the North Sea) in accordance with the new legislation was published in July 2013. This was the first storage license in the EU subjected to the advisory procedure by the European Commission (on the basis of the CCS Directive).

However, Dutch CCS ambitions have been reduced because of lack of public acceptance and funding of demonstration projects, as well as project delays. CCS is still part of ESD implementation with calculated emission cuts (EEA) – but, given the lack of CCS progress, these calculations are questionable. The Netherlands has tried to set up CCS demonstration projects, but these have suffered various setbacks. In 2010, one relatively big CO<sub>2</sub> transportation and storage demonstration project planned by Royal Dutch Shell in the densely populated area of Barendrecht was cancelled due to massive local opposition and delays in obtaining permits (see Feenstra et al. 2010; van Noorden 2010). The plan had been to send CO<sub>2</sub> emissions through a pipeline from a gasification hydrogen plant at Shell's Pernis refinery near Rotterdam, about 20 km away. After the massive local opposition to the Barendrecht project, the government decided not to set up CCS projects on land in any form, but to concentrate on offshore CCS only (Notenboom et al. 2012: 17–18).

Preparations for an offshore CCS demonstration project near the Rotterdam Harbour area (the ROAD project) are ongoing, and efforts are concentrated on achieving robust funding for the project. The project received €180 million from the EU and €150 million from the Dutch government, but actual deployment has encountered significant difficulties due to the high costs of developing the project. No other demonstration projects are planned and no projects have been funded by NER300,

the EU's main funding programme for CCS and innovative renewable energy projects.

CCS projects do not receive much attention in the 2050 roadmaps of the Netherlands (Notenboom et al. 2012). In the national Energy Agreement (2013), however, it was agreed that CCS will be necessary to achieve an entirely sustainable energy-supply system. The government has committed to taking steps to produce a long-term strategy regarding the role of CCS in the transition to such an energy-supply system (Energy Agreement 2013: 10). This strategy is to be ready by the end of 2014.

The European Commission is to review the CCS Directive and submit its report to the European Parliament and Council by 31 March 2015. The Netherlands see this as an opportunity to remove potential CCS hurdles from the regulatory framework, especially regarding liabilities. The Dutch recommendation is that the Commission, as part of this review, also examines all existing CCS-development projects, with the purpose of identifying the major hurdles that have caused set-backs. The Netherlands has decided to join a coordinated comment at the level of the North Sea Basin Taskforce, an initiative of the UK, Norway, Germany, the Netherlands and Flanders.

## **5.6 Towards decarbonization?**

Despite the measures to promote renewables in the Netherlands, investments in fossil power generation overshadow investments in renewable energy. The construction of three new coal-fired power plants has just been finalized, following construction permits from the government around a decade ago. The parties to the Energy Agreement have agreed that the capacity of the coal-fired power stations built in the 1980s will be minimized as part of the transition to a more sustainable energy system. Three of those coal-fired power stations are to be closed with effect from January 2016, and the two remaining power stations closed from July 2017. If the first three old power stations have been shut down by the date agreed, an earlier exemption for electricity production in the tax on coal will be reintroduced on 1 January 2016. It is expected that any price increases arising from the closure of old coal-fired power stations will be very small and will be counteracted by the sharp increase in renewable energy (Energy Agreement 2013: 10). In addition, gas-fired power stations will continue to be an important source of fossil power generation in the Netherlands.

Recent and planned investments in fossil power generation will lock in future carbon emissions and decrease the need for additional capacity in renewables. Since 2005, the share of renewables in final energy consumption in the Netherlands has increased from 2.3% to 4.5% (by 2013), but current renewables policies are not expected to provide sufficient incentives to reach the 2020 EU-established target of 14% renewable energy. The Netherlands has lost its early lead in windpower development to neighbouring countries, notably Denmark and Germany, which have been staunch promoters of renewables. As noted, the Netherlands is one of Europe's most fossil fuel-dependent countries, with over 90% of its energy mix based on fossil fuels. In April 2014, the International



Energy Agency (IEA) urged the Netherlands to increase its deployment of renewable energy and to develop the last of its gas fields as well as its shale gas resources.<sup>22</sup>

The various plans for a transition towards a low-carbon economy in 2050, often called climate and energy ‘roadmaps’, reflect the Dutch dependence on fossil fuels. In 2011, the right-centre government published *Klimaatbrief 2050*, Climate Letter 2050 (Ministry of Infrastructure and the Environment 2011). This document outlines the challenges the Netherlands faces in the transition towards a low-carbon economy, identifies strategies for a low-carbon system and explains the necessity of a 2030 GHG reduction target. Whereas Denmark and Germany have ambitious climate and energy strategies with timetables up to 2050, and 2050 targets going beyond the agreed EU targets, the Netherlands is still searching for new approaches to a cost-effective energy transition.

According to a report by the PBL Netherlands Environmental Assessment Agency (Notenboom et al. 2012: 11), the order of drivers underlying national plans for a decarbonization path appears as follows in the Netherlands: (1) affordability, (2) industrial opportunity, (3) greenhouse gas mitigation, (4) security of supply. By comparison, the corresponding order in Germany would seem to be (1) industrial/employment opportunities, (2) security of supply, (3) greenhouse gas mitigation, (4) affordability, (5) ethical issues (Notenboom et al. 2012: 11). Hence, affordability – often referred to as cost-effectiveness – seems to be a key priority for the Dutch government, relative to other drivers underlying national plans for a decarbonization path.

