

# Assessment of climate change policies as part of the European Semester

**Country Report Netherlands** 

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A report submitted by ICF Consulting Limited in association with

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to DG Climate Action

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# 1 Short Summary

The Netherlands is an early starter in the area of climate and energy policies. The government published its first climate change in policy in 1989. As for many EU countries the Netherlands managed to decouple its economic growth from GHG emission in the last decades. The 15.3% decrease in the GHG emissions from the non-ETS sector between 2005 and 2013 clearly illustrate this trend. Despite this decrease, the Netherlands stays one of the most fossil fuel and CO<sub>2</sub> intensive economies in the EU. With regard to renewable and energy efficiency improvement, the country is behind its objectives and considerable efforts will be needed to meet its ambition.

In order to meet this challenge, the Netherlands has been quite active in the last years and has set up a series of new measures to complement the existing ones. The signature of the Energy Agreement for Sustainable Growth (*SER Energieakkoord* - SER) in 2013 represents an important milestone in this context. This agreement was developed under the leadership of the Social and Economic Council of the Netherlands (*Sociaal-Economische Raad*) and involves a large scope of stakeholders. It contains a package of policy measures to ensure that non-ETS sectors reach their GHG emission reduction target. In 2014, the concrete implementation of all these measures started and some of them already entered into force. Example include the creation of new funding mechanisms for energy efficiency in the building sector and tax incentives for renewable energy development and consumption at local level. The Climate Agenda which followed the SER Energy Agreement constitutes another important milestone. This new agenda sets a multiannual policy framework for climate change mitigation and adaptation policies looking towards 2030.

The Dutch non-ETS target under the Effort Sharing Decision (ESD) is -16% (compared to 2005) and non-ETS emissions were reduced by 15.3% between 2005 and 2013 which is largely above the interim target. According to the latest national projections submitted to the Commission and taking into account existing measures, the 2020 target is expected to be missed by a small margin of 0.8% points.

# 2 Climate and energy policy priorities

The vast majority of the gross energy consumed<sup>1</sup> in the Netherlands in 2012 was based on fossil fuels, notably crude oil and petroleum (41%), natural gas (40%) and to a lesser extent solid fuels (10%). Renewable energy and nuclear energy were less important in the energy mix representing respectively 4.3% and 1.2%. The Netherlands has important energy reserves and a surplus production capacity, equal to 113 TWh in 2013. The Dutch power generation mix is dominated by gas-fired power generation (representing 63.5% of the gross electricity generation mix in 2011) and by solid fuel (19%). Renewable electricity sources represented 10.9% and other sources such as nuclear were less important. The Netherlands is the biggest natural gas producer in the EU, representing 43.2% of the EU-28 gas production in 2012. However, the gas production is expected to significantly decrease by 2020. In Jan 2014, the government decided to decrease production in the short term due to the increase of earthquakes in the province of Groningen, where a large gas field is located. This decrease should be equivalent to 10 million ton of oil equivalent (Mtoe) per year, starting from a recent production level of 57.4 Mtoe in 2012 (European Commission, 2014).

The Energy Agreement for Sustainable Growth (*SER Energieakkoord* - SER) published in Sep 2013 fixes the policy framework for the transition towards a fully sustainable energy supply in the Netherlands. It was developed by multiple stakeholders under the leadership of the Social and Economic Council of the Netherlands (*Sociaal-Economische Raad*) and contains a package of policy measures to ensure that non-ETS sectors reach their GHG emission reduction target (fixed at -16% by

<sup>&</sup>lt;sup>1</sup> These data are based on Eurostat Gross inland energy consumption figures: Gross inland consumption is calculated as follows: primary production + recovered products + total imports + variations of stocks - total exports - bunkers. It corresponds to the addition of final consumption, distribution losses, transformation losses and statistical differences.

2020 compared to 2005 level). The SER Energy Agreement also includes a series of additional targets, including an annual savings target of 1.5% in final energy consumption, totalling 100 PJ of energy savings by 2020; a target to increase the share of renewable energy in final energy consumption to 14% by 2020 and to 16% by 2023; and the creation of at least 15,000 jobs. The SER Energy Agreement also provides for the investment of 400 million EUR in insulating rented homes; the provision of low-interest loans for homeowners to fund energy-saving measures financed through the National Energy Saving Fund, which has a budget of 600 million EUR; and the provision of lower tax energy rates for people investing in local initiatives to generate electricity from sustainable sources.

In terms of climate policies, Netherlands is an early starter as it published its first climate change policy in the late 1980s. More recently the Dutch government published its Sustainability Agenda in 2011. This agenda sets a strategy to achieve green growth in the Netherlands and defines priority areas including resources and product chains, sustainable water and land use, food, climate and energy, and mobility. With the implementation of this Agenda, the Cabinet of Ministers hopes to increase the competitiveness of the Dutch economy by reducing its dependence on fossil energy sources as well as mitigating environmental harm (Rijksoverheid.nl, 2011).

