



National renewable energy action plan

Directive 2009/28/EC

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Introduction

Within the framework of Directive 2009/28/EC¹ (hereinafter also referred to as the Renewable Energy Directive), every Member State must draw up a national renewable energy action plan. This action plan must be submitted by the Member State to the European Commission by 30 June 2010 at the latest.

This action plan must comply with the mandatory model defined by the European Commission on 30 June 2009. Explanatory notes on the tables and numbers can be found in the mandatory model and the Frequently Asked Questions, as published by the European Commission on the Transparency Platform.

This action plan tentatively describes how the Netherlands intends to achieve the Renewable Energy Directive target of 14% renewable energy in 2020.

Responsibility for this action plan

This action plan is based on the following assumptions relating to the description of the policy and the data used;

1. Description of existing or announced policy

This action plan is based primarily on existing policy. Any announced policies have already been communicated through the usual channels. The policy/instruments will not be incorporated into this action plan until the usual announcements have been made and/or procedures completed. The announced policy incorporated in this action plan is subject to provisos, given the demissionary status of the Balkenende IV cabinet. This document describes the state of affairs as at April 2010.

2. Graphics and tables: reference projections and biomass availability

The figures quoted in this action plan (excluding paragraph 4.6, biomass availability) are derived from the Reference Projections - Energy and Emission 2010-2020 of the ECN/PBL². The projections provide input for policy information and policy evaluations in the context of national and international energy and climate policy³.

The figures for **biomass availability (paragraph 4.6)** are based on an estimate from a consortium comprising Procede Biomass, WUR and LEI. This estimate was produced for this action plan and is based on two studies which carried out an availability analysis for electricity and heat⁴, and transport⁵. These figures and assumptions were discussed in an inter-departmental expert workshop in September 2009, and were then incorporated into this action plan.

3. Indicative estimates based on current insights and policy

The Netherlands wishes to emphasise that the aforementioned quantities of renewable energy and gross final energy in this action plan are an indicative estimate, based on current perceptions and the current policy.

The sectoral targets for electricity, heating and cooling using renewable energy and the sectoral trajectories are therefore also estimates.

Finally, the current demissionary status of the Balkenende IV cabinet is also a significant factor. The approach adopted in this action plan is therefore tentative by nature. Decisions concerning the most desirable mix of sustainable options or the use of additional resources to achieve the European target will be taken by subsequent cabinets. Intended policy changes will be notified to the Commission in a timely manner.

¹ Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC.

² Reference Projections - Energy and Emission 2010-2020; Energy research Centre of the Netherlands and the Netherlands Environmental Assessment Agency, ECN-E--10-004, April 2010.

³ 'Figures included for the year 2005 are based on model outcomes. As a result, minor differences compared with the official national statistics from the Centraal Bureau voor de Statistiek [Statistics Netherlands] may occur.'

⁴ Beschikbaarheid van Nederlandse biomassa voor elektriciteit en warmte in 2020 [Availability of Dutch biomass for electricity and heat in 2020]; Jaap Koppejan, Wolter Elbersen, Marieke Meeusen and Prem Bindran, November 2009.

⁵ Can biofuels be sustainable by 2020? An assessment for an obligatory blending target

of 10% in the Netherlands; Prem Bindraban, Erwin Bulte, Sjaak Conijn Bas Eickhout,
Monique Hoogwijk, Marc Londo, January 2009.

1 Summary of national renewable energy policy



Energy situation

The current Dutch energy situation is characterised by a primary energy consumption of 3.3 EJ (2009). The main energy sources are natural gas (1.5 EJ), oil (1.3 EJ) and coal (0.3 EJ). Renewable energy sources currently make a contribution of 0.1 EJ (avoided primary).

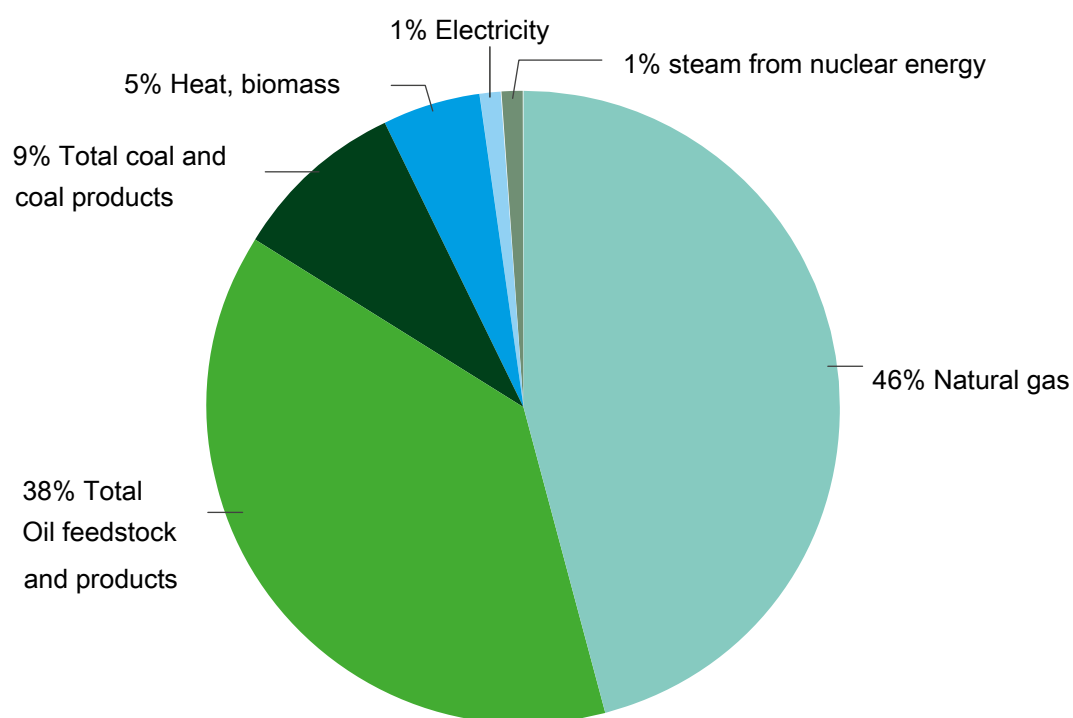


Figure 1 *Energy consumption in the Netherlands 2009: total 3.3 EJ (Source: CBS Statline)*

Strategy

In order to obtain sufficient energy from renewable sources, market players need to be provided with a stable investment climate with long-term prospects in the Netherlands. A vision, strategy and agenda for the medium-term (with long-term prospects up to 2020 and 2050) are set out in the 2008 energy report. Central policy themes in this report include economically efficient energy supply, a sustainable energy mix for the Netherlands and associated adequate infrastructure. The strategy for ensuring the creation of an energy supply in the Netherlands that can meet the demand for energy in a sustainable manner comprises the following three main elements:

- Making the supply of energy cleaner and more efficient through the encouragement of energy savings, the production of more renewable energy and the capture and storage of CO₂.
- The promotion of smoothly running energy markets in which consumers of energy occupy a central position and in which there is total freedom for energy innovations at central and local level.
- Creation of a healthy and stable investment climate for all energy options by defining a clear framework and procedures, with additional incentives where necessary.

This must result in a clean, affordable and secure energysupply. The Dutch government does not set out a blueprint for sustainable energy management, but provides targets and a framework, incentives and direction.

Less energy, more diversification

Energy saving is also a cornerstone of the energy policy.

The target for Clean and Efficient energy saving is 2% per annum.

Further diversification of the fuel mix is also required in the form of coal-fired and nuclear power stations. In the case of coal-fired power stations, the capture and storage of CO₂ (CCS) is essential in order to achieve the CO₂ emission reduction target. For this reason, the cabinet is driving forward the development of CCS. Various nuclear energy scenarios are also currently under consideration. The next cabinet will decide on these options.

Renewable energy

Along with energy savings and diversification, there are also good reasons for investing in renewable energy. The Dutch renewable energy policy is driven by the need to help tackle the climate problem, to safeguard a secure energy supply and to maintain the long-term affordability of energy. In addition, it is also a major incentive for innovation and economic activity.

Cabinet targets for 2020

The cabinet targets for 2020, as set out in the Clean and Efficient Work Programme are to enable the achievement of a 30% reduction in CO₂ in 2020 compared with 1990, a renewable energy share of 20% in 2020 and an annual energy saving of 2% as from 2011.

Avoided primary energy and gross final energy

The Dutch method for calculating renewable energy and the method from the Renewable Energy Directive differ from one another. The Dutch method for calculating the renewable energy contribution is known as the substitution method. This method examines what the primary energy consumption would be in a reference situation if no use were made of renewable energy. The method from the Renewable Energy Directive is based on the gross final energy (the denominator) and focuses on the component of this energy that is derived from renewable sources. The expected 14.5% gross final energy in 2020 in this action plan corresponds to 15.5% according to the substitution method.

Clean and Efficient strategy

The strategy aims to achieve the Clean and Efficient objectives in three phases;

- 1) Make advances using technologies and policy instruments that are already available.
- 2) Pave the way for further advances by working on options that will come to fruition over a number of years;
- 3) further innovations through the implementation of an innovation agenda for the medium and long term.

This strategy will be implemented by means of a broad and coherent portfolio of instruments (see 4.1).

Government and market working together

The government wishes to tackle these challenges together with society. By doing this, the government can build up greater momentum than it would by imposing measures on society. In the 'energy transition', the government and market work together, focusing particularly on the transition paths which offer the best opportunities for the Netherlands. Common goals and paths are defined by making covenants and agreements.

Central instruments

A number of instruments are central to the achievement of an increase in the renewable energy share;

- The Stimuleringsregeling Duurzame Energieproductie – SDE [Incentive Scheme for Sustainable Energy Production] is a financial instrument. Renewable energy in the electricity, heat and gas sectors is subsidised through this scheme.
- The Verplichting Biobrandstoffen [Biofuels Obligation] is an instrument which specifies a mandatory minimum share for petrol and diesel substitutes in the transport sector .
- The Rijkscoördinatieregeling - RCR [Government Coordination Scheme] facilitates the coordination of licences for major energy infrastructure projects and renewable energy projects. The aim of this scheme is to speed up the licensing process.
- The aim of the Wet algemene bepalingen omgevingsrecht - Wabo [law governing the general provisions of the Environment Act] is to speed up the licensing procedures for small-scale renewable energy installations and increase transparency.
- The aim of the 'Voorrang voor duurzaam' ['Priority for sustainable'] bill is to give priority to sustainable energy in the energy network in the event of congestion.

Policy instruments

The Reference Projections - Energy and Emission 2010-2020 are based on the projections for the long-term SDE which the Minister for Economic Affairs sent to the House in her letter of 17 April. These projections contain the indicative development of renewable electricity up to 2020, in which cost effectiveness is a key condition: large-scale additional burning and combined burning of biomass in coal-fired power stations, onshore and offshore wind energy are the dominant aspects of this scenario.

Target range

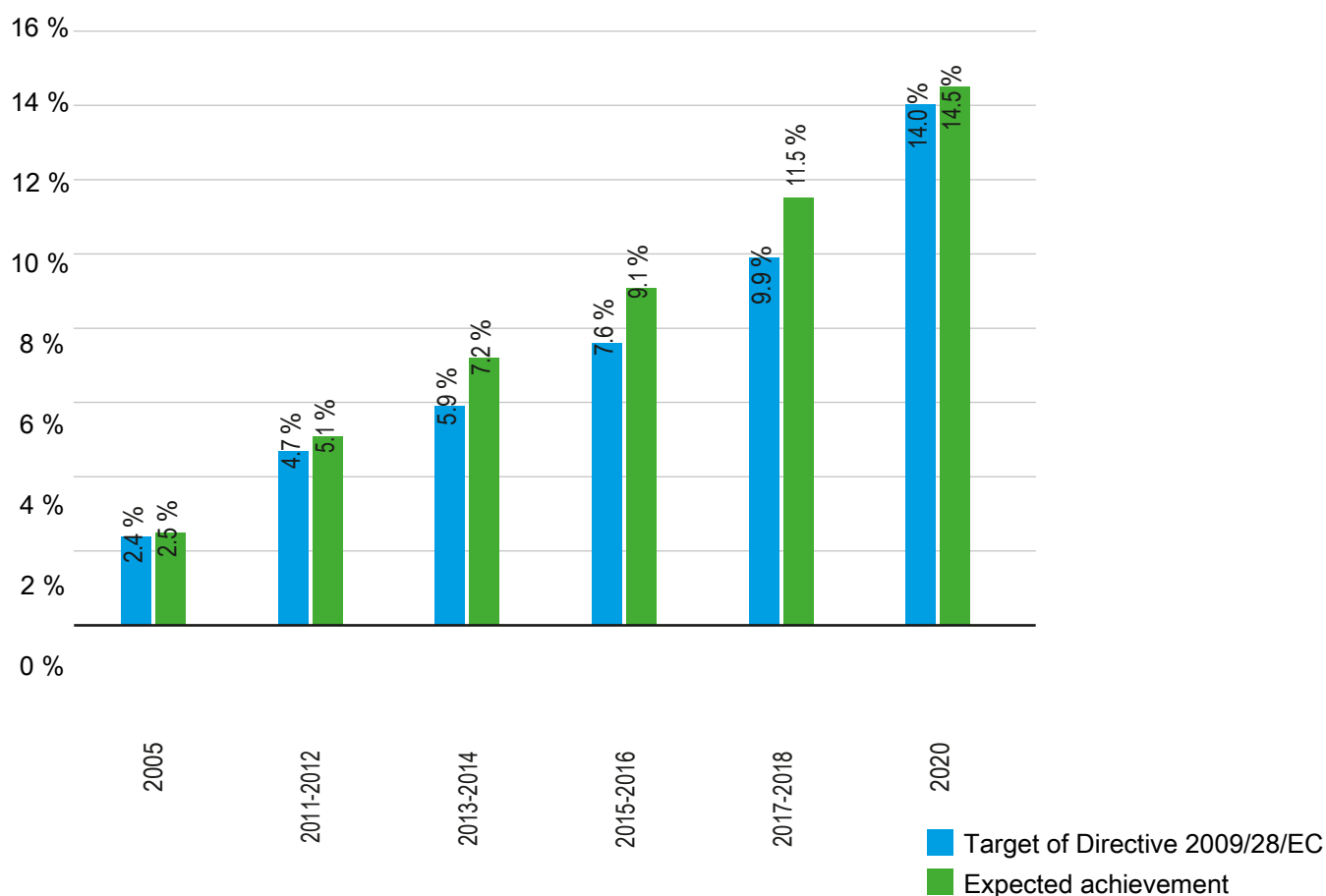


Figure 2 Target of the Renewable Energy Directive and expected achievement

Figure 2 shows the expected achievement and the indicative targets from the Renewable Energy Directive. Nederland expects to achieve the target from the Renewable Energy Directive for the general share of energy from renewable sources. This target from the Renewable Energy Directive for 2020 is 14.0%. The expectation is that the the renewable energy share could be 14.5% in 2020.

With regard to the indicative trajectory, the Netherlands expects an achievement above this trajectory up to 2018. The indicative figure for 2011-2012 is 4.7%. The expected average achievement for the year 2011-2012 is 5.1%.

The target from the Renewable Energy Directive of 10.0% within the transport sector is also expected to be achieved. The expected achievement on the basis of the reference projections and additional assumptions regarding the share of fuels in Article 21(2) of the Renewable Energy Directive is 10.3% renewable energy within the transport sector.

Uncertainties

Long-term projections are notoriously uncertain. For this reason, ECN/PBL assume a range within which the renewable energy share will move. The range reflects a 95% certainty interval and amounts to 12% - 15%, whereby the projected 14.5% in this action plan lies at the upper end of this range⁶.

It should be noted here that this share is achievable, but only on condition that the construction of sustainable options is not delayed and an adequate budget is made available to finance these options.

⁶ The reference projections describe the uncertainty analysis in more detail.

2 Expected final energy consumption 2010-2020



Gross final energy demand

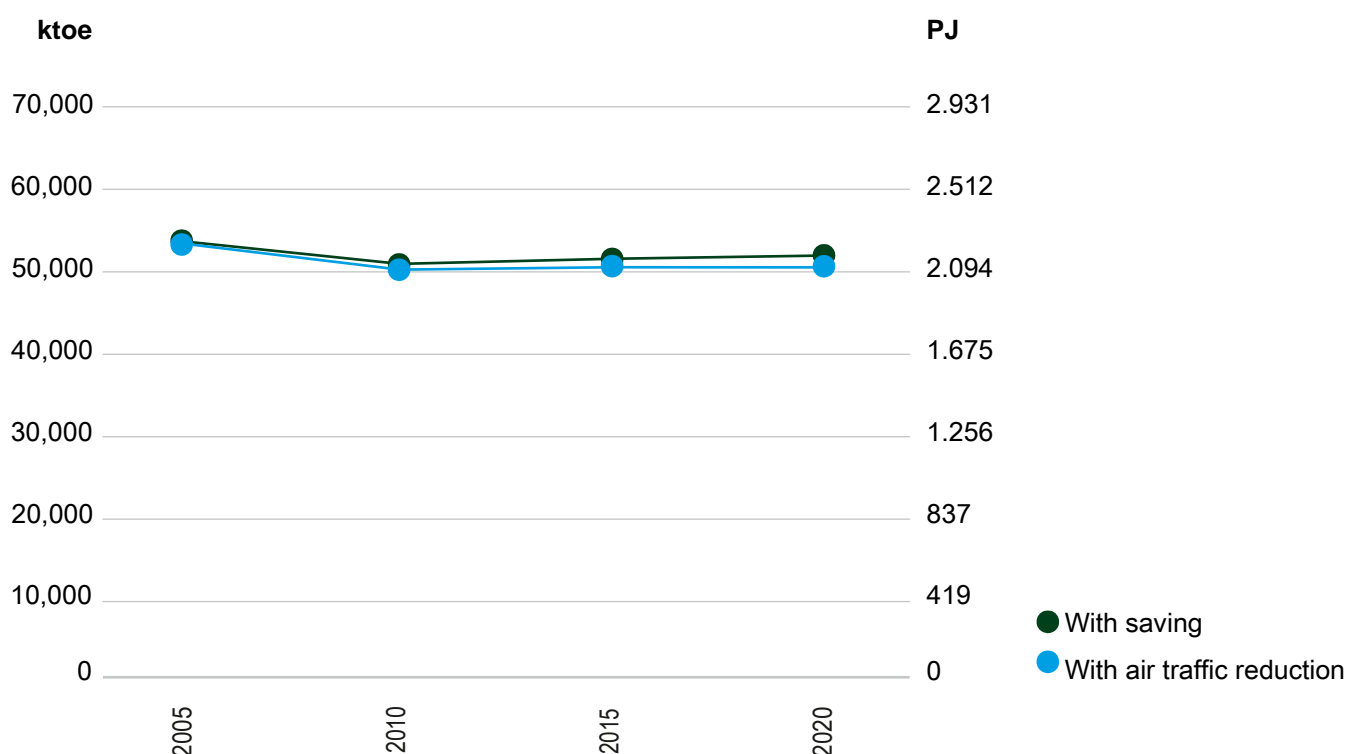


Figure 3 Gross final energy demand in the Netherlands

Figure 3 shows the gross final energy demand of the Netherlands. The national energy-saving policy forms an inseparable part of the entire package of policy measures, as defined in the reference projections and based in particular on measures defined before 2009. These reference projections will also form the basis of other estimates which are submitted by the Netherlands to the Commission, particularly pursuant to the Directives on energy services and energy performance of buildings. For this reason, the 'without saving' reference scenario is not presented in this action plan.

Due to the national energy-saving policy, the results of which are shown in the 'with saving' variant, the national gross final consumption in 2020 will be 52 Mtoe (2.2 EJ). Due to the reduction in air traffic, the gross final energy demand in accordance with Article 5 of the Renewable Energy Directive will be 51 Mtoe (2.1 EJ) in 2020. The reduction in air traffic (in accordance with Article 5(6) is applicable because the quantity of energy consumed in aviation as a share of the gross final consumption in the Netherlands is 9.2%. This is more than the limit value of 6.18% in accordance with Article 5(6). The Netherlands is therefore eligible for the aircraft correction.

Gross final consumption in three sectors

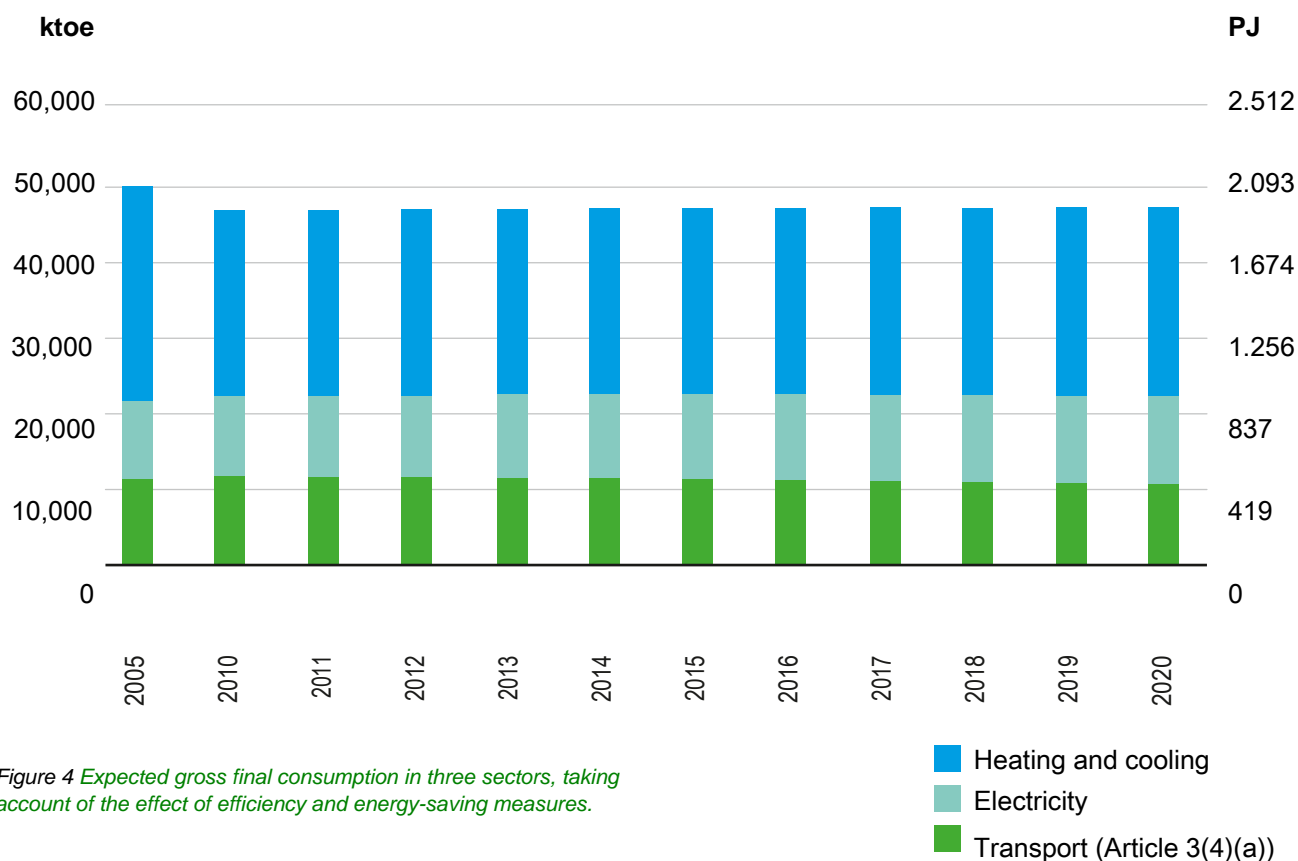


Figure 4 shows the energy consumption share for three sectors (transport, electricity and heating and cooling) for the years 2005 and 2010 to 2020. The expectation is that 25 Mtoe (1.0 EJ) will be consumed in the heating and cooling sector in 2020. Electricity (11.7 Mtoe (0.5 EJ) in 2020) and transport (10.6 Mtoe (0.4 EJ) in 2020) make a smaller contribution to the energy consumption. Table 1 shows the data on which Figures 3 and 4 are based.

Table 1: Expected gross final consumption of energy of the Netherlands from electricity, heating and cooling and transport to 2020, taking account of the effect of energy efficiency measures and energy savings 2010-2020 (ktoe)

| | 2005 | 2010 | | 2011 | | 2012 | | 2013 | | 2014 | | |
|--|-----------|--------------------|------------------------------|--------------------|------------------------------|--------------------|------------------------------|--------------------|------------------------------|--------------------|------------------------------|--|
| | Base year | Reference scenario | Additional energy efficiency | Reference scenario | Additional energy efficiency | Reference scenario | Additional energy efficiency | Reference scenario | Additional energy efficiency | Reference scenario | Additional energy efficiency | |
| (1) Heating and cooling | 28,436 | | 24,612 | | 24,614 | | 24,615 | | 24,616 | | 24,617 | |
| (2) Electricity | 10,347 | | 10,627 | | 10,743 | | 10,860 | | 10,976 | | 11,093 | |
| (3) Transport as in Article 3(4)(a) | 11,351 | | 11,699 | | 11,643 | | 11,587 | | 11,531 | | 11,475 | |
| (4) Gross final energy consumption | 54,010 | | 51,008 | | 51,146 | | 51,284 | | 51,422 | | 51,560 | |
| Final consumption for aviation | 3,630 | | 3,920 | | 4,004 | | 4,088 | | 4,172 | | 4,256 | |
| Lowering of limit value for aviation Article 5(6) | 293 | | 768 | | 843 | | 919 | | 994 | | 1,069 | |
| TOTAL consumption following lowering of the limit value for aviation | 53,717 | | 50,240 | | 50,303 | | 50,366 | | 50,428 | | 50,491 | |

| | | 2015 | | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | |
|--|--|--------------------|------------------------------|--------------------|------------------------------|--------------------|------------------------------|--------------------|------------------------------|--------------------|------------------------------|--------------------|------------------------------|
| | | Reference scenario | Additional energy efficiency | Reference scenario | Additional energy efficiency | Reference scenario | Additional energy efficiency | Reference scenario | Additional energy efficiency | Reference scenario | Additional energy efficiency | Reference scenario | Additional energy efficiency |
| | (1) Heating and cooling | | 24,618 | | 24,692 | | 24,766 | | 24,840 | | 24,914 | | 24,989 |
| | (2) Electricity | | 11,210 | | 11,304 | | 11,398 | | 11,493 | | 11,587 | | 11,681 |
| | (3) Transport as in Article 3(4)(a) | | 11,419 | | 11,262 | | 11,105 | | 10,948 | | 10,791 | | 10,634 |
| | (4) Gross final energy consumption | | 51,698 | | 51,776 | | 51,854 | | 51,932 | | 52,010 | | 52,088 |
| | Final consumption for aviation | | | | | | | | | | | | |
| | Lowering of limit value for aviation Article 5(6) | | 4,339 | | 4,426 | | 4,514 | | 4,601 | | 4,688 | | 4,775 |
| | | | 1,144 | | 1,227 | | 1,309 | | 1,391 | | 1,473 | | 1,556 |
| | TOTAL consumption following lowering of the limit value for aviation | | 50,554 | | 50,550 | | 50,545 | | 50,541 | | 50,536 | | 50,532 |

3 *Renewable energy targets and trajectories*



3.1 National overall targets

Table 2 shows the national overall targets for the Netherlands. In 2005, the national share for energy from renewable sources was 2.4%. The binding national overall target for 2020 is 14.0%.

With an expected gross final energy consumption in 2020 of 50.5 Mtoe (2.1 EJ), a share of 14.0% corresponds to 7.1 Mtoe (0.30 EJ).

Table 2: National overall targets for the share of energy from renewable sources in gross final consumption of energy in 2005 and 2020.

| | |
|--|--------|
| (A) Share of energy from renewable sources in gross final consumption of energy in 2005 (T2005) (%) | 2.4 % |
| (B) Targets for energy from renewable sources in gross final consumption of energy in 2020 (T2020) (%) | 14.0 % |
| (C) Expected total adjusted energy consumption in 2020 (from Table 1, final cell) (ktoe) | 50,532 |
| (D) Expected amount of energy from renewable sources corresponding to the 2020 target (calculated as B x C) (ktoe) | |
| 2020 (berekend als B x C) (ktoe) | 7,074 |

3.2 Sectoral targets and trajectories

Changes in share of renewable energy per sector

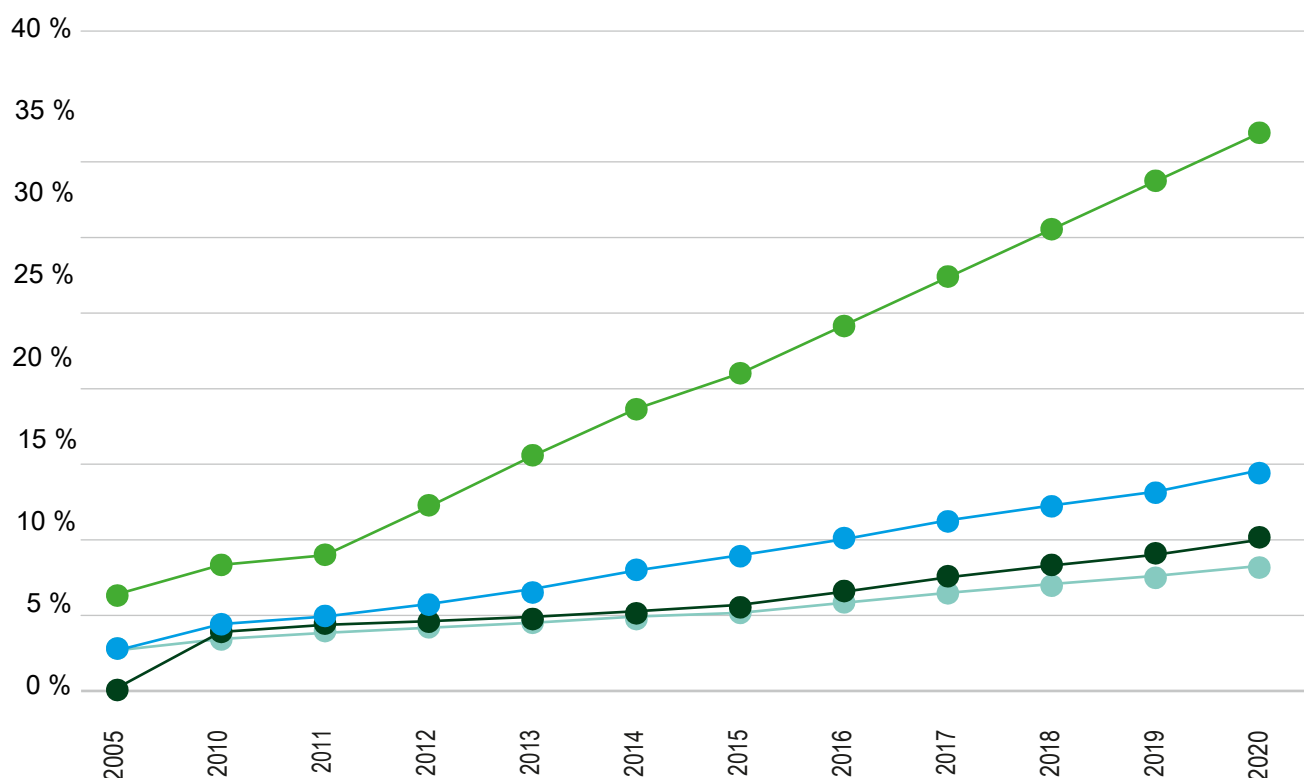


Figure 5 Changes in share of renewable energy per sector and total share.

- Renewable energy in electricity sector (%)
- Overall share of renewable energy (%)
- Renewable energy in transport (%)
- Unlabeled series (%)

Renewable energy in heating and cooling (%)

Figure 5 shows the changes in the share of renewable energy for the three sectors and the overall share. In 2005, the share of renewable energy for the heating and cooling sector was 2.5%, for the electricity sector 6.0% and for the transport sector 0.1%. For 2020, the expected share in the heating and cooling sector is 8.7%, the electricity sector 37.0% (in relation to gross electricity production) and the transport sector 10.3%. The overall share of renewable energy in the energy sector will therefore increase from 2.4%⁷ in 2005 to 14.5% in 2020.

In Figure 5, the share of renewable energy in the transport sector takes account of

- the double counting (in accordance with Article 21(2)) for biofuels based on waste, residues, non-food cellulose material and ligno-cellulosic material; and
- the multiplication by 2.5 for the electricity share within the transport sector.

These two multiplication factors in accordance with the definitions (Article 2) are not taken into account in the overall renewable energy share.

Targets and indicative trajectory

Table 3 shows the underlying data for Figures 2 and 5. This relates to the national targets for 2020 and the estimated trajectory for energy from renewable sources for the three sectors.

Table 3: National targets for 2020 and estimated trajectory for energy from renewable sources in heating and cooling, electricity and transport.

| | 2005 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| RES-H&C (%) | 2.5 % | 3.7 % | 4.0 % | 4.4 % | 4.8 % | 5.2 % | 5.6 % | 6.2 % | 6.9 % | 7.5 % | 8.1 % | 8.7 % |
| RES-E (%) | 6.0 % | 8.6 % | 9.1 % | 12.5 % | 15.3 % | 19.0 % | 21.0 % | 24.4 % | 27.6 % | 30.8 % | 33.9 % | 37.0 % |
| HEB-T (%) | 0.1 % | 4.1 % | 4.2 % | 4.6 % | 5.1 % | 5.6 % | 6.0 % | 6.8 % | 7.7 % | 8.5 % | 9.4 % | 10.3 % |
| Overall RES share (%) | 2.5 % | 4.2 % | 4.6 % | 5.6 % | 6.6 % | 7.7 % | 8.5 % | 9.7 % | 10.9 % | 12.1 % | 13.3 % | 14.5 % |
| Of which via cooperation mechanism (%) | | | | | | | | | | | | |

| As Part B of Annex I of the Directive | 2011-2012 | | 2013-2014 | | 2015-2016 | | 2017-2018 | | 2020 | |
|---------------------------------------|-------------------------------|--|-------------------------------|--|-------------------------------|--|-------------------------------|--|--------|--|
| | S2005 + 20 % (S2020-S2005) | | S2005 + 30 % (S2020-S2005) | | S2005 + 45 % (S2020-S2005) | | S2005 + 65 % (S2020-S2005) | | S2020 | |
| Minimum trajectory RES (%) | 4.7 % | | 5.9 % | | 7.6 % | | 9.9 % | | 14.0 % | |
| Minimum trajectory RES (ktoe) | 2.505 | | 3.102 | | 3.984 | | 5.134 | | 7.074 | |

⁷ Or 2.5% according to the model outcome, see comment in responsibility.