In March 2013, the European Commission presented a Green Paper on a 2030 framework for climate and energy policies, and asked for insights and viewpoints through a public consultation process (European Commission 2013). Unlike many other member states, the Netherlands did not provide a public government contribution to this consultation. However, the PBL Netherlands Environmental Assessment Agency submitted its views, arguing for the need for a mix of complementary 2030 targets on GHG emissions reduction, renewable energy and energy efficiency, as well as specific targets for innovative low-carbon technologies (Koelemeijer et al. 2013). The parliamentary group of the liberal party VVD in the Lower House of the Dutch Parliament also submitted its views, arguing forcefully that the only target needed for 2030 is a single CO<sub>2</sub> emissions target (VVD 2013). As the VVD is the largest party in Parliament and is part of the Dutch coalition government, its views reflect positions that must have been important in the Dutch government’s discussions on the Green Paper. No other Dutch stakeholders or public authorities submitted a public contribution to the consultation, but the Dutch Ministry of Economic Affairs and the Confederation of Netherlands Industry and Employers (VNO-NCW) have stated that the only target needed for 2030 is a single CO<sub>2</sub> emissions target.

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<sup>22</sup> ENDS (24 April 2014) Netherlands falling behind on renewables – IEA.

In January 2014, the European Commission presented a communication on a policy framework for climate and energy in the period from 2020 to 2030. Key elements of the 2030 policy framework set out by the Commission include the target of reducing EU GHG emissions by 40% below the 1990 level by 2030 through domestic measures alone; an EU-wide binding target for renewable energy of at least 27% by 2030, not to be translated into national targets through EU legislation; continued improvements in energy efficiency; reform of the EU ETS; measures to ensure a competitive and secure energy system in a 2030 perspective; and a new governance system based on national plans for competitive, secure and sustainable energy (European Commission 2014a).

The state secretary in the Dutch Ministry of Infrastructure and Environment, Wilma Mansveld (socialist),<sup>23</sup> revealed her views on the 2030 framework on 3 March 2014, when the Green Growth Group Ministers issued a joint statement prior to the European Council discussion of the framework on 20–21 March. The Green Growth Group is an informal grouping of like-minded energy, climate and environment ministers from 13 EU member states, including the Netherlands. These ministers urged the European Council in March to agree on the core elements of the 2030 framework as set out by the Commission (Green Growth Group 2014). About half a year earlier, in October 2013, the Green Growth Group had published a policy report, presenting ‘the case for ambitious and immediate EU low-carbon action’ (Green Growth Group 2013). However, the European Council meeting on 20–21 March was unable to agree on the 2030 framework and deferred the final decision to the Council meeting in October 2014. The Council conclusions on climate and energy set out various principles on which the new framework, to be agreed in October, should be based (European Council 2014). In October 2014, the European Council was able to adopt a framework for new EU climate and energy policies for 2030. The new goals are domestic reductions of at least 40% GHG emissions, 27% increase in renewable energy consumption at EU level, and an indicative target of 27% increase in energy efficiency – all by 2030 compared to 1990 levels.

Although the Dutch Ministry of Economic Affairs and the VNO-NCW have argued against the need for a 2030 renewables target, the EU-wide binding target of at least 27% renewable energy seems acceptable to the Netherlands, because it does not need to be translated into national targets through EU legislation. Moreover, the Commission’s business-as-usual scenario is a renewables share of 24% in the EU by 2030 (European Commission 2014b), which means that reaching the EU-wide target of 27% will hardly require any Dutch efforts. In fact, the European Commission is confident that the EU will exceed this target because some countries, among them Germany and France, have already established plans that go far beyond 27%.<sup>24</sup> The falling costs of renewable energy

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<sup>23</sup> Part of her portfolio is environment and climate change. When representing the Netherlands internationally she may call herself ‘minister’. The minister is Melanie Schultz van Haegen-Maas Geesteranus (liberal), whose main responsibilities are infrastructure and mobility issues.

<sup>24</sup> ENDS (26 June 2014) EU likely to exceed 27% green energy target – EC.

technologies mean that offshore wind is likely to be the sole major renewable source that the Dutch government still need to support by subsidies after 2020.<sup>25</sup>

The Netherlands supports an EU-wide reduction in GHG emissions of at least 40% by 2030 and further reductions of between 80% and 95% by 2050. It has also supported the EU 2030 policy framework for climate and energy set out by the Commission. However, while the Dutch government and the Energy Agreement (2013) set out key actions for 2020 and the Climate Agenda (2013) has a longer-term perspective, the Netherlands still lacks a long-term climate and energy framework. The Dutch 2050 roadmap ‘provides little information on the long-term strategy and cost considerations prevail in the short-term steps to be taken’ (Notenboom et al. 2012: 5). It appears that the EU 2030 framework will be important for establishing long-term targets for the Netherlands and national plans for achieving them. Indeed, the IEA has concluded that the EU’s climate and energy policies for 2030 are needed to support low-carbon investments in the Netherlands (IEA 2014). Within the 2030 framework, the Dutch government will have to define its own ambitions, policy instruments and long-term framework.