Following the Agenda, the Dutch government published its new "Climate Agenda" on 4 Oct 2013. This new agenda sets a multiannual policy framework for climate change mitigation and adaptation policies looking towards 2030. This agenda builds on the SER, which was focusing on the horizon 2020 and sets the framework for those sectors that were not included in the SER. In addition, it lists the Dutch obligation under EU and international law. With regard to climate mitigation, the government set five action lines:

- towards a larger set of tools for mitigation: this concerns the development of effective instruments for both the EU ETS and non-ETS sectors;
- facilitating renewable energy and energy saving through better planning;
- towards sustainable mobility: this will be based on a large agreement amongst the stakeholders of the transport sector about how to achieve this path;
- towards others resources and sustainable industry; and
- towards a more productive and climate-friendly agriculture and horticulture.

With this Agenda, the aim of the Dutch government is to provide a framework for its cooperation with private, public and non-governmental partners at local, national and international level in the area of climate policy (Rijksoverheid, 2013a and Mansveld, 2013).

# **3** GHG trends and projections

The Netherlands reduced its total GHG emissions by 8% between 2005 and 2013. The share of GHG emissions not covered by the European Emission Trading Scheme (EU ETS) was around 55% in 2013, which is slightly below the EU28 average (see Table 1).<sup>2</sup>

Table 1	Key data	on GHG	emissions
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		National data			EU28	
		2005	2011	2012	2013	2013
Total GHG emissions	Mt CO <sub>2</sub> eq	209.4	195.1	191.7	191.9	4 539
Non-ETS emissions	Share in total emissions	62%	59%	60%	55%	58%

<sup>&</sup>lt;sup>2</sup> The European Environment Agency has developed a complex methodology to measure progress on the Non-ETS/ESD targets of all EU Member States. This report uses the figures derived on this basis. A detailed explanation and the underlying absolute amounts are contained in Annexes 1-3 of the EEA report No 6/2014 "Trends and projections in Europe 2014. Tracking progress towards Europe's climate and energy targets for 2020" available at <u>http://www.eea.europa.eu/publications/trends-and-projections-in-europe-2014/</u>

#### Source: EEA 2014a; EEA 2014c

By 2020, the Netherlands needs to reduce its emissions not covered by the EU ETS by 16% compared to 2005, according to the Effort Sharing Decision (ESD). The latest data for 2013 show that the Netherlands not only met but exceeded its annual allocation interim target under the ESD for the year 2013 by 11.8 percentage points (see figures in Table 2). National projections indicate that the country may just about miss its 2020 target by 0.8 percentage points with existing measures (WEM) but will meet it with additional measures (EEA 2014a).

## Table 2 Non-ETS emission targets, trend and projections

		Compared to base year
2013	ESD interim target	- 3.5%
	ESD emissions	- 15.3%
2020	ESD target	- 16.0%
	ESD projections WEM	- 15.2%
	ESD projections WAM	- 18.8%

Source: EEA 2014a. Green indicates target met or exceeded, orange indicates a value below.

GHG emissions are mainly created by direct fuel consumption (e.g. households for heat generation) followed by the energy industries and the transport sector (see figure below for historic and estimated emissions by sector). Projections from 2010 indicate that by 2020 emissions from energy use and the energy industries will remain constant. However, between 2010 and 2012 these emissions have already been reduced significantly, even below the WAM scenario. Emissions from the transport sector are projected to be reduced slightly.



## Figure 1 GHG trends and projections by sector

Source: EEA 2014a. Actual data until 2012 and projections from 2010 onwards. Dashed lines indicate the WEM projection, dotted lines the WAM projection.

# 4 Policy development

This section covers significant developments made in key policy areas between January and December 2014. It does so through three different perspectives: 1) progress on the policies communicated under the National Reform Programme; and 2) developments in the identified national priority sectors and policy areas.

## 4.1 Key policies as outlined in the National Reform Programme

Member States prepare National Reform Programmes (NRPs) each April outlining the country's progress and the key policies and measures to achieve targets under the EU 2020 Strategy. These key policies and measures are summarised in the following table and their current status (in force, amended, abolished, or expired) is provided.

### Table 3 Key policies and measures as outlined by the NRP 2014

Climate Agenda	
Status in the NRP	Published on 4 Oct 2013
Status as per Dec 2014	No further update.
Description of policy	The Climate Agenda is discussed under section 2 and section 4.2.1.

