



Netherlands Enterprise Agency

2014

Report on Renewable Energy

Annual report on SDE+, SDE,
MEP and OV-MEP

>> Sustainable. Agricultural. Innovative. International.

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Introduction

Dear reader,

It is the Dutch Government's ambition to have 16% renewable energy by 2023. This ambition forms the basis of all decisions made about subsidies. The SDE+ scheme is a powerful instrument which ensures that every euro of subsidy is used extremely effectively. This effectiveness has led other European bodies to ask how, for years now, we have succeeded in encouraging renewable energy production in a way that is both cost-efficient and that delivers results.

The Netherlands Enterprise Agency is not only making its contribution to this as a supervisor; its role as agent and linchpin between government and entrepreneurs means the Netherlands Enterprise Agency is a pioneer for small- and large-scale projects in the field of renewable energy. A large number of projects are benefiting from the knowledge, expertise and the large network the Netherlands Enterprise Agency has developed over the years.

The 2014 Report on Renewable Energy demonstrates that the general public is increasingly aware of the importance of renewable energy. Accordingly, 2014 in particular witnessed a large increase in the number of solar-PV projects. Solar panels on roofs are slowly becoming a common sight. Many Dutch citizens are



gaining a concrete idea of what renewable energy is and have a positive view of it.

At the same time, the Netherlands remains a role model in Europe concerning small-scale bioenergy projects. For example, more and more farmers are building a manure fermenting installation on their land. This development highlights once again the amount of innovation within our agricultural sector.




There are yet more larger onshore and offshore wind energy projects in the pipeline which will be implemented thanks to the support granted by the Dutch Ministry of Economic Affairs. Although projects of this kind usually take time to produce results, they make a considerable contribution in terms of benefits to the environment. In short, the Netherlands is well on its way to achieve its goal for 2023.

Jaco Stremmer, Deputy Director for Energy and Sustainability at the Ministry of Economic Affairs



Explanation of this report

Navigation

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The Dutch Government encourages the production and use of renewable energy by using a number of different instruments. In this report you will read about the current situation in the Netherlands with regards to the implementation of renewable energy resources, and you will read about the way government instruments contribute towards this. The annual overview of the funds spent and the results of the SDE+, SDE, OV-MEP and MEP form a significant part of this report. This data, with the reference date 1 March 2015, is based on the Netherlands Enterprise Agency's (Rijksdienst for Ondernemend Nederland) Subsidy-Administration system. This data may deviate from other publications that (also) make use of alternative sources.

This report will initially give a picture of the support programmes put in place by the Dutch government during the period 2010 to 2014. It will describe the instruments used and will explore developments with regards to heat supplies.

The different energy sources feature a list of the technologies used and the results these technologies have achieved. Not all sustainable energy is subsidised with SDE, SDE+, MEP or OV-MEP. For example, the production of renewable energy using heat pumps does not receive any MEP-SDE subsidy. The practical examples show how entrepreneurs apply renewable energy in practice.

Interpretation of the figures

The energy production has been converted to the 'human scale' ([source: CBS Statline](#)): renewable electricity production is compared to the number of households that can be supplied with electricity for a year (use of 3,150 kWh); renewable heat and green gas production are converted to the equivalent in natural gas usage of an average Dutch household (use of 1,600 m³ per year). Savings in CO₂ emissions are compared to the annual emission produced by the equivalent number of petrol cars (3,300 kg CO₂ at an annual number of kilometres of 20,000 km). ([source: Statistics Netherlands](#))

Interpretation of the terminology

You can find further explanations regarding terminology and abbreviations at the end of this document. From there you can click through to the relevant websites. [Go to the Glossary.](#)

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Energy production

In 2014, all projects that were subsidised within the framework of MEP, OV-MEP, SDE or SDE+ produced a total of 9,764 GWh. This is the equivalent of 35.1 PJ. Almost 80% of this production relates to electricity;

the rest of the production relates to heat, CHP and renewable gas. Biomass and wind projects which were allocated subsidies from the OV-MEP and MEP made the largest contribution.