Renewable energy per sector in final consumption of energy

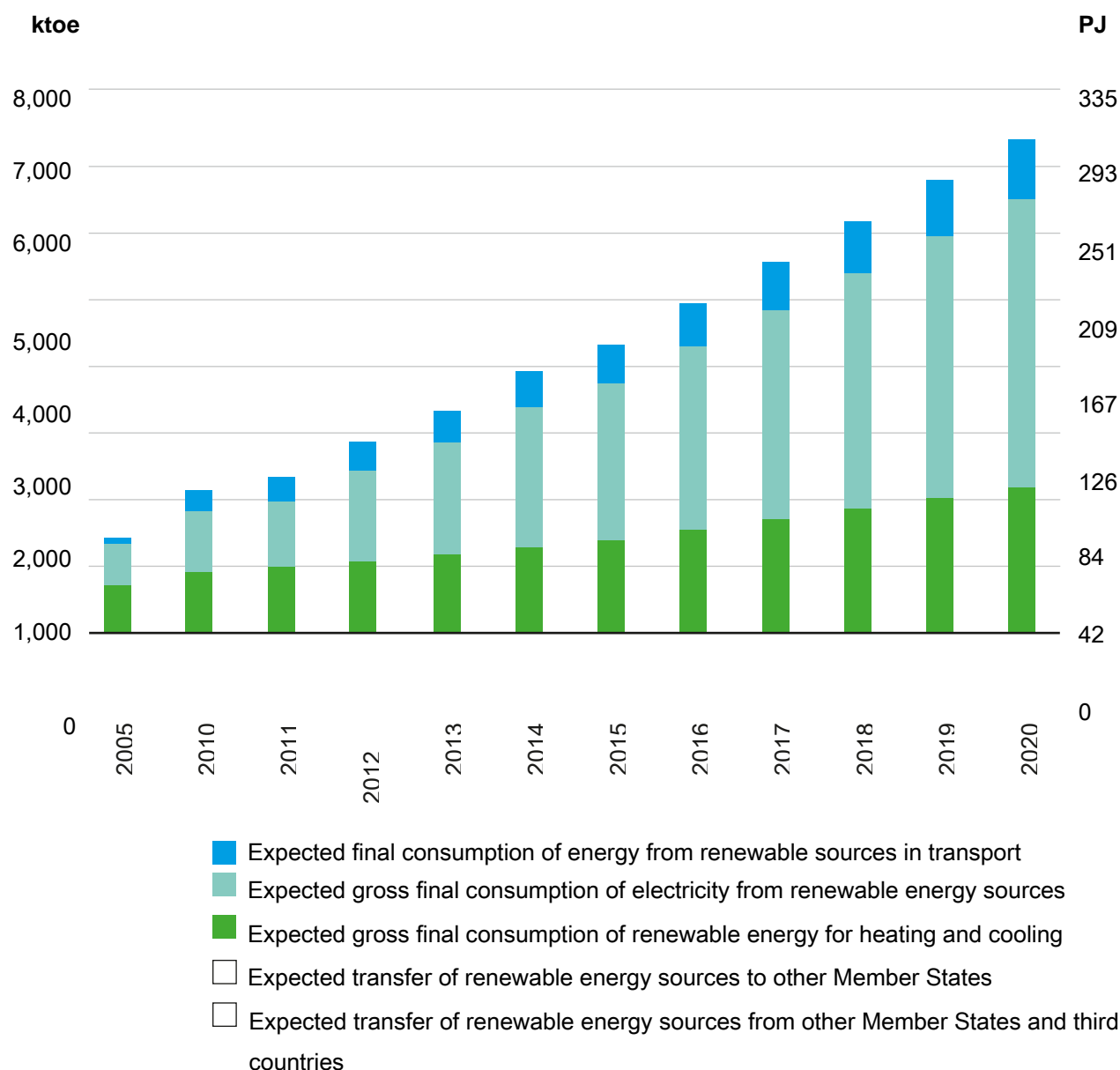


Figure 6 Contribution of renewable energy per sector and for cooperation mechanisms.

Figure 6 is a graphical representation of Table 4a. It shows the absolute contribution of the three sectors and the cooperation mechanisms to the total amount of renewable energy. In 2005, the contribution of renewable energy came particularly from the sectors of heating and cooling (0.72 Mtoe, 30 PJ) and electricity (0.62 Mtoe, 26 PJ). In 2020, these sectors are expected to contribute 2.2 Mtoe (91 PJ) and 4.3 Mtoe (181 PJ) respectively.

sector will increase from 0.01 Mtoe (0.3 PJ) in 2005 to 0.91 Mtoe (38 PJ) in 2020 (without double counting).

The expected renewable final consumption in the transport

It should be noted that, in terms of the overall target from the Renewable Energy Directive (14.0% in 2020), gas, electricity and hydrogen count towards the contribution for the transport sector by only a factor of one. No double counting is involved here.

In terms of cooperation mechanisms such as statistical transfer, no national policy currently exists, although the Netherlands is open to proposals and ideas from other Member States. For this reason, the statistical transfer to Member States and from Member States is currently set to zero.

Renewable transport fuels

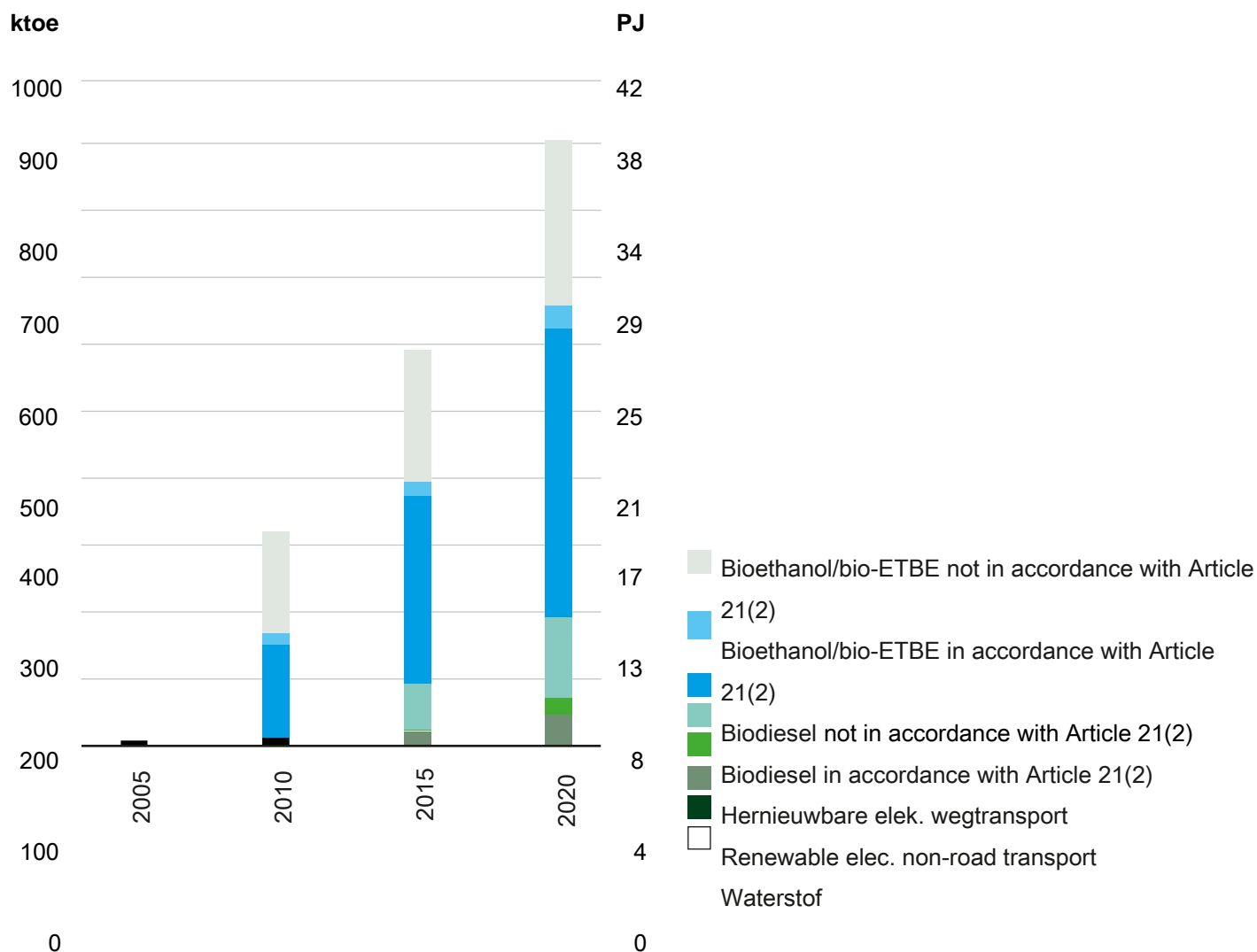


Figure 7 Contribution of renewable energy to the transport sector.

Figure 7 and Table 4b show the calculation of the amount of renewable energy in the transport sector.

These projections are based on existing policy from previous years. The biofuel policy is to be formulated in the spring of 2010 for the next few years and has therefore not been taken into account in these projections.

Including the double counting, 1.10 Mtoe (46 PJ) of

renewable energy will be consumed in the transport sector in 2020. Exclusief de dubbeltellingen is dit 0,91 Mtoe (38 PJ).

The total contributions of the double-counting biofuels in 2020 are expected to amount to 0.16 Mtoe (6.5 PJ). This relates to 0.03 Mtoe (1.4 PJ) for Article 21(2) petrol substitutes such as bioethanol/bio-ETBE and 0.12 Mtoe (5.1 PJ) for Article 21(2) biodiesel.

In 2020, renewable electricity in road transport will amount to 0.02 Mtoe (1.0 PJ). In accordance with Article 3 of the Directive, this is multiplied by a factor of 2.5. For non-road transport (primarily trams and trolleybuses), the Netherlands expects a contribution of 0.05 Mtoe (2.0 PJ) in 2020. This subsector is multiplied by a factor of one in the transport target..

Table 4a: Calculation table for the renewable energy contribution of each sector to the final energy consumption (ktoe)

| | 2005 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| (A) Expected gross final consumption of renewable energy for heating and cooling | 717 | 906 | 987 | 1,076 | 1,172 | 1,276 | 1,380 | 1,540 | 1,700 | 1,860 | 2,019 | 2,179 |
| (B) Expected gross final consumption of electricity from renewable energy sources | 622 | 915 | 981 | 1,357 | 1,683 | 2,108 | 2,360 | 2,753 | 3,146 | 3,540 | 3,933 | 4,326 |
| (C) Expected final consumption of energy from renewable sources in transport | 8 | 319 | 374 | 428 | 482 | 537 | 591 | 654 | 717 | 780 | 842 | 905 |
| (D) Expected use of renewable energy sources | 1,339 | 2,128 | 2,328 | 2,845 | 3,319 | 3,900 | 4,307 | 4,914 | 5,520 | 6,127 | 6,733 | 7,340 |
| (E) Expected transfer of renewable energy sources to other Member States | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (F) Expected transfer of renewable energy sources from other Member States and third countries | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (G) Expected consumption of renewable energy sources adjusted for targets (D)-(E)+(F) | 1,339 | 2,128 | 2,328 | 2,845 | 3,319 | 3,900 | 4,307 | 4,914 | 5,520 | 6,127 | 6,733 | 7,340 |

Table 4b: Calculation table for the share of renewable energy in transport (ktoe)

| | 2005 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|------|------|------|------|------|-------|-------|
| (C) Expected consumption of renewable energy sources | 8 | 319 | 430 | 459 | 507 | 556 | 591 | 654 | 717 | 780 | 842 | 905 |
| (H) Expected consumption of electricity from renewable energy sources in road transport | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 6 | 11 | 15 | 20 | 24 |
| (I) Expected consumption of biofuels from waste, residues, non-food cellulose material and ligno-cellulosic material for transport | 0 | 156 | 63 | 68 | 77 | 85 | 92 | 105 | 117 | 130 | 143 | 155 |
| (J) Expected contribution from renewable energy sources to transport for the targets for transport: (C)+(2.5-1) x(H)+(2-1)x(I) | 8 | 475 | 494 | 528 | 585 | 643 | 685 | 768 | 850 | 932 | 1,014 | 1,097 |

4 *Measures for achieving targets*

4.1 Overview of all measures and policy to promote the use of energy from renewable sources

Table 5 shows an overview of national policy and measures. The measures are presented in the order of their occurrence in this document. The objective of the measures is indicated, along with the Articles from the Directive which are supplemented and the paragraph in which additional information is provided on the measure concerned.



Table 5a: Overview of all policies and measures.

| | Name and reference of the measure | Type of measure | Expected result | Target group and/or activity | |
|-----|---|-----------------|---|--------------------------------------|--|
| 1. | Energy report 2008 | Soft | Behavioural change, installed i capacity and generated energy | Miscellaneous | |
| 2. | Clean and Efficient policy programme | Soft | Behavioural change, installed i capacity and generated energy | Government | |
| 3. | Government coordination scheme | Regulatory | Installed capacity | Government | |
| 4. | Wabo | Regulatory | Installed capacity | Government | |
| 5. | EPC | Regulatory | Installed capacity | Government, planners, i architects | |
| 6. | Climate agreement between the Municipal authorities and Government | Soft | Installed capacity | Government | |
| 7. | Climate-energy agreement between the government and provinces | Soft | Installed capacity | Government | |
| 8. | National Action Plan i Wind energy | Soft | Behavioural change, installed i capacity and generated energy | Miscellaneous | |
| 9. | Priority for sustainable | Regulatory | Generated energy | Energy producers | |
| 10. | Gas Act and Electricity Act | Regulatory | Generated energy | Energy producers and : carriers | |
| 11. | SDE: Incentives for sustainable i energy production | Financial | Generated energy | Energy producers (incl. i consumers) | |
| 12. | MEP | Financial | Generated energy | Energy producers | |
| 13. | OVIMEP | Financial | Generated energy | Energy producers | |
| 14. | EIA: Energy investment deduction (Energie investeringsaftrek - EIA) | Financial | Installed capacity | Energy producers | |
| 15. | IMIA/VAIMIL | Financial | Installed capacity | Energy producers | |
| 16. | Green investment | Financial | Installed capacity | Energy producers and : investors | |
| 17. | Energy innovation agenda | Financial | Installed capacity, generated i energy, energy innovation | Energy producers | |
| 18. | Sustainable heat subsidy scheme | Financial | Installed capacity | End users | |
| 19. | Risk ' cover for geothermal energy projects | Financial | Installed capacity | Energy producers | |
| 20. | Biofuels obligation | Regulatory | Generated energy | Traders in transport fuels | |

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|-----|---|--------------------|--------------------|---|--|
| 21. | TAB: Filling stations for alternative fuels | Financial | Installed capacity | Sales organisations for transport fuels | |
| 22. | IBB: Innovative biofuels | Financial | Installed capacity | Producers biofuels for transport | |
| 23. | Action Plan for Electric Driving; | Soft and financial | Behavioural change | Investors, end users, government | |

| Objective | Reference to Directive | Existing or planned | Start and end date of the measure | Reference (paragraph) |
|---|-------------------------------|---------------------|---|-----------------------|
| Policy programme | | Existing | 2008 | Summary |
| Policy programme | | Existing | 2007 - 2011 | Summary |
| Shorten procedures for setting up renewable ; energy projects | Article 13(1). | Existing | 2008,- | 4.2.1 |
| Shorten procedures for setting up renewable ; energy projects | Article 13(1) | Existing | 2010,- | 4.2.1 |
| Reduction in energy consumption in built environment and ; production of renewable energy | Article 13(6) ; | Existing | 1995,- | 4.2.3 |
| Room for renewable energy | Article 13(3) ; Article 14 | Existing | 2007 - 2011 | 4.2.3 |
| Room for renewable energy | Article 13, Article 14 | Existing | 2009,-2011 | 4.2.3 |
| Policy programme | | Existing | 2008 | 4.2.1 |
| Priority for renewable energy in network connection ; and transport | Article 16(2) | Existing | 2010,- | 4.2.6 |
| Non-discriminatory treatment of renewable energy | Article 16 | Existing | Gas Act 2000, Electricity Act 1998,- | 4.2.7 |
| Subsidy on produced renewable energy | | Existing | 2008,- | 4.3 |
| Subsidy on produced renewable energy | | Existing | 2003 - 2006 (opening up of regulation) | |
| Subsidy on produced renewable energy | | Existing | 2006-2007 (opening up of regulation) | 4.3 |
| Reduction in charges on fixed assets for investment | | Existing | 2001,- | 4.3 |
| Reduction in charges on fixed assets for investment | | Existing | MIA: 2000, Vamil: 1991,- | 4.3 |
| Reduction in charges on fixed assets for investment | | Existing | 1995,- | 4.3 |
| Incentives for innovations relating to renewable energy | | Existing | 2008-2012 | 4.3 |

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Government and market working together

Covenants and the energy transition play a part in the national energy policy. Covenants and activities of the energy transition are specified at the designated places in this action plan. An overview of the following covenants is set out below.

Table 5b: Overview of covenants

| Covenant | Datum | Ondertekenaars |
|--|---------------|---|
| Meerjarenafspraken energie- efficiency (MJA's) | Various years | MJA1: Supermarkets and Netherlands Railway Company; MEE: ETS undertakings; MJA3: Non-ETS undertakings; MJA-e+: Flower bulb and bulb flower and mushroom production |
| Climate agreement between the municipal authorities and government | November 2007 | VNG [Association of Netherlands Municipalities] and the Government |
| More With Less | January 2008 | Bouwend Nederland [Dutch Construction and Infrastructure Federation], UNETO-VNI [Business Organisation for the installation and technical retail sector], EnergieNed, Vereniging voor Marktwerving in Energie (VME) [Association for Market Operation and Energy] and the Government. |
| Spring Agreement on Energy Saving in | April 2008 | Bouwend Nederland, Neprom [Association of Dutch Property Developers], NVB [Dutch Banking Association] and the Government |
| Convenant ' Schone en Zuinige Agrosectoren' | Juni 2008 | LTO Nederland [Dutch Federation of Agriculture and Horticulture], KAvB [Royal General Bulb Growers' Association], LTO glaskracht [LTO Greenhouse Growers' Association], Productschap Tuinbouw [Horticulture Marketing Board], Productschap Akkerbouw [Arable Farming Marketing Board], Platform Hout in Nederland [Platform for Wood in the Netherlands], BVOR [Industry Association for Organic Residues], Bosschap [Forestry Board], Nevedi [Dutch Association of the Animal Feed Industry], FNLI [Federation of the Dutch Food and Grocery Industry], Platform Agrologistiek, NZO [Dutch Dairy Association] and the Government |
| Covenant on Energy Saving in the corporate sector | October 2008 | Aedes [national body promoting the interests of social housing organisations in the Netherlands], Woonbond [Dutch Tenants' Association] and the Government |
| Sectoral Energy Agreement 2008 - 2020 | October 2008 | EnergieNed, Vereniging voor Marktwerving in Energie VME, Netbeheer Nederland [Dutch Association of Energy Network Operators] and the Government |
| Sectoral Agreement: Duurzaamheid in Sustainability | December 2008 | ANWB [Royal Dutch Touring Club], RAI [The Netherlands Association of Bicycle and Automobile Industries], B OVAG [Branch Organisation for the Dutch Motor Car Industry], VNA [Association of Dutch Car Lease Companies], KNV [Royal Dutch Transport Association], TLN [Dutch Transport Operators Association], EVO [Association of Logistics Operators], CBRB [Central Office for Rhine and Inland Navigation], NS reizigers [Netherlands Railways Passenger Division], Havenbedrijf Rotterdam [Rotterdam Port Authority], Schiphol Group, KLM [Royal Dutch Airlines], PDM [Project Development and Management Company] and the Government |
| Climate Energy Agreement between the Provinces | january 2009 | IPO [Association of Provincial Authorities] and the Government and |

Targets

- Achieve energy efficiency improvement in companies and institutions; within the port and in the chain
-
- Contribute to the achievement of Clean and Efficient targets
 - offer incentives for and facilitate renewable energy in housing, municipal buildings and energy and waste businesses
 - Designation of land-use plans for the production of Renewable Energy
 - Additional energy saving in existing buildings of 100 PJ in 2020.
-
- Compared with building-related energy consumption in accordance with the EPC 2007 requirement:
 - 25 % lower standardised energy consumption in 2011
 - 50% lower standardised energy consumption in 2015
 - CO₂ reduction: 3.5-4.5 Mtoe in 2020 compared with 1990
 - Reduction in other greenhouse gases: 4-6 Mtoe CO₂ equivalents in 2020
 - Renewable energy:
 - 200 PJ in 2020 from domestic biomass
 - 12 PJ in 2020 from wind energy
 - Improvement of 2% energy efficiency per annum
 - In accordance with More with Less and Spring Agreement
 - Additional energy-saving measures; 24 PJ saving in 2020
 - Contribution to the achievement of the climate and energy targets
 - Agreements on efforts to achieve targets for offshore and onshore wind, biomass, solar photovoltaic systems, CCS, heat, and infrastructure
 - Sustainable mobility: reduce CO₂ emissions and energy consumption
 - Contribute to the achievement of Clean and Efficient targets

Within the Energy Transition, businesses, government, knowledge institutions and business organisations work together to ensure that the energy supply in 2050 is sustainable. Energy is then clean, affordable for everyone and in continuous supply. Energy Transition brings parties together and ensures that brainpower is combined. The Energy Transition streamlines legislation and regulation and provides financial support for potentially successful projects.

Seven topics were jointly defined as a focus for the Energy Transition in order to achieve a sustainable energy supply. These were chosen because they offer the Netherlands significant economic opportunities and are genuinely viable for the Netherlands.



Tabel 5c: Overview of 'Energy Transition topics

| Topic | Explanatory note |
|---|--|
| Duurzame Mobiliteit [Sustainable Mobility] | The Sustainable Mobility Platform is working on clean and more climate-neutral fuels, clean and efficient vehicles and more efficient use of vehicles. |
| Groene Grondstoffen [Green Feedstock] | The Green Feedstock Platform is aiming to replace 30% of fossil-based feedstock in the Netherlands with green feedstock by 2030. This will result in fewer CO ₂ emissions and less dependency on oil, coal and natural gas. |
| Ketenefficiëntie [Efficiency in the Chain] | The Efficiency in the Chain Platform aims to achieve an annual saving of 150 to 180 PJ in the product and production chains by around 2030 and approx. '240 to 300 PJ by around 2050. |
| Nieuw Gas [New Gas] | The New Gas Platform is taking the lead in the implementation of sustainable gas management. In terms of primary energy supply, the Netherlands is still approximately 50% dependent on natural gas. |
| Duurzame Elektriciteit [Sustainable Electricity] | The Sustainable Electricity Supply Platform has reached the conclusion that it is possible to meet the demand for electricity in the Netherlands virtually without CO ₂ emissions. The Platform believes that a 40 per cent share of renewable electricity by 2020 is a realistic target. |
| Gebouwde Omgeving [Built Environment] | The Platform EnergieTransitie Gebouwde Omgeving (PeGO) [Energy Transition Built Environment Platform] aims to achieve a 50 per cent energy reduction in the built environment within 20 years (by 2030). The Platform intends to achieve this by implementing energy-saving measures on a broad scale and by using sustainable energy. |
| Kas als Energiebron | From the Glasshouse as an Energy Source Platform, the ambition of the glasshouse horticulture |

| | |
|----------------------------------|---|
| [Glasshouse as an Energy Source] | industry is, by 2020, to create climate-neutral (newly built) glasshouses, to reduce CO ₂ emissions by 48%, to be a supplier of sustainable heat and energy and achieve a significant reduction in the use of fossil energy. |
|----------------------------------|---|

4.2 Specific measures to fulfil the requirements under Articles 13, 14, 16 and 17 to 21, of Directive 2009/28/EC

Companies which come under the Integrated Pollution Prevention and Control (IPPC), such as waste incineration installations or combustion installations larger than 50 MW, are entirely outside the scope of the Activities Decree and are therefore always and entirely subject to licensing.

4.2.1 Administratieve procedures en spatial planning (Article 13(1), of Directive 2009/28/EC)

(a) List of existing national and, if applicable, regional legislation concerning authorisation, certification, licensing procedures and spatial planning applied to installations and associated transmission and distribution network infrastructure:

The following Acts are explained in this paragraph;

1. Wet milieubeheer [Environmental Management Act]
2. Wet ruimtelijke ordening [Spatial Planning Act]

Government Coordination Scheme

3. Flora en faunawet [Flora and Fauna Act]
4. Natuurbeschermingswet [Nature Conservancy Act]
5. Crisis en herstelwet [Crisis and Recovery Act]
6. Law governing the general provisions of the Environment Act
7. Other Acts

- Algemene wet bestuursrecht (Awb) [General Administrative Law Act]
- Woningwet [Housing Act]
- Wet beheer rijkswaterstaatswerken [Public Works (Management) Act]

1. **Wet milieubeheer** [Environmental Management Act]

The Environmental Management Act governs the licensing obligation for renewable energy installations. Pursuant to this Act, general rules must be observed and/or a licence must be granted to set up, maintain in operation and modify an installation.

Activiteitenbesluit [Activities Decree]

The underlying assumption is that companies must observe general rules, unless these companies are included in an exhaustive list of companies requiring a licence. This overview is set out in Annex 1 of the Decree on general rules for environmental management installations, also referred to as the Activities Decree. An example of a technology which comes under the Activities Decree is wind energy.

Relevant authority

Annex 1 of the Inrichtingen- en vergunningenbesluit – Ivb [Installations and Licences Decree] determines who holds the relevant authority for what type of installation.

Environmental Impact Reporting

The Environmental Management Act, together with the Decree on environmental impact reporting 1994, regulates the environmental impact (assessment) obligation.

2. Wet ruimtelijke ordening [Spatial Planning Act]

The Spatial Planning Act regulates:

- the spatial integration of renewable energy installations and the associated network structure;
- the preparation of structural visions at municipal, provincial and national level, such as a regional or provincial environmental plan;
- land use designation at municipal level. Specifically in the case of renewable energy projects in rural areas, it is important to ascertain whether these tie in with the activities of existing agricultural businesses.

The provincial and national authorities have the facility to draw up integration plans for projects of provincial or national interest.

Government Coordination Scheme

Application

Large-scale energy projects come under the Government Coordination Scheme. The Government Coordination Scheme aims to shorten and streamline the procedures relating to the setting up of these projects. The Government Coordination Scheme is incorporated in Article 3.35 and 3.36 of the Spatial Planning Act. In the case of renewable energy projects, the Government Coordination Scheme applies in the following situations:

- In the case of a production installation for the generation of renewable electricity with the aid of wind energy with a capacity of at least 100 MW, including the connection of this installation to the network.
- In the case of a production installation for the generation of renewable electricity other than with the aid of wind energy with a capacity of at least 50 MW, including the connection of this installation to the network.

Modules

The Government Coordination Scheme comprises two modules: the project module and the implementation module.

- The project module comprises the spatial decision relating to the project. If the project is not included in the land-use plan, a national integration plan is drawn up which forms part of the land-use plan. This national integration plan is drawn up by the government (jointly by the Ministry of Economic Affairs (EZ) and the Ministry of Housing, Spatial Planning and the Environment (VROM)).

- The implementation module provides for the coordination of all other decisions by the Minister for Economic Affairs which are required for the project. The relevant administrative bodies themselves remain authorised to take decisions and are responsible for the content of the decisions. However, the Minister for Economic Affairs determines the period within which the decisions must be taken and ensures that all decisions are consistent with one another and the logistics of the presentation for inspection are co-ordinated. The commenting on the (draft) decisions and the right of appeal to the Council of State are also included. The right of direct appeal to the Council of State also applies generally within this procedure. If an administrative body does not take the required decision or does not take it in a timely manner, the government is authorised (the Ministers for Economic Affairs and for Housing, Spatial Planning and the Environment) to take a decision which takes the place of the decision of the administrative body concerned.

3. *Flora en faunawet* [Flora and Fauna Act]

The Flora and Fauna Act stipulates by way of ecological testing that, in the event of habitat disturbance, account must be taken of protected plant and animal species and protected areas. In principle, work carried out in public areas must not cause damage to protected plant or animal species. The Ministry of Agriculture, Nature and Food Quality (LNV) may grant dispensation or exemption. The criterion applied here is that the preservation of species must not be endangered. However, if this is expected to occur, the interests of nature will be weighed up against the interests of the activity.

4. *Natuurbeschermingswet* [Nature Conservancy Act]

The Nature Conservancy Act is applicable to Natura 2000 area (Birds Directive and Habitats Directive areas), Protected Natural monuments and Wetlands. Activities or projects which cause damage to the protected natural environment are subject to licensing.

The provinces are normally the licensing authority. Resulting disturbances for which, for example, tests are carried out are the impact of noise from wind turbines or emissions from bio-energy installations on the natural environment within the Natura 2000 area. The European Commission is legally obliged to enforce the protection of Natura 2000 areas. The national government designates areas as Natura 2000 areas. Management plans must then be drawn up for these areas. This is normally done by the provinces. Activities which have consequential impacts on the natural values in the Natura 2000 areas are subject to licensing under the terms of the Nature Conservancy Act.

5. *Crisis- en herstelwet* [Crisis and Recovery Act]

The Crisis and Recovery Act was initiated in 2009 to tackle the economic crisis. The cabinet intends to use the Act to speed up (construction) projects, including wind energy and bioenergy projects, by simplifying and shortening procedures. Amendments to the Nature Conservancy Act and Expropriation Act form part of the Act, which, in part, is of a temporary nature. In the Crisis and Recovery Act, the province virtually always holds the relevant authority for wind parks from 5 MW to 100 MW. If a sponsor applies to the province, the province must then implement an integration plan and licensing trajectory.

6. *Wet algemene bepalingen omgevingsrecht* [Law governing the general provisions of the Environment Act]

The Law governing the general provisions of the Environment Act brings together around 25 regulations which relate to the living environment. This involves licences for buildings, the environment, nature and monuments, which are combined into one licence, known as the Environmental Licence. The Environment Act therefore also has an effect on the development of the national renewable energy supply. With the entry into force of the Environment Act, citizens and undertakings now only have to deal with one point of contact, one decision and one procedure. The application can be submitted and processed electronically. The Landelijke Voorziening Omgevingsloket – LVO [National Environment Office] is being set up for this purpose.

7. Other relevant Acts:

The General Administrative Law Act also includes regulations for the procedures to be followed. The Housing Act regulates the licensing obligation for construction. The Building Decree stipulates requirements for building work. The Public Works (Management) Act regulates the licensing obligation for, inter alia, offshore wind turbines.

(b) Responsible Ministry(/ies)/authority(/ies) and their competences in the field:

The Ministers for Housing, Spatial Planning and the Environment, Transport, Public Works and Water Management and Economic Affairs are responsible in the first instance for the legislation in this area.

(c) Revision foreseen with the view to take appropriate steps as described by Article 13(1) of Directive 2009/28/EC in December 2010

The Environmental Management Act and Spatial Planning Act will be revised in order to comply with Article 13(1) of Directive 2009/28/EC. The revision is expected to be completed in December 2010.

The entry into force of the law governing the general provisions of the Environment Act is also envisaged. This is expected to enter into force in the course of 2010, thereby improving the coordination of the licensing procedure.

(d) Summary of the existing and planned measures at regional/local levels (where relevant):

Existing and planned measures at regional and local level are set out in 1) Climate and Energy Agreement between the Government and the Provinces and 2) Climate Agreement between the Municipal authorities and the Government (2007 - 2011). A detailed description of these agreements can be found in paragraph 4.2.3. The spatial planning measures are set out below. A recent development has been the setting up of municipal energy companies.

Climate and Energy Agreement between the Government and the Provinces

Climate and Energy Agreement between the Government and the Provinces

- Spatial planning: provinces promote the framework for spatial integration of energy projects; provinces support and facilitate municipal authorities.
- Authorisation: provinces facilitate investment by granting licences quickly and resolving issues and eliminating obstacles.
- Role model: provinces act as a role model and invest in energy saving and generation or use of sustainable energy in their own provincial organisation.
- Stakeholder: provinces which are stakeholders in energy - production and/or network companies can use this role to support objectives.
- An implementation programme has been set up to implement this Climate and Energy Agreement.

Climate Agreement between the Municipal Authorities and the Government (2007 - 2011)

The government and municipal authorities promote substantial increases in the generation and use of renewable energy. By way of land-use plans, municipal authorities designate sites for the generation of renewable energy. The focus is primarily on regulation and local acceptance. In the agreement, the government and municipal authorities have agreed to set up a national implementation programme for wind energy.

Municipal energy companies

Municipal authorities and provinces have recently sold their share in major energy companies such as Nuon and Essent. In a parallel development, municipal authorities have themselves set up an energy company. One objective of this may be to set up the local production of renewable energy within the municipal area or region. Examples of this include initiatives in the municipal authority areas of Apeldoorn, Veenendaal and Tilburg.

(e) Are there unnecessary obstacles or non-proportionate requirements detected related to authorisation, certification and licensing procedures applied to installations and associated transmission and distribution network infrastructure for the production of electricity, heating or cooling from renewable sources, and to the process of transformation of biomass into biofuels or other energy products? If so, what are they?

One obstacle in the case of renewable energy installations is the current need to obtain a large number of different licences, each with their own criteria, procedures, contact points, handling periods, fees and supervisory bodies, often issued by different government bodies. The Government Coordination Scheme, the Environment Act and the Spatial Planning Act, which are intended to reduce these obstacles, are described in part a of this paragraph.

(f) What level of administration (local, regional and national) is responsible for authorising, certifying and licensing renewable energy installations and for spatial planning? (If it depends on the type of installation, please specify.) If more than one level is involved, how is coordination between the different levels managed? How will coordination between different responsible authorities be improved in the future?

Article 8.2 of the Environmental Management Act, together with the Installations and Licences Decree, determines who holds the relevant authority. Depending on the situation, this involves the mayor and municipal councillors, provincial executives or the Minister for Housing, Spatial Planning and the Environment and/or for Economic Affairs. The coordination is also regulated in this Act. The Minister for Transport, Public Works and Water Management is responsible for the Public Works (Management) Act. The implementation module of the Government Coordination Scheme provides for the coordination of at least the decisions designated by law by the Minister for Economic Affairs. Authority in respect of the Spatial Planning Act is held by the municipal authority, the province or the Ministry of Housing, Spatial Planning and the Environment.