Decommissioning of the five oldest coal power plants (dating from the 1980s) by 2017				
Status in the NRP	This measure was agreed under the SER, contingent on approval by the Authority for Consumers and Markets (ACM). However as the ACM did not grant this approval, the status of these initiatives is currently unclear.			
Status as per Dec 2014	The SER Energy Agreement progress report calls for the development of a suitable solution for the decommissioning of the five oldest coal power plants. A technical working group has been set up under the lead of SER to explore alternatives to meet the decommissioning ambitions set out in the SER Energy Agreement while taking into account the advice of the ACM.			
Description of policy	The objective is to decommission the oldest and less efficient coal power plants located in the Netherlands in order to contribute to the EU objective of decreasing GHG emissions by 80% to 95% by 2050. Three coal power plants should be shut down by 1 Jan 2016 and the remaining two by 1 Jul 2017.			
Reintroduction of the e	exemption of the coal tax for power plants from 1 January 2016			
Status in the NRP	This measure was agreed under the SER, contingent on approval by the Authority for Consumers and Markets (ACM). However as the ACM did not grant this approval, the status of these initiatives is currently unclear.			
Status as per Dec 2014	This measure is directly linked to the decommissioning of the five oldest coal power plants measure presented above. Since progress on the previous measure is limited progress, the same applies for this measure.			
Description of policy	The tax on the use of coal is applicable for all users with only a few exemptions for coal used for non-energetic purposes. If the decommissioning of the coal power plants from the 1980s goes as planned, then the government plans to reintroduce the exemption of the coal tax for power plants from 1 January 2016. This will presumably support most modern coal power plants (Oudeman, 2013). This exemption will be equivalent to 189 million EUR per year which will be compensated by an increase of the energy tax applicable both to citizens and businesses. This increase will be balanced by the forecasted lower expenditures under the SDE+ scheme <sup>3</sup> , which should be equivalent to 2.3 billion EUR over the 2014-2020 period (OndernemersPlein.nl, 2014 and SER, 2013c).			

<sup>&</sup>lt;sup>3</sup> The SDE+ scheme is the main mechanism to support renewable energy in the Netherlands. It is presented in more details under section 4.2.5.

Reduced tariff in the energy tax system for citizens' initiatives to generate renewable energy locally and at decentralised level			
Status in the NRP	In force since 1 Jan 2014.		
Status as per Dec 2014	The new tax deduction was introduced for non-commercial small users.		
Description of policy	The 2014 Tax Plan ( <i>Belastingplan</i> ) introduced a tax rebate of 7.5 EURct/kWh (excluding VAT) for renewable energy produced by local communities and consumed by non-commercial small users grouped in so-called " <i>postcoderoos</i> ". The government is studying a similar scheme for commercial small users to be introduced by the 2015 Tax Plan (SER, 2014a).		

Setting up of a revolving fund for energy conservation in the built environment			
<b>Status in the NRP</b> This was in the process of being developed at the time of the NRP.			
Status as per Dec 2014On 21 Jan 2014, the National Energy Saving Fund (Nationaal Energiebespaarfonds - NEF) was launched.			
Description of policy	This measure is discussed in more details under section 4.2.4.		

400 million EUR will be made available for landlords in the social housing sector to make energy-saving improvements to their properties			
Status in the NRP	us in the NRP This was in the process of being developed at the time of the NRP.		
Status as per Dec 2014	Since the 1 Jul 2014, landlords in the social housing sector can apply for a subsidy to finance energy saving measures in their homes. The government made 400 million EUR available for the period 2014-2017.		
Description of policy	<b>cy</b> This measure is discussed in more details under section 4.2.4.		

Development of an expertise centre to support and identify cost-effective energy saving<br/>measures for the built environment, the agricultural sector and industryStatus in the NRPThis was in the process of being established in Apr 2014.Status as per Dec<br/>2014The expertise centre is still under development.Description of policyThe idea presented in the SER Energy Agreement is to develop an<br/>expertise centre to provide advice on energy efficiency improvement<br/>within the built environment, the agricultural sector and industry.

Improved energy performance within the greenhouse growing sector			
Status in the NRP	Will take effect as of 1 Jan 2015		
Status as per Dec 2014	A new multiannual agreement was signed with the greenhouse sector on 3 Jul 2014.		
Description of policy	This agreement covers the period 2014-2020 and aims at making all new greenhouses climate neutral by 2020 and decreasing the fossil fuel consumption of existing greenhouses by 50% by 2020 compared to 2011.		

## 4.2 National policy priorities

The below sub-sections provide updates on key existing and new policies in priority sectors and policy areas of relevance to the energy and climate targets under the Europe 2020 strategy<sup>4</sup>. Each sector or policy area contains information on the most important policy instruments in operation or development.

## 4.2.1 Horizontal measures

On 4 Oct 2013, the State Secretary for Infrastructure and Nature from the Dutch government Wilma J. Mansveld presented the new **Climate Agenda** to the Second Chamber. As said above, this new agenda sets a multiannual policy framework for climate mitigation and adaptation policies looking towards 2030. The Climate Agenda also defines the approach of the Dutch government towards the upcoming international climate negotiations. Moreover, it describes the government's vision on the key issues that are currently discussed at EU level such as the review of the EU ETS. The Climate Agenda also tackles the non-ETS sectors, emphasising the role of innovation for meeting the mitigation targets. Hence, the government's objective with the agenda is to provide companies consistency and security for their future investment. The government considers that the Dutch knowhow on water and nature management represents important export opportunities which could lead to sustainable economic growth and the creation of new jobs. Based on this agenda, the government will develop a National Adaptation Strategy which will be published in 2016 (Rijksoverheid.nl, 2013b).