## 5.7 Summing up

The Netherlands has been relatively efficient in *transposing* the various parts of the EU package (see Table 1). According to our categories, our overall assessment is that this has been a fairly quick and efficient transposition process.

**Table 1: Transposition of EU climate and energy package acts in the Netherlands**

EU act	Transposition deadline	Transposition	Sector ministry
ETS Directive	31 Dec 2009	September 2012	Ministry of Infrastructure and the Environment
Effort-sharing decision (ESD)	(direct effect, in force from 25 June 2009)		Does not require transposition
RES Directive	5 December 2010	March 2011	Ministry of Economic Affairs
CCS Directive	25 June 2011	September 2011	Ministry of Economic Affairs

Concerning *application* of the EU package and progress towards the 2020 targets, we consider the Netherlands to have an intermediate score: there has been correspondence between the EU 2020 targets and policy/behavioural change, but the Netherlands is still struggling to increase the share of renewable energy. Although the Netherlands acted quickly to

<sup>25</sup> ENDS (1 July 2014) Low cost to drive renewable uptake by 2030 – study.

adopt targets similar to the EU 2020 targets and even above the EU requirement for GHG emissions, the right-centre government (first Rutte cabinet) that took office in 2010 reduced the GHG ambition level from 30% to 20% – corresponding to the EU target. The share of renewable energy sources in 2011 remained below the interim 2011/2012 trajectories for the EU Renewables Directive and the National Renewable Energy Action Plan (NREAP). Planned onshore CCS demonstration projects have been cancelled following strong local opposition, resulting in a shift in policy focus from onshore to offshore CCS projects only. Application of the ESD needs additional policies and measures, but the 16% target is in sight. Finally, implementation of the revised ETS has led to calls for weakening the system by changing allocation benchmarks for energy-intensive industry so as to take increases in production into account.

Assessed with a view to long-term decarbonization, investments in fossil power generation overshadow investments in renewable energy. Moreover, co-firing of coal and biomass has been the most important RES measure. There are plans and agreements for increasing other RES by 2020, but longer-term plans reflect the dominance of fossil fuels in the Netherlands.

We can safely conclude that the EU 2020 targets and the climate and energy package have not represented a ‘game changer’ in the Netherlands. The recently completed construction of new coal-fired power plants will lock in future carbon emissions and decrease the need for additional renewable capacity. The decisions taken by the Dutch government a decade ago to permit these constructions will have long-term effects. In addition, the shale gas revolution in the USA results in decreasing coal prices because the USA exports more coal, which in turn makes coal-fired power plants more competitive in Europe and elsewhere. These developments increase the challenge for the Netherlands to meet EU climate targets and to decarbonize the economy in the long term (2050). Current renewables policies are not expected to provide sufficient incentives to achieve the Dutch government’s renewable energy goal to 16% by 2023, or the EU 14% target for the Netherlands by 2020.

In the following, we examine why the Netherlands scores high on transposition of EU Directives, but struggles with application by 2020 and transformation to a low-carbon economy in the long term. More broadly, the focus for explanation can be framed as a question of why a northwestern European state that used to be perceived as a ‘green’ frontrunner now seems to be struggling with implementation of the EU 2020 targets.

## **6 Explaining implementation**

### **6.1 Degree of ‘misfit’ and adaptation pressure**

The Netherlands is one of the few EU member states that have supported the EU ETS since its inception. Emissions trading has remained a key priority for all Dutch government coalitions, with backing from society. A coalition of trade unions and green groups even proposed that emis-

sions trading should be extended to other sectors, such as construction and transport. With the help of Germany, Dutch concerns for energy-intensive industries were mainly taken care of in the negotiations by exempting almost all energy-intensive industry sectors from auctioning. The Dutch economy has a larger proportion of energy-intensive industries exposed to international competition than other European countries. As noted, important energy-intensive industries in the Netherlands include the oil refining industry, the chemical industry and the steel and metallurgic industry. These industries are concerned about the higher gas prices in Europe compared to the USA and the Middle East, and the potential costs of putting a price on carbon. The Netherlands thus has a strong interest in maintaining a level international playing field for its energy-intensive industries and avoiding 'carbon-leakage'.

The 'fit' between national and EU policies and the correspondence between the Dutch negotiating position and the revised ETS Directive, was high resulting in low adaptation pressure. This observation is largely in line with actual implementation, but the Netherlands has also made some efforts to weaken the ETS by arguing for a cap that would take changes in production into account.

EU CCS policies were also in line with Dutch policies and the negotiating position. The Netherlands wanted allowances from the New Entrants' Reserve to finance CCS, and received 300 such allowances from the EU. CCS would be particularly suitable for coal-fired power plants, an integral part of Dutch climate policy.