Details of improvements in the coordination between the different authorities can be found in the Environment Act and Government Coordination Scheme above.

(g) How is it ensured that comprehensive information on the processing of authorisation, certification and licensing applications and on assistance to applicants is made available? What information and assistance is available to potential applicants for new renewable energy installations on their applications?

The General Administrative Law Act, together with the Environmental Management Act and the Government Information (Public Access) Act specify the information that must be available.

InfoMil informs authorities on environmental policy, including energy policy. The Duurzame Energie in Nederland - DEN [Sustainable Energy in the Netherlands] programme provides support in the authorisation process with, for example, wind teams for wind energy and acts as the authorisation support point for bioenergy.

(h) How is horizontal coordination facilitated between different administrative bodies, responsible for the different parts of the licence? How many procedural steps are needed to obtain the licence? Is there a single point of contact where all steps are coordinated? Are there timetables for processing applications communicated in advance? What is the average time for obtaining a decision for the application?

Horizontal coordination

Horizontal coordination is promoted through cooperation between the various departments that hold the relevant authority and the obligation to consult advisers. Deze coördinatie zal verder verbeteren door de invoering van de Wabo en de daarmee gepaard gaande gevolgen voor de uitvoeringspraktijk.

Procedural steps for licensing

The number of procedural steps needed to obtain a licence depends on the licence type. If a licensing obligation applies pursuant to the Environmental Management Act, a draft decision is taken on the basis of the application, which is then available for comments. The authorisation decision is then taken, whereafter appeals may be lodged through the courts.

Single point of contact

The Environment Act provides for a single point of contact to assist the applicant. Timetables for processing applications are communicated in advance.

Authorisation periods

The permitted authorisation period pursuant to the Environmental Management Act is six months, with a possible extension facility in special cases.

For the performance of activities regulated by the Activities Decree, notification must be submitted four weeks before the start or change of the activities. Furthermore, no procedure is associated with this notification. Pursuant to the Environment Act, an Activities Decree notification is a submission requirement for the application for an environmental licence in the event of overlap with a required environmental licence. Rules from the Activities Decree apply automatically.

With regard to the Spatial Planning Act (Article 3.8), a statutory period applies from the time when a draft land-use plan is submitted for inspection. At the end of the 6-week inspection period, the relevant authority must make a decision on the draft plan within 12 weeks. Within 2 weeks of the decision, the land-use plan will be published and a 6-week appeal period will follow. The draft land-use plan is preceded by a preparatory period. The length of this period is not regulated by law.

In the case of large-scale energy projects which come under the Government Coordination Scheme, the Minister for Economic Affairs sets the deadline for the relevant authority to produce the (draft) decision.

(i) Do authorisation procedures take into account the specific characteristics of the different renewable energy technologies? If so, please describe how. If they do not, how do you envisage taking them into account in the future?

Specific characteristics of technologies

The Environmental Management Act is geared towards the specific installation to which a licence application relates, whereby the specific characteristics are taken into account. In the case of wind turbines and bioenergy installations, for example, a limit (in terms of installed power capacity or processed biomass) is incorporated for an assessment, or an environmental impact report must be drawn up. The Activities Decree sets out suitable regulations for installations to which it applies, with possible customisation for a number of aspects. In the case of wind projects which must meet the requirements of the Activities Decree, the licensing obligation pursuant to the Environmental Management Act lapses. The Activities Decree for wind turbines is currently being revised with a view to allowing the environmental licensing obligation to lapse for more wind turbines. Within the Spatial Planning Act, the possibilities for applying different technologies are assessed in terms of their spatial impact. One example of a guideline for the spatial integration of fermentation installations is the 'Assistance for the co-fermentation of manure'.

(j) Are there specific procedures, for example simple notification, for small-scale, decentralised installations (such as solar panels on buildings or biomass boilers in buildings)? If so, what are the procedural steps? Are the rules publicly available to citizens? If so, where? Is the introduction of simplified notification procedures planned in the future? If so, for which types of installation/system? (Is net metering possible?)

Specific procedures: Activities Decree

The Activities Decree sets out automatically applicable rules for wind turbines. These rules are published in the Bulletin of Acts and Decrees. Here, the applicant reports the activity to the relevant authority. The notification is published in one or more daily or other newspapers or in the free local press. If necessary, the relevant authority may impose individual, tailored regulations. As far as public disclosure is concerned, these rules must meet the general requirements of the General Administrative Law Act, and the decision must be published in the form of a notice in one or more daily or other newspapers or in the free local press. These rules are publicly accessible to citizens. In the case of solar panels and heat and cold storage (in installations), no specific environmental rules are imposed and no environmental licensing obligation applies. In the case of small solar boilers and solar panels, no construction permit is required. In other respects, the licensing procedure rules contained in the Environment Act are simpler than those set out in the current regulation.

(k) Where are the fees associated with applications for licences for new installations published? Are they related to the administrative costs of granting such licences? Are there any plans to revise these fees?

The Gemeentewet [Municipality Act] and the Provinciewet [Provinces Act] stipulate that the municipal and provincial authorities may exercise rights in respect of services, but may not make profits from them. Each authority can set its own tariffs and no national tariff applies.

Costs relating to fees are not published separately. Model fees regulations have in fact been produced by the Vereniging van Nederlandse Gemeente – VNG [Association of Netherlands Municipalities] providing guidance for municipal authorities on the fees they should charge. The fees are proportionate to the costs incurred in granting these licences. There are no plans to revise these fees.

in electricity and heating and cooling, including district heating and cooling? If such official guidance is not available or is insufficient, how and when will this need be addressed?

The uniform measure of the Nationaal Expertisecentrum Warmte – NEW [National Expertise Centre for Heat] is a method developed to enable simple comparison of the energy performance of various renewable (and non-renewable) technologies. The uniform measure is an instrument which can be used on a voluntary basis. Building regulations offer a facility for regional energy solutions to be counted towards the achievement of targets. For this purpose, an energy performance standard at area level (energieprestatienorm op gebiedsniveau - EMG) has been developed as an extension of the Energy Performance Standardisation for Buildings. The Energie in Gebouwde Omgeving - EGO [Energy in the Built Environment] programme of the Ministry of Housing, Spatial Planning and the Environment/Housing, Communities and Integration helps professionals to achieve energy savings and CO₂ reduction agreed in covenants.

(m) Are there specific training courses for case handlers of authorisation, certification and licensing procedures of renewable energy installations?

The Hoger Beroepsonderwijs - HBO [Higher Vocational Education] courses in environmental studies and university courses in environmental sciences pay particular attention to authorisation for, inter alia, renewable energy.

4.2.2 Technical specifications (Article 13(2) of Directive 2009/28/EC)

(a) To benefit from support schemes do renewable energy technologies need to meet certain quality standards? If so, which installations and what quality standards? Are there national or regional standards that go beyond European standards?

The quality standards with which renewable energy technologies must comply depend on both the technology and the support scheme. The main support schemes are described in paragraph 4.3. Paragraph i indicates for each scheme whether minimum efficiency requirements have to be met.

Broadly speaking, the following points apply to each subsidy scheme:

- SDE/Milieukwaliteit Elektriciteitsproductie – MEP [Electricity Production (Environmental Quality)]/subsidy scheme for fermentation installations (OVMEP): The scheme offers the facility to impose additional quality standards. In the case of waste incineration plants (Afvalverbrandingsinstallaties - AVIs), for example, a minimum efficiency is required. Additionally, in the case of various biomass categories, the amount of the subsidy depends on the use of renewable energy.
- Groen beleggen [Green investment]: The eligibility of Green investment for this scheme is determined on the basis of predefined technology requirements. A wind turbine, for example, must meet the requirements set out in NVN 11400-0.
- Energie investeringsaftrek – EIA [Energy Investment Deduction]: In the case of some (renewable energy) operating resources within the EIA, quality requirements are specified, such as an efficiency requirement for a biomass boiler. Capacity and budget limits are imposed on the remaining renewable energy installations within the EIA to determine eligibility for this tax incentive scheme.
- Duurzame warmte [Sustainable heat]: A minimum efficiency requirement is imposed, depending on the technology involved. In addition, the amount of the subsidy depends on the efficiency of the installation. International standards should be referred to. For example:
 - solar boilers must comply with NEN EN 12976. The subsidy is linked to the thermal performance under standard Dutch conditions calculated in accordance with NPR 7976;

4.2.3 Gebouwen (artikel 13, lid 3, van Richtlijn 2009/28/EG)

- heat pumps must comply with NEN EN 14511 or EN 12309. (NEN EN 14511 of EN 12309).

Additionally, a design is chosen in some cases where quality or safety standards are imposed pursuant to the Environmental Management Act or the Spatial Planning Act. Given that permission is often required pursuant to these Acts for award of subsidy or for setting up this renewable energy installation, a decision is taken in these cases not to include these requirements in the support scheme. Examples include emission requirements of bioenergy installations or safety requirements for wind turbines which are governed by the Environmental Management Act and are not included in the incentive scheme for sustainable energy production. As far as assessment of eligibility for support schemes is concerned, there are no national standards which go beyond the international standards.

(a) Reference to existing national and regional legislation (if any) and summary of local legislation concerning the increase of the share of energy from renewable sources in the building sector:

Energy performance standardisation

Requirements for the energy performance of a building have been applied in the Netherlands since 1995 to the construction of new residential and non-residential buildings, and to substantial renovation projects. This means that the total building-related energy use of a building (under standard usage conditions and climatic conditions) must not be higher than the standard energy use. The standard energy use is dependent on the usage function, the total loss area and the total usage area of the building. The requirement is imposed in the form of a dimensionless value: the EPC. The total building-related energy use of a building under standard conditions is determined by means of an energy performance standard. A characteristic of the energy performance standard is that the construction parties can decide for themselves which measures to take to meet the requirement. This may involve measures to limit energy loss, such as better insulation and joint-sealing, use of renewable energy such as heat pumps and solar boilers, and the use of energy-efficient apparatus such as high-efficiency boilers and balanced ventilation. When the energy efficiency requirement was introduced, the imposed requirement could still be met with a single measure, but since 1995 the requirement has been made increasingly more stringent and an increasing number of combinations of measures and increasing use of renewable energy have been necessary in order to be able to meet the imposed requirement.

Area-related measures in energy performance standardisation

In order to be able to evaluate locally generated heat and electricity in the energy performance standard, an additional standard is being developed, the EMG. Instead of the current flat-rate values, the actual performance can be evaluated with this standard. This concerns, inter alia, collective heat pump systems, use of residual heat from industrial sites, etc. The intention here is to offer incentives for the sustainable generation of heat and electricity.

Experimentation and innovation

Various schemes have been devised to enable parties to

experiment with even more stringent energy performance requirements.

- The Innovatie Agenda Energie - Gebouwde Omgeving [Energy Innovation Agenda – Built Environment]
- The Unieke Kansen Regeling [Unique Opportunities Scheme]
- The schemes for Areas of Excellence and the Northern Netherlands



(b) Responsible Ministry(/ies)/authority(/ies):

Ministry of Housing, Spatial Planning and the Environment/Housing, Communities and Integration (VROM/WWI).

(c) Revision of rules, if any, planned by: [date]

The EPC requirement for housing will be tightened up in 2011 by 25% and in 2015 by 50%, with the aim of achieving energy-neutral housing by 2020. For non-residential buildings, a tightening up of the EPC requirement is envisaged in 2015. The current energy performance standard and the standards for determining the energy label will be replaced on 1 January 2011

by the building energy performance standard (energieprestatienorm gebouwen - EPG). The standard for evaluating area-related measures (EMG) is also expected to enter into force on 1 January 2011.

(d) Summary of the existing and planned measures at regional/local levels:

Climate agreements have been concluded with municipal authorities and provinces. Both agreements cover aspects other than (renewable) energy alone, such as energy efficiency. Only those agreements which relate to renewable energy are presented below. The administrative arrangements are not legally enforceable in either of these agreements.

Climate Agreement between the municipal authorities and the government

- In the climate agreement between the municipal authorities and the government, it has been agreed that municipal authorities will seek to achieve climate-neutral housing and organisation. Twenty authorities will act as role models, ensuring that their own municipal organisation is climate- neutral by 2012.
- The role that the municipal authorities will play in promoting the generation and use of renewable energy has been agreed as follows:
 - Municipal authorities will provide scope in land-use plans for sustainable energy, inter alia by designating sites for sustainable energy generation;
 - Municipal authorities will exert their influence as stakeholders of energy and waste companies to exploit the opportunities for the use of sustainable energy and residual heat;
 - Municipal authorities will support the development of 'green gas' by supporting and collaborating in trial projects.
- The government will introduce a climate subsidy scheme (SLOK) for the period 2008 - 2012. Municipal authorities can use the contributions from this scheme to implement energy saving plans, on condition of cofinancing from their own funds.
- Om experimenten met verdergaande energiebesparing te stimuleren en zo de weg voor te bereiden naar energieneutrale nieuwbouw in 2020, is het volgende afgesproken:
 - Ten (residential) areas will be put forward in which experiments can be carried out with innovative energy-saving measures and/or renewable energy sources;
 - an energy saving innovation programme for new construction and renovation is being set up with an allocated budget.

Climate and Energy Agreement between the Government and the Provinces

The provinces are backing the national and European climate policy initiatives and are working together with other authorities and private partners to achieve the set targets. The agreements made which relate specifically to renewable energy include the following:

- In spatial planning, opportunities are being created for the production and use of biomass.
- Attempts are being made to relax the Nitrate Directive in respect of manure processing and co-fermentation behoeve van mestverwerking en covergisting.
- Large-scale solar power projects are being started up.
- The provinces and the government are offering incentives for the production of biofuels that meet sustainability

criteria developed in Europe.

- The provinces are facilitating large-scale production installations for biofuels adjacent to energy infrastructure.
- The government and provinces are working together to devise an effective licensing process for ground energy systems.
- Through licensing arrangements, the provinces are promoting the use of residual heat in operational processes. They are mapping out where heat is released and where potential consumers are located.
- The provinces are promoting and facilitating regional collaboration in the use of residual heat.

In 2009, the provinces reported on the contribution they can make to the implementation of energy-neutral new construction in 2020 and to the achievement of the 100 PJ target for energy saving in the existing stock.

Spring Agreement

Project developers, housing corporations and construction companies have made a covenant with the Government to encourage construction which is more energy-efficient than prescribed by the legal requirements: the Spring Agreement. The use of renewable energy forms part of this agreement. Information on the technologies and processes required to achieve this is provided on the Spring Agreement website and via courses and excursions organised through the Spring Agreement.

More with Less

More with Less is a covenant made between the government (Ministries of Housing, Spatial Planning and the Environment/Housing, Communities and Integration, Housing, Spatial Planning and the Environment and Economic Affairs) and industry (Bouwend Nederland, UNETO-VNI energy suppliers which are members of EPHRIN [Association of energy producers, traders and retail companies in the Netherlands] – for the Retail division of EnergieNed, energy suppliers who are members of the Vereniging voor Marktwerving in Energie (VME) [Association for Market Operation and Energy] and the Aedes association of housing corporations). The covenant was drawn up in close collaboration with the Energy Transition Built Environment Platform and its aim is to provide incentives for energy saving in existing buildings.

(e) Are there minimum levels for the use of renewable energy in building regulations and codes? In which geographical areas and what are these requirements? (Please summarise.) In particular, what measures have been built into these codes to ensure the share of renewable energy used in the building sector will increase? What are the future plans related to these requirements and measures?

Renewable energy in energy performance standardisation

Requirements for the energy performance of a building have been applied in the Netherlands since 1995 to the construction of new housing and non-residential buildings, and to substantial renovation projects. A detailed description is set out in paragraph (a). The use of renewable energy is one of the options for meeting the requirements, and therefore no minimum level is required for the use of renewable energy. When the energy performance standard was introduced, the imposed requirement could still be met with a single measure, but since 1995 the requirement has been made more and more stringent and an increasing number of combinations of measures and increasing use of renewable energy have been necessary in order to be able to meet the imposed requirement. Even more stringent requirements are intended to be imposed over the next few years. The EPC for housing will be tightened up in 2011 to 0.6 and in 2015 to 0.4, with the aim of achieving energy-neutral housing in 2020. A comparable tightening up has been announced for non-residential buildings for the year 2015.

measures adopted in order to meet the energy performance requirement. A distinction can be made here between the impact on residential and non-residential buildings;

- A study which preceded the latest tightening up in non-residential buildings (introduced in 2009), attempted to identify the most energy-efficient and cost-neutral package of measures for all building functions. It revealed that renewable energy (mainly heat pumps) forms part of this package in half of the reference buildings examined, particularly in medium-sized and large buildings.
- A study [ECN, 2009] into the use of energy-saving measures and renewable energy in various EPCs in housing revealed that more renewable energy was used in 1200 homes with a lower EPC. This is in fact related to homes built in the same period, so the effect of the tightening up of the requirement is not yet visible. This finding was also confirmed in subsequent studies.

Effect of tightening up of the energy performance requirement on the use of renewable energy

In practice, cost is a significant factor in the choice of

(f) What is the projected increase of renewable energy use in buildings until 2020? (Divide this up if possible into residential buildings – “One unit” and “several units”, business premises, government buildings and industry.)

Table 6a: *Estimated share of renewable energy*

| | 2010 | 2015 | 2020 |
|------------|-------|-------|-------|
| Households | 2.3 % | 2.8 % | 3.8 % |
| Services | 1.8 % | 2.7 % | 3.7 % |
| Industry | 0.8 % | 0.7 % | 0.9 % |

The data for calculating the percentages specified in the table above are partly determined on the basis of assumptions regarding the deployment according to usage and sector of the options. Thus, for industry, the entire consumption has been taken as a reference, since the part that is not building-related is not known. The following technologies have been included in the table compilation: geothermal energy, sewage treatment, various biomass options (in the case of CHP, the generated electricity is not included), environmental energy from heat pumps, woodburning stoves, waste incineration (with assumptions regarding the sector in which the heat is deployed), heat and cold storage (cold is not included), solar

photovoltaic systems and solar boilers.

(g) Have obligations for minimum levels of renewable energy in new and newly refurbished buildings been considered in national policy? If so, what are these levels? If not, how will the appropriateness of this policy option be explored by 2015?

Requirements for the energy performance of a building have been applied in the Netherlands since 1995 to the construction of new residential and non-residential buildings, and to substantial renovation projects. As explained in paragraph (a), no minimum level of renewable energy is required, but use of renewable energy is one measure for meeting the energy performance requirement. Large-scale renovation and change of function of a building are regarded in building regulations as ‘new construction’, in respect of which requirements for the energy performance of the building also apply. Exemptions from the EPC may be granted for renovation in specific situations. In the case of a limited adaptation of a building, the current policy does not prescribe any requirement for the EPC.





h) Please describe plans for ensuring the exemplary role of public buildings at national, regional and local level by using renewable energy or becoming zero energy buildings from 2012 onwards. (Please take into account the requirements under the EPBD).

Sustainable procurement

The sustainable procurement programme is based on a healthy balance between people, the environment and the economy. Sustainable procurement was set up for authorities, and has now been adopted by businesses such as banks and insurance companies. With sustainable procurement, organisations take account of, for example, energy use.

the government spends more than EUR 50 billion per annum on procurement and invitations to tender. This makes up a substantial part of the market for, inter alia, office buildings, office equipment, roadworks and building works, means of transport and energy.

The government is aiming to implement 100 per cent sustainable procurement by 2010. The municipal authorities are aiming for 75 per cent by 2010 and 100 per cent by 2015. The provinces and Water Boards have set a target of 100 per cent by 2015. Organisations such as the government authorities can implement sustainable procurement for products and services by applying sustainability criteria to every invitation to tender and purchase. This can be done on the basis of sustainability criteria devised for 45 product groups.

In the case of new construction and renovation, the government will work with environmental performance instruments with which the overall environmental quality of buildings can be determined.

- For the construction of new office buildings, the government will require a minimum environmental performance of a GreenCalc score of 200 or a GPR Building score of 7.
- For renovation work, an improvement in the environmental performance of at least 60 points calculated using GreenCalc or at least 2 points using GPR Building is required.

Within GreenCalc, the contribution of energy towards the total score has a relatively heavy weighting. GPR includes 5 topics, one of which is energy. For sustainable procurement, a minimum score of 7 is required for each of these 5 topics.

As from 2010, all authorities will only lease sustainable buildings with at least a C-label. The effects of this may be great. The government spends EUR 25 billion per annum on office buildings. In total, 20% of the 78,000 offices in the Netherlands are used by the government. This policy is now also being adopted by major market players.

Agreements

In the Netherlands, the Clean and Efficient agreement and the agreements with the provinces and municipal authorities stipulate that:

- Government buildings will be climate-neutral by 2012 with the aid of the energy label and customised advice. As far as new buildings are concerned, the government building service will be at least one phase ahead of the tightening up of the EPC. The requirements set out in the Energy Performance Building Directive (EPBD) will be met in this process.
- Municipal authorities are aiming to make their accommodation climate-neutral by acting as role models. The VNG [Association of Netherlands Municipalities] will propose 20 municipal authorities who will make their organisation climate-neutral by 2012.
- In the award of contracts for public buildings, consideration must be given to investment in energy saving/the climate in all invitations to tender.

The provinces must indicate how they can contribute to the implementation of energy-neutral new construction by 2020 and the achievement of the 100 PJ energy saving in the existing stock. In their own construction projects, the provinces must take account of the increasing requirement for cooling due to climate change in order to restrict energy consumption.

Subsidy for Energy-neutral Schools and Offices

The Unique Opportunities Programme for Energy-neutral Schools and Offices (UKP-NESK) has been set up to provide incentives for energy-neutral construction of schools and offices. The sector is supported, inter alia, through subsidies in the preparation and implementation of highly energy-efficient schools and offices. Renewable energy can form part of the proposals.

Covenant of Mayors

In 2009, the European Commission launched 'The Covenant of Mayors' initiative. By signing this covenant, municipal authorities confirm that they will make every effort to go beyond the European Union's 20-20-20 target. Fourteen Dutch municipal authorities have now signed this covenant. Agentschap NL acts as the Supporting Structure for the Netherlands, with the aim of encouraging municipal authorities to become involved and providing support for the municipal authorities.

(i) How are energy-efficient technologies for renewable energy in buildings promoted?

Energy-efficient technologies for renewable energy in the energy performance standard

Heat pumps and thermal solar power systems for heating and hot tap water are included in the EPG (see paragraph a). Biomass boilers are not (yet) evaluated separately in the EPG. This is currently under investigation. Higher-efficiency systems are evaluated more highly in the standard. This provides incentives for the use of high-efficiency systems. Primarily European standards are used to determine efficiency, and are adapted if necessary in line with the conditions prevailing in the Netherlands.

National verification marks: Stichting Energie Prestatie Keur [Energy Performance Verification Foundation]

Verification marks, such as those of the Stichting Energie Prestatie Keur (EPK) are evaluated in the EPG. EPK is an independent organisation which promotes the use of renewable-energy-related installation products. To do this, the EPK Foundation develops and promotes quality verification marks which guarantee that the equipment concerned meets stringent, objective requirements. The quality verification marks are accessible to all suppliers on the Dutch market and are recognised by the Raad voor de Accreditatie [Accreditation Council], indicating that the verification mark has been granted by independent experts. The criteria for the verification marks are based primarily on European standards, adapted if necessary in line with the conditions prevailing in the Netherlands. The verification mark for heat pumps is the 'Heat Pump Verification' and for solar boilers and solar combinations the 'Solar

Verification'.

Heat and Cold Storage Collaboration Programme

The aim of the Heat and Cold Storage Collaboration Programme (Samenwerkingsprogramma Warmte Koude Opslag (SWKO)) is to carry out activities ensuring that heat and cold storage can make a substantial contribution to sustainable energy generation and energy saving in the Netherlands. The programme focuses on accelerated growth through exploitation of opportunities and removal of obstacles, but also on quality assurance.

A four-part policy has been adopted, resulting in a coherent package of measures. The four parts are:

- Legislation and regulation for heat and cold storage
- Development of information and knowledge
- Quality assurance
- Plankerend beleid

The implementation of the Renewable Energy Directive (e.g. certification for installers) takes place in the quality assurance part.

The collaboration programme is the product of collaboration between all parties involved in heat and cold storage. These include, for example, authorities (municipal authorities, water boards, provinces and ministries), the industry sector (NVOE [Dutch Association for Underground Energy Storage Systems]) and knowledge institutions (SKB [Foundation for Ground-related Knowledge Transfer and Development] and SIKB [Foundation for Infrastructure for Quality Assurance of Soil Management]).

Financial incentives

- The EIA (paragraph 4.3) is a tax incentive scheme to encourage the use of energy-saving operating resources and renewable energy. For heat pump investment to be eligible for EIA, the heat pump concerned must meet the minimum efficiency requirements. The aim here is to promote the use of energy-efficient heat pumps. Efficiency is determined in accordance with European standards. Additionally, biomass boilers are also included on the list of the technologies in the built environment which qualify for the EIA.
- The SDE (paragraph 4.3) provides incentives for the production of energy from renewable sources. Within the built environment, PV systems are eligible for SDE.

- The energy saving credit offers the advantage of a lower interest rate, as the Government guarantees the loan. The loan has a maximum life of fifteen years. The energy saving credit is available to owner-occupiers. A substantial interest rate reduction applies to solar cells (photovoltaic), solar collectors and heat pumps, as lenders can finance these at a lower cost through the Green Projects scheme (paragraph 4.3).
- The sustainable heat scheme (paragraph 4.4) is an investment subsidy for solar boilers, heat pumps and micro-CHP systems in existing housing. The target group is private home owners, but also other investors in existing housing, for example housing corporations.

Non-financial incentives

- Incentives are also available to citizens and companies in the form of information provisions. This is described in chapter 4.2.4.

4.2.4 Information provisions (Articles 14(1), 14(2) and 14(4) of Directive 2009/28/EC

(j) Reference to existing national and or regional legislation (if any) concerning information requirements according to Article 14 of Directive 2009/28/EC:

Wet openbaarheid bestuur [Government Information (Public Access) Act]

The Government Information (Public Access) Act (Wet openbaarheid bestuur - Wob) guarantees the facility for citizens to request documents administrative matters from an administrative body (for example a ministry, provincial or municipal authority). In addition, the Aarhus Convention has been implemented in the Netherlands in the Government Information (Public Access) Act. In order to implement the convention and the Renewable Energy Directive, a new Article 19.1c has been introduced into the Environmental Management Act, setting out a number of requirements relating to the provision of environmental information by the relevant bodies on their own initiative.

(k) Responsible body or bodies for dissemination of information at national, regional and/or local level:

At national level, information is provided regarding the energy label, national subsidy schemes, financing schemes and tax schemes:

- Information regarding renewable energy and subsidy schemes is available on the websites of the various ministries. Links are also provided to the organisations specified below which can provide information on renewable energy.
- Information on subsidy schemes can be found on the website of Agentschap NL, an agency of the Ministry of Economic Affairs. Subsidies can also be requested to an increasing extent via this website. The website comprises a large number of subsites geared towards the use of renewable energy by specific target groups (Energy in the Built Environment (EGO)) or the use and generation of renewable energy (NEW, Energy Research Subsidy (EOS), Sustainable Energy in the Netherlands (DEN)). Agentschap NL also has a helpdesk where information on subsidy schemes and other relevant information can be obtained.

- The More With Less implementation organisation was set up from the 'Clean and Efficient' work programme to inform and engage citizens and companies with regard to energy saving and renewable energy. Citizens and companies can obtain information via the website and helpdesk on the availability of subsidies and financing schemes for renewable energy.
- Milieu Centraal is an independent foundation focusing on the provision of independent environmental information to consumers. Milieu Centraal receives government funding for its basic activities, such as the provision of source documents and information material, the maintenance of a website and the information line.
- Postbus51 ishetadresvoorburgers en bedrijven metvragenaan de Rijksoverheid. Information is provided here on renewable energy and publications on the subject can be requested.

At local level, it is primarily the municipal and provincial authorities that inform citizens and companies about the generation and use of renewable energy. See also paragraph 4.2.3 for details of the Climate Agreement between the Municipal Authorities and the Government and the Climate and Energy Agreement between the Government and Provinces.

(l) Summary of the existing and planned measures at regional/local levels (where relevant):

Facilitation of Local and Regional Climate Initiatives

Agentschap NL runs the Facilitation of Local and Regional Climate Initiatives programme (FLOK) on behalf of the Ministry of Housing, Spatial Planning and the Environment. This programme focuses on the intensification of local and regional climate policy and on the collaboration with market players with climate ambitions. The generation and use of renewable energy forms part of this agreement.

Promotion of Local Climate Initiatives

The subsidy made available by the government for the Promotion of Local Climate Initiatives (SLOK) for both the provincial and municipal authorities gives them the opportunity to implement their policy. Each of the twelve provinces carries this out in their own particular way. 320 of the 441 municipal authorities have drawn up a climate policy for the next four years. In almost every case, these policies include projects aimed at creating awareness of renewable energy.

HIER

In the ‘HIER’ climate campaign, various local and regional authorities, NGOs and market players are working together to make the Netherlands climate-neutral.

(m) Please indicate how information is made available on supporting measures for using renewable energy sources in electricity, heating and cooling and in transport to all relevant actors (consumers, builders, installers, architects, suppliers of relevant equipment and vehicles). Who is responsible for the adequacy and the publishing of this information? Are there specific information resources for the different target groups, such as end consumers, builders, property managers, property agents, installers, architects, farmers, suppliers of equipment using renewable energy sources, and public administration? Are there information campaigns or

The organisations responsible for information dissemination (specified in paragraph b) have various programmes and methods for providing customised service to target groups. In the case of (subsidy) schemes, a means of communication is always devised by the government or market players. The following overview is not exhaustive, but provides an illustration of the various communication channels.

Table 6b: Information provision

| Facility Managers | Implementation organisation | Explanatory note |
|--|--|---|
| Target Group | AgNL Energy in the Built Environment (EGO) | 'Smart Energy': a campaign to inform facility managers about energy saving and use of renewable energy in their buildings |
| Authorities | AgNL Sustainable procurement | Comprises criteria which the government implements for its own sustainable procurement. These include the use of renewable energy and criteria for sustainable transport. |
| Authorities | AgNL InfoMil | Information on legislation and regulation (including licences) to local authorities. Website, helpdesk and information events. |
| Construction, architects, installers | AgNL Energy in the Built Environment (EGO) | Example projects and independent information via the website and publications. |
| Project developers, housing corporations and authorities | AgNL NEW Energy in the Built Environment (EGO) | Independent information and assessment frameworks for the use of (sustainable) heat in the built environment. |
| Project developers and construction companies | Spring Agreement | To promote the use of renewable energy for more energy-efficient construction than prescribed by the legal requirements. |
| Market players, authorities, knowledge institutions | AgNL DEN | Information and exchange of knowledge relating to renewable energy via the Sustainable Energy Centre and knowledge products. |
| Consumers | Milieu Centraal | Website and information products as an independent information source for the consumer. Information is tested by a forum of independent experts. |
| Consumers | Postbus 51 | Portal for information from the government. |
| (agricultural) undertakings | Response for companies | Website and helpdesk where undertakings can ask questions, inter alia, on subsidies, tax schemes, tenders, etc. |
| Consumers/companies | More with less | More with Less has its own organisation and website with information on bringing sustainable energy into the built environment. |
| Market players, advisers, knowledge institutions | AgNL GAVE | Information and exchange of knowledge on biofuels via a helpdesk and knowledge products. |

(n) Who is responsible for publishing information on the net benefits, costs and energy efficiency of equipment and systems using renewable energy sources for heating, cooling and electricity? (Who is the supplier of the equipment or system, a public body or someone else?)

In principle, market players are themselves responsible for this. A number of foundations exist in which suppliers of energy-efficient products work together to inform the market. Examples include:

- The DE Koepel is a sector association for renewable energy options in the Netherlands. Its members include: Holland Solar, stichting Platform Bio-Energie [Bioenergy Platform Foundation], the Nederlandse Wind-Energie Associatie (NWEA) [Netherlands Wind Energy Association], de Stichting Warmtepompen [Heat Pumps Foundation] and the Nederlandse Vereniging voor Ondergrondse Energie opslag-systemen (NVOE) [Netherlands Association for Underground Energy Storage Systems].

- The members of the DE-koepel themselves also provide information on renewable energy. The Stichting EPK is an independent organisation which promotes the use of energy-efficient, clean and effective heaters, water heaters and other renewable-energy-related installation products. The Stichting EPK develops and promotes quality verification marks.
- Stichting Warmtenetwerk is a broadly based platform which aims to reduce the use of fossil energy and greenhouse gas emissions by promoting collective heat and cold networks. The activities of the Warmtenetwerk foundation include the collection and provision of knowledge and information, – and the promotion of education and training in the field of heat and cold supply.

(o) How is guidance for planners and architects provided to help them to properly consider the optimal combination of renewable energy sources, high efficiency technologies and district heating and cooling when planning, designing, building and renovating industrial or residential areas? Who is responsible for that?

- Project developers, housing corporations and authorities and other parties involved in area development are informed via Agentschap NL NEW about the use of renewable energy for heat generation in the built environment. This concerns in particular the use of collective heat generation and the use of residual heat. The NEW has a website which provides tools which can be used to carry out a careful assessment of these systems. NEW also has a helpdesk and advisers to answer individual questions.
- The climate advisers of the Energy in the Built Environment programme (EGO) are active nationwide, giving advice on the options available for energy saving and renewable energy in area development. The advisers help to bring together the various parties by offering support for processes, by providing knowledge of legislation and the policy aims of the government, and by bringing in technical expertise.



(p) Please describe the existing and planned information, awareness raising and training programmes for citizens, the benefits and practicalities of developing and using energy from renewable sources. What is the role of regional and local actors in designing and managing these programmes?

Milieu Centraal is an independent foundation focusing on the provision of independent environmental information to consumers. Milieu Centraal receives government funding for its basic activities, such as the provision of source documents and information material, the maintenance of a website and the information line. The most comprehensive information tailored to the needs of the citizen can be obtained via this website. Postbus 51 is the address for citizens and companies with questions for the Government. Information is provided here on renewable energy and publications on the subject can be requested. Links are also provided here to the above-mentioned organisations. The More with Less implementation organisation has been set up to engage citizens and inform them about energy saving and renewable energy. Citizens are informed via the website of the availability of subsidies and financing schemes for renewable energy. A helpdesk is linked to the website. The Better Climate Campaign shows people that sustainable action is quite normal. Its three cornerstones are: acting in an eco-friendly manner; demonstrating that the government and industry are already undertaking many sustainable activities and inspiring people to play their part in creating a healthier climate.