The **SER Energy Agreement** represents the second key element of the Dutch climate and energy policy framework. The first SER Energy Agreement progress report (SER, 2014) was published on 20 Jun 2014 and made a positive evaluation of its implementation. Out of the 159 commitments which were presented in the SER Energy Agreement in 2013, 139 are in the process of being implemented. The type of measures varies considerably and some led to the creation of new financing instrument such as the tenders for Top Sector Energy issued by the National Office for Entrepreneurial Netherlands (*Rijksdienst voor Ondernemend* - RVO). These tenders target among others energy savings, energy efficiency, renewable and sustainable energies in key industrial sectors. A large series of tenders in these different areas were launched in 2014 (RVO, 2014a). The 2014 SER Energy Agreement progress report highlighted among others the following key results:

- the definition of zones for offshore and onshore wind projects more information on this in section 4.2.5;
- the establishment of the Centre of Excellence for Financing Renewable Energy Projects: the task of this centre is to ensure that small scale industries benefit from a combined technical, financial and organizational expertise to standardise renewable energy projects; and
- the launch of the support programme of the Association of Dutch Municipalities (Vereniging van Nederlandse Gemeenten - VNG) supporting local authorities willing to encourage sustainable energy initiatives (SER, 2014a and SER, 2014b).

The Progress Report also identified a series of issues requiring more attention and efforts in the future. This includes among other:

the development of a suitable solution for the decommissioning of the five oldest coal power plants (dating from the 1980s). The original plan was to reach this decommissioning objective by 2017 but the Authority for Consumers and Markets (*Autoriteit Consument en Markt* - ACM) didn't grant its approval as they considered that it didn't meet competition rules. Hence the status of the measure is still unclear. A technical working group has been set up under the lead of SER to explore alternative ways to meet the decommissioning ambitions set out in the SER Energy Agreement while taking into account the advice of the ACM;

<sup>&</sup>lt;sup>4</sup> The Consortium jointly with DG Clima identified these based on identified challenges in Country Profiles (EEA, 2014), share of sectors in total GHG emissions, and Country Specific Recommendations (2014). DG Clima has identified additional relevant issues to be reviewed for some or all Member States, including country specific energy challenges.

- the exchange of information and experiences about the renewable energy regulation needs to be further improved; and
- the participation of local residents in the decision-making about the development of new onshore wind energy projects has to be ensured (SER, 2014a and SER, 2014b).

A recent report (Quitel Intelligence, 2014) based on a new economic model (*Energietransitiemodel*) developed new estimates of the number of jobs which could be associated with the implementation of the SER Energy Agreement. According to this report a total of 65,000 jobs could be created for a period of 10 years. These jobs would mainly be linked to the development of sustainable technologies (i.e. wind farms, solar panels and water pumps) and the investment in building insulation. The indirect jobs would be in the same order of magnitude, resulting in a total of 130,000 additional direct and indirect jobs. This does not take into account the investment in the industry and mobility sectors. Displacement effects are not included. Finally there are high uncertainties about the share of these jobs which will be permanent and the ones which are only temporary (SER, 2015 and Quitel Intelligence, 2014).

Another horizontal instrument put in place by the Dutch government to develop a green economy are **Green Deals** with businesses, provinces, municipalities and non-governmental organisations. These deals are signed to promote local and individual environmentally friendly undertakings. The Dutch government uses this instrument as a voluntary agreement between the government and private sector parties to facilitate emissions reduction measures. Green Deals provide no financial support. Instead, the government aims to eliminate administrative barriers using specific government instruments and expertise. Since the start of the initiative in 2011, more than 160 Green Deals have been agreed. In 2014, more than 20 new Green Deals were closed on a large variety of topics from the development of  $CO_2$  emission factors and calculation tools to sustainable tourism. The 2013 progress report of the Green Deal initiative was published on 21 Jan 2014. A new progress report should be published early 2015 (OndernemendGroen, 2014; RVO, 2014b and Rijksoverheid, 2013c).

## 4.2.2 Environmental Taxation

In the Netherlands, the implicit tax rate on energy was slightly above the EU average with EUR 180 per ton of oil equivalent in 2012 (compared to the EUR 173 average) (Eurostat, tsdcc360). The share of environmental tax revenues in overall tax revenue was at 9.1% in 2012, and therefore above the EU average of 6.1% and the third highest in the EU (Eurostat, ten00064). The same holds true for a comparison of environmental tax revenues with GDP, at 3.6% in 2012 (with the average at 2.4%) (Eurostat, ten00065).