The RES Directive was not particularly favoured by the Netherlands during the 2008 negotiations, but the feed-in premium system was already in line with EU RES requirements. The Dutch 14% RES target was ambitious compared to the low RES level in the Netherlands, but lenient compared to the national target adopted in 2007. Moreover, an ambitious RES policy did not fit well the Dutch energy mix dominated by fossil fuels, in which mainly indigenous natural gas accounted for almost 50% of the energy needs. The 'fit' is accordingly somewhat mixed, and adaptation pressure must be assessed as being somewhere between low and medium. To date, the Netherlands has experienced more significant implementation challenges than could be expected from this approach. The RES share is only 4.5%, and the main RES strategy has been to absorb new EU requirements in the existing energy mix. Co-firing of biomass and coal provide the largest source of RES. Still, new policies in the form of an energy agreement have been adopted, in order to meet the 14% RES target.

It remains to be seen whether the Netherlands will achieve the targets in the Energy Agreement. We have noted how it has been lagging behind most other EU member states in the share of renewables in final energy consumption, which was only 4.5% for the Netherlands in 2013. That is a long way from its 2020 EU target of 14%. The Netherlands was a frontrunner in the development and use of Combined Heat and Power (CHP) technology and has a historical legacy of using windpower to drain off water and grind grain, but the IEA has warned that the country has lost its early renewables lead to neighbouring Denmark and

Germany.<sup>26</sup> The leading renewable power sources are biomass and wind, whereas the share of solar and geothermal in final energy consumption remains rather low. The potential for hydropower resources is very limited because of the flat and often sub-sea level Dutch landscape.

The EU 2020 target for renewable energy in the Netherlands has been important for keeping renewables on the political agenda of various Dutch governments. According to the PBL Netherlands Environmental Assessment Agency, this target has ‘clearly triggered innovations and cost-price reductions for renewable energy sources, like wind-energy and solar-PV’ in the Netherlands and comparable countries – but having a general renewable energy target is not sufficient to stimulate more costly innovations, especially in the case of biomass (Koelemeijer et al. 2013: 3).

The picture is somewhat similar concerning the ESD. The Netherlands has had various climate policies in place for dealing with emissions from non-ETS sectors, and the national 16% reduction target was accepted during the negotiations. This target can be attained only if new policies and measures are adopted or if some of the reduction burden is transferred to the ETS sectors. This indicates that there have been implementation challenges, despite high ‘fit’ and low adaptation pressure.

We expected that parallel negotiations of different EU legislation would lead to varying adaptation pressures as a result of trade-offs between different national priorities in the negotiations. This expectation is not supported in the Dutch case. The main reason is that the Netherlands did not demand any significant changes to the Commission proposal, except for more generous free allocation rules for energy-intensive industry.

With regard to the EU package and the 20-20-20 targets as a whole, the EU sought to combine policy solutions for different concerns in a package approach: climate change, energy affordability, security of supply and international competitiveness. The Dutch energy-economic situation and policy priorities partly matched the situation and priorities in the EU. At the time the EU package was adopted, climate change concerns were relatively high on the political agenda in the Netherlands, as were concerns for energy affordability and international competitiveness. Unlike the situation in several other EU countries, however, security of supply was not a matter of major concern in the Netherlands. Over the past decade, Dutch energy supplies have been increasing and electricity prices have been decreasing. This ‘deviation’ is important, as energy security was a crucial motivation behind the EU climate and energy policy (Skjærseth, 2013). Increasing the RES share in the EU member states was seen as one important measure to reduce energy dependency from Russia in particular.

Concerns for security of supply have ranked low on the Dutch political agenda, but this may be about to change. The Netherlands is, as noted, one of the world’s most fossil fuel-dependent countries, with over 90% of

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<sup>26</sup> ENDS, (24 April 2014) Netherlands falling behind on renewables – IEA.

its energy mix based on fossil fuels. It has for many years been a net exporter of gas from the huge Groningen gas field. However, the country is expected to shift from being a net exporter to a net importer of gas by 2025, due to declining production from the Groningen field. The IEA has recommended that the Netherlands develop the last of its gas fields, as well as its shale gas reserves, in coming years, but strong public and local government opposition may obstruct this.<sup>27</sup> In the Groningen area, there is firm opposition to further development of the gas field, due to problems with tremors caused by the collapse of deep reservoirs following gas depletion. Shale gas exploration and test drilling have been put on hold until at least the end of 2014, pending the outcome of a national impact assessment. On the other hand, the construction of three new coal-fired power plants has just been completed, following government approval of the plants around a decade ago. As mentioned, current investments in both renewables and fossil fuels are expected to lead to overcapacity in electricity generation by 2020 or earlier, turning the Netherlands into an exporter of electricity (Rathmann et al. 2010: 60).

Energy technological innovation and the creation of new 'green' jobs were also important EU concerns. Unlike comparable European countries, there is no substantial 'green' technology industry in the Netherlands and there are relatively few 'green' jobs, but the parties to the Energy Agreement have established the target for the Netherlands to be among the top 10 in credible clean-tech rankings by 2030. An intermediary aim, on the way to achieving the 2030 clean-tech target, is to quadruple the economic value of the clean energy technology chain by 2020 compared to 2010. As regards employment, the aim is to create at least 90,000 additional full-time equivalents between 2014 and 2020. It is predicted that the Energy Agreement will create such employment opportunities in the installation and construction sectors and, in the longer term, in the renewable energy sector as well (Energy Agreement 2013: 11). This may indicate that the Netherlands is poised to start exploiting new low-carbon opportunities from the EU climate and energy package.