Regional and municipal actors

320 of the 441 municipal authorities have drawn up a climate policy for the next four years. In almost every case, these policies include projects aimed at creating awareness of renewable energy. These 320 municipal authorities have been awarded a climate subsidy under the SLOK scheme to implement their policy.

In the context of housing improvement projects, a number of municipal authorities are setting up a single point of contact to help citizens with label approvals, subsidy requests and implementation of energy-saving and renewable energy measures. With this type of project, the municipal authority is organising information events and publishing articles in local newspapers.

4.2.5 Certification of installers (Article 14(3) of Directive 2009/28/EC

(a) Reference to existing national and/or regional legislation (if any) concerning certification or equivalent qualification schemes for installers according to Article 14(3) of Directive 2009/28/EC:

The Netherlands currently has no national and/or regional legislation relating to certification or equivalent qualification schemes for installers, in accordance with Article 14(3). However, a voluntary certification scheme and recognition scheme for installers exists in the construction and renewable energy domain (see paragraph c). An Action Plan is in preparation for the implementation of the Article concerned. This action plan includes all the actions required in order to comply with Article 14(3) of the Renewable Energy Directive by 31 December 2012, i.e.:

- the availability of certification schemes or equivalent qualification schemes based on Article 14 and Annex IV of the Renewable Energy Directive for installers of small-scale biomass boilers and stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps;
- the removal of possible obstacles to the setting up and implementation of the above;
- a communication plan describing how all parties involved, including the consumer, are informed of the certification scheme.

(b) Responsible body or bodies for setting up and authorising certification/qualification schemes by 2010 for installers of small-scale biomass boilers and stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps:

Certification is currently regulated on a voluntary basis. With the introduction of the Renewable Energy Directive, the Ministry of Housing, Spatial Planning and the Environment/Housing, Communities and Integration is the department responsible for this certification scheme or equivalent qualification scheme.

(c) Are such certification schemes/qualifications already in place? If so, please, describe.

Product verification marks and verification marks for services exist;

- In the case of product verification marks, the EPK foundation issues the product-verification marks for heat pumps and solar thermal equipment.
- The Komo Install certification scheme and the Installers Recognition Scheme are available as a verification mark for services. These schemes are voluntary and are managed by the sector organisations.

The Komo Install certification scheme is set out in an evaluation guideline (BRL6000), subdivided into heat pump boilers (6000-12), heat pumps (6000-12, 6000-13 and 6000-18) and solar boilers (6000-14). The BRL focuses on the various practical operational processes and is therefore a form of operational certification. The BRL also clarifies the requirements for the materials, products and/or feedstock that is used. The certification focuses on both organisational and project-related aspects and includes practical testing.

The Installers Recognition Schemes are managed by the Stichting Erkenningsregeling van Installateurs (SEI) [Installers Recognition Scheme Foundation], and currently apply to heat pumps only. This recognition scheme is based on personalised, technology-specific training modules, produced in accordance with ISSO guidelines. The training is usually provided by Kenteq and examinations are administered by the Centraal Instituut voor Toets-ontwikkeling (CITO) [Central Institute for Test Development], an expert in the development and administration of examinations and tests.

(d) Is information on these schemes publicly available? Are lists of certified or qualified installers published? If so, where? Are other schemes accepted as equivalent to the national/regional scheme?

Certification scheme

In the case of both Komo Install and the Recognition Scheme, the information is in the public domain and lists of certified companies are available. This information is available at www.stichtingkbi.nl and www.erkendinstallatiebedrijf.nl.

(e) Summary of existing and planned measures at regional/local levels (where relevant).

In drawing up the above-mentioned Action Plan, all existing and planned measures at regional and local level will be evaluated and, if relevant, included the implementation.

4.2.6 Electricity infrastructure development (Article 16(1) and Article 16(3) to (6) of Directive 2009/28/EC)

(a) Reference to existing national legislation concerning requirements related to the energy grids (Article 16):

- Electricity Act 1998 and Gas Act
- 'Priority for sustainable electricity' bill (TK [House of Representatives] 2008-2009, 31904, No 2.) (Amendment to the Gas Act and the Electricity Act 1998, strengthening the operation of the gas market, improving the security of supply and including rules relating to the priority for sustainable electricity, and a number of other amendments to these Acts.)

(b) How is it ensured that transmission and distribution grids will be developed with a view to integrating the target amount of renewable electricity, while maintaining the secure operation of the electricity system? How is this requirement included in the transmission and distribution operators' periodical network planning?

The system operator is legally responsible for providing sufficient transport capacity. The system operators periodically produce quality and capacity documents to ensure that the target amounts of electricity, originating, inter alia, from renewable sources can be integrated, while maintaining the secure operation of the electricity system. Further details are set out below. Tariffs for connection and transport are set out in the tariff code. Bill 31904 serves to improve the opportunities for investment in infrastructure by system operators, inter alia for renewable electricity. This bill also provides for the implementation of priority for renewable electricity in the event of a transport capacity shortage.

Wet Onafhankelijk Netbeheer [Independent System Operation Act]

The Independent System Operation Act (Wet Onafhankelijk Netbeheer (WON)) ('segregation act') supplements the Electricity Act 1998 and Gas Act with additional rules relating to independent system operation. The Act consists of three main elements, i.e.:

- The transfer of operation of the high-voltage networks with a voltage level of 110-150 kV to TenneT
- The creation of 'fat system operators' who themselves perform all strategic tasks and also take over economic ownership of the system.
- The introduction of the group prohibition which stipulates that operation and ownership of energy systems and supply- and production activities via these systems must be carried out by separate undertakings as from 1 January 2011.

The aim of independent system operation is to enable the systems to function as independent platforms for the operation of the energy market. There is no inherent conflict of interest with production or supply activities within the same group. Investments are more effectively safeguarded as there are no potential disincentives for system operators in terms of market foreclosure.

Quality and capacity documents

The Implementation & Intervention Act includes Articles relating to quality regulations. The Act stipulates that the electricity and gas system operators must:

- have in place an effective quality management system;
- overvoldende transportcapaciteit moeten beschikken om in de totale behoefte te voorzien;
- submit a quality and capacity document once every two years to the Management Board of the Energiekamer [Office of Energy Regulation].

The Office of Energy Regulation assesses these documents and, if necessary, delivers an opinion to the Minister for Economic Affairs.

Netcode

The Electricity Act (1998) stipulates that joint system operators must submit a proposal for a tariff structure and technical conditions (regulations) for system operation to the Office of Energy Regulation. One of the technical regulations is the Netcode. The Office of Energy Regulation evaluates the proposal from the system operators for the Netcode and adopts this.

The Netcode sets out conditions governing the behaviour of system operators and consumers with regard to:

- the operation of the networks;
- the provision of a connection to the network (connection service);
- the performance of transport of electricity over the network (transport service);
- international transport.

Priority for sustainable electricity bill

The 'priority for sustainable' electricity bill stipulates that sustainable electricity must be given priority in the event of a transport capacity shortage. The objectives of the bill are as follows:

- to ensure the transport of renewable energy, even in the event of a physical transport capacity shortage.
- optimum use of the available transport capacity; a maximum incentive for system operators to connect new production resources as quickly as possible at all times within the constraints of efficiency.
- New users can be connected immediately rather than only at the time when sufficient transport capacity has been provided by the system operator.

- Creation of more competition on the (inter)national energy market by increasing and renewing the available production capacity, resulting in higher efficiency of existing production facilities.
- greater security for system operators in terms of the return on investment in the network.

If there is insufficient transport capacity, it is important to distribute the remaining insufficient transport capacity following 'priority for sustainable' –among the parties without priority privileges. A congestion management system has been introduced for this purpose. The proposed congestion management system is based on "system redispatch". In this context, a bid ladder for downward and upward power adjustments is used, coordinated by the system operator. Producers of renewable electricity are given priority on the network without incurring congestion charges. If the available transport capacity itself is insufficient to carry all renewable electricity, non-adjustable renewable electricity takes priority over adjustable renewable electricity.

Construction of an offshore power grid

In a letter to the House of Representatives on 19 February 2010, the Minister for Economic Affairs described the status of the development of infrastructure for offshore wind energy;

Two wind farms (in total 228 MW offshore wind) were set up in phase 1. The forthcoming developments is divided up into two phases:

1. Phase 2 (950 MW offshore wind)

Costs for laying the cable between the wind farms and the national high-voltage network are included in the calculation of the SDE subsidy amount. Socialisation of cables is not yet under consideration. Also, due to the size of the farms and the distance from the shore, a clustered installation is not per se the most cost-effective solution in this phase 2.

2. Phase 3 (4800 MW offshore wind)

Following the decision-making relating to phase 2 and the designation of additional wind energy areas, the costs for connecting phase 3 wind farms to the power grid can be presented more accurately. An overall decision can then also be taken regarding the most cost-effective construction of the offshore grid.

The national system operator is currently not under any legal obligation to construct an offshore grid. The Minister has undertaken to draft a bill to make the national system operator also responsible for the construction and operation of the offshore transmission system.

North Sea Countries offshore grid initiative

In the second strategic energy review (2008), the EC proposed the 'North Sea offshore grid'. This concerns the construction of a joint high-voltage grid in the North Sea for the transport of, for example, wind energy, hydropower and tidal power.

The initiative resulted in a declaration. This was signed in December 2009 by the Netherlands, together with Belgium, Denmark, France, Germany, Ireland, Luxembourg, Sweden and the United Kingdom. In 2010, a strategic plan of work for the North Sea high-voltage grid was agreed in the form of a Memorandum of Understanding.

Information provision and monitoring

Products which contribute to the information provision and monitoring are:

- Market monitor of the Office of Energy Regulation of the Netherlands Competition Authority (NMa). The Office of Energy Regulation annually sets out its findings on the extent of market operation in a report to the Minister for Economic Affairs. The Office of Energy Regulation collates market information, such as prices and quantities, in this report.
- The security of supply reports from TenneT and GTS. The security of supply monitoring report 2008-2024 was drawn up by the transmission system operator (TSO) TenneT at the request of the Minister for Economic Affairs. This report is based, inter alia, on data from energy producers and offers an insight into the expected development of supply and demand for electricity.
- The Visie 2030 [Vision for 2030] from TenneT. This comprises an analysis of the long-term developments of the Dutch electricity supply.

(c) What will be the role of intelligent networks, information technology tools and storage facilities? How will their development be ensured?

Decentralised Infrastructure Action Plan

The Decentralised Infrastructure Working Party drew up the decentralised infrastructure action plan in 2008. This working group is a collaboration between the energy transition platforms of the Sustainable Electricity Supply (Duurzame Elektriciteitsvoorziening - DEV) and the New Gas Platform (Platform Nieuw Gas - PNG). An inventory of the ambitions of the various platforms and the joint system operators reveals the impact on the natural gas, electricity and heat infrastructure. Various issues are raised, which the working group regards as important to system operators. Specific actions are also highlighted, primarily concerning a) development of knowledge among system operators, b) definition of standard solutions, and c) realisation through investment.

Intelligent Networks Taskforce

The Minister for Economic Affairs set up the Intelligent Networks Taskforce in October 2009. This Taskforce is responsible for creating a vision for the establishment of intelligent networks and an action plan for the implementation of intelligent networks in the Netherlands.

To enable the creation of intelligent networks, new technologies will have to be developed and applied without adversely affecting the electricity supply. Intelligent networks are expected to be rolled out extensively, particularly between the years between 2015 and 2020. The Taskforce must ensure the smooth running of this process.

Intelligent Networks Innovation Programme under development

'Smart networks' is one of the three cornerstones of the 2008 Energy Report. The Ministry of Economic Affairs has asked a consultation group comprising network companies and knowledge institutions to set up an "Intelligent Networks Innovation Programme". The aim of this innovation programme is to prepare the energy infrastructure for the introduction of intelligent networks.

It will examine whether a system in which system operators are given a financial incentive outside the regulatory framework for which they will be charged retrospectively is an effective and efficient way to increase network innovation.

Smart meter

The smart meter is regarded as an important building block for smart grids and smart markets, particularly as it enables the consumer to participate more actively in the energy markets, by means of feed-in, usage on the basis of current prices, etc. The introduction of the smart meter is regulated in legislation which is passing through a final phase in Parliament.

Example projects

Stichting Energy Valley and the Noordelijke Ontwikkelings Maatschappij (NOM) [Northern Development Company] are championing pioneering work on smart power networks for North Netherlands. Example projects under development are the Nieuwveense Landen residential areas in Meppel and the new construction of the zoo in Emmen.

(d) Is the reinforcement of the interconnection capacity with neighbouring countries planned? If so, which interconnectors, for which capacity and by when?

The interconnection capacity plans are described in the ENTSO-E Ten Years Network Development Plan (TYNDP). The following reinforcements of the interconnection capacity of the Dutch network are planned;

| Naam | Verbinding | Vermogen (MW) | Geplande inbedrijfstelling | Status |
|------------------------------|----------------|---------------|----------------------------|---------------------|
| BritNed | United Kingdom | 1290 | 2010 | Under construction |
| Niederrhein-Doetinchem 380kV | Germany | 1000-2000 | 2013 | In preparation |
| NorNed 2 | Norway | 700-1400 | 2015-2017 | Under consideration |
| Cobra | Denmark | 600-700 | 2016 | Under consideration |

MVA must be submitted within 10 working days of receipt of a complete request.

(e) How is the acceleration of grid infrastructure authorisation procedures addressed? What is the current state and average time for getting approval? How will it be improved?

Licences (Spatial Planning) from 220 kV: Government Coordination Scheme

The Government Coordination Scheme also applies to authorisation procedures for network infrastructure. Network infrastructure qualifies for the Government Coordination Scheme if it relates to the national high-voltage electricity grid from 220 kV or the national gas transport network with a pressure of at least 40 bar. For an explanation of the Government Coordination Scheme, see paragraph 4.2.1 If the Government Coordination Scheme did not apply, the implementation of an interconnector between Doetinchem and Wesel would be expected to take 7 to 10 years. Through the application of this scheme, the period normally required for the implementation of this type of project can be reduced to 4.5 to 5 years. As decisions are bundled for appeal purposes, companies can also enjoy a cost benefit, and any participants can make an overall assessment.

Licences (Spatial Planning) <220 kV: standard procedures

The standard Spatial Planning procedures are followed for network infrastructure with a voltage level below 220 kV. Spatial Planning is not perceived as an issue for the development of this network infrastructure. This infrastructure is usually laid underground.

Network access authorisations: Netcode

The connection of a renewable energy installation to the network infrastructure is governed by the Electricity Act. The Netcode sets out conditions for the development of a connection. The quality criteria prescribe, for example, that a proposal for a connection with a connection capacity up to 10

Government Coordination Scheme

Within the Government Coordination scheme, the project minister in the implementation module coordinates all necessary authorisations. The Minister defines the period within which the authorisations must be granted, arranges the publication and inspection, collates all comments, etc. If a supervisory body refuses to cooperate, the Minister may himself take a decision. This decision is taken together with the Minister for Housing, Spatial Development and the Environment. All decisions are designated for appeal as one decision so that all decisions can be dealt with collectively.

Quality and capacity documents

As indicated in paragraph a), the further establishment of network infrastructure is developed and described in the quality and capacity documents of the system operators.

Priority for sustainable electricity bill

The 'priority for sustainable electricity' bill provides for a mandatory alignment of the investment plans of the system operators whose systems are adjacent to one another. The purpose of this alignment is to optimise network planning as a whole. A contribution is thereby made to a faster and more efficient increase in the transport capacity. This must result in network reinforcements and expansions which are no longer regarded piecemeal, but rather from an overall perspective.

No. A generally applicable connection obligation is imposed on system operators. Prioritised connection rights are deemed to be unnecessary with this connection policy. The 'Priority for sustainable electricity' bill in fact regulates the transport priority for renewable energy.

(h) Are any renewable installations ready to come online but not connected due to capacity limitations of the grid? If so, what steps are taken to resolve this and by when is it expected to be resolved?

Requests for connection must always be submitted by the regional system operator or the TSO, unless the secure operation of the network cannot be guaranteed.

The Ministerial Order (Ministeriele Regeling - MR) on better utilisation of transport capacity ensures that, in the event of possible congestion, requests for connection may be honoured until the maximum is attained whereby safety can still be guaranteed. In this way, capacity is created for both existing producers and newcomers. The Ministerial Order is an interim order and must provide a solution to transport capacity shortages until the 'Priority for sustainable electricity' bill enters into force.

The 'priority for sustainable' bill has already been discussed above and has now been approved by the House of Representatives. The Ministry for Economic Affairs is currently preparing the low-level regulation in the form of general administrative regulations.

(i) Are the rules on cost sharing and bearing of network technical adaptations set up and published by transmission and distribution system operators? If so, where? How is it ensured that these rules are based on objective, transparent and non-discriminatory criteria? Are there special rules for producers located in peripheral regions and regions with low population density?

Tariff regulations, connection conditions and tariff structures of the Netherlands Competition Authority

Yes, this relates to the tariff regulations of the Netherlands Competition Authority (the Office of Energy Regulation), and the connection conditions and tariff structures which the Netherlands Competition Authority has set out in the codes. The Electricity Act 1998 stipulates that the Office of Energy Regulation must define the maximum transport and connection tariffs, and also the system service tariff for every electricity grid operator in the Netherlands. For this reason, a system operator submits a proposal to the Office of Energy Regulation every year, setting out the tariffs that it wishes to apply. The Office of Energy Regulation assesses these tariff proposals and adopts these tariffs, with or without amendments.

Publication

Both the system operators and the Office of Energy Regulation publish the tariff decisions on the website. In the codes, the Netherlands Competition Authority sets out the conditions governing the implementation of connections, including the cost allocation principles which are to be applied.

Objective, transparent and non-discriminatory criteria

Objectivity, transparency and non-discrimination are guaranteed by the process followed by the Netherlands Competition Authority in relation to the preparation of the tariff decisions and codes. The Board adopts these decisions following consultation with the joint system operators and representative organisations of market players. This process is legally defined.

Peripheral areas and regions with low population density.

No special rules apply to producers in peripheral areas and regions with low population density. The costs may in fact differ between areas given that different network areas are involved.

(j) Please describe how the costs of connection and technical adaptation are attributed to producers and/or transmission and/or distribution system operators. How are transmission and/or distribution system operators able to recover these investment costs? Is any modification of these cost bearing rules planned in the future? What changes do you envisage and what results are expected?

Tariff Code

The tariff structures set out in Article 36 of the Electricity Act 1998 are implemented by the Office of Energy Regulation in the form of the Tariff Code. The Tariff Code defines how the costs of the electricity grid in the Netherlands are distributed among the various consumers in the Netherlands. The Tariff Code is used by the Office of Energy Regulation in defining the level of the tariffs that the system operators can charge to their consumers.

Tariff structure for the connection service

The work involved in the connection service is described in the Electricity Act. The connection tariff serves to control the costs incurred by the system operator and must be divided up into a) initial investment costs and b) costs for maintaining the connection.

Tariff structure for the transport service

The transport service comprises the transport of electricity from producers to users by making use of the network. This also means: a) the removal of transport restrictions; b) compensation for losses incurred during transport; c) maintenance of the voltage and reactive power management.

The costs are divided up into two categories:

a. the transport-dependent costs, i.e.:

- the network infrastructure depreciation charges;
- a reasonable return on network infrastructure investment;
- the network infrastructure construction and maintenance costs;
- the costs for energy purchase to cover network losses, the removal of transport restrictions and the operation of voltage and reactive power management;
- the cascaded costs from networks at a higher voltage level;
- the operational costs incurred in connection with the above.

b. the transport-independent costs, i.e.:

- the costs for processing measurement data;
- the costs for managing the connection register;
- the costs for allocation, reconciliation and validation;
- the costs for invoicing, customer service, collection and customer and contract administration;
- the costs for fulfilling data requests from the Management Board of the competition authority;
- the costs for processing switching and relocation notices.

Cost recovery

System operators can recover their costs - insofar as the Netherlands Competition Authority designates these costs as efficient - via the tariffs. The tariff elements are defined in the aforementioned tariff codes, along with the cost allocation principles.

Amendment of the rules

The codes are adjusted annually. No structural amendment of these rules is provided for.



(k) Are there rules for sharing the costs between initially and subsequently connected producers? If not, how are the benefits for subsequently connected producers taken into account?

Connections (except for the most complex) are established at the nearest point in the network where there is sufficient capacity and the newly connected party pays the costs to the connection point in the network. The costs for the associated network reinforcement elsewhere in the network will be borne by the system operator. The system operator can recover these costs via the tariffs. The costs of opening up a new geographical area will be borne by the system operator who can recover these costs via the tariffs. New connections are set up at regulated tariffs, or at market prices in cases where the connection can also be provided by other parties.

(l) How will it be ensured that transmission and distribution system operators provide new producers wishing to be connected with the necessary information on costs, a precise timetable for processing their requests and an indicative timetable for their grid connection?

The NMa asked the TSO in April 2009, in the context of the fulfilment of the legal obligation as described in Article 16(1)(k) of the Electricity Act 1998, to submit a proposal indicating how the information on available, requested and allocated transport capacity in the Netherlands would be made available in transparent form to market players.

In addition, a request was also made for the submission of a proposal to amend the technical conditions within the meaning of Article 31(1) of the Electricity Act. This amendment proposal must examine the procedure to be followed if a consumer requests a connection which differs from the standard connections. The need to set out a procedure of this type in the technical conditions arises in particular from Article 6(b) of the Regulation relating to electricity tariff structures and conditions. More specifically, the TSO is asked to guarantee in this proposal that:

- more information is published on the available transport capacity, the commitment of current producers and the ongoing applications, in order to increase transparency for the connection process;
- a connection procedure with a system of reciprocal milestones and/or guarantees is introduced.

This system must ensure that an application for a connection only continues to be processed for as long as the applicant demonstrably makes progress with his project. The applicant can prove this with reference to important milestones, such as steps in the licensing trajectory and invitations to tender. The intention is that a system of this type will reduce the opportunities for strategic behaviour.

4.2.7 Electricity grid operation (Article 16(2) and Article 16(7) and (8) of Directive 2009/28/EC)

(a) How is the transmission and distribution of electricity from renewable energy sources guaranteed by transmission and distribution system operators? Is priority or guaranteed access ensured?

A non-discriminatory connection and transport obligation applies to the system operator pursuant to Article 23 of the Electricity Act 1998, and Article 14 of the Gas Act.

Priority rights for the transport of electricity from renewable sources in the event of a transport shortage form part of the 'priority for sustainable' bill (TK 2008-2009, 31904, No 2). See paragraph 4.2.6.

(b) how is it is ensured that transmission system operators, when despatching electricity generating installations, give priority to those using renewable energy sources?

This forms part of the 'priority for sustainable' bill (TK 2008-2009, 31904, No 2), as described in paragraph 4.2.6.

Within 'Priority for sustainable', a congestion management system is proposed which prevents the occurrence of an electricity production surplus in a network area. This new connection policy offers the significant advantage that newcomers do not have to wait a long time for a connection and therefore gain earlier access to the market.

The proposed system is based on 'system redispatch'. In this context, a bid ladder for downward and upward power adjustments is used, coordinated by the system operator. Producers of renewable electricity are given priority on the network without incurring congestion charges. If the electricity production capacity in an area relates almost entirely to renewable electricity, prioritisation will still apply in such areas. Non-adjustable renewable electricity takes priority over adjustable renewable electricity.

(c) How are grid- and market-related operational measures taken in order to minimise the curtailment of electricity from renewable energy sources? What kinds of measures are planned and when is implementation expected?

In principle, responsibility lies here with the national and regional system operators. At national level, this also forms part of the 'Priority for sustainable' bill (TK 2008-2009, 31904, No 2). In addition, work is in hand at international level to extend market integration within the Florence Forum and the Pentalateral Energy Forum.

Electricity Regulatory Forum (Florence Forum)

The Electricity Regulatory Forum, or Florence Forum, was set up to discuss the development of an internal electricity market. Items currently on the agenda include international electricity trading, particularly tariff-setting for international electricity trading and the management of interconnection capacity shortages.

Participants in the Florence Forum are the national regulatory authorities, EU Member States, the European Commission, TSOs, traders, consumers, grid users and commercial firms.

Pentalateral Energy Forum

The Pentalateral Energy Forum is an initiative of the Benelux, Germany and France with the aim of promoting collaboration between all relevant parties to create a regional North West European electricity market, as an intermediate stage in the creation of a single common European electricity market. The Pentalateral Energy Forum intends to remove obstacles to further market integration and increase security of supply.

(d) Is the energy regulatory authority informed about these measures? Does it have the competence to monitor and enforce implementation of these measures?

Office of Energy Regulation (of the Netherlands Competition Authority)

Responsibility for the implementation of the Electricity Act 1998 and the Gas Act and for verification of compliance with these Acts has been assigned to the Office of Energy Regulation (Energiekamer - EK). The Office of Energy Regulation is a service which comes under the Minister of Economic Affairs and is a regulatory body within the Netherlands Competition Authority (NMa). This creates an effective synergy between the Office of Energy Regulation and the other directorates of the NMa.

Under the terms of a mandate order, the director and cluster managers are granted a mandate, delegated power and authority for matters concerning the Electricity Act 1998 and the Gas Act and for all other matters concerning the Office of Energy Regulation. The Office of Energy Regulation is closely involved in the agreements made on the basis of the Florence Forum and has powers in respect of the implementation of agreements in Technical Codes and the enforcement thereof.

(e) Are plants generating electricity from renewable energy sources integrated in the electricity market? Could you please describe how? What are their obligations regarding participation in the electricity market?

All electricity producers have the same rights and obligations pursuant to the Electricity Act 1998.

(f) What are the rules for charging transmission and distribution tariffs to generators of electricity from renewable energy sources?

The tariffs are the same as those described in 4.2.6(i).

4.2.8 Integration of biogas in the natural gas grid (Article 6(7), (9) and (10) of Directive 2009/28/EC)

(a) How is it ensured that the charging of transmission and distribution tariffs does not discriminate against gas from renewable energy sources?

Gas from renewable sources that is fed into the natural gas grid is treated as if it were natural gas. This ensures that transmission and distribution tariffs do not discriminate against gas from renewable sources.

(b) Has any assessment been carried out on the need to extend the gas grid infrastructure to facilitate the integration of gas from renewable sources? What is the result? If not, will there be such an assessment?

Integration status

There are currently fewer than 10 installations in the Netherlands which feed gas from renewable sources (reprocessed to natural gas quality) into the gas grid. A number of these have been doing so for some years but still only to a limited extent.

Expectation for the integration of gas from renewable sources

The projects relating to the production of biogas and feeding of biogas into the gas grid are developed and implemented by private organisations. The need for expansion of the gas grid therefore depends to some extent on the location where undertakings intend to implement their project. Undertakings with plans for green gas projects must then also make contact with the system operator at an early stage to discuss the connection options.

Studies have been carried out by the government and a number of market players on a regional scale to assess the need to expand the gas grid infrastructure in order to promote the integration of gas from renewable sources. A wider study into the potential for biogas for a specific regional area where a problem area has currently been identified is being carried out on behalf of the government to determine the possible future plans of undertakings. This study is a collaboration between the relevant regional system operator, the national system operator, the national government and the provincial authority. As well as providing a specific network integration solution for the area concerned, this study also offers instructive ideas and suggestions for a further inventory of the required gas grid infrastructure at national level. The aforementioned studies will serve as examples for other regions.

In various regions, but primarily in North Netherlands, market players are focusing attention on the development of (green) gas hubs as a means of achieving network integration of gas from renewable energy. Various fermenters are working together to clean, process and feed green gas into the gas grid and are aiming to achieve economies of scale in this way. These economies of scale also make it economically viable at an earlier stage to feed the green gas into the high-pressure network. Sufficient capacity is available on the high-pressure network.

The national system operator is now carrying out a scenario study into network integration of gas from renewable sources on its own initiative. The Government is examining whether green gas should take priority in the event of congestion on the gas grid.

Results from all of the aforementioned studies are expected in 2010.

(c) Are technical rules on network connection and connection tariffs for biogas published? Where are these rules published?

Connection and transport conditions for gas

The energy supervision directorate of NMa has published connection and transport conditions for gas. In addition, the system operators have published the 'additional conditions of the Regional System Operators (Regionale Netbeheerders - RNB) for green gas feeders'. These are currently still being drafted. Further experience will be gained in the coming period relating to the feed-in of green gas and the additional conditions will be adapted in the light of this experience.

Network access and transport capacity

The tariffs for connection of the renewable gas production installation to the gas grid will be paid by the project developer. The project developer must cover these costs - and similarly all other costs - from the sale of the biogas and the received subsidy. The connection costs are highly dependent on the location of the production installation. The proximity of the gas grid, possible infrastructure obstacles such as canals, rivers, highways, etc. will all impact on the cost level.



4.2.9 District heating and cooling infrastructure development (Article 16(11) of Directive 2009/28/EC)

(a) Please provide an assessment of the need for new district heating and cooling infrastructure using renewable energy sources and contributing to the 2020 target. Based on this assessment, are there plans to promote such infrastructures in the future? What are the expected contributions of large biomass, solar and geothermal facilities in the district heating and cooling systems?

The Netherlands has a long history of using natural gas. As a result, the gas grid provides very extensive coverage. A large-scale transition from a natural gas network to a heat network is not envisaged. However, local heat networks exist.

Large-scale heat networks

In existing large-scale networks, the source is mainly heat from electricity production or waste incineration. Under pressure from municipal authorities, operators are looking for ways to make these networks sustainable, for example by using heat from biomass or geothermal systems.

Preliminary demonstration projects are being implemented for geothermal systems. For example, a project is being implemented in The Hague relating to the use of renewable heat from geothermal sources in the built environment. If this

project is successful, further projects may follow over the next few years.

In the development of new residential areas, business sites and glasshouse areas, attention is focused on the role that a (sustainable) heat network might play. This is also often done in combination with bioenergy or heat and cold storage.

Small networks

Small networks are on the increase, whereby a cluster of homes is provided with a collective heat pump or solar boiler. Growth is expected here particularly in new construction and renovation. Sustainable cold through hot and cold storage in aquifers is in widespread use in the Netherlands. Roughly half of all new offices are provided with this technology, making the Netherlands a world leader.

4.2.10 Biofuels and other bioliquids - sustainability criteria and verification of compliance (Articles 17 to 21 of Directive 2009/28/EC)

(a) How will the sustainability criteria for biofuels and bioliquids be implemented at national level? (Is there legislation planned for implementation? What will be the institutional setup?)

The Environmental Management Act does not yet include an Article imposing general sustainability requirements for a specific product. In a number of areas, sustainability aspects are now taken into consideration (whole chain approach for waste, ecological aspect, etc.).

A bill amending the Environmental Management Act provides for a regulation imposing sustainability requirements for biofuels and bioliquids.

The quantitative requirements for the use of renewable energy as a transport fuel, and also the sustainability aspects, will be included in the Decree on biofuels for road transport 2007 and the ensuing ministerial orders.

The structuring of the implementation organisation will also be examined. The most important tasks will be to validate the reports submitted by the companies - in connection with the implementation of the relevant Directives - and prepare the reports to be submitted by the Netherlands to the European Commission. Until this implementation organisation is set up, the inspectorate of the Ministry of Housing, Spatial Development and the Environment will remain responsible for implementation.

(b) How will it be ensured that biofuels and bioliquids that are counted towards the national renewable target, towards national renewable energy obligations and/or are eligible for financial support comply with the sustainability criteria set down in Article 17(2) to (5) of Directive 2009/28/EC? (Will there be a national institution/body responsible for monitoring/verifying compliance with the criteria?)



An independent audit will be carried out, organised and set up by the industry. This will verify compliance. A certification system is also planned. The Renewable Energy Directive is binding in this respect. The government supports the development of the certification system which guarantees compliance with the sustainability requirements. The NTA8080/8081 standards and the CEN standards provide input for the certification, whereby the Netherlands standards are tested against the Renewable Energy Directive.

The Ministry of Housing, Spatial Development and the Environment is responsible for biofuels for transport. The Ministry of Economic Affairs is responsible for biomass for electricity and heat.

(c) If a national authority/body will monitor the fulfilment of the criteria, does such a national authority/body already exist? If so, please specify. If not, when is it envisaged to be established?

According to the implementation schedule, the body will be operational in 2010.

(d) Please provide information on the existence of national law on land zoning and national land register for verifying compliance with Article 17(3) to (5) of Directive 2009/28/EC. How can economic operators access this information? (Please provide information on the existence of rules and distinction between different land statuses, like biodiversity area, protected area etc; and on the competent national authority who will monitor this land register and changes in land status.)

No specific legislation exists for land zoning and the land register in the Netherlands which relates to the sustainability of plants. However, legislation exists which designates protected areas or high biodiversity areas. These national laws (e.g. the Nature Conservancy Act) are primarily based on the Birds and Habitats Directives. See paragraph 4.2.1.

The biomass produced in the Netherlands relates particularly to residues (see paragraph 4.6). Given the limited biomass production, the risk of non-compliance with Article 17(3) to (5) is assessed as low.

(e) As far as protected areas are concerned, please provide information under which national, European or international protection regime they are classified.

However, legislation exists which designates protected areas or high biodiversity areas. These national laws (e.g. the Nature Conservancy Act) are primarily based on the Birds and Habitats Directive. See paragraph 4.2.1.

(f) What is the procedure for changing the status of land? Who monitors and reports at national level on land status changes? How often is the land zoning register updated (monthly, annually, bi-annually, etc.)?

The framework act for land zoning is the Spatial Planning Act. Landscapes and areas are designated at national level in this Act. Moreover, land zoning is primarily the responsibility of local authorities and is structured on the basis of land-use plans. Changes to land-use plans are made by the local authorities, taking account of regional and national frameworks, such as, for example, protected areas. The register is updated with each change. See also paragraph 4.2.1.

(g) How is compliance with good agro-environmental practices and other cross-compliance requirements (required by Article 17(6) of Directive 2009/28/EC) ensured and verified at national level?

Enforcement of agro-environmental regulation is ensured at national level. The inspectorate of the Ministry of Housing, Spatial Development and the Environment ensures enforcement of and compliance with environmental regulation. The General Inspectorate, which is part of the Ministry of Agriculture, Nature and Food Quality, ensures that rules relating to food safety, animal welfare and the environment are complied with.