Green fiscal reform has been on the political agenda for a very long time in the Netherlands. It is considered as an important tool to provide the right price incentives to consumers and stimulate green growth. In Apr 2013, the Netherlands Environmental Assessment Agency (*Planbureau voor de Leefomgeving* - PBL) published a report (Vollebergh, 2013) presenting an analytical framework to assess different tax options in the context of energy and climate policies. Based on a step-by-step analysis, the approach considers standard criteria, such as allocative effectiveness, static efficiency, distributive justice and feasibility, but also explicitly takes criteria such as dynamic efficiency into account (PBL, 2013).

In its Green Growth Strategy published in Mar 2013, the Dutch government announced its intention to further green the Dutch taxation system (Kamp and Mansveld, 2013). The SER Energy Agreement followed-up on this announcement and introduced a series of changes in the milieu- and energy tax regime. The key achievement in this field identified in the 2014 SER Energy Agreement Progress Report is the introduction of a tax rebate of 7.5 EURct/kWh (excluding VAT) for renewable energy produced by local communities and consumed by non-commercial small users. This tax deduction was introduced by the 2014 Tax Plan (*Belastingplan*). The government is studying a similar scheme for commercial small users to be introduced by the 2015 Tax Plan (SER, 2014a). Other changes introduced by the SER Energy Agreement but not in place at this stage include:

- the reintroduction of the exemption of the coal tax for power plants from 1 January 2016<sup>5</sup>; and
- the energy tax will be slightly and temporarily increased from 2016 to cover some of the measures introduced by the SER Energy Agreement (e.g. 400 million EUR subsidy for investment in energy saving measures in social houses and exemption of the coal tax for power plants). However, the government argues that this tax increase will be balanced by the forecasted lower expenditures under the SDE+ scheme from 2018 (SER, 2013c).

The 2015 Tax Plan includes two changes in terms of environmental tax:

- the tax on waste is lowered from 17 EUR per tonne to 13 EUR per tonne. This tariff applies to
  waste kept in landfills and incinerated waste. This second group was previously not covered
  by the waste tax. The tax does not apply to recycled waste. With this new tariff the tax on
  waste will generate 100 million EUR per year from 2015; and
- the modification of the water tax which were supposed to enter into force on 1 Jul 2014 are being adapted with retroactive effect as it appeared that they had a negative impact on the environment and innovation (Ministrie van Financien, 2014).

## 4.2.3 Energy Network

While development on the Dutch energy networks were not identified as a key interest by the European Commission, three important development occurred in 2014 and are worth mentioning in this country report.

First, on 28 January 2014, the transmission system operators TenneT and Amprion increased the **intraday trading capacity on the German-Dutch border**. Thanks to better information sharing about the grid situation in both countries, an additional 100 MW/hour are now available to the intraday market. This increases the maximum transmission capacity by 100 MW in both directions (import and export). The increase in cross-border transmission capacity also contributes to the further implementation of a fully integrated European electricity market (TenneT, 2014a). Later in 2014, TenneT announced that they were working with their German counterparts on the optimisation of the interconnectors between the Netherlands and Germany. The research initiative was prompted by the introduction of a new system for interconnector transmission capacity allocation, known as 'flow-based market coupling' later in 2014. Another aim is to bolster TenneT's strategy for closer integration of the energy markets in north-west Europe and higher price convergence between the Netherlands and Germany (TenneT, 2014b).

Second, on 17 Jun 2014, TenneT reported that it was selected by the Dutch government to build and operate Netherland's **offshore power grid**. According to the SER Energy Agreement, offshore wind farms with a total installed capacity of 3,450 MW need to be constructed and connected to the grid by 2023. TenneT will face the task of providing the grid connection in the North Sea. The total output of electricity retrieved from these wind farms will correspond to the annual electricity consumption of one million households (TenneT, 2014c and Tsanova, 2014).

Finally, on 4 Aug 2014, RVO announced the launch of a **Smart Grid Innovation Programme** (*Innovatieprogramma Intelligente Netten*) on behalf of the Ministry of Economic Affairs. The importance of smart grids increased along with the growing interest in renewable energy production in the Netherlands. When developed, the smart grid should be able to manage locally generated energy as well as the energy supplied by utilities. An Integral Test Facility will be developed in order to test the efficiency of the system. The tests will focus on the scalability, robustness and feasibility of smart grid applications. In addition, possible optimisation and feasibility of large-scale applications of new products and possible new services or business models in the energy distribution networks will be tested. It is expected that the construction of the Integral Test Facility will be completed in 2015 (RVO, 2014c).

<sup>&</sup>lt;sup>5</sup> See section 0 for more information about this measure.

## 4.2.4 Energy Efficiency

Within the EU-28, the Dutch economy is more energy intensive than the average and the Netherlands are the thirteenth least-energy-intensive economy. Energy intensity declined by only 6% from 2005 to 2012 (Eurostat, tsdec360), while the final energy consumption dropped by only 1% from 2005 to 2012 with the reductions coming mainly from the industrial sector (Eurostat, tsdpc320). The Netherlands is currently on track to meet its indicative EU energy efficiency target (EEA 2014a).