The main conclusion from our assessment is that misfit and adaptation pressure between the EU package and the situation in the Netherlands cannot explain the slow implementation of the package. We will need to delve more deeply into the role of domestic politics in order to understand the implementation challenges in the Netherlands.

## **6.2 Affectedness and veto players**

The Netherlands is a parliamentary democracy and is often referred to as a consociational state. Typical of Dutch politics and governance is the aim of achieving broad consensus on important issues, within the political community and in society. The head of government is the prime minister, who usually is the leader of the largest party in the governing coalition. The cabinet consists of some 13 to 16 ministers and a varying number of

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<sup>27</sup> ENDS (24 April 2014) Netherlands falling behind on renewables – IEA.

state secretaries. It is responsible to the bicameral parliament, which has legislative powers.

Can changes in (majority) government explain changes in political priorities with consequences for implementation? The short answer is ‘yes’. Since 2008, the Netherlands has implemented EU climate and energy policies under the *Clean and Efficient* programme (adopted in 2007) and the Energy Transition Framework. The country’s policies were based on the EU climate and energy package and the EU 20-20-20 targets. However, the Dutch right-centre coalition minority government that took office in 2010 (first Rutte cabinet), lowered the targets for the level of GHG emissions and the share of renewable energy to the EU-required level. The government also distanced itself from the more ambitious GHG targets that had been established by the fourth Balkenende cabinet in 2007. A key difference between the 30% target established by the Balkenende cabinet and the 16% target established for the Netherlands by the ESD is that while the former applies to all GHG emissions, the latter applies only to non-ETS emissions.

In 2007, the Dutch government committed the Netherlands to a 20% renewable energy target for primary energy (not the same as final energy consumption). Later, the Rutte government reduced this ambition to 14% of *final energy consumption* (the EU measurement), required for the Netherlands by the EU Renewables Directive.

Ambitions were raised again by the second Rutte coalition government, which was formed in 2012.<sup>28</sup> The renewables target was raised from 14% to 16% by 2020. In 2013, this target was confirmed but postponed to 2023 in the Energy Agreement. Like the Renewables Directive, this target applies to final energy consumption, which includes energy used for heating and cooling, electricity generation and transport. On the basis of the coalition agreement, a society-wide Energy Agreement for Sustainable Growth (the ‘Energy Agreement’) was adopted by 40 Dutch organizations and institutions in September 2013. Initiated by the Social and Economic Council (SER), the Energy Agreement relies on the Dutch ‘polder model’, which is a consensus-driven and bottom-up decision-making process, aimed at aligning the interests of industry, civil society and government towards the key climate and energy policy objectives of sustainable and secure energy supply, industrial competitiveness and affordability for consumers. The overall objectives of the 2013 Energy Agreement are to reduce energy consumption by 1.5% or 100 PJ per year to 2020 and to increase the share of renewables. Other priorities include investment in networks, effective carbon markets, clean coal technologies and CCS, as well as ambitions for the transport and mobility area and for the commercialization of clean energy technologies. The Energy Agreement focuses mainly on achieving climate and energy objectives for 2020.<sup>29</sup>

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<sup>28</sup> Coalition agreement *Building Bridges* (29 October 2012) of the Rutte-Asscher government.

<sup>29</sup> The first progress report on the implementation of the Energy Agreement was published in 2014 (Voortgangsrapportage 2014).



In October 2013, the Climate Agenda for 2030 reaffirmed the Dutch commitment to achieve a CO<sub>2</sub> reduction of 80% to 95% in 2050 compared to 1990 and the need to strengthen action on climate mitigation and adaptation. The Climate Agenda confirmed the government's support to an EU-wide GHG emissions reduction objective of at least 40% emissions reduction below 1990 levels by 2030, innovation of low-carbon technologies and reform of the EU ETS to match the pathway of the EU low-carbon roadmap (Ministry of Infrastructure and Environment 2013). The Climate Agenda builds on the Climate Letter and the Energy Agreement, but takes a longer-term view with measures on how to achieve the 2050 emissions reduction objectives.

On the whole, Dutch implementation ambition levels have varied with changes in government. This led to a slow start in package implementation, but a new coalition government from 2012 raised the ambition level. In a longer-term perspective, short-term changes in priorities have made consistent implementation challenging in the Netherlands. Subsidy schemes for renewable energy have changed under various governments, resulting in uncertainty among investors and in the market. The lack of stability or long-term vision in climate and energy policies is often cited as a reason for the slow development of renewable energy and new technologies in the Netherlands (e.g. Rathmann et al. 2010: 61; IEA 2008, 2014). Observers have also noted that the Dutch energy transition policy (the Energy Transition Framework), which was largely an industrial policy, stagnated and suffered from the short-term priorities of changing government coalitions (see Rathmann et al. 2010).

Instability in implementation priorities can also stem from different positions within the government. Two separate ministries are in charge of climate policy and energy policy: the Ministry of Infrastructure and Environment is responsible for climate policy, and the Ministry of Economic Affairs for energy policy. This division of responsibilities mirrors the situation in many comparable countries, and helps to explain why it is hard to integrate climate and energy policies in the Netherlands. The EU package approach does not seem to have affected the Dutch implementation process, because the package components have largely been implemented in isolation.