(h) Do you intend to help develop voluntary "certification" scheme(s) for biofuel and bioliquid sustainability as described in the second subparagraph of Article 18(4) of Directive 2009/28/EC? If so, how?

Yes, the certification is carried out for and by industry, but the government intends to help them set this up. The standard is provided by the independent audit. The development of the certification receives collaborative assistance and financial support to the tune of EUR 200,000.

4.3 Support schemes to promote the use of energy from renewable sources in electricity applied by a Member State or a group of Members States

The following schemes for promoting the use of renewable electricity are specified in this paragraph;

1. SDE
2. MEP
3. OVMEP
4. MIA/Vamil
5. EIA
6. Green investment scheme
7. Energy innovation agenda
8. Technology development: EOS, ERA-NET and SET
9. Promotion of additional burning and combined burning of biomass in coal-fired power stations

Incentive Scheme for Sustainable Energy Production (SDE)

(a) Can you please provide the name and a short description of the scheme?

The SDE is an operating subsidy for the production of renewable electricity and gas. The SDE was started up in 2008 with the opening up of various subsidy categories.

Basic amount

The SDE offers long-term financial security by covering the unprofitable component of projects. The unprofitable component is determined by including a basic amount in the decision to grant a subsidy. This is the average cost price of the renewable energy option, often the sum of the investment and operating costs, plus a reasonable profit margin, divided by the expected quantity of produced sustainable energy.

Subsidy

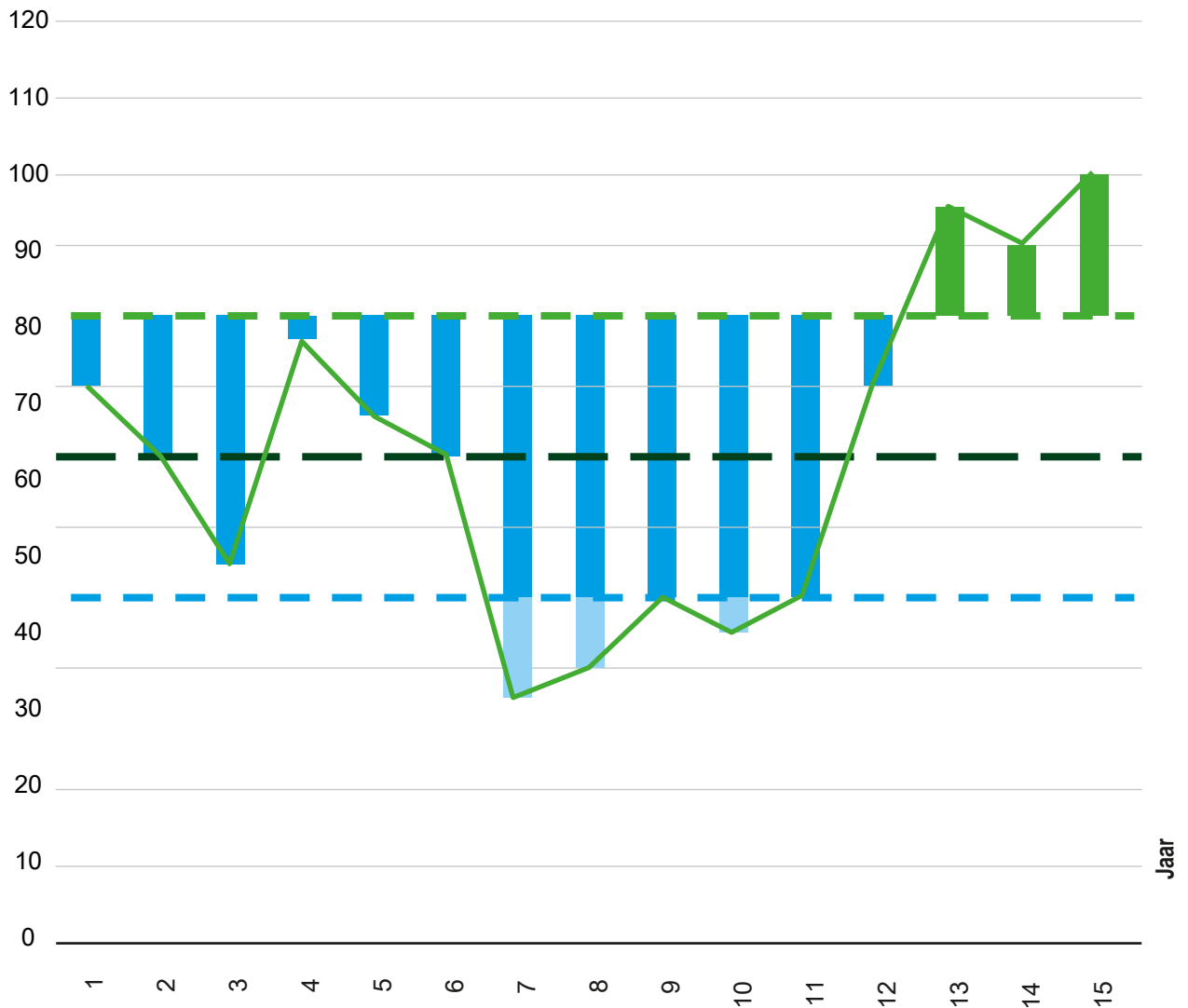
The subsidy is the difference between the basic amount and the energy price. The energy price is determined at the end of each calendar year for the preceding year. The energy price may differ for each category. As well as the energy price, further factors may be included which are relevant to the price which the producer obtains. The energy price, including any remaining factors, is referred to as the correction amount. As the correction amount may differ from year to year, the producer receives a different subsidy amount per produced energy unit per calendar year.

Basic energy price

As well as the basic amount, a basic energy price also applies. In the case of electricity, the basic electricity price amounts to 2/3 of the expected long-term average electricity price. The subsidy is thereby maximised; the maximum subsidy per produced energy unit cannot be more than the difference between the basic amount and the basic energy price.



euro/MWh



Subsidy maximisation

The amount of the subsidy is also maximised by including in the subsidy grant decision a maximum amount of renewable energy to be subsidised per calendar year. This is expressed as the maximum number of MWh or Nm³ per annum for which subsidy can be obtained.

Application for subsidy and allocation of funding

A subsidy can be applied for whenever a subsidy category has been opened up for that purpose. Subsidy budget can be allocated in order of receipt, or in 'order of ranking'. Order of ranking may be based on various tender criteria, such as, for example, price (an applicant himself then specifies the basic amount).

The subsidy budget has hitherto been allocated for most categories in order of receipt. For the Offshore Wind category (opened up in January-February 2010), the published allocation mechanism was 'in order of ranking'.

- Basic amount
- Basic electricity price
- The correction amount
- Subsidy
- Additional loss for the producer
- Additional profit for the producer
- The expected long-term average electricity price. The basic electricity price is 2/3 of this.

(b) Is it a voluntary or obligatory scheme?

The SDE is a voluntary scheme.

(c) Who manages the scheme? (implementing body, monitoring authority)

The scheme comes under the responsibility of the Ministry of Economic Affairs and is implemented by Agentschap NL.

The monitoring authority is the Audit Service of the Ministry of Economic Affairs.

Guaranties of Origin must be issued for renewable electricity. CertiQ is responsible for issuing Guarantees of Origin, and supplies this information to Agentschap NL.

No statutory certification system currently exists for renewable gas. Here, the producer must himself provide the production information; however, the associated metering and monitoring must meet certain requirements. A voluntary system for Guaranties of Origin for green gas has been in operation since July 2009. These green gas certificates are issued by Vertogas.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national targets?

Current financing of the SDE

The SDE is financed from the government budget and comes under the responsibility of the Ministry of Economic Affairs. In January 2010, a budget of EUR 2.1 billion was published for various categories in this scheme. This relates to a reserve for the payment of subsidies in the coming 12-15 years for projects which will receive a subsidy grant in 2010.

Additionally, at the end of 2009, a budget of EUR 5.3 billion was published for projects under the offshore wind subsidy category, and EUR 1.3 billion for projects under the onshore wind and wind in water subsidy categories, which also receive a subsidy grant in 2010.

It should be noted that the allocated budget is a maximum reserve, based on the difference between the basic amount and the basic energy price and the production maximum in the award. The budget to be paid out will be less, as this is dependent on the actual production and the energy price.

Announced funding of the SDE: Surcharge on electricity tariff

In the additional policy agreement (March 2009), the Cabinet stated: "In order to ensure a clean and efficient energy supply for the future, the SDE will continue in its present form, but will be financed more substantially and robustly from an electricity tariff surcharge." Given the demissionary status of the Balkenende IV cabinet, the preparation and possible introduction of the surcharge agreed in the additional policy agreement will be left to a subsequent cabinet.

(e) How is long-term security and reliability addressed by the scheme?

Subsidised projects

Producers who have been awarded an SDE subsidy have a long-term guarantee (12-15 years) of the income from their project. The subsidy amount may differ from year to year, but energy prices may also rise or fall. Undertakings are in fact dependent on the subsidy categories which are opened up, the relevant requirements imposed on the production installation, the associated published budget and the extent of competition from other projects in the allocation of the budget. It is not established in advance whether a project can or cannot be subsidised. This process was adopted to ensure that the scheme remains financially manageable and can therefore be used as a long-term instrument. This contrasts with the MEP, the predecessor of the SDE, which was an open-ended scheme.

(f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

General Administrative Regulation and Ministerial Order

The SDE process is set out in a General Administrative Regulation (Algemene Maatregel van Bestuur - AMvB). A Ministerial General Implementing Regulation is also issued, setting out the practical implementation of a number of aspects from the General Administrative Regulation. New subsidy categories are opened up by Ministerial Order on an annual basis, along with associated basic (energy) amounts.

Advice on basic amounts

The Ministry of Economic Affairs asks ECN annually for advice on the basic amounts for renewable energy and green gas. This advice is given following consultation with the market on the basis of a draft opinion. The issues raised during the market consultation, with a response to them from ECN/KEMA, are set out in a consultation document which is published at a later stage.

Definition of subsidy categories (including basic amounts)

The Minister for Economic Affairs annually defines the subsidy categories (including the basic amounts). This is done in consultation with the House of Representatives.

Optimising the scheme

Compared with the first opening up of the scheme, a number of optimisations, for example, are made;

- Provision of incentives for the production of heat from combined bioheat and power systems (through an increase in the electricity price for efficient use of heat).
- An increased number of biomass flows eligible for subsidy through changes to subsidy categories and Netherlands Technical Agreements.
- A publication of calculation systems in order to offer greater security.
- A subsidy category for Wind Near Shore and larger wind turbines.

(g) Does support differ according to technology?

Yes. Given that the amounts may differ for each technology (such as the basic amount or correction amount), the support for each category may also differ.

(h) What are the expected impacts in terms of energy production?

The expected impacts of SDE on energy production are set out in the table below.

| Category | | Power communicated in 2008 | Expected realization to in 2009 | Open up power 2009 | | |
|---|-----|----------------------------|---------------------------------|--------------------|---------|-------------|
| Onshore wind | MW | 2,070 | 542 | 355-500 | 367-517 | 1,265-1,559 |
| | GWh | 4,554 | 1,580 | 1,100 | 1,137 | 3,818 |
| Biomass electricity | MW | 190 | 70 | 30-38 | 30-38 | 130-146 |
| | GWh | 1,520 | 556 | 240-304 | 240-304 | 1,039-1,164 |
| Biomass gas | MW | 18 | 31 | 16-22 | 16-22 | 63-75 |
| | GWh | 144 | 250 | 128-176 | 128-176 | 506-602 |
| Solar pv small | MW | 93 | 38 | 20 | 25 | 83 |
| | GWh | 79 | 33 | 17 | 21 | 71 |
| Solar pv large | MW | - | 11 | 5 | 5 | 21 |
| | GWh | - | 9 | 4 | 4 | 18 |
| | MW | 30 | 0 | 9 | 5 | 14 |
| | GWh | 240 | 0 | 72 | 40 | 112 |
| Biogas production sewage/waste water treatment and landfill gas | MW | 10 | 0,3 | 13 | 5 | 18 |
| | GWh | 80 | 2 | 104 | 40 | 146 |
| AVI's | MW | 160 | 127 | 86 | 0 | 213 |
| | GWh | 621 | 492 | 337 | 0 | 829 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

8 Naar alle waarschijnlijkheid is op basis van voorlopige resultaten van de huidige tender een bijstelling naar 750 MW verwacht.

(i) Is support conditional on meeting energy efficiency criteria?

Energy efficiency requirements may be imposed in the designation regulation for subsidy categories. In the case of AVIs, a different basic amount applies depending on the monthly output of the installation. As from 2009, a higher basic amount applies to specific biomass projects depending on heat utilisation.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

It is an existing measure. The Decree on incentives for sustainable energy production is a General Administrative Regulation. The decree is based on the Kaderwet EZ-subsidies [Framework Act governing subsidies from the Ministry of Economic Affairs].

(k) Is this a planned scheme? When would it be operational?

Not applicable.

(l) What start and end dates (duration) are set for the whole scheme?

The scheme was started up in 2008. No end date has been set. The scheme is opened up for a specified number of months each year. This opening-up period may differ per category and per annum.

(m) Are there maximum or minimum sizes of system which are eligible?

This depends on the subsidy category. In 2010, for example, limits were imposed in the solar PV and biomass categories on the scope of the project.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

Permitted combinations

Projects may be eligible for SDE in combination with support measures such as EIA, the green investment scheme and MIA/VAMIL. SDE may not be combined with MEP or with OVMEP.

Environmental Support Framework

To avoid excessive promotion, projects must be tested against the European Environmental Support Framework (Milieusteunkader - MSK). The framework regulation defines how much financial support is permitted for projects relating to environmental protection. De regels van

The rules of the MSK are set out in the Community guidelines on state aid for environmental protection (2008/C 82/01). The MSK test is necessary for projects which, as well as the SDE subsidy, the Energy Investment Deduction (Energieinvesteringsaftrek - EIA) and subsidy under the Green Projects Scheme, also receive or will receive other forms of state aid.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

Not applicable.

Specific questions for feed-in premiums:

(a) What are the conditions for obtaining the premium?

In broad outline, the premium payment conditions are as follows:

- the producer must be in possession of a subsidy grant;
- the energy price must be lower than the basic amount;
- the production must be proven:
 - For renewable electricity, guarantees of origin must be issued, for electricity on the basis of combined heat and power. Guarantees of Origin for electricity and CHP are issued in the Netherlands by CertiQ.
 - No statutory certification system currently exists for renewable gas. Here, the producer must himself provide the production information; however, the associated metering and monitoring must meet certain requirements. A voluntary system for Guarantees of Origin for green gas has been in operation since July 2009. These green gas certificates are issued by Vertogas.

(b) Is there a cap on the total volume of electricity produced per year or of installed capacity that is entitled to the premium?

Yes, a cap is set in the subsidy grant decision on the total volume of electricity produced that is subsidised per calendar year. In addition, a cap can also be set on the total volume of electricity to be subsidised over the period of the project, if this is necessary in order to comply with the environmental support framework (milieusteunkader - MSK).

(c) Is it an alternative to fixed tariff?

Yes.

(d) Is it a technology-specific scheme? What are the premium levels for each?

Different categories are designated every year. Categories for 2010 are:

| | Basic Amount | basic electricity price |
|--|--------------|-------------------------|
| Renewable electricity: | EUR /kWh | EUR /kWh |
| onshore wind < 6MW | 0,12 | 0,049 |
| onshore wind >= 6 MW | 0,12 | 0,050 |
| solar pv : | | |
| - 1-15 kWp | 0,474 | 0,202 |
| - 15-100 kWp | 0,430 | 0,053 |
| Waste incineration | 0,114-0,137 | 0,090 |
| Landfill gas, waste water/sewage treatment | 0,059 | 0,044 |
| biomass: | | |
| - co-fermentation of animal manure and thermal conversion (≤10 MW) | 0,165-0,193 | 0,044 |
| - fermentation KGW | 0,129-0,149 | 0,044 |
| - other fermentation | 0,158 | 0,044 |
| - thermal conversion (≤10 MW) | 0,151-0,176 | 0,044 |
| - incineration, thermal conversion (10-50 MW) | 0,115-0,156 | 0,044 |
| Hydropower: | | |
| - height of drop < 5 m | 0,123 | 0,044 |
| - height of drop > 5 m | 0,072 | 0,044 |
| Renewable gas: | € /m3 | € /m3 |
| Landfill gas, waste | 0,218 | 0,147 |
| biomass: | | |
| - KGW fermentation | 0,465 | 0,147 |
| - co-fermentation of animal manure | 0,635 | 0,147 |
| - other fermentation | 0,583 | 0,147 |

In 2009, a subsidy category was opened up for renewable electricity from offshore wind. In addition, a subsidy category was opened up for renewable electricity from onshore wind and wind in water. These categories also apply in 2010.

(e) Is er een minimum- en een maximumpremie? Gelieve deze te vermelden.

The minimum premium is zero. The maximum differs for each category. The regulation itself (AMvB) does not specify an absolute maximum. The highest maximum payments in the 2010 categories are reserved for solar pv.

For example:

For the category greater than 0.6 kWp and less than or equal to 15 kWp, the basic amount is EUR 0.474 per kWh and a basic electricity price of EUR 0.202 per kWh. The maximum subsidy is therefore EUR 0.272 per kWh (=0.474-0.202). Whether or not this will also be paid out in practice depends on the energy price.

For the category greater than 15 kWp and less than or equal to 100 kWp, the basic amount is EUR 0.43 per kWh and a basic electricity price of EUR 0.053 per kWh. The maximum subsidy is therefore EUR 0.377 per kWh (=0.43-0.053). Whether or not this will also be paid out in practice depends on the energy price.

(f) For how long is the premium price guaranteed?

This varies according to the category. In the categories in 2010, this is 12 or 15 years.

(g) Is any tariff adjustment foreseen in the scheme?

For a project with a subsidy grant, the basic amount and the basic energy price do not change. However, the annual correction amount changes, as it is dependent on the energy price. If new subsidy categories are opened up, the basic amounts and basic energy amounts are then updated. ECN provides advice on this matter to the Ministry of Economic Affairs.

Environmental quality of electricity production (Milieukwaliteit Electriciteitsproductie - MEP)

Financial support

(a) Can you please provide the name and a short description of the scheme?

The MEP subsidy scheme is an operating subsidy aimed at the environmental quality of electricity production in the Netherlands. The scheme was opened up in 2003 and closed in 2006. The MEP subsidy is a fixed subsidy tariff per kWh produced and applies for a 10-year period. The exceptions to this rule are CHP installations, to which an annual subsidy scheme applied. Although the subsidy scheme is closed, the subsidy payments will continue until the subsidy period for all projects which obtained a subsidy grant has elapsed. The scheme is closed and will therefore no longer be revised.

(b) Is it a voluntary or obligatory scheme?

MEP is a voluntary scheme.

(c) Who manages the scheme? (implementing body, monitoring authority)

The scheme comes under the responsibility of the Ministry of Economic Affairs. The scheme was implemented by EnerQ, a subsidiary of Tennet (the high-voltage grid operator). On 1 January 2009, implementation was taken over by Agentschap NL, an agency of the Ministry of Economic Affairs. Only production for which a guarantee of origin is issued (certificates in the case of CHP) is eligible for subsidy. Issue of guarantees of origin is the responsibility of CertiQ, which is also a subsidiary of Tennet.

(d) what are the measures taken to ensure availability of budget/funding to achieve the national targets?

The MEP is financed from the government budget and comes under the responsibility of the Ministry of Economic Affairs.

(e) How is long-term security and reliability addressed by the scheme?

Producers who are awarded an MEP subsidy are guaranteed a fixed amount per kWh produced for 10 years (does not apply to CHP). The MEP was discontinued in 2006 and was replaced in 2008 by the SDE. New MEP subsidies are no longer awarded.

(f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

The MEP is based on a 10-year subsidy per kWh. The amount of the subsidy is dependent on the period in which the application for subsidy was submitted. The scheme is closed and will therefore no longer be revised.

(g) Does support differ according to technology?

Yes. The tariffs are adjusted on the basis of estimates of the unprofitable component and the energy price. As the unprofitable component differs according to the technology involved, different tariffs occur as a result.

(h) What are the expected impacts in terms of energy production?

The expected impacts on energy production are integrated with other measures in the total ECN estimates as set out in chapters 3 and 5 of this document.

(i) Is it an existing measure? Could you please indicate national legislation regulating it?

The following categories currently still receive support from the MEP: onshore wind, offshore wind, biomass (including waste), solar pv and hydropower. Out of these categories, efficiency requirements apply only to electricity from waste incineration.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

The MEP is an existing measure, but new requests may no longer be submitted. The MEP is governed by the Electricity Act 1998.

(k) Is this a planned scheme? When would it be operational?

It is a closed scheme.

(l) What start and end dates (duration) are set for the whole scheme?

1 July 2003 to 18 August 2006.

(m) Are there maximum or minimum sizes of system which are eligible?

No. The scope may indeed impact on the subsidy tariff.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

MEP can be combined with EIA and Green Financing. If other support measures are involved, an environmental support framework test is carried out, which may be shortened if necessary.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

Not applicable.

Specific questions for feed-in premiums:

(a) What are the conditions for obtaining the premium?

The producer must have an OVMEP subsidy grant. Production must be proven with guarantees of origin.

(b) Is there a cap on the total volume of electricity produced per year or of installed capacity that is entitled to the premium?

The capacity of the production installation is specified in the subsidy grant. Additionally, in the case of onshore wind, a limit is imposed on the maximum production over the period of the project (18,000 of 20,000 peak load hours). Initially, the scheme had no annual maximum. From December 2006, a maximum number of peak load hours eligible for subsidy was added retroactively to the subsidy awards. However, this measure has only a limited effect.

(c) Is it an alternative to fixed tariff?

This scheme has fixed tariffs.

(d) Is it a technology-specific scheme? What are the premium levels for each?

The maximum MEP subsidy on renewable energy is EUR 0.097 per kWh (including solar pv, offshore wind and hydropower).

(e) Is there a floor and/or a cap for the premium? Please specify.

The maximum tariff is EUR 0.097 per kWh. Several tariffs may apply to one project:

- In the case of waste incineration depending on the monthly output of the installation (this is higher in cases where more heat is utilised);
- In the case of biomass, the tariff depends on the fuel type and technology used (for example gasification).

(f) For how long is the premium price guaranteed?

10 years.

(g) Is any tariff adjustment foreseen in the scheme?

No.

Subsidy scheme for fermentation installations (OVMEP)

Financial support

(a) Can you please provide the name and a short description of the scheme?

The OVMEP subsidy scheme for fermentation installations is a transitional scheme for producers of renewable electricity using fermentation installations. The scheme was set up shortly after the MEP was discontinued in August 2006 so that advanced investment plans, particularly in fermentation installations of primarily small agricultural undertakings, could still be implemented.

The advanced investment plans related, inter alia, to the fact that the EU policy on the sale of the residue as fertiliser following co-fermentation of manure with other by-products and the sale of the digestate from the fermentation of maize as a fertiliser product had recently been relaxed. With this scheme, subsidy was still awarded to this specific group of small undertakings. Like the MEP, the OVMEP offers a fixed subsidy tariff for the 10-year period. However, one difference is that, in the subsidy grant, a maximum is imposed on the number of kWh that are eligible each year for subsidy. Additionally, the subsidy scheme budget was capped at EUR 326 million.

(b) Is it a voluntary or obligatory scheme?

OVMEP is a voluntary scheme.

(c) Who manages the scheme? (implementing body, monitoring authority)

The scheme comes under the responsibility of the Ministry of Economic Affairs and is implemented by Agentschap NL, an agency of the Ministry of Economic Affairs. Only production for which a guarantee of origin is issued is eligible for subsidy. Issue of guarantees of origin is the responsibility of CertiQ, which is also a subsidiary of Tennet.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national targets?

The OVMEP is financed from the government budget and comes under the responsibility of the Ministry of Economic Affairs.

(e) How is long-term security and reliability addressed by the scheme?

Producers awarded an OVMEP subsidy are guaranteed a fixed amount per kWh produced for 10 years. This was a one-off subsidy scheme. It was a transitional scheme between MEP and SDE for a specific target group.

(f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

This was a one-off subsidy scheme.

(g) Does support differ according to technology?

Subsidy was granted only to fermentation installations based on animal manure. No further differentiation on the basis of technology was included here.

(h) What are the expected impacts in terms of energy production?

The expected impacts on energy production are integrated with other measures in the total ECN estimates as set out in chapters 3 and 5 of this document.

(i) Is support conditional on meeting energy efficiency criteria?

Nee.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

No new subsidies can be applied for. The scheme comes under the Kaderwet EZ-subsidies [Framework Act governing subsidies from the Ministry of Economic Affairs].

(k) Is this a planned scheme? When would it be operational?

Not applicable.

(l) What start and end dates (duration) are set for the whole scheme?

Applications could be submitted in the period from 19 December 2006 to 29 May 2007.



(m) Are there maximum or minimum sizes of system which are eligible?

No.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

OVMEP can be combined with EIA and Green Financing. If other support measures are involved, an environmental support framework test is carried out, which may be shortened if necessary.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

Not applicable.

Specific questions for feed-in premiums:

(a) What are the conditions for obtaining the premium?

The producer must have an OVMEP subsidy grant. Production must be proven with guarantees of origin.

(b) Is there a cap on the total volume of electricity produced per year or of installed capacity that is entitled to the premium?

A cap is set on the total volume of electricity produced per year that is eligible for subsidy.

(c) Is it an alternative to fixed tariff?

The OVMEP has a fixed subsidy tariff.

(d) Is it a technology-specific scheme? What are the premium levels for each?

Yes, for fermentation on the basis of manure and co-substrates. The subsidy tariff is EUR 0.097 per kWh.

(e) Is there a floor and/or a cap for the premium? Please specify.

The tariff is EUR 0.097 per kWh.

(f) For how long is the premium price guaranteed?

10 years.

(g) Is any tariff adjustment foreseen in the scheme?

No.

(b) Is it a voluntary or obligatory scheme?

Voluntary.

Environmental investment deduction scheme (Milieu Investeringsaftrek - MIA) & Random write-off of environmental investments (Willekeurige Afschrijvingen Milieu-investeringen - Vamil)

Financial support

(a) Can you please provide the name and a short description of the scheme?

The aim of the MIA and Vamil schemes is to encourage undertakings to invest in environment-friendly sustainable operating resources specifically included in the Environmental List. The schemes substantially increase awareness of environment-friendly operating resources and demonstrably reduce the time-to-market. The MIA and Vamil are two different schemes, but are used in combination, as both schemes make use of a common list, referred to as the Environmental List. This Environmental List is revised annually.

The MIA offers an additional facility for a taxable profits deduction, over and above the other tax deduction options such as write-off. In connection with the crisis measures, undertakings that are not involved in fisheries, agriculture or horticulture can benefit from an additional 20 per cent under the MIA scheme in 2010. A budget of EUR 113 million is available for MIA in 2010.

The Vamil offers the facility to write off an investment at any given time. This offers an advantage in terms of interest payment and liquidity. It is possible to fully write off the total investment as early as the year of purchase. Taxable profits are reduced by the accelerated write-off. A budget of EUR 55 million is available for Vamil in 2010.

Examples of sustainable energy technologies that are supported are: investments in electric hybrid transport, highly efficient private cars, gasification installations, biomass processing equipment, a pyrolysis installation for reuse of waste, a groundwater management system with a sustainable energy supply, sustainable energy generation, a drive system for a river-going vessel, a microalgae production installation, a fermentation installation with an algae reactor, etc.

The MIA and Vamil schemes come under the responsibility of the Ministry of Housing, Spatial Planning and the Environment in agreement with the Ministry of Finance (budgetary framework) and in consultation with the Ministry of Economic Affairs and the Ministry of Agriculture, Nature and Food Quality. Agentschap NL and the Tax Authorities implement the MIA and Vamil. Agentschap NL checks the technical content of the declarations. The Tax Authorities check the tax declaration and then determine whether MIA/Vamil may be applied.



Funding is made available through the fiscal instruments in the form of a reduction in income tax and corporation tax. The MIA/VAMIL is included in the annual proposed national budget of the Cabinet. Additional budget has also been released from the resources allocated to alleviate the consequences of the credit crisis.



The MIA/VAMIL is included in the annual proposed national budget of the Cabinet. Since 2009, the schemes have involved a budgetary system controlled on the basis of a multi-annual balance. In principle this runs over a three-year period. This prevents a scheme running the year previously from closing due to an excessive over-run. This has happened several times in the past.



The environmental list is revised annually. Industry and/or the government can submit a proposal for a specific operating resource to be included on the environmental list. An environmental list committee assesses these requests. Agentschap NL submits its final proposal to the Ministry of Housing, Spatial Environment and the Built Environment.



Yes, the MIA/VAMIL is essentially generic. However, different categories are possible: write-off of 15, 30 or 40% of the investment costs (in addition to the normal write-off and excluding the additional 20% under the MIA scheme for 2010). Some operating resources are capped at a maximum amount.

(h) What are the expected impacts in terms of energy production?

is eligible for both EIA and Vamil.

Given that the scheme is focused primarily on environment-friendly operating resources, the exact effect on energy is not known.

(i) Is support conditional on meeting energy efficiency criteria?

No

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

Yes, Article 3.31 (Random write-off of environmental operating resources) and Article 3.42a. (Environmental investment deduction) of the Income Tax Act apply.

(k) Is this a planned scheme? When would it be

It is an existing scheme. Vamil since 1994, MIA since 2000.

(l) What start and end dates (duration) are set for the whole

The scheme normally runs annually from 1 January to 31 December.

(m) Are there maximum or minimum sizes of system which are eligible?

An undertaking which is liable to pay income tax or corporation tax in the Netherlands and actually operates a company on its own account can benefit from the EIA scheme. Investment must then be made in an operating resource that meets the requirements from the Environmental List.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

Yes, to a limited extent. Subsidy schemes: If an investment subsidy is received under a different subsidy scheme for the operating resource concerned, the amount of the subsidy must be deducted from the purchase or production costs. Other tax schemes: There may be cases where an investment relates to (part of) an operating resource which

In this case, both schemes can be used, provided that the operating resource is registered separately for both schemes. A combination of MIA and EIA is not possible. Although the investment may be registered for both EIA and MIA, only one of the two may be used.

If a project uses MIA/Vamil only, the environmental support framework (MSK) will not be exceeded. Participants themselves declare when applying that the cumulative total of support schemes remains below the relevant upper limit. If this is no longer the case, the MIA/Vamil must be (partially) waived.



Not applicable.

Specific questions for financial support for investment:



Tax credit.



Minimum: The cost of one operating resource must be at least EUR 450 and investments totalling less than EUR 2,200 per annum are eligible for Vamil, but not for MIA. Maximum: investments must not exceed EUR 25 million per operating resource.



The scheme normally runs annually from 1 January to 31 December.

Energy investment deduction (Energie investeringsaftrek - EIA):

Financial support

(a) Can you please provide the name and a short description of the scheme?

The energy investment deduction is intended for undertakings that are prepared to invest in energy-saving technologies and the use of renewable energy in their undertaking. Undertakings obtain a tax benefit through their investment. The EIA is essentially generic. This means that the operating resources described in the brochure meet a specified economy or efficiency requirement. An exclusion applies to a number of operating resources that do not meet the specified requirement, but nevertheless represent the best available alternative on the market. The operating resources or parts thereof that are eligible are included on the EIA Energy List. This list is updated annually.

(b) Is it a voluntary or obligatory scheme?

Voluntary.

(c) Who manages the scheme? (implementing body, monitoring authority)

The energy investment deduction (EIA) is a tax scheme offered by the Ministries of Finance and Economic Affairs. Agentschap NL and the tax authorities implement the EIA. If the budget available for EIA threatens to overrun, the Minister for Finance can limit or discontinue the scheme. This will then be published, inter alia, in the Government Gazette.

(d) what are the measures taken to ensure availability of budget/funding to achieve the national targets?

Budget/funding is made available through the fiscal instruments in the form of a reduction in income tax and corporation tax. The EIA is included in the multi-annual budget by the Ministry of Finance.

the scheme?

The EIA is included in the multi-annual budget by the Ministry of Finance.

(f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

The energy list is updated annually. Industry and/or the government can submit a proposal for a specific operating resource to be included on the energy list. An energy list committee assesses these requests.

(g) Does support differ according to technology?

No, the EIA is essentially generic. In addition to the normal write-off, 44% of the investment costs can be deducted from the taxable profits. The income tax or corporation tax liability is therefore reduced. Some operating resources are capped at a maximum amount.

(h) What are the expected impacts in terms of energy

Effect of the EIA for 2008: Undertakings registered for investments of around EUR 1.4 billion. The energy saving achieved with these investments is estimated at 32 PJ.

(i) Is support conditional on meeting energy

Yes. Operating resources that promote efficient use of energy and meet specific energy performance requirements are eligible for EIA. An energy performance requirement could involve, for example, a standard saving per invested euro or an efficiency requirement.

(j) Is it an existing measure? Could you please indicate

Yes, Article 342 (EIA) of the Income Tax Act applies.

(k) Is this a planned scheme? When would it be operational?

It is an existing scheme.

(l) What start and end dates (duration) are set for the whole

The scheme normally runs annually from 1 January to 31 December.

(m) Are there maximum or minimum sizes of system which are eligible?

Minimum: The cost of one operating resource must be at least EUR 450 and the total energy investment amount per calendar year must be at least EUR 2,200. Maximum: EIA is granted on energy investments up to a maximum of EUR 113 million per company in one calendar year. This means that, for an energy investment amount of, for example, EUR 150 million in one calendar year, the EIA amounts to 44% of EUR 113 million. No EIA is granted on the remaining amount.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

Yes, to a limited extent. Subsidy schemes: If an investment subsidy is received under a different subsidy scheme for the operating resource concerned, the amount of the subsidy must be deducted from the purchase or production costs. Other tax schemes: There may be cases where an investment relates to (part of) an operating resource which is eligible for both EIA and Vamil. In this case, both schemes can be used, provided that the operating resource is registered separately for both schemes.

(o) Are there regional/local schemes? If so, please detail using the same criteria as zetten

Not applicable.



Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

Tax credit.

(b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

An undertaking which is liable to pay income tax or corporation tax in the Netherlands and actually operates a company on its own account can benefit from the EIA scheme. Investment must then be made in an operating resource that meets the requirements from the Energy List.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

The scheme normally runs annually from 1 January to 31 December.