There is no specific long term energy efficiency strategy in the Netherlands but the SER Energy Agreement defines an annual savings target of 1.5% of final energy consumption, totalling 100 PJ of energy savings by 2020 compared to the 2012 level (SER, 2013). The measures contained in the SER Energy Agreement to meet this objective focus on the energy users and not on the energy providers and tackle energy savings within buildings as well as improved energy efficiency within the industry, the agricultural sector and other businesses. The SER Energy Agreement also sets two interim targets in order to ensure progress towards the final target: by the end of 2016 at least 35% of the target has to be achieved and by the end of 2018 65% of the target has of be achieved. If these two interim targets are not achieved, extra measures will be put in place (SER, 2013).

Following the SER Energy Agreement a series of measures have been put in place in 2014 in both the housing and the industry and agricultural sectors. On 21 Jan 2014, the **National Energy Saving Fund** (*Nationaal Energiebespaarfonds* - NEF) was launched. In line with the Living Agreement (*Woonakkoord*) of the government, the NEF makes 300 million EUR available for low interest loans to homeowners in order to finance different energy saving measures. The government is providing 75 million EUR to the NEF while Rabobank and ASN Bank act as co-financiers and provide together 225 million EUR. As costs and interests go back to the fund, the objective is to loan that money twice over the lifetime of the NEF. It is however not clear how long this lifetime will actually be (Blok, 2013; Rijksoverheid.nl, 2013d and SER, 2014a).

Since 1 Jul 2014, landlords in the social housing sector can apply for a **subsidy to finance energy saving measures** in their property. The government made 400 million EUR available for the period 2014-2017. This scheme is managed by RVO and is available both for housing associations as for individual landlords. The amount of the subsidy depends on the scale of the energy efficiency improvement based on the energy label system – with a minimum improvement of three steps to be eligible Rijksoverheid.nl, 2014e and SER, 2014a).

After long discussions during 2014 on the introduction of a new methodology to define **energy labels for homes**, the Dutch government introduced a new energy index for homes as well as a new energy label on 1 Jan 2015. The energy index is expressed in a number and is the result of a comprehensive analysis of a home combined with a calculation method. The analysis has to be carried out by an official energy advisor and is based on 150 characteristics of a home. The energy index is taken into account in the definition of the maximum rental price for social housing dwellings. In parallel a new energy label has been established. This energy label is expressed as a letter based on 10 characteristics of the home. It is considered as a tool to have a first indication of the energy efficiency of a home and has to be presented to new tenants (Rijksoverheid.nl, 2015a and Rijksoverheid.nl, 2015b). In addition to these two labels, Renda stressed that until 2025, the old energy label will still be used for the definition of the maximum rental price. Hence the Woonbond fears that this might confuse the tenants and miss the actual objectives (Renda, 2015).

Another measures which continued in 2014 is the "Acceleration" programme. Acceleration is a cooperation agreement between building companies and housing corporations for the realisation of the first 11,000 'zero-on-the-meter' homes. The idea behind the 'zero-on-the meter' concept is to use the energy bill to finance the renovation of homes into zero-energy homes. Building companies provide landlords with guarantees that the home has no energy costs after renovation. If roll-out is successful the government plans to complete 100,000 'zero-on-the meter' renovations by 2020. Four prototypes were delivered at the end of 2013. The objective for 2014 was to further develop the prototype in 1,000 homes and to reach industrialisation in 2015-2016 with the upgrading of 10,000 homes. By 2020 the government aims to have 50,000 to 100,000 homes upgraded. However in a

recent parliamentary response the Minister in charge indicated that a maximum of 350 prototypes would be finalised by the end of 2014, but that the 10,000 homes objective by 2016 was nonetheless not in jeopardy. Meeting the 50,000 homes objective by 2020 would represent an investment of 2.5 billion EUR and up to 9,000 jobs by 2020 (National Energy Efficiency Action Plan, 2014; Stroomversnelling.net, 2014 and Blok, 2014).

With regard to energy efficiency in other sectors, the Dutch government started working with some of them (i.e. metal, car reparation, rubber and chemicals, healthcare facilities, schools and public offices) on the development of "**lists of recognised measures**". These lists are supposed to help companies meet their obligation to implement energy efficiency measures as stated in the Environmental Management Law (*Wet milieubeheer*). The first batch of "recognised measures" were introduced in the legislative process in Jul and Aug 2014 and will enter into force during the summer of 2015. This will be followed by the development of lists for other sectors (Rijksoverheid.nl, 2014f).

In order to meet the obligation from the Environmental Management Law, the SER Energy Agreement set up a new **system of Energy Performance Assessment** (*Energie Prestatie Keuring system* - EPK). This system is supposed to support businesses not covered by multiannual energy-efficiency agreements<sup>6</sup> in their efforts to implement energy efficiency measures. Private energy advisors provide a first scan of the energy efficiency performance of a business in order to guide entrepreneurs towards the most appropriate measures. This system was tested under different pilot formats in 2014 and a first evaluation report (Harmelink, 2014) was published in Aug 2014. This system will continue to be tested in 2015 and 2016 (SER, 2014c).