Turning to affectedness and societal actors, the Netherlands is a major producer of natural gas and maintains competitive oil-refining and petrochemical industries. These industries would be heavily affected, and negatively so, by a development towards a low-carbon economy. Royal Dutch Shell is the biggest and most important company in the Dutch petroleum sector. It is a key player in Dutch policymaking, representing key national interests; and it is exposed to international competition.

The oil refining industry is part of a large energy-intensive sector in the Netherlands exposed to international competition. In fact, the Dutch economy has a larger proportion of energy-intensive industries than other EU member states. Important Dutch energy-intensive industries, besides the oil refining, include the chemical industry and the steel and metallurgic industry. These industries are concerned about the indirect costs of putting a price on carbon, although they generally support emissions

trading. The Netherlands thus has a strong interest in maintaining a level international playing field for its energy-intensive industries in order to avoid ‘carbon leakage’. The Dutch agenda of securing the interests of energy-intensive industries exposed to international competition is promoted by the Confederation of Netherlands Industry and Employers (VNO-NCW).

The dominant role of fossil fuels and energy-intensive industries has limited the search for new low-carbon opportunities. There are few ‘green’ jobs in the Netherlands compared to similar countries, even though the Netherlands was well positioned to develop green and renewables industries when such industries took off in comparable countries like Denmark. The Netherlands was once a frontrunner in development and deployment of CHP technology (Tangen 1999) and could also have been a front-runner in the development of onshore and offshore windpower.

The implementation of climate *and* energy policies has always spurred domestic conflicts among societal interest groups in the Netherlands, as the two policy fields have partly conflicting goals and have been challenging to combine, and the EU package approach does not seem to have facilitated policy integration. Implementing the components of the package in isolation has triggered cost concentration and opposition in several sectors. Examples are renewables, CCS, transport and agriculture under the ESD and RES directed at large electricity producers. Implementation of the ESD rests on ‘skilful accounting measures’ as well, which has meant that some Dutch non-ETS sectors could be re-classified as ETS sectors, easing the pressure on these sectors. National decision-makers do not seem to have fully exploited potential synergies of the various components of the package – but the package has not created difficulties for implementing existing national agreements and policy packages, either.

To summarize, the package components have been implemented mainly as separate policies in the Netherlands, and the EU package approach has apparently made little difference to domestic implementation. Still, internal effort sharing between the ETS and non-ETS sectors represents a concrete example of cost-sharing. Beyond that, the central government has not been able to use possible synergies in order to exploit CCS and renewables (wind farms) projects or to convince major industry players to pursue a low-carbon development path. It does not seem to have ‘mattered’ much that EU climate and energy policies came as a package in 2009, since the package components are implemented as separate policies.

### **6.3 Policy style**

A consensual policy style may improve the likelihood of successful implementation, because target groups who are included in the policy process are more likely to implement agreed policies than those who are not. The Netherlands traditionally uses a consensual policy style. Lijphart (1977) has described the Netherlands as a ‘consociational’ democracy: a democratic form held to explain political stability in culturally segmented

societies. A consociational democracy is characterized by the development of institutions that decrease the potential for conflicts. The relationship between interest groups and regulators is one of cooperation and bargaining. However, the Dutch political system has clear neo-corporatist characteristics: the key to stability is cooperation and compromises with industry and other interest groups during policymaking and implementation. Strong and persistent cooperation between the state and the industry is sometimes seen as an advantage as regards the development of environmentally friendly technology and implementation of policies. Due to the dominant role of fossil fuels and energy-intensive industries in the Netherlands, an inclusive and consensual approach means that those actors most negatively affected by an ambitious EU climate policy also have most influence in decisionmaking.

The consensual Dutch policy style is visible in the making and implementation of domestic climate and energy policy. One particular feature of the policy is the extensive use of covenants and agreements, as seen in the implementation of the ESD. Another feature is the extensive formal and informal inclusion of industry and interest groups in the making and implementation of Dutch climate and energy policy.

The Dutch ‘polder model’ was applied for the first time to the climate and energy field when the Energy Agreement (2013) was developed by the Social and Economic Council of the Netherlands (SER). The SER is an advisory and consultative body of employers’ representatives, union representatives and independent experts with the explicit aim of helping to create societal consensus on national and international socio-economic issues. It has traditionally advised the Dutch government and parliament on social and economic legislation and policy. When SER decided to act as a platform for the negotiations on the Energy Agreement, it entered into an entirely new field of policymaking and facilitation.

The work began with SER’s advisory report *Towards an Energy Agreement for Sustainable Growth*, which was adopted at its meeting in November 2012. A conference held immediately after this meeting marked the beginning of the process that led to the Energy Agreement. More than 40 societal, economic and environmental organizations took part in the negotiations, which also included government representatives. The process entailed various meetings among the parties, consultative processes throughout the Netherlands and through online consultation processes and interviews, and presentation of ideas and views from scientists, business representatives, politicians and other stakeholders. After more than six months of intense negotiations, the parties agreed on the comprehensive Energy Agreement. This agreement is claimed to be unique in terms of its comprehensiveness and inclusiveness and its holistic approach to climate and energy issues. It is hoped that the agreement will lead to greater stability and predictability for Dutch climate and energy policies, but this remains to be seen.