Green projects scheme (Green Investment)

(a) Can you please provide the name and a short description of the scheme?

Consumers can purchase green securities (green saving) or shares in a green investment fund (green investment). Anyone who participates in green saving or green investment invests in green projects which are approved by the Dutch government and are eligible for tax benefits.

Banks then lend the deposited money at a lower interest rate to projects whose performance in the areas of nature and the environment is clearly better than normal, and much better than the statutory minimum requirement. A list of eligible project categories has been drawn up. The performance in the areas of nature and the environment is specified in requirements that are monitored by the Agentschap NL and Dienst Regelingen [Schemes Department] agencies of the Ministry of Agriculture, Nature and Food Quality.

(b) Is it a voluntary or obligatory scheme?

A voluntary scheme.

(c) Who manages the scheme? (implementing body, monitoring authority)

The scheme comes under the Ministries of Housing, Spatial Development and the Environment and Finance. The Ministry of Housing, Spatial Development and the Environment coordinates this scheme. Agentschap NL and Dienst Regelingen implement this scheme. Agentschap NL is supervised by the Audit Department of the Ministry of Economic Affairs.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national targets?

Sponsors can lend money from a bank with a green fund at a lower interest rate. In practice, this is around 0.75 percentage points less interest. The green projects scheme is financed from the Government budget.

It is an open-ended scheme that has been in existence

since 1995. Continuity is ensured in that the scheme is financed by private savers and investors who have deposited money in green banks. For this they obtain a lower interest than normal, but this is offset by a tax benefit.

(f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme has been in force since 1995. Controlled adjustments are made to ensure that the projects meet more stringent requirements than the statutory minimum.

(g) Does support differ according to technology?

Eligibility for green investment is determined on the basis of different criteria for each technology. These criteria are defined in the project categories.

The benefit offered by an individual project depends on standard factors which play a part in obtaining a loan, such as the status of the debtor, the general interest rate level, available securities, etc. Possible differences in interest rate benefit depend on differences between projects and do not depend on the project category.

Experience has taught that, in the financing of projects with a green certificate, the green funds apply an interest rate that is around 0.75% lower than it would otherwise be. By making this net cash over the project period this amounts to a benefit of 1.85% on the investment costs.

The green projects scheme covers more than sustainable energy production alone. For example, sustainable heat, sustainable housing, organic farming and soil decontamination also come under the possible project categories.

(h) What are the expected impacts in terms of energy

Improved capital acquisition facilities are provided by the scheme. This has a positive influence on the prospects of implementation of a project.

(i) Is support conditional on meeting energy efficiency

Special requirements apply depending on the specific category. There are no efficiency requirements for renewable electricity production, but requirements apply to heat pumps. In the case of heat pumps, a quality requirement is incorporated in the form of a minimum value of the Coefficient of Performance (4). To guarantee optimum energy performance of the system, the heat pump must be combined with a closed ground heat exchanger or aquifer in order to be eligible for a green certificate.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

It is an existing measure. The Income Tax Act 2001 is specifically applicable here. Private investors and savers in green funds are compensated via the income tax system for a lower return on their investments.

(k) Is this a planned scheme? When would it be operational?

Not applicable.

(l) What start and end dates (duration) are set for the whole scheme?

The scheme has been continuously open since its introduction.

(m) Are there maximum or minimum sizes of system which are eligible?

The minimum project scope is EUR 22,000, and a maximum scope of EUR 34 million can be specified.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be

Projects can be supported by a number of measures. Green investment, for example, can be combined with EIA and/or SDE.

(o) Are there regional/local schemes? If so,

Not applicable.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

Tax credit for consumers who invest in green funds, lower interest loans for investors.

(b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

Companies, institutions and natural persons who develop and maintain an environment-friendly project in the Netherlands. A list of eligible project categories has been drawn up. In the case of renewable electricity production, standard solar PV, wind and hydropower are included. In addition, other technologies can also be submitted in the other projects category, where they are tested on a case-by-case basis.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

Requests are processed on an ongoing basis.

Energy Innovation Agenda

The innovation agenda is funded from the government budget.

Financial support

(a) Can you please provide the name and a short description of the scheme?

The Energy Innovation Agenda includes a large number of support measures aimed at the acceleration phase of the energy innovation chain. Renewable energy forms a large part of this package. This is a generic package to support initiatives for renewable electricity, heat and transport. It involves a total of EUR 438 million in the period 2008-2012. The innovation activities here are focussed on the following topics:

- Groene Grondstoffen [Green Feedstock]
- Nieuw Gas [New Gas]
- Duurzame Elektriciteitsvoorziening [Sustainable Electricity Supply]
- Duurzame Mobiliteit [Sustainable Mobility]
- Ketenefficiency [Efficiency in the Chain]
- Gebouwde Omgeving [Built Environment]
- Kas als Energiebron [Glasshouse as an Energy Source]

Around half of this amount, EUR 210 million, will be divided equally among the aforementioned seven topics: EUR 30 million per topic. The remainder of the EUR 438 million will be used flexibly, dependent in part on the issues to be resolved and the dynamics of the market.

(b) Is it a voluntary or obligatory scheme?

The energy innovation agenda is a voluntary scheme.

(c) Who manages the scheme?

The Interdepartmental Energy Transition Programme Directorate (Interdepartementale Programmadirectie EnergieTransitie - IPE) monitors the consistency in the development and implementation of the innovation portfolio and reports on progress and relevant developments. The implementing body differs for each sub-scheme.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national targets?

The Netherlands systematically allocates part of its natural gas expenditure to the development of its knowledge base. This temporary scheme originates from this. Funds have been allocated for the period 2008-2012.



The scheme is divided up into two phases. Implementation of the second phase will depend on developments in the market and on specific problem areas.



The effect differs for each sub-scheme due to the differing nature of the promoted projects and technologies.



With the aid of an innovation system analysis, the money will be used as effectively as possible to influence the functionality of the innovation system so that the renewable energy innovation transition process is speeded up.



Not applicable.



Part of the scheme is already in force. A further part is still being developed. The scheme comes under the Kaderwet EZ-subsidies [Framework Act governing subsidies from the Ministry of Economic Affairs]. Many parts are developed in conjunction with existing subsidy programmes.



Not applicable.



(l) What start and end dates (duration) are set for the whole scheme?

This depends on the sub-scheme.

(m) Are there maximum or minimum sizes of system which are eligible?

This depends on the sub-scheme.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

Projects can be supported from other measures.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

Not applicable.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

A subsidy or procurement is normally involved.

(b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

It involves projects in the following areas: Green Feedstock, New Gas, Sustainable Electricity Supply, Sustainable Mobility, Efficiency in the Chain, Built Environment, Glasshouse as an Energy Source. Within these areas, support measures are geared towards different focus areas/technologies.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

The opening up of a sub-scheme is normally a one-off occurrence.

Technology development: EOS, ERA-NET and SET

(a) Can you please provide the name and a short description of the scheme?

Technology development is important for the achievement of the objectives from the Renewable Energy Directive. The national energy research subsidy programme (Energie Onderzoek Subsidie - EOS) aims to expand technical knowledge relating to energy efficiency and sustainable energy by supporting research carried out by knowledge institutions and companies in the Netherlands. EOS follows the route from the idea through to the market launch. Depending on the project type and the prospects of the project, subsidy may be available from many EOS schemes .

Research in the Netherlands is increasingly aligned and coordinated internationally. One example of this are the ERA-NET projects. National ministries and agencies work together and undertake joint activities within these projects. A total of 68 ERA-NET projects have been set up. Some projects issue calls for submission of research projects in the participating countries. The researchers in these countries can then receive amounts based on the scheme in the country concerned. ERA-NET can play a part in the short-term and medium-term programmes between the joint (European) programming and the national programming.

In November 2007, the European Commission published the European Strategic Energy Technology Plan (SET plan). The aim of the plan is to enable Europe to become a world leader in new energy technologies. The SET plan proposes seven priority areas in which to launch the European Industrial Initiatives (EII). These initiatives are intended to strengthen industrial energy research and innovation by ensuring critical mass for the activities and participants. A roadmap and an implementation plan have been developed for each topic. The Netherlands participates in these EIIs, the first of which started in June 2010.

Promotion of additional burning and combined burning of biomass in coal-fired power stations

(a) Can you please provide the name and a short description of the scheme?

The new cabinet will decide on the additional burning and combined burning of biomass in coal-fired power stations. The topic is politically sensitive, as there is little appetite for subsidising the cost price difference between coal and biomass in the long term. Various forms of obligation are being considered.



4.4 Support schemes to promote the use of energy from renewable sources in heating and cooling applied by the Member State or a group of Member States

Regulation

The following regulation is relevant to renewable heat:

Energy performance standard for new buildings: this concerns a statutory requirement for the minimum energy performance of a new building. It is a performance requirement, which does not prescribe specific technologies, for example for renewable heat. Technologies for renewable heat may, however, be used in order to meet the requirement. No statutory energy performance requirements are imposed on existing buildings. This regulation is explained in more detail in paragraph 4.2.3.

Warmtewet [Heat Act]: this act was recently adopted by both Houses of the parliament. The Minister for Economic affairs is now finalising the Act and preparing its implementation. The purpose of the Act is to offer security of supply and (price) protection for both consumers and suppliers of heat. The Act does not set out specific rules or tariffs for renewable heat.

Financial support

Three financial support measures are available specifically for renewable heat:

1. Sustainable heat subsidy scheme
2. Risk cover for geothermal energy projects
3. SDE scale for bio-CHP heat

Additionally, the EIA and the green projects scheme can also be used for renewable heat. These are described in paragraph 4.3

Sustainable heat subsidy scheme

(a) Can you please provide the name and a short description of the scheme?

It relates to an investment subsidy for solar boilers, heat pumps and micro-CHP systems in existing homes. The target group is private home owners, but also other investors in existing housing, for example housing corporations. A budget of EUR 66 million is available from 2008 to 2011. The scheme contributes to the achievement of the renewable energy objective in existing buildings from the Clean & Efficient work programme: by 2011, 100,000 existing homes will be equipped with renewable energy supplies. Micro-CHP is included in this scheme, even though it is not a form of renewable energy.

(b) Is it a voluntary or obligatory scheme?

Voluntary

(c) Who manages the scheme? (implementing body, monitoring authority)

Agentschap NL manages the scheme.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national targets?

The scheme is financed from the government budget.

(e) How is long-term security and reliability addressed by the scheme?

In the first instance, this is a temporary scheme for the period 2008 to 2011.

(f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme runs for a limited period. For that reason, no extensive revision is envisaged. Since the start, the scheme has been optimised in a number of areas (including subsidy level for a single category)

(g) Does support differ according to technology?

Yes. The support differs according to technology.

(h) What are the expected impacts in terms of

The expected impacts in terms of energy production are integrated with other measures in the total ECN estimates, as set out in chapter 3 of this document.

(i) Is support conditional on meeting energy efficiency criteria?

Energy-efficient installations are promoted. Heat pumps must therefore achieve a minimal COP value to be eligible for subsidy. In addition, the subsidy is higher in the event of a higher expected production in a reference case. A list has been drawn up for each technology with equipment that is eligible in each case for subsidy.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

It is an existing measure. This is legally established in a scheme published in the Government Gazette on 8 September 2008 entitled 'Tijdelijke Energieregeling markt en innovatie' ['Temporary energy scheme for market and innovation'].

(k) Is this a planned scheme? When would it be

Not applicable.

(l) What start and end dates (duration) are set for the whole

10 September 2008 to 2011. NB: the scheme is opened and closed annually and the subsidy amount is published for the year in question.

(m) Are there maximum or minimum sizes of system which

No.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

Yes. For example, in addition to the present subsidy, private individuals can also obtain a low-cost loan to improve the energy performance of their homes (in preparation). Housing corporations can also benefit from the EIA and the green projects scheme.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

Not applicable.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

Investment subsidy.

(b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

Private home owners and other investors in housing. All existing housing supplied before 1 January 2008. Solar boilers, heat pumps, micro-CHP systems.

(c) Are applications continuously received and granted or

The scheme is opened and closed annually and the budget is published for the year concerned.



Risk cover for geothermal energy projects

(a) Can you please provide the name and a short description of the scheme?

The risk cover for geothermal projects scheme operates as a guarantee scheme. The risk of misdrilling acts as a barrier to investment in geothermal projects. In exchange for a premium, the scheme pays out if the drilling delivers a lower than expected output.

A budget of EUR 35.7 million is available for this scheme. The maximum support for each project is EUR 5.95 million. The projects are assessed in order of receipt. If the application is approved, the applicant pays a premium of 7% of the maximum subsidy amount, up to maximum of EUR 416,000.

Within the horticulture sector, the scheme can be combined with the Energy Innovations Market Launch (Marktintroductie energieinnovaties - MEI) scheme that was opened up for the fourth year in 2010. This is a scheme for glasshouse horticulture, within which a subsidy of EUR 16 million is available in 2010 for renewable energy options, including geothermal heat. The maximum payment amounts to 40% of the costs to which the subsidy scheme applies.

(b) Is it a voluntary or obligatory scheme?

The risk cover for geothermal projects scheme is a voluntary scheme.

(c) Who manages the scheme? (implementing body)

Agentschap NL implements this scheme on behalf of the Ministry of Economic Affairs in agreement with the Ministry of Agriculture, Nature and Food Quality.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national

The risk cover for geothermal projects scheme comes under the Energy Innovation Agenda described in chapter 4.3



(e) How is long-term security and reliability addressed by the scheme?

The Netherlands systematically allocates part of its natural gas expenditure to the development of its knowledge base. This scheme originates from this.

(f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme was published on 30 October 2009; it remains open until 1 May 2010. It is a pilot scheme. On the basis of experience of this scheme and developments among insurers, a study will be carried out to determine the best way to deal with this risk in the long term. A new submission period is expected to start up in 2011.

(g) Does support differ according to technology?

The scheme is intended specifically for geothermal heat.

(h) What are the expected impacts in terms of energy production?

The aim of this scheme is to cover the geological risk that the drilling of two holes for the use of geothermal heat is unsuccessful. On the basis of experience gained in these projects, it is envisaged that the market should be able to provide the insurance cover for drilling. The ultimate aim for the future is to be able to meet a larger part of the energy demand using this technology.

(i) Is support conditional on meeting energy efficiency criteria?

Not applicable.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

It is an existing scheme. The scheme comes under the Kaderwet EZ-subsidies [Framework Act governing subsidies from the Ministry of Economic Affairs].

(k) Is het een geplande regeling? Wanneer gaat zij in?

Not applicable.

(l) What start and end dates (duration) are set for the whole scheme?

Applications during the first open period can be submitted from 3 November 2009 to 1 May 2010.

(m) Are there maximum or minimum sizes of system which are eligible?

Projects must have a minimum thermal rating of 2 MW in order to be eligible.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

Projects can be supported from other measures. The sponsor must himself bear at least 5% of the risk.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

Not applicable.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

It is normally a guarantee scheme.

(b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

The scheme is intended for investors in geothermal projects. Projects relating to heat and cold storage are not included.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

The scheme has currently been opened up once. On the basis of experience of this scheme and developments among insurers, a study will be carried out to determine the best way to deal with this risk in the long term.

SDE scale for bio-CHP heat

(a) Can you please provide the name and a short description of the scheme?

Since 2009, the SDE has included a heat scale to promote the efficient utilisation of heat released during the production of electricity.

The subsidy is based on the measured efficient utilisation of heat. A higher subsidy price per electric kWh is paid out for higher utilisation of residual heat. In addition, an SDE subsidy is available for biogas that is injected into the natural gas grid and is therefore also used (inter alia) to provide heat. This scheme forms part of the SDE scheme. This is described in detail in paragraph 4.3.

4.5 Support schemes to promote the use of energy from renewable sources in transport applied by the Member State or a group of Member States 58

The following support schemes promoting the use of renewable energy for transport are presented:

1. Biofuels obligation
2. TAB
3. IBB
4. Action Plan for Electric Driving
5. E85 excise duty correction

Biofuels obligation

(a) What are the concrete obligations/targets per year (per fuel or technology)?

| Non-Article 21(2) | | | |
|-------------------|-------|-------------------------|-------------------------|
| year | Total | of which minimum petrol | of which minimum diesel |
| 2010 | 4 % | 3,5 % | 3,5 % |

(b) Is there differentiation of the support according to fuel types or technologies? Is there any specific support to biofuels which meet the criteria of Article 21(2) of the Directive?

A minimum mandatory quota applies to petrol and diesel substitutes.

A regulation was published on 6 December 2009 for the implementation of double counting, in accordance with Article 21(2) of the Renewable Energy Directive.

Regulation governing this double counting has been in force retroactively since 1 January 2009.

Regulation

(a) What is the legal basis for this obligation/target?

Decree of 20 October 2006, setting out rules for the use of biofuels in road transport (Decree on biofuels in road transport 2007).

Legislation will be adapted for implementation of the Renewable Energy Directive.

(b) Are there any technology-specific targets?

A differentiation is made in the targets between bio-fuels to replace diesel and biofuels to replace petrol.

(c) What are the concrete obligations/targets per year (per technology)?

See overview under a.

(d) Who has to fulfil the obligation?

The obliged party is: the person in whose name the licence is issued from one or more excise duty goods depots from which unleaded oil or gas oil is released for road transport.

(e) What is the consequence of non-fulfilment?

Violation of the provisions of the decree is an economic offence. If the offence is committed deliberately, it is a criminal offence. A criminal offence is punishable by imprisonment for up to six years or a fine of EUR 45,000. If the fine does not represent a fitting punishment for legal entities, a fine of EUR 450,000 may be imposed. In addition, pursuant to Article 36e of the Wetboek van Strafrecht [Criminal Code], a financial penalty may be imposed for the purposes of withdrawal of the wrongly obtained advantage.

(f) Is there any mechanism to supervise fulfilment?

Obligated parties must maintain a biofuels administration. This biofuels administration is monitored, in collaboration –with the tax authorities, by the inspectorate of the Ministry of Housing, Spatial Development and the Environment. In the biofuels administration, obligated parties record the quantities of fuels purchased, the quantities produced and the quantities sold (to the market or elsewhere). By comparing these data with the quantities of fossil fuels which the obligated parties bring to market (this is monitored by the tax authorities), it is possible to check whether the requirement for the minimum biofuels quota has been fulfilled.

(g) Is there any mechanism to modify obligations/targets?

By way of General Administrative Regulations.

Filling stations for alternative fuels (Tankstations Alternatieve Brandstoffen - TAB)

Financial support

(a) Can you please provide the name and a short description of the scheme?

The aim of the TAB is to set up a nationwide network of filling stations where alternative fuels are available to everyone. To achieve this, a subsidy can be applied for to set up a filling point for an alternative fuel such as natural gas/green gas, E85 (bioethanol) and/or B30 (biodiesel). The fuels that are eligible differ for each tender. The first tender was open for natural gas, biogas and bioethanol. The second tender was also opened up for biodiesel.

(b) Is it a voluntary or obligatory scheme?

Voluntary scheme.

(c) Who manages the scheme? (implementing body, monitoring authority)

The scheme is managed by Agentschap NL. The customer is the Ministry of Transport, Public Works and Water Management with a number of provinces, municipal authorities and metropolitan regions.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national targets?

The first tender in 2008 was funded from the budget of the Ministry of Transport, Public Works and Water Management. A sum of MEUR 1.8 was reserved for the tender.

The second tender was funded by the Ministry of Transport, Public Works and Water Management and various local authorities. A total of MEUR 4.1 was available for the tender. The Ministry of Transport, Public Works and Water Management provides MEUR 1.6, while five provinces and two organisations contribute MEUR 2.5 pursuant to the Framework Act. The money is to be spent on filling points in the relevant sponsor's own province or region. The second tender closes in mid-March 2010.

(e) How is long-term security and reliability addressed by the scheme?

The scheme is a tender-based scheme. It is open for a specific period. The announced budgets are committed in advance and are earmarked by the organisation concerned. Projects that are eligible for subsidy have several years to make the investments. If they fail to meet the set deadline, the subsidy will be withdrawn.

(f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

The second tender (2010) is an optimisation of the 2008 tender. Compared with 2008, the tender has been broadened out in terms of the permitted filling points (with biodiesel), the subsidy amounts have been increased and the amount of the total scheme has been increased through collaboration with local authorities.

(g) Does support differ according to technology?

Yes. The maximum subsidy amount depends on the size of the company applying for the subsidy and the type of filling point (fuel)

| Undertaking type | new construction of a natural gas filling point | new construction of an E85 filling point | new construction of a small or large B30 filling point | conversion to an E85 or to a small or large B30 filling point |
|--------------------------|--|--|--|--|
| Large undertaking | Maximum 50 per cent of the costs eligible for subsidy up to EUR 60,000 | Maximum 50 per cent of the costs eligible for subsidy up to EUR 20,000 | Maximum 50 per cent of the costs eligible for subsidy up to EUR 13,000 | Maximum 50 per cent of the costs eligible for subsidy up to EUR 7,500 |
| Medium-sized undertaking | Maximum 60 per cent of the costs eligible for subsidy up to EUR 72,000 | Maximum 60 per cent of the costs eligible for subsidy up to EUR 24,000 | Maximum 60 per cent of the costs eligible for subsidy up to EUR 16,000 | Maximum 60 per cent of the costs eligible for subsidy up to EUR 9,000 |
| Small undertaking | Maximum 70 per cent of the costs eligible for subsidy up to EUR 84,000 | Maximum 70 per cent of the costs eligible for subsidy up to EUR 28,000 | Maximum 70 per cent of the costs eligible for subsidy up to EUR 19,000 | Maximum 70 per cent of the costs eligible for subsidy up to EUR 10,500 |

(h) What are the expected impacts in terms of energy production?

Along with a financial contribution from subsidy from the 1st round of TAB, around 30 ethanol filling points (E85) were set up in the first half of 2009.

The second tender round runs from December 2009 to March 2010. The filling point from the second tender round must be opened before 1 January 2012.

(i) Is support conditional on meeting energy efficiency criteria?

Not applicable.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

It is an existing measure.

(k) Is this a planned scheme? When would it

It is a tender. The first tender round took place in 2008.

(l) What start and end dates (duration) are set for the

Yes. A filling point is eligible to subsidy if: the investment project is geared towards CO₂ reduction, whereby the CO₂ reduction for a natural gas filling point is set annually at around 190 tons and for an ethanol filling point at around 140 tons.



Projects may possibly be eligible for other subsidy schemes also. However, a check will always be carried out to ensure that the MSK requirements are met.



The scheme is a joint initiative involving national, regional and local authorities. Money from the regional and local authorities is spent on filling points in the relevant sponsor's own region.



Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

Subsidies.

(b) Who can benefit from this scheme? Is it specified for certain technology(ies)?

The target group for the scheme is the parties wishing to set up a filling point for one of the alternative fuels included in the tender such as natural gas/green gas, E85 (bioethanol) and/or B30 (biodiesel). The fuels (technologies) that are eligible for subsidy are determined for each subsidy tender.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

There are defined periods within which applications can be submitted. The second tender was open from December 2009 to mid-March 2010.

Innovatieve biobrandstoffen – IBB [Innovative Biofuels]

Financial support

(a) Can you please provide the name and a short description of the scheme?

IBB subsidy programme. This subsidy programme supports projects that improve or renew the process for supplying innovative biofuels to the transport sector. The scheme is implemented on behalf of the Ministry of Transport, Public Works and Water Management.

(b) Is it a voluntary or obligatory scheme?

Voluntary scheme.

(c) Who manages the scheme? (implementing body, monitoring authority)

The scheme is implemented by Agentschap NL on behalf of the Ministry of Transport, Public Works and Water Management.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national targets?

The scheme is funded from the government budget and comes under the responsibility of the Ministry of Transport, Public Works and Water Management. In 2006, a total budget of EUR 50 million was allocated to this scheme.

that of conventional (non-Article 21(2)) biofuels in terms of CO₂ reduction.

(e) How is long-term security and reliability addressed by the scheme?

The scheme is intended to fulfil the obligation imposed on market players to offer biofuels on the market, and is focused on the production of innovative biofuels which can be brought to market under the terms of the obligation.

(f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

The reserved budget is allocated to a number of tenders. There has so far been 1 tender which has produced 4 positive decisions with a subsidy amount totalling EUR 19.4 million. An evaluation of the scheme is currently being carried out on the basis of the results of the first tender, and areas for potential improvement are being investigated for subsequent tenders. A decision on the issue of a second tender is expected at the beginning of 2010.

(g) Does support differ according to technology?

The support is defined for each project proposal, but, in the first tender amounted to a maximum of EUR 45 per ton of avoided CO₂ -eq (compared with conventional biofuels).

(h) What are the expected impacts in terms of energy production?

The aim of the subsidised projects is to promote the production of innovative biofuels.

(i) Is support conditional on meeting energy efficiency criteria?

The first tender stipulated that the performance of the produced biofuels must be at least 10% higher than

It is an existing measure.

See below.



Start: 21 December 2006, end date still unknown.



No.



Projects may possibly be eligible for other subsidy schemes also. However, fulfilment of the environmental support framework (MSK) requirements will always be verified.



Not applicable.

Specific questions for financial support for investment:



Subsidies

(b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

The subsidy programme supports projects that develop new methods and processes for innovative biofuels for the transport sector. Innovative characteristics may be present in the end product or in the production process, or in both. The cultivation of feedstock for the production of biofuels and projects relating to new distribution or tank infrastructure are not considered in the programme.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

There are defined periods within which applications can be submitted. The scheme is currently closed.

Action Plan for Electric Driving

Financial support

(a) Can you please provide the name and a short

The Action Plan for Electric Driving comprises an entire package of initiatives and measures. All of the underlying support schemes have not yet been developed. The existing template is used to provide a succinct overview, although not all questions are applicable.

The Action Plan for Electric Driving includes various government measures, not only support schemes. The package is described below. The Dutch Cabinet is investing in electric driving in order to become less reliant on fossil fuels, to stimulate the economy and to protect the environment. In July 2009, the Ministers for Transport, Public Works and Water Management and Economic Affairs presented the Action Plan for Electric Driving. The key aim of the plan is to turn the Netherlands into an international pilot project for electric driving in the period 2009-2011, and then, on the basis of the established framework and useful experience gained, to scale up the project and expand it into a large-scale market launch.

The Action Plan for Electric Driving comprises three main components:

1. The setting up of a public-private Formula E-team to drive forward the market development and identify and eliminate obstacles to electric driving.
2. Specific incentive measures in the period 2009-2011 totalling EUR 65 million in the area of:
 - a) monitored practical tests and demonstration projects to learn, test and prove.
 - b) launching customership by authorities and private parties such as lease companies and fleet owners.
 - c) (charging, payment and energy) infrastructure.
 - d) research, development and production of electric vehicles and/or their components.
 - e) formation of (procurement) consortium and coalition.
 - f) supporting policy, for example through fiscal measures (reduced tax rate for zero-emission company vehicles, purchase tax/BPM [Act on the taxation of passenger cars and motorised vehicles] and street charges/MRB [motor vehicles tax]).
3. A coordinated and phased market launch approach supported by the Formula E-team with the following phases:

Following each phase, the required (government) activities for the next phase will be identified, working towards the large-scale market launch of electric vehicles.

- 'pilot projects' (2009-2011)
- 'scaling-up' (2012-2015)
- 'further rollout' (2015-2020)
- 'mature market' (> 2020)

(b) Is it a voluntary or obligatory scheme?

Both voluntary and obligatory instruments form part of the plan.

(c) Who manages the scheme?

Different components of this plan will be managed by different parties. The fiscal policy will therefore be implemented by the tax authorities and subsidy schemes will be implemented by Agentschap NL.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national targets?

The scheme is funded from the government budget.

(e) How is long-term security and reliability addressed by the scheme?

This is a one-off scheme, set up as part of the crisis package.

(f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

Not applicable.

(g) Does support differ according to technology?

The support relates to several technologies (all-electric/plug-in hybrids). In addition, infrastructure is also supported.

(h) What are the expected impacts in terms of energy

Not applicable.

(i) Is support conditional on meeting energy efficiency criteria?

Not applicable.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

The policy is still being developed.

(k) Is this a planned scheme? When would

This is a package of planned schemes which are being further developed. The start date for these schemes varies.

(l) What start and end dates (duration) are set for the whole

The package was presented in July 2009.

(m) Are there maximum or minimum sizes of system

which are eligible?

Not applicable.

Projects may possibly be eligible for other subsidy schemes also. However, fulfilment of the MSK requirements will always be verified.



Not applicable.



Not applicable.



Not applicable.

E85 excise duty correction



Since 1 April 2010, the tax authority has applied a lower excise duty tariff to E85 within the 'Uitvoeringsregeling Accijns' [rule of law relating to the application of excise duty]. This tariff takes account of the lower energy content of ethanol compared with lead-free petrol.

The excise duty correction applies only to E85 produced in accordance with the Renewable Energy Directive. Subject to conditions and restrictions, a reimbursement of excise duty is granted in the sum of 27% of the excise duty tariff for lead-free petrol.

As a result, the price of E85 at the pump is lower than the price of lead-free petrol. Flexifuel car drivers will now be more inclined to fill up with E85.

4.6 Specific measures for the promotion of the use of energy from biomass

4.6.1 Biomass supply: both domestic and trade

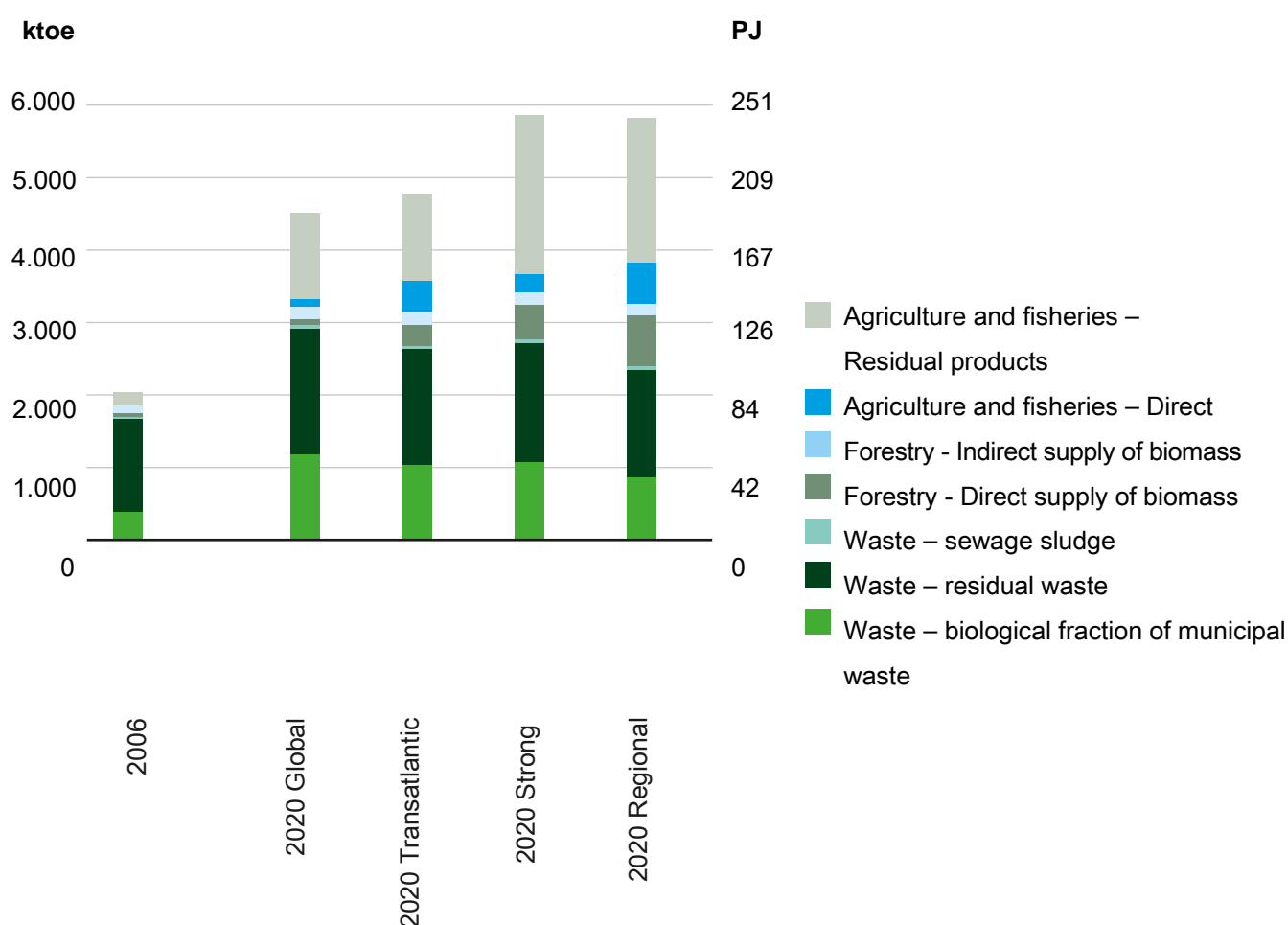


Figure 8 Available national biomass for energy supply

Figure 8 shows the national biomass that is available in the Netherlands for energy uses for the years 2006 and 2020.

This relates to the biomass originating from the Netherlands which is available in the Netherlands. Wood pellets and palm oil are not included in this graph as they do not originate from the Netherlands. The fraction of the recycled wood originating from the Netherlands that is exported is also excluded, as it is not available in the Netherlands.

The data in 2006 relate to the quantities that were actually used, as shown in Table 7. For 2020, four scenarios have

been developed (Global Economy, Transatlantic Market, Strong Europe and Regional Communities). For each of the four

scenarios, the available biomass for energy uses in 2020 is shown. Table 7a shows the underlying figures for this graph.

In 2006, national biomass available in the Netherlands accounted for a primary energy production of 2.0 Mtoe (82 PJ). 1.6 Mtoe (68 PJ) of this related to waste streams such as domestic and industrial waste.

Depending on the scenario, it is expected that between 4.5 Mtoe (189 PJ) and 5.9 Mtoe (245 PJ) of national biomass will be available for energy applications in 2020. According to expectations, waste and residual products from agriculture and fisheries will then make the greatest contribution.