Another important measure was the signature of a **new multiannual agreement for sustainable greenhouses** for the period 2014-2020 on 3 Jul 2014. The objective of this agreement between the industry and the government is to make all new greenhouses climate neutral by 2020 and decrease the fossil fuel consumption of existing greenhouses by 50% by 2020 compared to 2011. The focus of this new plan is on increased energy savings, increased use of geothermal energy, energy savings and innovation. One of the objectives is to source 5% of total energy consumption from geothermal plants by 2020. The total budget for this multiannual agreement split as follows: 10 million EUR for research and knowledge exchange (provided both by the private and public sector); 38 million EUR for incentive measures in the area of energy innovation, energy efficiency and renewable energy; 3 million EUR for research projects related to innovation breakthrough and 97 million EUR as guaranties for geothermal projects (Rijksoverheid.nl, 2014g).

## 4.2.5 Renewable Energy

The share of renewables in gross final energy consumption was 4.5% in 2012 which is slightly below the indicative 2012 target of 4.7% set out by the Renewable Energy Directive (RED). The average annual growth rate was 11.5% between 2005 and 2012. A higher annual growth rate of 15.4% is needed between 2013 and 2020 to reach the 2020 target of 14% (EEA 2014a). The share of renewable electricity generation in final electricity consumption increased from 6.3% to 10.5% from 2005 to 2012, while the share of renewable heating increased from 2.0% to 3.4% (Eurostat, SHARES 2014).

As stated above, the Dutch objective is to reach 14% of renewables in gross final energy consumption by 2020. The SER Energy Agreement added to that the objective to reach 16% by 2023. The Key mechanism to support renewable energy in the Netherlands is the **Promotion of Sustainable Energy+ (SDE+)** scheme. SDE+ is a feed-in-tariff put in place in 2011 to support supporting renewable electricity, gas and heat generation. As explained on the RVO website, producers receive

<sup>&</sup>lt;sup>6</sup> Multiannual energy-efficiency agreements are in place since 1992 in the Netherlands. These agreements are signed between the government and businesses, institutions and local authorities with the objective to improve the industrial energy efficiency. RVO reported in Nov 2014 that local authorities and non-ETS companies saved 10.5 PJ in 2013 compared to 2012 thanks to these agreements. This is equivalent to a 4% efficiency improvement. The agreements signed with the ETS sectors led to an energy saving of 12.3 PJ in 2013 compared to 2012 equivalent to a 2.1% efficiency improvement (RVO, 2014g).

financial compensation for the renewable energy they generate. SDE+ compensates producers for the unprofitable component of renewable energy generation (difference between the cost price of renewable energy and that of energy derived from fossil fuel) for a fixed number of years, depending on the technology used. The budget for the support of renewable energy in electricity and heat production in SDE+ will amount to 3.5 billion EUR in 2014(RVO, 2014i). Furthermore, the feed-in-tariff proposed by SDE+ favours renewable technologies producing at lower costs. Hence some stakeholders consider that new technologies, being relatively expensive, lack sufficient support and thus the chance for further cost reductions (EEA, 2014a and Tonneyck, 2013). Key changes to SDE+ in 2015 include:

- the subsidy for onshore wind projects will be based on the wind speed and the capacity of the wind turbine will not be taken into account anymore;
- a new category is created for wind turbines located on dikes; and
- SDE+ will be eligible for biomass co-firing in coal power plants (RVO, 2014e).

Under the SER Energy Agreement, the partners fixed the objective to source 4,450 MW from **offshore wind energy** by 2023 – compared to the 1,000 MW produced by the offshore wind energy park in 2013. The projection how to achieve this objective is presented in Table 4. The areas for the development of these windfarms were identified by the government in Dec 2013. The consultation on the draft implementation law started then in Apr 2014 with the aim to have the law applicable from 1 Jul 2015. On 26 Sep 2014 RVO announced that the government selected three new locations for offshore wind energy parks. The rationale was to develop only a few large wind parks rather than many smaller ones (RVO, 2014d). As mentioned under section 4.2.3, TenneT was appointed as responsible for the building and operating of Netherland's offshore power grid.

Start of tenders	Wind power	Operational
2015	450 MW	2019
2016	600 MW	2020
2017	700 MW	2021
2018	800 MW	2022
2019	900 MW	2023

#### Table 4 Planned projections for offshore wind energy development

With regard to onshore wind energy, the key development in 2014 include:

- the vision for onshore wind energy was published in Mar 2014 appointing 11 locations for large onshore wind park (Rijksoverheid, 2014h);
- the code of conduct for participation procedures when planning onshore wind energy projects was signed on 3 Sep 2014. This work was led by the Dutch Wind Energy Association (NWEA) and aims to ensure that the public is consulted in the development of wind farms (NWEA, 2014); and
- the Dutch provinces are the ones in charge of the spatial planning of the wind farms. Following different rounds of consultation all provinces had settled the locations for wind energy in their spatial plans by 1 Jan 2015. They are now working on the licensing of the wind farms (IPO, 2015).