In its assessment of Dutch energy policies, the IEA notes that it will be challenging ‘to ensure the actual delivery of the many actions and commitments’ in the Energy Agreement, and that implementation of actions might be delayed or fail if one party steps out (IEA 2014: 28). As

regards policy style, however, we can clearly see the Dutch preference for negotiated and comprehensive agreements and inclusive policymaking processes instead of traditional command-and-control regulations.

The question is, then, whether the EU package approach opened up for new alliances or cemented old alliances in Dutch policymaking processes. The short answer is that the EU package approach does *not* seem to have influenced the Dutch consensual policy style in any major ways. The reason is that the package has not significantly strengthened competitors to the 'fossil regime' by stimulating new industries in RES, CCS or other technologies. The making of the Energy Agreement is innovative in terms of the application of the 'polder model' to the energy sector, but this agreement represents a continuation of a well-established and traditional policy style in the Netherlands. Moreover, the Energy Agreement was initiated by non-state actors in response to challenges to domestic climate and energy policy, not the EU climate and energy package. On the other hand, the EU package clearly influenced the targets and policy measures agreed by all 40 parties to the Energy Agreement. In addition, the EU package clearly increased domestic regulatory pressure and expectations that industry would adopt more progressive measures, which in turn motivated and convinced non-state actors to negotiate the Energy Agreement. Hence, the EU climate and energy package may be said to have been among the decisive factors that motivated the establishment of the Dutch Energy Agreement in 2013.

The expectation that a consensual policy style improves the feasibility of policy implementation has to some extent been confirmed by this study. Dutch climate and energy policies seem to be accepted by target groups because of their participation in the policymaking process. In a long-term perspective, the key societal groups that have to implement the EU package were also involved, through various voluntary agreements signed just before the package negotiations commenced in 2008 (see section 3).

The slow implementation of renewables policy in the Netherlands can be explained by dominant interests rather than privileged access. A consensual policy style (which we had expected would facilitate implementation) was not sufficient to foil the strong counterforces that obstructed successful implementation. These forces were the energy-intensive industries and the energy producers' dependency on fossil fuels that seem to have trumped the interests of the renewables industry in the Netherlands. That said, it seems clear that the Dutch policy style helps to explain the rather slow development of renewables in the Netherlands. The Dutch consensual policy style creates societal acceptance for the implementation of government policies. In this sense, the consensual policy style is effective as a tool for creating legitimacy and acceptance of the government's climate and energy policy – but is probably less effective if the aim is to create radical policy change towards a low-carbon society. Our analysis indicates that the Dutch policy style serves to promote incremental, step-by-step changes rather than large-scale industrial and societal transition.

## 6.4 Administrative organization

The relatively quick transposition process in the Netherlands appears to have been facilitated by concentration of governmental responsibility. The EU directives in the package were transposed at different times, but within a narrow time frame. Only two ministries were involved in implementing all package components: the Ministry of Infrastructure and the Environment, and the Ministry of Economic Affairs. However, these ministries have somewhat differing interests and policy priorities. This could help to explain the mismatch of Dutch climate and energy policy and the lack of integration of the two policy fields.

The Ministry of Infrastructure and the Environment was created in 2010 following the merger of the former Ministry of Transport, Public Works and Water Management and Ministry of Housing, Spatial Planning and the Environment. Observers regarded this merger as a degradation of the environmental policy field, since the portfolio of the new minister did not include environmental issues. Climate policy and other environmental issues were now to be handled by a new subordinated state secretary (a type of junior minister, not a full minister), who is currently Wilma Mansveld. These institutional changes reflected the policy priorities of the centre-right government that took office in 2010 and that was reluctant to renewables and decarbonization – which helps to explain implementation problems.

The climate and energy package was adopted at EU level, but will largely be implemented at local level. The Netherlands has three levels of administration: state, provinces (9) and municipalities (400). Local levels have key competences that contribute to explain slow implementation. Local councils and communities have blocked or hindered plans from the central government. Local opposition to plans from the central government may cause vertical disintegration of climate and energy policies. As noted, Royal Dutch Shell's carbon capture and storage project in the Netherlands (Barendrecht) was cancelled by the government in November 2010 because of strong local protests and delays in obtaining permits. Residents and town officials opposed the plan, because of safety concerns and what they regarded as an experimental project with potentially harmful consequences for the city and local community. After the various setback with CCS demonstration projects, the Dutch government decided not to pursue CO<sub>2</sub> storage on land in any form, but to concentrate on offshore CCS only.

Wind *onshore* is also one of the cheaper renewable options, but local opposition and long planning processes represent problems for rapid, large-scale realization. Large wind farms are deemed superior to stand-alone windmills scattered over extensive areas. The Netherlands is a small and densely populated country, which makes it difficult to find suitable locations for wind farms.

The EU climate and energy package does not seem to have affected horizontal and vertical fragmentation in the Netherlands. It has, however, highlighted the need for local participation to strengthen public acceptance when implementation rests on local competence. The 'sustainability

accords' signed in 2007 with regional and local governments have apparently not proved sufficiently effective (see section 3).

On the whole, horizontal and vertical distribution of competence helps to explain slow implementation in the Netherlands. The case of the EU package has highlighted the importance of local participation to strengthen public acceptance when implementation rests on local competence.