Table 7: Biomass supply in 2006

| Sector of origin | | Quantity own country (kton ns) | Introduced | | Carried | Net amount (kton ns) | Primary energy (Ktoe) |
|--|---|--------------------------------|--------------|----------------------|-----------------------|----------------------|-----------------------|
| | | | EU (kton ns) | Outside EU (kton ns) | EU / non EU (kton ns) | | |
| A) Biomass from forestry: | Of which: | | | | | | |
| | 1. Direct supply of wood biomass from forests and other wooded land for energy generation | | | | | | |
| | Optional - if information is available, you can further detail the amount of feedstock belonging to this category: | | | | | | |
| | a) fellings | 0 | 0 | 0 | 0 | 0 | 0 |
| | b) residues from fellings (tops, branches, bark, stumps) | 270 | | | | 270 | 52 |
| | c) residues from landscape management (biomass from wood from parks, gardens, tree rows, bushes) | | | | | | |
| | d) other (please define) | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2. Indirect supply of wood biomass for energy generation Optional - if information is available you can further detail: | | | | | | |
| | a) residues from sawmilling, woodworking, furniture industry (bark, sawdust) | 255 | 0 | 0 | 0 | 255 | 94 |
| | b) products of the pulp and paper industry (black liquor, tall oil) | 500 | 0 | 0 | 0 | 500 | 24 |
| | c) processed wood-fuel | 400 | 0 | 0 | 0 | 400 | 116 |
| | d) post consumer recycled wood (recycled wood for energy generation, household waste wood) | 1.485 | 0 | 0 | 1.008 | 477 | 176 |
| | e) other (please define) | | | | | | |
| | Wood pellets | 0 | 690 | 235 | 455 | 186 | 0 |
| B) Biomass from agriculture and fisheries: | Of which: | | | | | | |
| | 1. agricultural crops and fishery products directly provided for energy generation Optional - if information is available you can further detail: | | | | | | |
| | a) arable crops (cereals, oilseeds, sugar beet, silage maize) | 40 | 0 | 0 | 0 | 40 | 6 |
| | b) orchards | 10 | 0 | 0 | 0 | 10 | 2 |
| | c) short rotation trees | 0 | 0 | 0 | 0 | 0 | 0 |
| | c) other energy crops (grasses) | 0 | 0 | 0 | 0 | 0 | 0 |
| | d) algae | 0 | 0 | 0 | 0 | 0 | 0 |

| Sector of origin | | Quantity own country (kton ns) | Introduced | | Carried | Net amount (Kton ns) | Primary energy (Ktoe) |
|------------------|--------------------------|--------------------------------|--------------|----------------------|-----------------------|----------------------|-----------------------|
| | | | EU (kton ns) | Outside EU (Kton ns) | EU / non EU (Kton ns) | | |
| | e) other (please define) | 0 | 0 | 0 | 0 | 0 | 0 |

| Sector of origin | | Quantity own country (kton ns) | Introduced | | Carried | Net amount (Kton ns) | Primary energy (Ktoe) |
|------------------------|---|--------------------------------|--------------|----------------------|-----------------------|----------------------|-----------------------|
| | | | EU (kton ns) | Outside EU (Kton ns) | EU / non EU (Kton ns) | | |
| | 2. Agricultural by-products/processed residues and fishery by-products for for energy generation | | | | | | |
| | Optional - if information is available you can further detail: | | | | | | |
| | a) straw | | | | | | |
| | b) manure | | | | | | |
| | Slurry | | | | | | |
| | Poultry manure | | | | | | |
| | c) animal fats | | | | | | |
| | Fatty residues | | | | | | |
| | d) meat-and-bone meal | | | | | | |
| | e) by-products in the form of oil-cake (such as oil-cake from oilseeds and olive oil cake for energy) | | | | | | |
| | f) fruit biomass (including shell, kernel) | | | | | | |
| | g) fishery by-products | | | | | | |
| | g) clippings from vines, olives, fruit trees | | | | | | |
| | h) other (please define) | | | | | | |
| | Potato residues | | | | | | |
| | Coffee grounds | | | | | | |
| | Frying oil | | | | | | |
| | Palm oil | | | | | | |
| C) Biomass from waste: | Of which: | | | | | | |
| | 1. Biodegradable fraction of municipal solid waste including biowaste (biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises, and comparable waste from food processing plants) and landfill gas | | | | | | |
| | Compost overflow | | | | | | |
| | Auction waste | | | | | | |

| Sector of origin | | | Quantity own country (kton ns) | Introduced | | Carried | Net amount (Kton ns) | Primary energy (Ktoe) |
|------------------|--|--|--------------------------------|--------------|----------------------|-----------------------|----------------------|-----------------------|
| | | | | EU (kton ns) | Outside EU (Kton ns) | EU / non EU (Kton ns) | | |
| | | KGW | | | | | | |
| | | Landfill gas | | | | | | |
| | | 2. Biodegradable fraction of industrial waste (including paper, paperboard, pallets) | | | | | | |
| | | 3. Sewage sludge | | | | | | |

Please explain the conversion factor/calculation methodology used above for the conversion of the amount of available resources to primary energy.

All biomass streams are expressed in tonnes of wet material (wm). Landfill gas is expressed in TJ gas. For waste, the biogenic fraction is given.

For each biomass stream, it is specified whether it is converted into bioenergy via fermentation or via a thermal conversion. Depending on the conversion technique used, the following elements are defined for each biomass stream;

- (1) the Lower Heating Value (LHV) for streams which are thermally converted (incinerated) or:
- (2) the Higher Heating Value (HHV) for streams which are fermented.

The tonnes of wet material are then converted to an energy value or calorific value in the SI unit Joule. The following conversion factor is used for the conversion from Joule to ktoe: 1 ktoe = 41.868 TJ.

Example: Residues from fellings (tops, branches, bark, stumps).

Net biomass quantity: 270 ktons (= 270 106 kg)
Conversion technique: incineration
Heating Value type: LHV
LHV: 8 MJ/kg
Primary energy production = 270 106 [kg] * 8 106 [J/kg] = 2160 1012 J = 2160 TJ = 2160/41.868 = 53 ktoe

Please specify on what basis the biodegradable fraction of municipal solid waste and of industrial waste was calculated.

Organisation

The SDE scheme (see paragraph 4.3) states that the percentage of renewable energy from waste incineration installations is defined annually for the coming year. The methods from the renewable energy monitoring protocol are used to determine this percentage. This percentage is determined annually by the Centraal Bureau voor de Statistiek (CBS) [Statistics Netherlands] in collaboration with Agentschap NL.

Method and result

The calculation of the renewable energy from waste incineration plants (AVIs) entails a number of steps.

1. Overview of the quantities of waste processed in the AVIs.

The *Werkgroep Afvalregistratie* [Waste Registration Working Party] reports annually on the quantities of incinerated waste. For 2008, the total quantity was established as 6.1 Mtons, comprising the following components:

6.1 Mtons, comprising the following components:

- Household waste: 2.9 Mtons
- Commercial waste: 2.2 Mtons
- Residues after separation (mainly household waste): 0,9 Mtons

- Other waste: 0.1 Mtons

2. Overview of the composition of the waste streams in components.

For household residual waste, the composition is determined annually on the basis of a representative sample. The composition of the remaining waste streams is assumed to be constant over the years and can be found in the Protocol monitoring duurzame energie [Sustainable Energy Monitoring Protocol], version 2006.

3. Calculation of the amount per component in the sustainable and in the total energy content.

The table for household residual waste is set out below. Different values are used for the other waste streams. For 2008, the results for household residual waste are as follows;

| Component | calorific component | AVI's total input | sustainable rate component | Sustainable input AVI's |
|-----------------|---------------------|-------------------|----------------------------|-------------------------|
| | GJ/ton | GJ/ton afval | % | GJ/ton afval |
| Organic | | | | |
| Paper | | | | |
| Plastics | | | | |
| Wood | | | | |
| other | | | | |
| combustible | | | | |
| non-combustible | | | | |
| Total | | | | |

Based on the Sustainable Energy Monitoring Protocol (2006), the percentage of renewable energy from waste incineration installations for 2008 is 49%.

Please use Table 7a to give an estimated contribution of biomass energy use in 2015 and 2020. (Following the categorisation used in Table 7.)

Residues (mainly household waste): Additionally for this action plan, the values for transport have also been added by the authors of the aforementioned study. In Table 7a, the range of the results of the different scenarios from the aforementioned report are shown for the year 2020. For 2015, a linear interpolation has been applied between

current usage figures from 2006 and the range in availability figures from the study.

Table 7a: Estimated domestic biomass supply in 2015 and 2020

| I | | 2015 | | 2020 | |
|--|--|--|-----------------------|--|-----------------------|
| | | Expected quantity indigenous (Kton ns) | Primary energy (Ktoe) | Expected quantity indigenous (Kton ns) | Primary energy (Ktoe) |
| A) Biomass from forestry: | 1. Direct supply of wood biomass from forests | | | | |
| | Wood from forests without felling | 0 - 82 | 0 - 16 | 0 - 150 | 0 - 29 |
| | Wood from forests with felling | 191 - 666 | 36 - 127 | 124 - 995 | 24 - 190 |
| | Wood from landscape | 53 - 210 | 10 - 40 | 96 - 384 | 18 - 73 |
| | Natural grass | 74 - 515 | 13 - 89 | 135 - 945 | 23 - 164 |
| | Grass from roadside verges and waterways | 44 - 698 | 8 - 121 | 80 - 1280 | 14 - 222 |
| | Heather | 0 - 28 | 0 - 9 | 0 - 52 | 0 - 16 |
| | Cane | 0 - 10 | 0 - 3 | 0 - 19 | 0 - 6 |
| | 2. Indirect supply of wood biomass for energy generation | | | | |
| | Residual wood from the wood processing industry | 348 | 128 | 425 | 157 |
| | Compost overflow | 50 | 12 | 50 | 12 |
| | 1. Agricultural crops and fishery products directly provided for energy generation | | | | |
| | Energy production within the agricultural sphere | 18 - 153 | 3 - 22 | 0 - 248 | 0 - 35 |
| | Energy production outside the agricultural sphere | 16 - 160 | 6 - 58 | 29 - 294 | 11 - 107 |
| | Grass for biorefinery | 0 - 727 | 0 - 47 | 0 - 1.333 | 0 - 87 |
| | Aquatic biomass (algae) | 0 - 27 | 0 - 2 | 0 - 50 | 0 - 5 |
| | Grain, potatoes, sugar beet for ethanol | 351-1.753 | 42-209 | 643-3.214 | 77-383 |
| B) Biomass from agriculture and fisheries: | 2. Agricultural by-products/processed residues and fishery by-products for energy generation | | | | |
| | Straw | 60 - 120 | 19 - 38 | 110 - 220 | 35 - 70 |
| | Grass straw | 3 - 5 | 1 - 2 | 5 - 10 | 2 - 3 |
| | Wet crop residues from arable crops | 0 - 1.079 | 0 - 70 | 0 - 1.979 | 0 - 128 |
| | Wet crop residues from horticulture | 0 - 545 | 0 - 33 | 0 - 1000 0 | 0 - 61 |
| | Green manure | 0 - 102 | 0 - 7 | 0 - 187 | 0 - 12 |
| | Fruit and tree growing | 61 - 90 | 12 - 17 | 104 - 156 | 20 - 30 |
| | Poultry manure | 2.195 - 2.509 | 348 - 398 | 3.691 - 4.266 | 586 - 677 |
| | Slurry | 1.440 - 17.475 | 46 - 556 | 2.265 - 31.662 | 72 - 1.008 |
| | Potato residue | 113 - 180 | 8 - 13 | 124 - 248 | 9 - 18 |
| | Oilseed meal | 5 - 57 | 2 - 22 | 10 - 104 | 4 - 40 |
| | Animal meal | 168 - 250 6 | 60 - 89 | 100 - 250 | 36 - 89 |
| | Potato/wheat starch and flour | 113 - 226 | 6 - 12 | 207 - 415 | 11 - 22 |
| | Cocoa shells | 36 | 13 | 66 | 24 |
| | Coffee grounds | 31 | 5 | 40 | 6 |

| Sector of origin | | 2015 | | 2020 | |
|--|---|--|-----------------------|--|-----------------------|
| | | Expected quantity indigenous (Kton ns) | Primary energy (Ktoe) | Expected quantity indigenous (Kton ns) | Primary energy (Ktoe) |
| A) Biomass from forestry: | 2. By-products/processed residues from the energy generation | | | | |
| | Sugar beet residue | 45 - 90 | 1 - 3 | 83 - 165 | 2 - 5 |
| | Brewers' grains | 0 | 0 | 0 | 0 |
| | Vegetable waste | 8 - 16 | 1 - 1 | 14 - 29 | 1 - 2 |
| | Fish waste | 1 | 0 | 2 | 0 |
| | Fatty residues | 55 | 46 | 100 | 85 |
| | Frying fats | 71 | 60 | 130 | 111 |
| | 1. Biodegradable fraction of municipal solid waste including biowaste (biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises, and comparable waste from food processing plants) and landfill gas | | | | |
| | Wood from built environment | 400 | 116 | 400 | 116 |
| | Wet biomass from built environment | 0 - 19 | 0 - 6 | 0 - 35 | 0 - 11 |
| | Swill | 0 | 0 | 0 | 0 |
| | Separately collected KGW | 847 | 157 | 1500 | 281 |
| | Separately collected textiles | 18 | 7 | 18 | 7 |
| | Separately collected old and processed wood | 877 - 1.322 | 324 - 488 | 1.210 - 2.027 | 446 - 748 |
| | Auction waste | 68 | 6 | 125 | 10 |
| B) Biomass from agriculture and fisheries: | 2. Biodegradable fraction of industrial solid waste (including paper, paperboard, pellets) | | | | |
| | Residues from separately collected old paper and paperboard | 789 - 904 | 39 - 44 | 1.030 - 1.240 | 50 - 61 |
| | Residual fraction from MSW | 3.749 - 4.856 | 841 - 1.089 | 3.569 - 5.599 | 800 - 1.255 |
| | Residual fraction of industrial waste | 871 - 1.051 | 46 - 56 | 847 - 1.177 | 45 - 63 |
| | Residual fraction of industrial waste | 1.363 - 1.591 | 298 - 348 | 1.249 - 1.666 | 273 - 364 |
| | SRF | 0 - 545 | 0 - 170 | 0 - 1.000 | 0 - 312 |
| | 3. Sewage sludge | | | | |
| | Sewage treatment sludge | 1.048 | 37 | 1.396 | 49 |
| | Total | 18.876 - 36.350 | 3.357 - 4.089 | 26.035 - 58.069 | 4.519 - 5.860 |

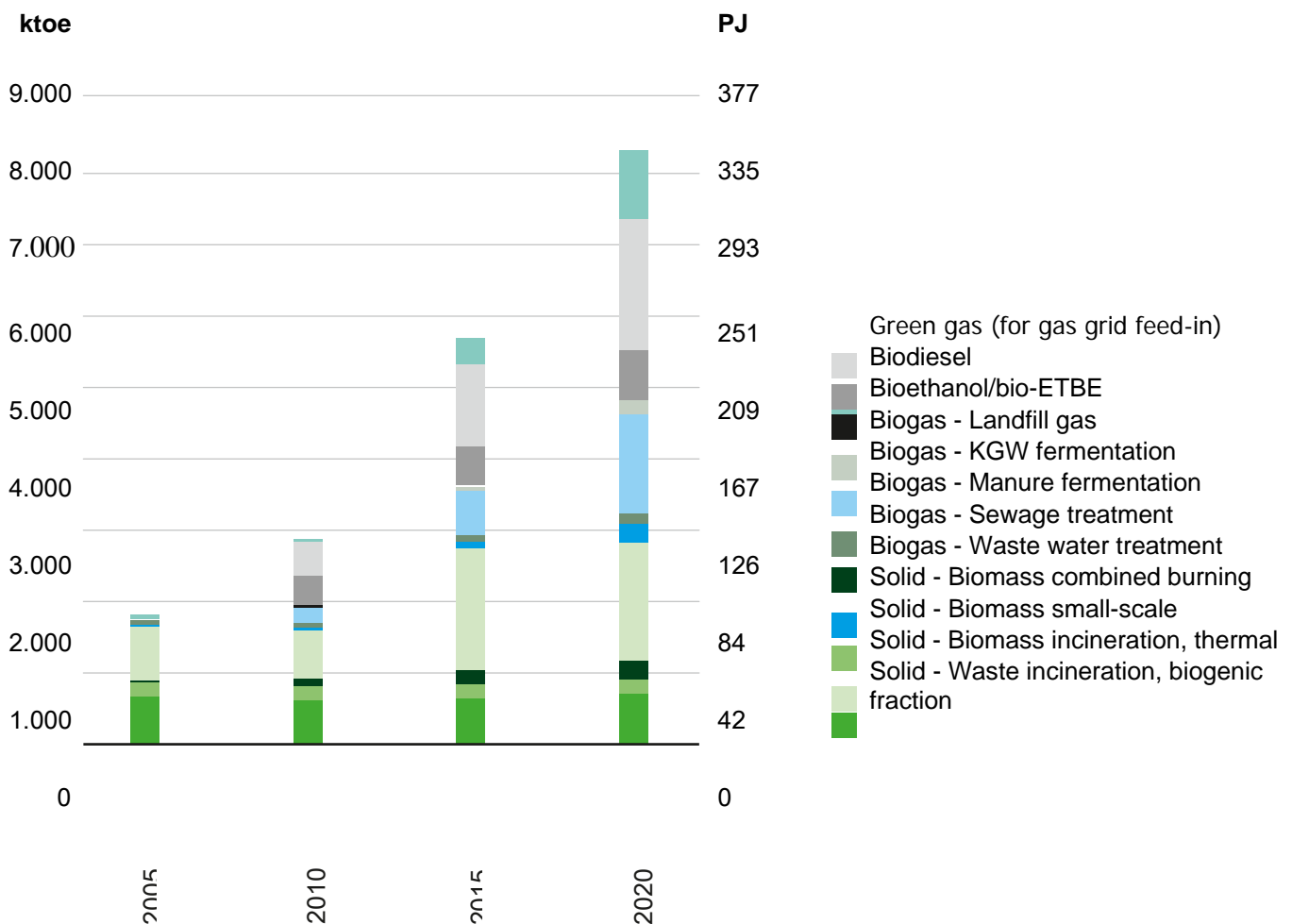


Figure 9 Expected required biomass for energy production (primary energy).

What is the estimated role of imported biomass up to 2020? Please specify the quantities expected (ktoe) and indicate possible import countries.

Figure 9 shows the expected required biomass for energy production on the basis of the presented estimates and investigations. For each technology used, a conversion output is calculated, on the basis of which the expected required biomass is established. The expected required biomass is approximately 8 Mtoe (Figure 9) in 2020. In the Netherlands -depending on the scenario - approximately 5 Mtoe will be available for energy applications in 2020 (Figure 8). It is difficult to predict what proportion of the biomass in the Netherlands will be used for bioenergy production in the Netherlands.

Sectors within which importation is particularly expected are combined burning in coal-fired power stations (biomass demand in 2020: 69 PJ or 1.7 Mtoe) and biofuels for transport (35 PJ of 0,8 Mtoe).

The countries supplying biomass for combined burning in coal-fired power stations are expected to be the wood-rich countries. With regard to the required biomass transport fuels, it is difficult to predict what proportion of the fuels will come to the Netherlands as fuel, or as a semi-finished product. The following table lists the semi-finished products which are necessary to produce the required energy for transport fuels. If the 0.5 Mtoe of biodiesel in 2020 has to be produced entirely from wood, 4 Mtons of wet wood material will then be required.

| | required energy in 2020 (ktoe) | Mtons of biomass (wm) to produce 100% of required quantity | | | |
|-----------|-----------------------------------|--|------------|------------|------|
| | | Wheat | Sugar beet | Sugar cane | Wood |
| Ethanol | 282 | 1,4 | 6,5 | 6,2 | 2,2 |
| Biodiesel | 552 | Swede rape | Palm | Wood | |
| | | 1,8 | 3,0 | 4,0 | |

In addition to the information provided above, could you please describe the current situation of agricultural land used for dedicated energy production as follows:

Table 8: Current agricultural land use for production of crops dedicated to energy in 2006

| Agricultural land use for production of dedicated energy crops | Area (ha) |
|--|-----------|
| 1) Land used for short rotation trees (willows, poplars) | 0 |
| 2) Land used for other energy crops such as grasses (reed canary grass, switch grass, Miscanthus). | 10.000 |



4.6.2 Measures to increase biomass availability, taking into account biomass users (agriculture and forest-based sectors)

Mobilisation of new biomass sources

(a) Please specify how much land is degraded.

The Netherlands understands “degraded land” to mean land that has become less suitable for the cultivation of arable crops. This includes, for example, eroded or salinised soil, but also closed landfill sites or derelict (building) land which is designated as ‘of a potentially temporary nature’. Land of this type is suitable for the cultivation of only a few crops. The Netherlands has very little land of this type.

(b) Please specify how much unused arable land there is.

In 2008, the set-aside obligation for arable farmers (more than 12 ha on clay soil and more than 18 ha on other soils) lapsed. The Netherlands is not expected to have unused arable land, given the price paid for land in the Netherlands. Furthermore, it seems unlikely that possibly unused land will be used for the cultivation of energy crops, given the hectare balance which still remains higher for arable crops.

(c) Are any measures planned to encourage unused arable land, degraded land, etc. to be used for energy purposes?

No. Given the limited amount of degraded or unused arable land, the relevance of such schemes to the Netherlands is limited.

(d) Is energy use of certain already available primary material (such as animal manure) planned?

The use of manure for energy generation via fermentation is financially stimulated via the SDE (paragraph 4.3)

Furthermore, various legal frameworks have been set up to make manure fermentation more attractive. The digestate may, for example, be processed and used as a fertiliser provided that it satisfies certain conditions from the rule of law relating to the application of the Meststoffen-wet [Fertilisers Act]. One such condition is that, in the case of fermentation with a composition comprising at least 50% animal fertilisers, one or more

substances from Annex Aa, part IV, must be included (the ‘positive list’).

In addition, the Ministry of Agriculture, Nature and Food Quality started the ‘mineral concentrate producer’ research in 2009. A liquid mineral concentrate can be produced from animal manure: an artificial fertiliser substitute. In this way, the animal manure surplus can be reduced and essential fertilisers can be re-used. Impacts in terms of possible sale outlets for digestate from co-fermenters will also be analysed in this research.

In the Clean and Efficient work programme (explanation in answer f), the stockfarming sector stated its ambitions for renewable energy, which it has set out in annual work plans.

(e) Is there any specific policy promoting the production and use of biogas? What type of uses are promoted (local, district heating, biogas grid, natural gas grid integration)?

Since 2008, all of these forms of renewable energy from biogas have been promoted via the SDE (paragraph 4.3) and they have also been put into practice. The use of residual heat from a local gas engine has been promoted since 2009 through a higher subsidy on the electricity produced.

(f) What measures are planned to improve forest management techniques in order to maximise the extraction of biomass from the forest in a sustainable way? How will forest management be improved in order to increase future growth? What measures are planned to maximise the extraction of existing biomass that can already be put into practice?

The Dutch Cabinet has set challenging climate-related targets. These have been devised in collaboration with all industry sectors involved and are set out in the Clean and Efficient Work Programme. The nature, forestry, landscape and wood chain (NBLH sector) indicated here that it intended to contribute 32 PJ of renewable energy in 2020. To do this, a detailed plan has been drawn up, involving both the government and the sector. Important measures from this plan are:

- The Government will encourage the various authorities to make a contribution to the supply and processing of biomass.
- The NBLH sector is endeavouring to maximise the supply of wood and non-wood biomass from residual streams for the production of renewable energy. The NBLH sector is promoting more intensive landscape management and discouraging the abandonment of management (by-) products in the landscape.
- The NBLH sector is promoting more intensive landscape management and discouraging the abandonment of management (by-) products in the landscape.

- The NBLH sector is endeavouring to conclude multi-annual agreements with the energy companies for a guaranteed and constant take-up of biomass products from the NBLH sector.
- The Government and the NBLH sector will jointly investigate - in pilot projects - how short rotation planting can be implemented at specific locations to generate energy-related income.

Impact on other sectors

(g) How will the impact of energy use of biomass on other sectors based on agriculture and forestry be monitored? What are these impacts? (If possible, please provide information also on quantitative effects.) Is the monitoring of these impacts planned in the future? In the Netherlands, relevant information is updated in various places:

Bio-based economy

The use of biomass and also the development of the European bio-based economy require an integrated approach, in which all biomass applications are considered. A bio-based economy is a systematic innovation, touching on a wide range of subjects: climate change, energy supply, various sectors (agriculture, chemicals, paper and paperboard, logistics, the economy and international trade, biodiversity and innovation. An integral approach provides Europe with the opportunity to develop a clear strategy for the use of biomass: not only for energy biofuels, but also for chemicals and materials.

LEI [Institute of Agricultural Economics]

The LEI, in collaboration with the supplying and processing industry and trade, has been collating the prices of agricultural products and production means for around the last 10 years. In this way, the impact of the promotion of bioenergy on e.g. the animal feed raw materials market can be analysed.

Werkgroep Afvalregistratie [Waste Registration Working Party]

The Waste Registration Working Party produces an annual inventory of the quantity of incinerated, tipped and composted waste in the Netherlands. The Working Party members are the Ministry of Housing, Spatial Development and the Environment, Interprovinciaal Overleg (IPO) [Interprovincial Consultative Body], the Vereniging Afvalbedrijven [Association of Waste Businesses] and Agentschap NL. The data from the Working Party provide a national information base and their uses include the monitoring and evaluation of the implementation of the national waste management plan for 2002-2012.

Study of biomass availability

The ' Beschikbaarheid van Nederlandse biomassa voor elektriciteit en warmte in 2020' [' Availability of biomass in the Netherlands for electricity and heat in 2020'] (Koppejan et al, November 2009) estimates biomass availability in various scenarios, focusing in particular on competing sectors.

PGG comparison methods

The Platform Groene Grondstoffen [Green Feedstock Platform] ('Widespread use of biomass, Comparison methods for various applications') is working on a method for promoting biomass in various sectors in the most balanced way possible. In phase 1, the aim is to develop comparison methods which are fairly robust to change and can make comparisons between different sectors of applications for biomass.

Scientific analyses

The Dutch government is closely examining the effects on other sectors of the use of biomass for energy. For this reason, scientific analyses are being carried out, coordinated inter alia, by the The Ministry of Housing, Spatial Development and the Environment. These measures include, for example: Kunnen Biofuels duurzaam zijn in 2020 [Can biofuels be sustainable in 2020] (Bindraban et al, 2009) and Assessment van wereldwijde biomassa potentiëlen en hun link naar voedsel, water, biodiversiteit, energievraag en economie [Assessment of worldwide biomass potentials and their link to food, water, biodiversity, energy demand and the economy] (Lysen, 2008). Both studies examine biofuels from a global perspective.

(h) What kind of development is expected in other sectors based on agriculture and forest that could have an impact on the energy use? (Could improved efficiency/increase or decrease the amount of by-products available for energy use?)

There are no known significant, external developments on the basis of which the availability of biomass streams from agriculture or forestry will quickly change. However, these sectors have stated their ambition in the Covenant Schoon & Zuinige Agrosectoren [Clean & Efficient Agricultural Sector Agreement] to make a significant contribution to the overall Clean & Efficient renewable energy targets. Together with the main policy objectives for the Netherlands in the area of renewable energy and the associated instruments, this will presumably result in a greater availability of biomass.



4.7 Planned use of statistical transfers between Member States and planned participation in joint projects with other Member States and third countries

4.7.1 Procedural aspects

(a) Describe the national procedures (step by step) established or to be established, for arranging a statistical transfer or joint project (including responsible bodies and contact points).

Statistical transfers will not be applied for the time being. The renewable energy surplus above the indicative trajectory as described in Annex 1 of the Renewable Energy Directive is renewable energy which is still required in order to achieve the Clean and Efficient target of 20% renewable energy in 2020 (calculated on the basis of primary energy consumption).

In terms of joint projects, no national policy currently exists, although the Netherlands is open to proposals and ideas from other Member States. Over the next few years, the policy will focus on building up national renewable energy capacity, in conjunction with the achievement of the (higher) Clean and Efficient target.

The Netherlands is involved in the Concerted Action supporting the transposition and implementation of Directive 2009/28/EC ['CA-RES']. The aim of the CA-RES is to facilitate Member States' implementation of this Directive. This CA-RES is expected to start in mid-2010. The Netherlands will play an active role in this CA-RES, in which the flexible mechanisms are also on the agenda.

(b) Describe the means by which private entities can propose and take part in joint projects either with Member States or third countries.

Not applicable (see a).

(c) Give the criteria for determining when statistical transfers or joint projects shall be used.

Not applicable (see a).

(d) What is going to be the mechanism to involve other interested Member States in a joint project?

Not applicable (see a).

(e) Are you willing to participate in joint projects in other Member States? How much installed capacity/electricity or heat produced per year are you planning to support? How do you plan to provide support schemes for such projects?

As mentioned under (a), no national policy currently exists in terms of joint projects, although the Netherlands is open to proposals and ideas from other Member States. Over the next few years, the policy will focus on building up national renewable energy capacity, in conjunction with the achievement of the (higher) national 20% renewable energy target.

4.7.2 Estimated surplus production of renewable energy compared to the indicative trajectory which could be transferred to other Member States

Not applicable.

4.7.3 Estimated potential for joint projects

(a) In which sectors can you offer renewable energy use development in your territory for the purpose of joint projects?

As mentioned under 4.7.1(a), no national policy currently exists in terms of joint projects, although the Netherlands is open to proposals and ideas from other Member States. Over the next few years, the policy will focus on building up national renewable energy capacity, in conjunction with the achievement of the (higher) national 20% renewable energy target.

(b) Has the technology to be developed been specified? How much installed capacity/electricity or heat is produced per year?

Not applicable.

(c) How will sites for joint projects be identified? (For example, local and regional authorities or promoters recommend sites? Or can any project participate regardless its location?)

Not applicable.

(d) Are you aware of the potential for joint projects in other Member States or in third countries? (In which sector? How much capacity? What is the planned support? For which technologies?)

There are no known projects, but ideas, inter alia, for projects relating to solar power e.g. in Spain (solar pv and CSP), Portugal (CSP) and various renewable energy technologies (wind, sun) in North African countries within the framework of the "Plan Solaire" (Mediterranean Union).

(e) Do you have any preference to support certain technologies? If so, what are they?

Not applicable.

4.7.4 Estimated demand for renewable energy to be satisfied by means other than domestic production

This has not yet been taken into account in the estimate for this action plan. The estimated surplus and deficit that can be transferred is set to zero in Table 9. The estimate document and this action plan indicate that a surplus is expected. As mentioned above, there are still no plans to transfer this to other Member States.

Table 9: *Estimated surplus and/or deficit in the production of renewable energy compared to the indicative trajectory which could be transferred to/from other Member States in the Netherlands (ktoe)*

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|------|------|--|------|------|------|------|
| Estimated surplus in estimate document | | | | | | | | | | | | |
| Estimated surplus in national action | | | | | | | | | | | | |
| planEstimated deficit in estimate document | | | | | | | | | | | | |
| Estimated deficit in national action plan | | | | | | | | | | | | |



5



5.1 Total contribution expected of each renewable energy technology to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable sources in electricity, heating and cooling and transport

On the basis of the scenarios of the reference estimates, this paragraph presents the development of renewable energy within the electricity, heat and cold and transport sectors. It is a graphical representation of Tables 10a, 10b, 11 and 12.

Established renewable electricity capacity

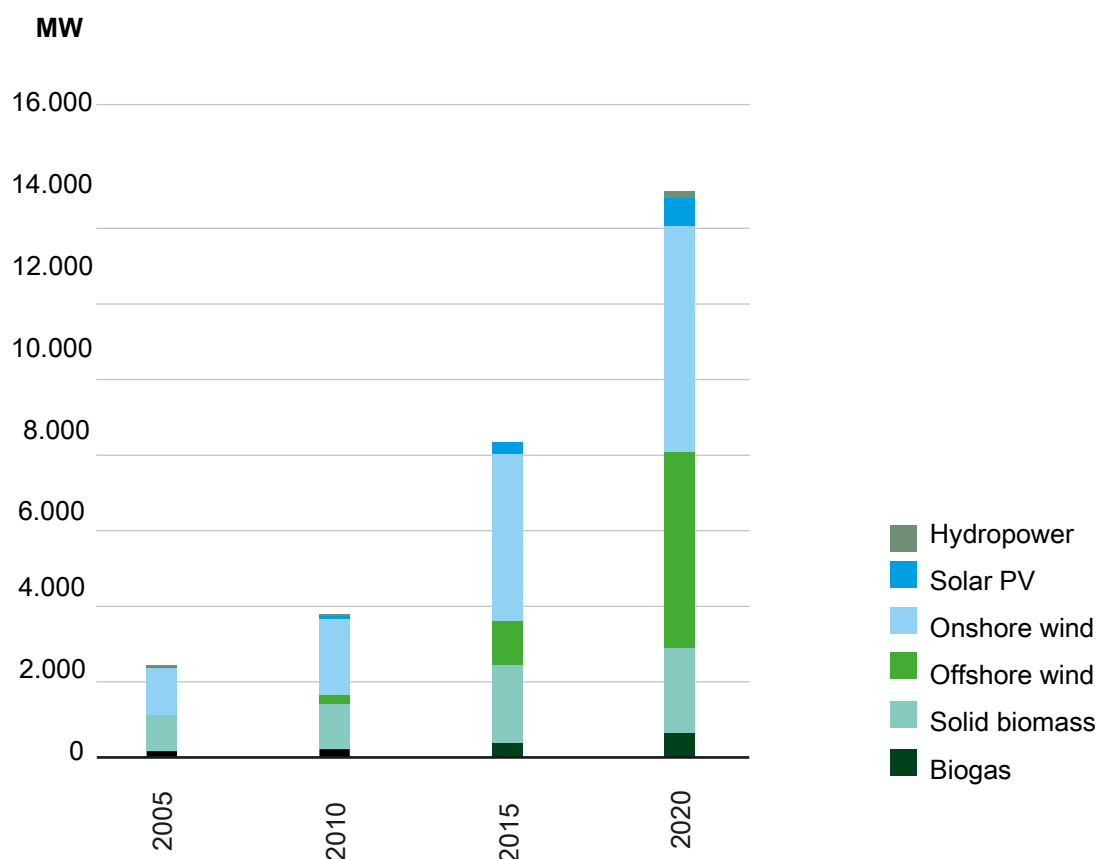


Figure 10 *Development of renewable energy capacity*

Figure 10 shows the development of renewable electrical energy capacity. The contribution to the expected established capacity in 2020 comes particularly from onshore wind, offshore wind and solid biomass.