With regard to biomass, the work on the definition of sustainability criteria continued in 2014. One of the objective is to have clear and acceptable criteria for the support to co-firing of up to 25 PJ biomass in coal power plants. In addition, the government published a letter on the additional value that can be extracted from biomass through cascading for bio-energy and other materials on 18 Jun 2014 (SER, 2014a and Kamp and Mansveld, 2014).

In terms of barriers for the development of renewable electricity, the key elements identified by the 2014 Keep on Track report (Spitzley, et al., 2014) include:

- the continuous change of strategy with regard to the support to renewable electricity. The SER Energy Agreement and its long term perspective might prevent such change in the future. However, the upcoming provincial elections (2015) might come in the way of its implementation;
- the uncertainty regarding the net-metering support scheme for solar installations;
- the modification of rules concerning the cumulating of support scheme options for large solar installations;
- the difficult access to finance was highlighted by developers of large scale commercial PV systems, wind developers, biogas & biomass operators as well as geothermal developers; and
- the SER Energy Agreement assume a considerable reduction of costs for the development of
  offshore wind energy (-40% over a period of 10 years). If these reduction do not occur, the
  strategy might be at risk.

## 4.2.6 Transport

GHG emissions as well as energy consumption from transport have increased between 1990 and 2012, both fluctuating at a rather constant level since 2005. The same holds for the proportion of these emissions among the Netherland's total emissions, reaching 17% in 2012 (Eurostat, tsdcc210 and tsdpc320). Average emissions for newly registered cars are very low in the Netherlands, with a level of 109.1  $CO_2$ /km. The level is the lowest in the EU and has decreased by 36%, at a higher rate than the EU average of 22% between 2005 and 2013 (Eurostat, tsdtr450). Fuel taxation in the Netherlands is above EU average. The road fuel excise duties on petrol are the highest among EU MS and the excise duties on diesel are the ninth highest (EEA 2014b).

Vehicle taxes in the Netherlands are only partly based on  $CO_2$  emissions. The registration tax that is levied on passenger cars and motorcycles is based on the price of the vehicle and its  $CO_2$  emissions. Cars with  $CO_2$  emissions at 50g  $CO_2$  /km or below are exempted from the ownership tax (ACEA, 2014). The Netherlands levies a time-based road toll for HVDs, with a weight of over 12t (CE Delft 2012).

In the area of transport, one of the main development in 2014 was the development of a Sustainable Fuel Vision (Jun 2014) by the SER partners from the Energy Agreement. This publication will be followed by a Sustainable Fuel Action Plan which was planned for the end of 2014 but has been delayed to early 2015. The objective of the Vision and Action Plan is to describe how transport modes can be made more efficient and which sustainable fuel has to be deployed at which point in time in order to contribute to the Dutch GHG reduction objective. The vision look at the long term objective of reducing GHG emission from the transport sector by 60% by 2050 compared to 1990 (Colofon, 2014 and Rijksoverheid.nl, 2014i).

In parallel to this long term development a series of changes were implemented in 2014. For example, fuel suppliers are obliged to blend transport fuels with a share of sustainable biofuels, from 4.25% in 2011 to 5.5% in 2014. Contributions made by biofuels produced from wastes, residues, non-food cellulosic material and lignocellulosic material are counted twice, which results in a relatively large share of biodiesel from used cooking oil, for example. Tax deductions scheme exist for investments in biofuel and hydrogen production facilities. The Action Plan Electric Mobility supports the purchase of electric vehicles if  $CO_2$  emissions are lower than 50 g $CO_2$ /km. The overall policy aim is to achieve 15,000 to 20,000 electric cars in 2015 and 1 million by 2025. A recent report analysing the impact of electric mobility in the Netherlands between 2008 and 2014 at least 1,300 jobs were created in that period for a total of 1,600 jobs. It is estimated that the electric transport sector made a turnover of over 380 million EUR in 2013, compared to around 60 million EUR in 2008. Currently, around 40,000 electric cars are in use in the Netherlands (EEA, 2014a and RVO, 2014f).

In parallel to these development a series of Green Deal connected to sustainable mobility have been signed. These include:

- Green Deal Zero Emissions for City Logistics;
- Green Deal CO<sub>2</sub> Reduction for Mobile Equipment; and
- Green Deal for Public Accessible Charging Point (De Weerd, 2014 and SER, 2014a).

# 5 Policy progress against Country Specific Recommendations (CSRs) issued 2013

The EU Commission provides Country Specific Recommendations (CSRs) for each MS for consideration and endorsement by the European Council. The recommendations are designed to address the major challenges in relation to the targets of the EU 2020 Strategy.

No CSRs have been issued in the climate and energy area for the Netherlands in 2014.

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