## 7 Conclusions

The Netherlands has had climate and energy policies in place for many years, but struggles to integrate the two policy fields. With new and more ambitious climate policies adopted in 2007, the country appeared well prepared for the EU climate and energy package. Targets and measures in the package were essentially similar to domestic targets and measures. One finding from this study is that the EU package was largely compatible with existing Dutch climate and energy policies. In other words, the Netherlands was exposed to relatively low adaptation pressure from the EU, although concerns had been raised domestically with regard to the lack of progress on renewables. In sum, the Netherlands supported the package, was in favour of emissions trading and established domestic climate and energy goals compatible with those of the EU.

Another finding from this study is that the EU climate and energy package has provided greater stability for Dutch climate and energy policies, establishing both short-term and longer-term targets. The lack of stability and long-term vision in Dutch climate and energy policies has often been cited as a reason for the slow development of renewable energy and new technologies in the Netherlands. The EU package has reduced the discretion of member states, although some room for manoeuvre still exists. In the absence of the EU package, Dutch climate and renewables policies would have been rather low on the political agendas of recent government coalitions. This right-centre coalition minority government that took office in 2010 lowered the Dutch targets for the level of GHG emissions and the share of renewable energy to the EU-required level. Under changing governments with changing priorities, EU climate and energy policies have provided some stability and certainty for Dutch policies. In fact, the EU 2020 package appears to have been crucial for avoiding further reduction of Dutch climate ambitions and renewables targets since 2010. Similarly, agreement on the EU's 2030 policy framework for climate and energy is needed for supporting low-carbon and renewables investments in the Netherlands.

How, then, can we explain the fact that the Netherlands appears to be struggling to implement an EU package that largely matched domestic targets and policy priorities? The energy-economic situation and policy priorities in the Netherlands were largely compatible with the situation and priorities in the EU as a whole, indicating that 'misfit' in energy-economic situations and policy priorities does not explain slow implementation.

Turning to affectedness and veto players, we have noted that the oil and gas industry and the fossil-fuel dependent petro-chemical industry as well

as other energy-intensive industries have strong interests in maintaining energy affordability, and can thus be regarded as industry interests that may block a transition to a low-carbon economy. Although their interests in maintaining the traditional carbon economy go some way in explaining the slow development of the renewables sector in the Netherlands, various Dutch governments have never proposed radical low-carbon solutions. In the case of renewable energy sources, factors like population density, topography and lack of high hydropower and geothermal potential also help to explain the slow development of the sector.

Another observation is that strong public and local government opposition has effectively blocked large windmill farms and onshore CCS demonstration projects, as well as shale gas exploration and test trilling in the case of fossil fuels. Local governments and local communities could thus be regarded as veto players that have prevented the implementation of certain national energy policies, in the case of both renewables and fossil fuels.

Regarding the Dutch policy style, we have highlighted how the Netherlands is referred to as a consociational democracy with strong neo-corporatist characteristics, which means that the key to stability is cooperation and compromises with industry and other interest groups during policymaking and implementation. Accordingly, the use of covenants – negotiated agreements with industry – is a typical feature of Dutch climate and energy industry. The frequent use of this form of collaborative agreement seems to have prevented severe conflicts between the government and industry, but we may question the effectiveness of the covenants in stimulating radical policy change and the transition towards a low-carbon society. The Dutch policy style promotes small, incremental changes rather than large-scale industrial transition. Similarly, the key guiding principle for Dutch climate and energy policies is cost-effectiveness or affordability – a principle that supports incremental rather than large-scale changes. This guiding principle is well aligned with EU emissions trading, but less so with EU renewables policy objectives. Hence, while the Dutch policy style creates acceptance for the implementation of government policies, it can also help to explain the rather slow implementation of the EU climate and energy package.

Finally, with administrative organization, we observed that only two ministries (infrastructure/the environment, and economic affairs) were involved in implementing all package components. While the relatively quick transposition process appears to have been facilitated by concentration of governmental responsibility, the Ministry of Infrastructure and the Environment and the Ministry of Economic Affairs have somewhat differing interests and policy priorities. This might help to explain the lack of integration of climate and energy policies in the Netherlands.

The EU package approach does not seem to have facilitated the integration of domestic climate and energy policies. Nor does it seem to have affected horizontal and vertical fragmentation. On the other hand, it has not disrupted existing policies and agreements in any major ways. The directives and decisions in the package have essentially been transposed and implemented in separate processes in the Netherlands. We may thus

conclude that while each EU directive, decision and regulation has had a significant impact on Dutch climate and energy policies, the fact that these all came as an EU ‘package’ did not make a significant difference.

The Netherlands has lost its early lead in climate and renewable policies and appears to be a rather slow implementer of the EU climate and energy package. Lack of stability and fragmentation of responsibilities have characterized Dutch climate policies in the last two decades. This may be about to change, however, as climate and renewable energy policies have reappeared high on the political agenda. With the 2013 Energy Agreement, broad societal consensus on the need for stability and long-term visions has been manifested in a comprehensive climate and energy document. What remains to be seen is whether the parties to the agreement will prove willing and able to deliver on their promises.

## **Interviews**

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