- The established capacity for hydropower increases from 0.04 GW in 2005 to 0.2 GW in 2020. A division into capacity is not made, as too few installations are available to anonymise data. No electrical capacity for pumped storage is expected in the Netherlands in 2020.
- Photovoltaic energy accounts for all solar power in the Netherlands. No contribution is expected from concentrated solar power in 2020. In 2005, the established capacity for photovoltaic solar power was 0.05 GW. Due to a fourteenfold increase compared with 2005, the capacity in 2020 will be 0.7 GW.

In 2005, the installed capacity of onshore wind was 1.2 GW.

The established capacity in 2020 is expected to be 6.0 GW. In 2015, the established wind capacity is already expected to be 4.4 GW.

- Offshore wind will increase from 0.2 GW in 2010 to 1.2 GW in 2015, reaching a capacity of 5.2 GW in 2020.
- No contribution from geothermal electricity is expected in the Netherlands. However, a contribution from geothermal heat is expected.
- The contribution from biomass to electricity production will be made particularly in the form of additional and combined burning of solid biomass.
 - The total established electrical capacity for solid biomass will be 2.3 GW in 2020.
 - The established capacity of electricity from biogas will be 0.6 GW in 2020. This biogas relates to electricity from waste water treatment installations (AWZI), sewage water treatment installations (RWZI), landfill gas, manure fermentation and KGW fermentation.

Renewable electricity production

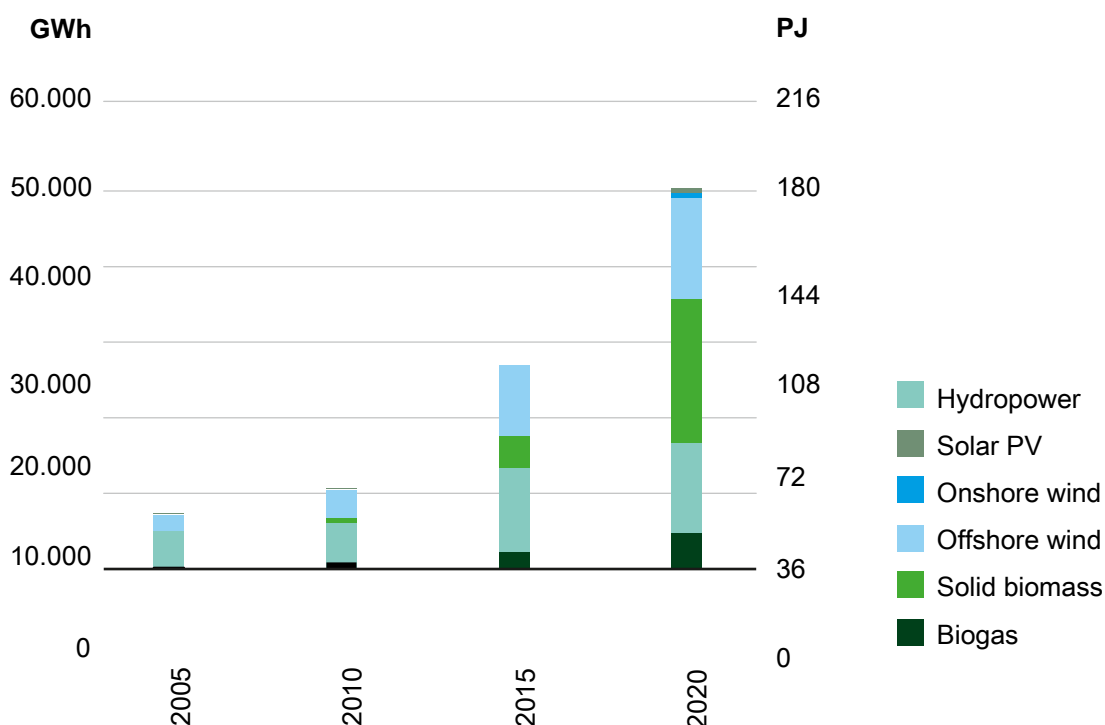


Figure 11 Development of energy from renewable electricity

Figure 11 shows the energy produced from the aforementioned electricity options. Due to the relatively high number of peak load hours, the contribution from hydropower, offshore wind, solid biomass and biogas is high compared with the installed capacity. In the case of energy production from wind energy and hydropower, the normalisation rule is applied in accordance with Annex II of the Renewable Energy Directive.

- For hydropower, a production of 0.7 TWh (2.6 PJ) is expected in 2020.
- The contribution from solar PV in 2020 will be roughly the same as that of hydropower (0.6 TWh, 2.0 PJ)

- The contribution made by wind energy in 2020 will be 13 TWh (48 PJ) onshore and 19 TWh (69 PJ) offshore.

- The contribution to electricity made by bioenergy will be 16.6 TWh (60 PJ) in 2020.
- Electrical production from solid biomass is expected to be 43 PJ in 2020. This is made up of 3.8 PJ from waste incineration, 9.2 PJ from small-scale biomass and 30.1 PJ from biomass used for additional and combined burning.
- Electrical production from biogas is expected to be 17 PJ in 2020 . This is made up of 2.2 PJ from waste water treatment, 1.2 PJ from sewage water treatment, 11.6 PJ from manure fermentation and 1.7 PJ from KGW fermentation.
- Bioliquids are not expected to contribute to the electricity supply in 2020.
- Out of this supply, 8.3 TWh (30 PJ) of bioelectricity will be produced by means of CHP in 2020.

Renewable heat

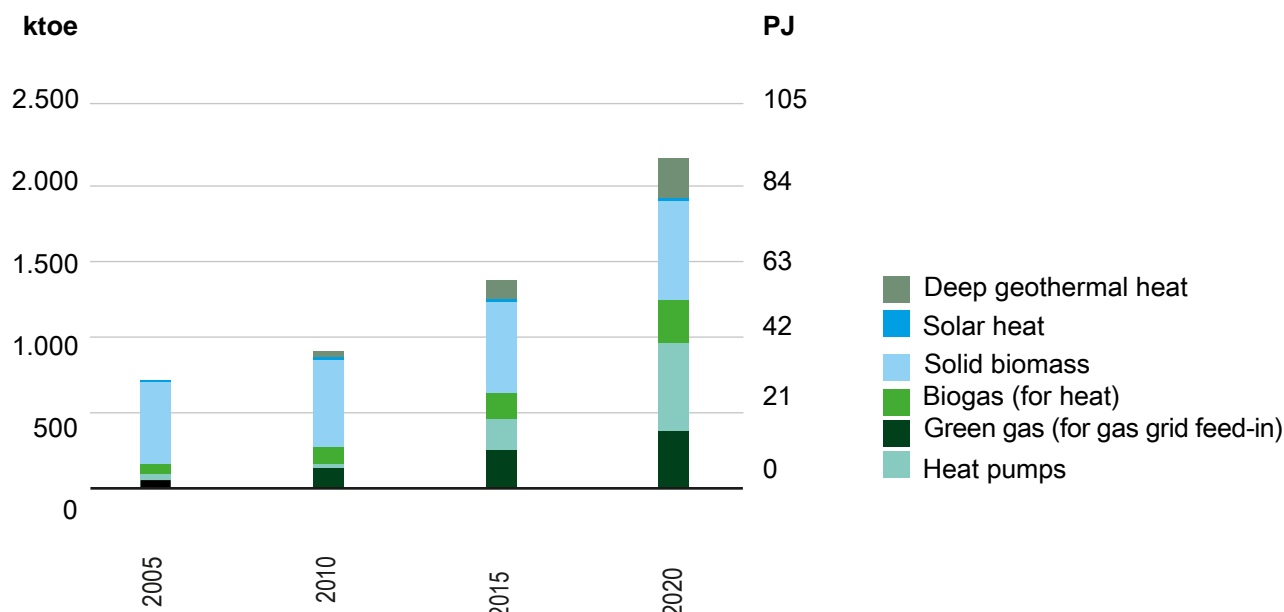


Figure 12 Development of energy from renewable heat

Figure 12 shows the development of energy from renewable heat and cold. Renewable heat will make a total contribution of 2.2 Mtoe (91 PJ) in 2020. The majority of this will be provided by bioenergy.

- Geothermal heat (excluding heat pumps for low-temperature heating) will make a contribution of 0.26 Mtoe (11 PJ) in the form of deep geothermal heat in 2020. This represents a sevenfold increase compared with 2010, for which 0.04 Mtoe (1.6 PJ) is expected.
- Thermal solar power from households and the service sector will make a contribution of 0.02 Mtoe (1 PJ) in 2020.
- Bioenergy will make a contribution of 1.5 Mtoe (64 PJ) to the heat supply in 2020.

levert in 2020 een bijdrage van 0,02 Mtoe (1 PJ).

An important point for consideration is the definition of heat from biomass. Article 2(f) of the Renewable Energy Directive defines gross final consumption of energy as 'the energy commodities delivered for energy purposes to industry,...'. This means that the reporting on heat from biomass must be based on input 9. Heat from bioenergy, referred to as green gas (for gas grid feed-in), is also included within the heat from bioenergy category.

- 0.65 Mtoe (27 PJ) of the heat from bioenergy will come from solid biomass in 2020. Relatively limited growth is expected for solid biomass; the contribution made by solid biomass in 2005 was 0.54 Mtoe (23 PJ).
- Biogas is expected to make a direct contribution of 0.29 Mtoe (12 PJ) to the direct heat supply in 2020.
- Bioliquids are expected to make no contribution to the heat supply.
- The Netherlands expects a significant contribution from direct feed-in of biogas into the natural gas grid ('green gas'), i.e. 0.58 Mtoe (24 PJ) in 2020. Since this gas is expected to be heavily used in the heat supply, it has

been decided to present it here (instead of biofuels).

- Heat pumps will supply 0.38 Mtoe (16 PJ) in 2020. This contribution is made up of 0.12 Mtoe (4.9 PJ) aerothermal, 0.24 Mtoe (10.1 PJ) geothermal and 0.01 Mtoe (0.5 PJ) hydrothermal.

Within the heat supply, a distinction is made between district heating and biomass in households;

- District heating relates to all biomass that is used directly for heat from CHP installations. This increases from 0.42 Mtoe (17 PJ) in 2005 to 0.75 Mtoe (31 PJ) in 2020.
- Biomass in households relates to boilers for domestic use (no CHP installations). This contribution is expected to remain constant between 2005 and 2020 at 0.16 Mtoe (6.6 PJ)

Hot and cold storage (HCS)

In accordance with the Renewable Energy Directive, cold from hot and cold storage is not currently included in the renewable energy share estimate: only the heat component is reported here. However, if cold were reported, the renewable energy share in 2020 would be 14.8% rather than 14.5% (the renewable energy share in heating and cooling in 2020 would increase from 8.7% (see Table 3) to 9.4%). The Netherlands proposes that the EC should begin negotiations on the inclusion of cold from hot and cold storage in the Renewable Energy Directive.

⁹ For the CHP options, this means that there is a need to determine what part of the biomass input needs to be allocated to heat. To do this, the relationship between electricity output and heat output is first determined. The share of heat in the output is then included in the total biomass input (for AVI's in the biogenic fraction only).

Renewable energy in transport sector

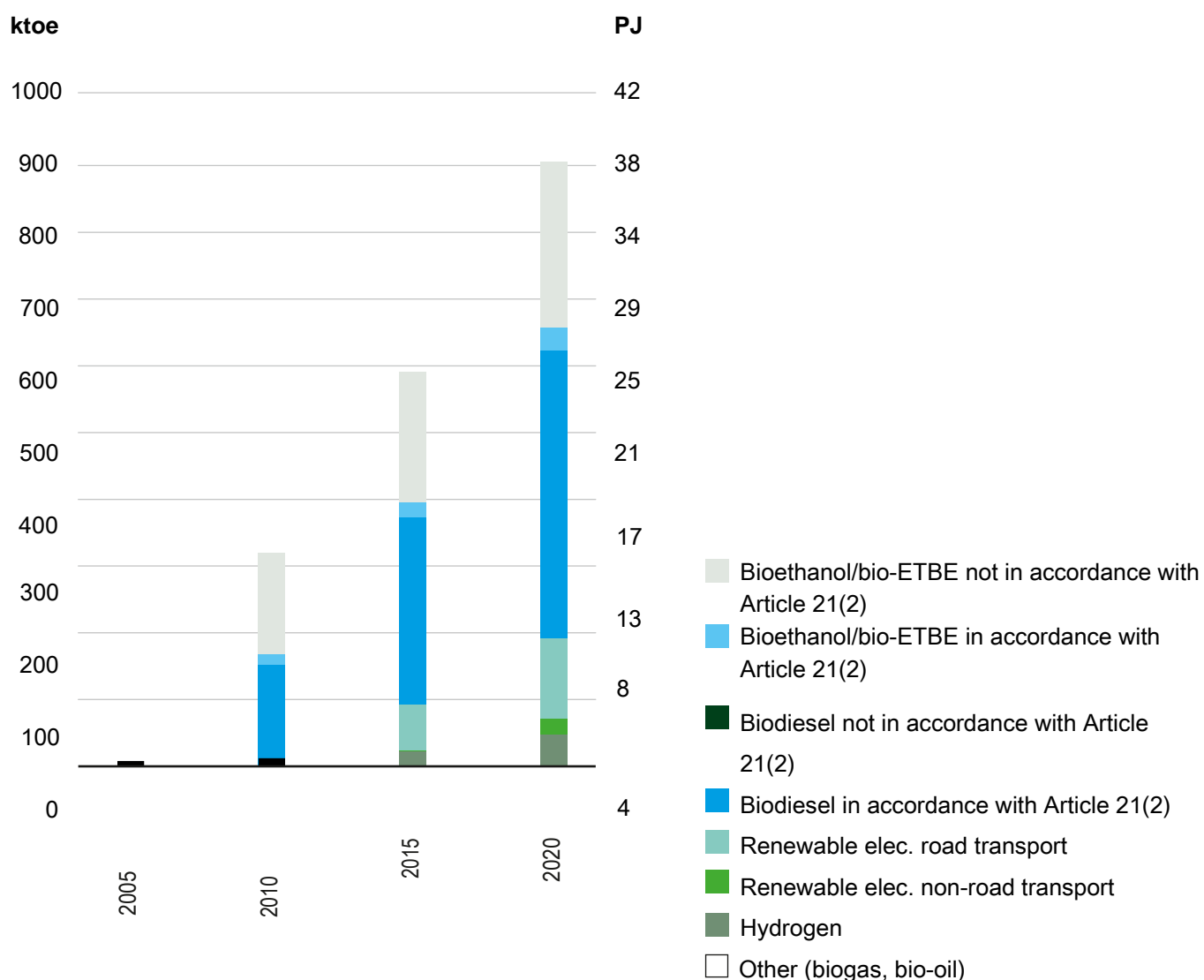


Figure 13 Development of the contribution of renewable energy in the transport sector.

Figure 13 shows the contributions of various energy commodities in the transport sector. In this figure and in the text below, the contribution of double-counting energy commodities is represented by a factor of one. The total contribution in 2020 without double counting will be 0.9 Mtoe (38 PJ), and with double counting 1.1 Mtoe (46 PJ)¹⁰.

The greatest contribution in 2020 is expected from 'non-Article 21(2)' biodiesel and 'non-Article 2' bioethanol/bio-ETBE. The share of 'Article 21(2) biofuels' within the biotransport fuels will increase from 16% in 2015 to 19% in 2020 (without double counting shown).

- Bioethanol/Bio-ETBE¹¹ will make a contribution of 0.28 Mtoe (12 PJ) in 2020. It is assumed that 85% of the bioethanol/Bio-ETBE will be imported into the Netherlands in 2020.
- Biodiesel will contribute 0.55 Mtoe (23 PJ) in 2020. Out of this, 0.12 Mtoe (5 PJ) is counted twice in accordance with Article 21.2.
- In the case of hydrogen and other energy commodities such as biogas and bio-oil, no contribution is expected in the transport sector up to 2020.
- In the transport sector, electricity is expected to contribute 0.07 Mtoe (3 PJ) in 2020. Out of this, 1/3 will be in road transport and 2/3 in non-road transport.

¹⁰ These projections are based on existing policy from previous years. The biofuel policy is to be formulated in the spring of 2010 for the next few years and has therefore not been

taken into account in these projections.

11 Under the bioethanol/bio-ETBE category, the fuels are shown that can also be used as petrol substitutes, such as, for example, biomethanol.

Table 10a: Estimation of total contribution (installed capacity , gross electricity generation) expected from each renewable energy technology in the Netherlands to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity, 2010-2014.

| | 2005 | | 2010 | | 2011 | | 2012 | | 2013 | | 2014 | |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| | MW | GWh | MW | GWh | MW | GWh | MW | GWh | MW | GWh | MW | GWh |
| Hydropower: | 37 | 89 | 47 | 128 | 56 | 159 | 67 | 195 | 68 | 200 | 68 | 200 |
| <1 MW | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. |
| 1MW - 10 MW | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. |
| >10MW | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. |
| Of which pumping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Geothermal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Solar power: | | | | | | | | | | | | |
| Photovoltaic | 51 | 40 | 92 | 73 | 149 | 104 | 185 | 132 | 229 | 167 | 273 | 201 |
| Concentrated solar power | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tide, wave, ocean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wind: | | | | | | | | | | | | |
| Onshore | 1.224 | 2.067 | 1.993 | 3.667 | 1.995 | 3.669 | 2.727 | 5.773 | 3.142 | 6.694 | 3.943 | 8.475 |
| Offshore | 0 | 0 | 228 | 803 | 228 | 803 | 228 | 803 | 465 | 1.628 | 940 | 3.309 |
| Biomass: | | | | | | | | | | | | |
| Solid | 966 | 4.758 | 1.214 | 5.103 | 1.294 | 5.620 | 1.597 | 7.637 | 1.879 | 9.399 | 1.975 | 10.492 |
| Gas | 162 | 283 | 216 | 872 | 249 | 1.060 | 274 | 1.245 | 303 | 1.491 | 346 | 1.840 |

1.583

2.897

3.359

3.700

4.071

4.600

Table 10b: Estimation of total contribution i (installed capacity, gross electricity generation) expected from each renewable energy technology in the Netherlands to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity, 2015-2020.

| | 2015 | | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | |
|-------------------------------------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | MW | GWh | MW | GWh | MW | GWh | MW | GWh | MW | GWh | MW | GWh |
| Hydropower: | 68 | 200 | 95 | 303 | 122 | 406 | 149 | 508 | 176 | 611 | 203 | 714 |
| <1MW | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. |
| 1MW-10 MW | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. |
| | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. |
| Of which pumping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Geothermal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Solar power: | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Concentrated solar power | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tide, wave, ocean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wind: | | | | | | | | | | | | |
| Onshore | 4.400 | 9.508 | 4.720 | 10.281 | 5.040 | 11.054 | 5.360 | 11.827 | 5.680 | 12.599 | 6.000 | 13.372 |
| Offshore | 1.178 | 4.147 | 1.978 | 7.125 | 2.778 | 10.103 | 3.578 | 13.081 | 4.378 | 16.058 | 5.178 | 19.036 |
| Biomass: | | | | | | | | | | | | |
| Solid | 2.062 | 11.189 | 2.100 | 11.346 | 2.138 | 11.503 | 2.177 | 11.661 | 2.215 | 11.818 | 2.253 | 11.975 |
| Gas | 381 | 2.161 | 432 | 2.662 | 484 | 3.162 | 536 | 3.663 | 587 | 4.163 | 639 | 4.664 |
| Liquid | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 8.406 | 27.442 | 9.723 | 32.017 | 11.041 | 36.592 | 12.359 | 41.167 | 13.677 | 45.742 | 14.994 | 50.317 |
| Of which in combined heat and power | | 5.092 | | 5.731 | | 6.371 | | 7.010 | | 7.649 | | 8.289 |

Table 11: Estimation of total contribution (final energy consumption) expected from each renewable energy technology in the Netherlands to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in heating and cooling 2010-2020

| | 2005 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Geothermal (excluding geothermal heat with a low temperature in heat pumps) | 0 | 39 | 57 | 75 | 94 | 112 | 130 | 156 | 182 | 207 | 233 | 259 |
| Solar power | 16 | 20 | 19 | 19 | 18 | 18 | 17 | 18 | 19 | 20 | 22 | 23 |
| Biomass: | | | | | | | | | | | | |
| Solid | 540 | 573 | 579 | 585 | 591 | 598 | 604 | 613 | 623 | 632 | 641 | 650 |
| Gas | 69 | 111 | 124 | 136 | 149 | 162 | 174 | 197 | 220 | 243 | 266 | 288 |
| Liquid | | | | | | | | | | | | |
| Renewable gas in natural gas grid ('green gas') | 38 | 31 | 51 | 80 | 115 | 158 | 202 | 278 | 354 | 430 | 506 | 582 |
| Renewable energy from heat pumps and HCS (heat only): | 54 | 132 | 156 | 180 | 204 | 228 | 252 | 277 | 302 | 327 | 352 | 377 |
| - of which aerothermal | n/a. | 35 | 44 | 54 | 63 | 72 | 81 | 89 | 96 | 103 | 110 | 117 |
| - of which geothermal | 90 | 104 | 118 | 132 | 146 | 161 | 177 | 193 | 209 | 226 | 242 | n/a. |
| - of which hydrothermal | 1 | 1 | 2 | 2 | 3 | 5 | 6 | 8 | 9 | 11 | | |
| TOTAL | 717 | 906 | 987 | 1.076 | 1.172 | 1.276 | 1.380 | 1.540 | 1.700 | 1.860 | 2.019 | 2.179 |
| district heating | 415 | 490 | 509 | 528 | 547 | 566 | 584 | 616 | 649 | 681 | 713 | 745 |
| Of which biomass in | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 |

The following comments relate to Table 11:

- Re ' Bioliquids' : Instead of bioliquids (contribution 0 PJ in 2020) the contribution of renewable gas to the natural gas grid is included.
- Re ' Renewable energy from heat pumps and HCS' : For heat pumps, the allocation to the source type is an estimate.

- Re ' Of which district heating' : This relates to all biomass used for heat from CHP installations, not only for district heating and energy sale.
- Re ' Of which biomass in households' : This relates only to boilers for household use (no CHP installations). The distribution among industrial boilers and boilers for household use is assumed to remain constant through time (no changes from 2005).

Table 12: Estimation of total contribution expected from each renewable energy technology in the Netherlands to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the transport sector 2010-2020 (ktoe)

| | 2005 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Bio-ethanol/bio-ETBE | 0 | 168 | 206 | 202 | 208 | 215 | 217 | 230 | 243 | 256 | 269 | 282 |
| Of which biofuels Article 21(2) | 0 | 17 | 21 | 20 | 21 | 22 | 22 | 24 | 27 | 29 | 31 | 34 |
| Of which fed in | 0 | 152 | 186 | 182 | 188 | 194 | 196 | 205 | 213 | 222 | 231 | 240 |
| Biodiesel | 0 | 139 | 210 | 240 | 280 | 319 | 350 | 391 | 431 | 471 | 512 | 552 |
| Of which biofuels Article 21(2) | 0 | 139 | 42 | 48 | 56 | 64 | 70 | 80 | 91 | 101 | 111 | 121 |
| Of which fed in | 0 | 69 | 147 | 168 | 196 | 224 | 245 | 251 | 258 | 264 | 270 | 276 |
| Hydrogen from renewables | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Renewable electricity | 8 | 12 | 14 | 16 | 19 | 21 | 23 | 33 | 42 | 52 | 62 | 71 |
| Of which road transport | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 6 | 11 | 15 | 20 | 24 |
| Of which non-road transport | 8 | 12 | 14 | 16 | 18 | 20 | 22 | 27 | 32 | 37 | 42 | 47 |
| Other (such as biogas, vegetable oils, etc.) | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. |
| Of which biofuels Article 21(2) | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. | n/a. |
| TOTAL | 8 | 319 | 430 | 459 | 507 | 556 | 591 | 654 | 717 | 780 | 842 | 905 |

The following comment relates to Table 12

- The bioethanol/bio-ETBE category contains the fuels that can be used as petrol substitutes, such as for example, biomethanol.

5.2 Total contribution expected from energy efficiency and energy-saving measures to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity, heating and cooling and transport

See chapter 2, Table 1.

5.3 Assessment of the impacts (optional)

Table 13: Estimated costs and benefits of the renewable energy policy support measures:

| Measure | Expected renewable Energy (ktoe) | Expected costs (EUR) - please time frame | Estimated GHG reduction by gas (tonnes / year) | Expected growth jobs |
|-------------------------------|----------------------------------|--|--|----------------------|
| No Clean and Efficient policy | 2005 | n/a. | n/a. | n/a. |
| Established policy | 3748 | n/a. | n/a. | n/a. |
| Announced policy | 7340 | n/a. | n/a. | n/a. |

Policy

With the policy set out in this action plan, 7.3 Mtoe (307 PJ) of renewable energy are expected to be used in 2020.

Employ-RES

The Employ-RES study was presented in April 2009. The study was carried out on behalf of the EC. It concluded that policy focused on achievement of the 20% renewable energy targets in 2020 (in final energy use) will create 410,000 new jobs and generate a net additional growth of 0.24% for the gross national (European) product.

5.4 Preparation of the national renewable energy action plan and the follow-up of its implementation

(a) How were regional and/or local authorities and/or cities involved in the preparation of this action plan? Were other stakeholders involved?

Covenants and consultation

Regional players, local authorities and cities were closely involved in the policy described in this plan from the Clean and Efficient and the Energy Transition programmes by way of the Covenants. The Association of Netherlands Municipalities (VNG) and the Interprovincial Consultative Body (IPO) were involved in a consultative capacity in preparing the action plan.

(b) Are there plans to develop regional/local renewable energy strategies? If so, could you please explain? In case relevant competences are delegated to regional/local levels, what mechanism will ensure national target compliance?

IPO Uitvoeringsprogramma Klimaat Energie en Ruimte [IPO Climate, Energy and Environment Implementation Programme] 2010

Wide-ranging regional renewable energy strategies already exist. One example is the IPO Climate, Energy and Environment Implementation Programme 2010, in which the following projects have been identified:

1. General control, organisation
2. Communication
3. International
4. Issue resolution
5. Financing strategies and innovative sustainable financing
6. Sustainable energy mix
7. Climate effects atlas
8. Monitor CO₂ reductie
9. Knowledge and innovation
10. Wind energy
11. Sustainable mobility
12. Sustainable road management
13. Energy saving in the built environment, adaptation of cities to climate change, sustainable housing

14. Biomass in the energy and feedstock supply and decentralised local energy generation and small-scale biomass processing
15. Sustainable heat
16. Residual heat
17. Geothermal heat
18. Cold and heat storage
19. Energy saving in businesses, MJA-3
20. Pioneering climate adaption projects
21. Solar power
22. CCS
23. Sustainable procurement
24. Energy storage

This work programme is a result of, inter alia, the covenants with municipal authorities, provinces and the government.

Mechanisms for achieving targets

The 'Climate Agreement between the Municipal Authorities and the Government' and the 'Climate and Energy Agreement between the Government and the Provinces' Covenants contain agreements made in respect of the mutual responsibilities for the achievement of renewable energy targets.

Local authorities have powers, inter alia, in the area of spatial planning. As explained in paragraph 4.1, the Environmental Management Act (Wro), the law governing the general provisions of the Environment Act (Wabo), the Government Coordination scheme (RCR) and the Crisis and Recovery Act provide facilities allowing the spatial implementation of renewable energy to be organised at central level.

(c) Please explain the public consultation carried out for the preparation of this Action Plan.

Subregions

Consultations have been held on various subjects. One example is the marketing day for Gaseous and Liquid climate-neutral Energy Commodities (GAVE) relating to the implementation of the Renewable Energy Directive in the transport sector. Consultations have also been held for the implementation of the European monitoring system in the Netherlands (development of the (5th) renewable energy monitoring protocol).

Action plan

Assuming that this action plan provides a description of existing or announced policy, an information meeting was held in April 2010 between the sectors involved such as the NGOs, authorities and market players. In April 2010, these parties were also invited to submit written comments.

(d) Please indicate your national contact point/the national authority or body responsible for the follow-up of the Renewable Energy Action Plan?

Ministerie van Economische Zaken
Dienstonderdeel ET/ED Mevr.
Drs. I.K. Post Postbus 20101 2500
EC Den Haag

(e) Do you have a monitoring system, including indicators for individual measures and instruments, to follow up the implementation of the Renewable Energy Action Plan? If so, could you please give more details on it?

Renewable Energy Monitoring Protocol

The renewable energy monitoring protocol is a policy document containing agreements which provide for a uniform

calculation method for determining the quantity of produced renewable energy. This protocol is consistent with the international protocols. It is defined by the Ministry of Economic Affairs.

The CBS uses this method to monitor the quantity of produced renewable energy. Calculation methods used consistently by all authorities and organisations allow the developments in this area to be accurately recorded. The revised (5th) version from 2010 incorporates the agreements made as a result of the Renewable Energy Directive.

Monitoring the Clean & Efficient policy programme

The targets are monitored as closely as possible in association with the monitoring of the Clean & Efficient policy programme. This is explained in: Monitor Schoon & Zuinig [Clean and Efficient Monitor] (2008). It includes indicators for measures and instruments.



6 *Abbreviations used*

A

AMvB: Algemene Maatregel van Bestuur [General Administrative Regulation], 60
AVI: Afvalverbrandingsinstallaties [Waste Incineration Installations], 36
Awb: Algemene wet bestuursrecht [General Administrative Law Act], 31

C

CBS: Centraal Bureau voor de Statistiek [Statistics Netherlands], 92
CCS: Carbon Capture & Storage, 10

D

DEN: Duurzame Energie in Nederland [Sustainable Energy in the Netherlands], 34
DEV: Duurzame Elektriciteitsvoorziening [Sustainable Electricity Supply], 48

E

EIA: Energie Investeringsaftrek [Energy Investment Deduction], 36
ECN: Energieonderzoek Centrum Nederland [Energy Research Centre of the Netherlands], 7
EK: Energiekamer [Office of Energy Regulation], 53
EMG: Energieprestatienorm op gebiedsniveau [Energy Performance Standard at Area Level], 35
EOS: Energie Onderzoeksubsidie [Energy Research Subsidy], 43
EPBD: Energy Performance Building Directive, 41
EPK: Stichting Energie Prestatie Keur [Energy Performance Verification Foundation], 41
EZ: ministerie van Economische Zaken [Ministry of Economic Affairs], 31

F

FLOK: Facilitering Lokale en Regionale Klimaatinitiatieven [Facilitation of Local and Regional Climate Initiatives], 43

G

GAVE: GASvormige en Vloeibare klimaatneutrale Energiedragers [Gaseous and Liquid climate-neutral Energy Commodities], 43

H

HBO: Hoger Beroepsonderwijs [Higher Vocational Education], 35
HHV: Higher Heating Value, 92

I

IBB: Innovatieve biobrandstoffen [Innovative Biofuels], 82
IPE: Interdepartementale Programmadirectie EnergieTransitie [Interdepartmental Energy Transition Programme Directorate], 74

IPO: Interprovinciaal Overleg [Interprovincial Consultative Body], 28
IPPC: Integrated Pollution Prevention and Control, 31
Ivb: Inrichtingen- en vergunningenbesluit [Installations and Licences Decree], 31

L

LHV: Lower Heating Value, 92
LNV: ministerie van Landbouw, Natuur en Voedselkwaliteit [Ministry of Agriculture, Nature and Food Quality]
LVO: Landelijke Voorziening Omgevingsloket [National Environment Office], 32

M

MEP: Milieukwaliteit Elektriciteitsproductie [Electricity Production (Environmental Quality)], 36
MIA: Milieu Investeringsaftrek [Environmental Investment Deduction], 58
MSK: Milieusteunkader [Environmental Support Framework], 62

N

NBLH: De Natuur-, Bos-, Landschaps- en Houtketen [Nature, Forestry, Landscape and Wood Chain], 97
NEW: Nationaal Expertisecentrum Warmte [National Expertise Centre for Heat], 35
NMa: Nederlandse Mededingingsautoriteit [Netherlands Competition Authority], 48
NOM: Noordelijke Ontwikkelings Maatschappij [Northern Development Company], 48
NVOE: Nederlandse Vereniging voor Ondergrondse Energieopslagsystemen [Netherlands Association for Underground Energy Storage Systems], 41
NWEA: Nederlandse Wind-Energie Associatie [Netherlands Wind Energy Association], 43

O

OVMEP: Subsidy scheme for fermentation installations, 36

P

PNG: Platform Nieuw Gas [New Gas Platform], 48
PBL: Planbureau voor de Leefomgeving [Netherlands Environmental Assessment Agency], 7

R

RCR: Rijkscoördinatieregeling [Government Coordination Scheme], 11
RNB: Regionale Netbeheerders [Regional System Operators], 54

S

SDE: Stimuleringsregeling Duurzame Energieproductie [Incentive Scheme for Sustainable Energy Production], 58
SLOK: Stimulering Lokale Klimaatinitiatieven [Promotion of Local Climate Initiatives], 37
SWKO: Samenwerkingsprogramma Warmte Koude Opslag

[Heat and Cold Storage Collaboration Programme], 41

T

TAB: Tankstations Alternatieve Brandstoffen [Filling stations for alternative fuels], 82

TSO: Transmission System Operator, 48

U

UKP-NESK: Unieke Kansen Programma Naar Energieneutrale Scholen en Kantoren [The Unique Opportunities Programme for Energy-neutral Schools and Offices], 40

V

V&W: Ministerie van Verkeer en Waterstaat [Ministry of Transport, Public Works and Water Management], 32

Vamil: Willekeurige Afschrijvingen Milieu-investeringen [Random write-off of environmental investments], 58

VME: Vereniging voor Marktwerking en Energie [Association for Market Operation and Energy], 28

VNG: Vereniging van Nederlandse Gemeenten [Association of Netherlands Municipalities], 28

VROM: Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer [Housing, Spatial Planning and the Environment], 31

W

Wabo: Wet algemene bepalingen omgevingsrecht [Law governing the general provisions of the Environment Act], 11

Wkk: Warmte-Kracht-Koppeling [Combined Heat and Power – CHP], 39

Wm: Wet Milieubeheer [Environmental Management Act], 31

Wob: Wet openbaarheid bestuur [Government Information (Public Access) Act], 35

Wob: Wet openbaarheid bestuur [Government Information (Public Access) Act], 35

WON: Wet Onafhankelijk Netbeheer [Independent System Operation Act], 46

Wro Wet ruimtelijke ordening [Spatial Planning Act], 31

WWI: Wonen, Wijken en Integratie [Housing, Communities and Integration], 35