Figure 1 Total renewable energy production per energy carrier– SDE+, SDE, OV-MEP and MEP 2010 – 2014

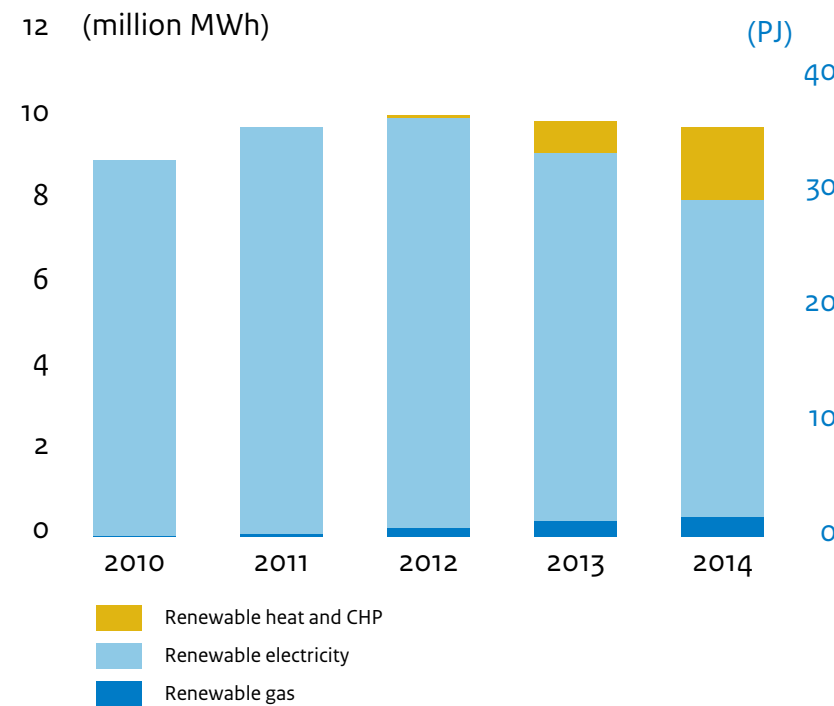
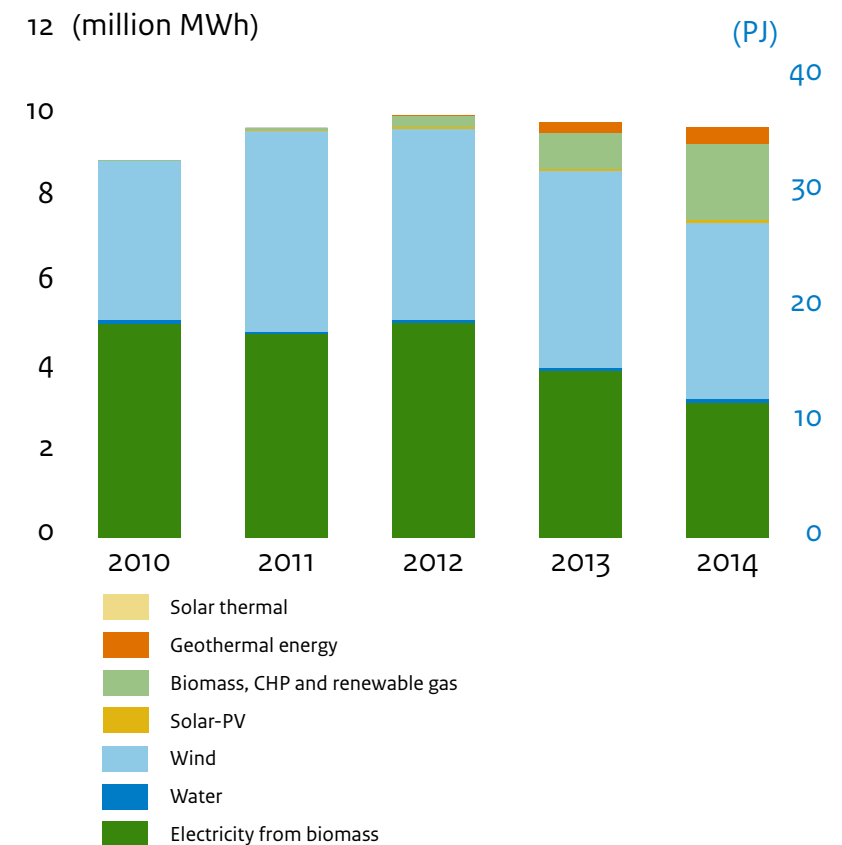


Figure 2 Total renewable energy production per technology– SDE+, SDE, MEP and OV-MEP 2010 – 2014



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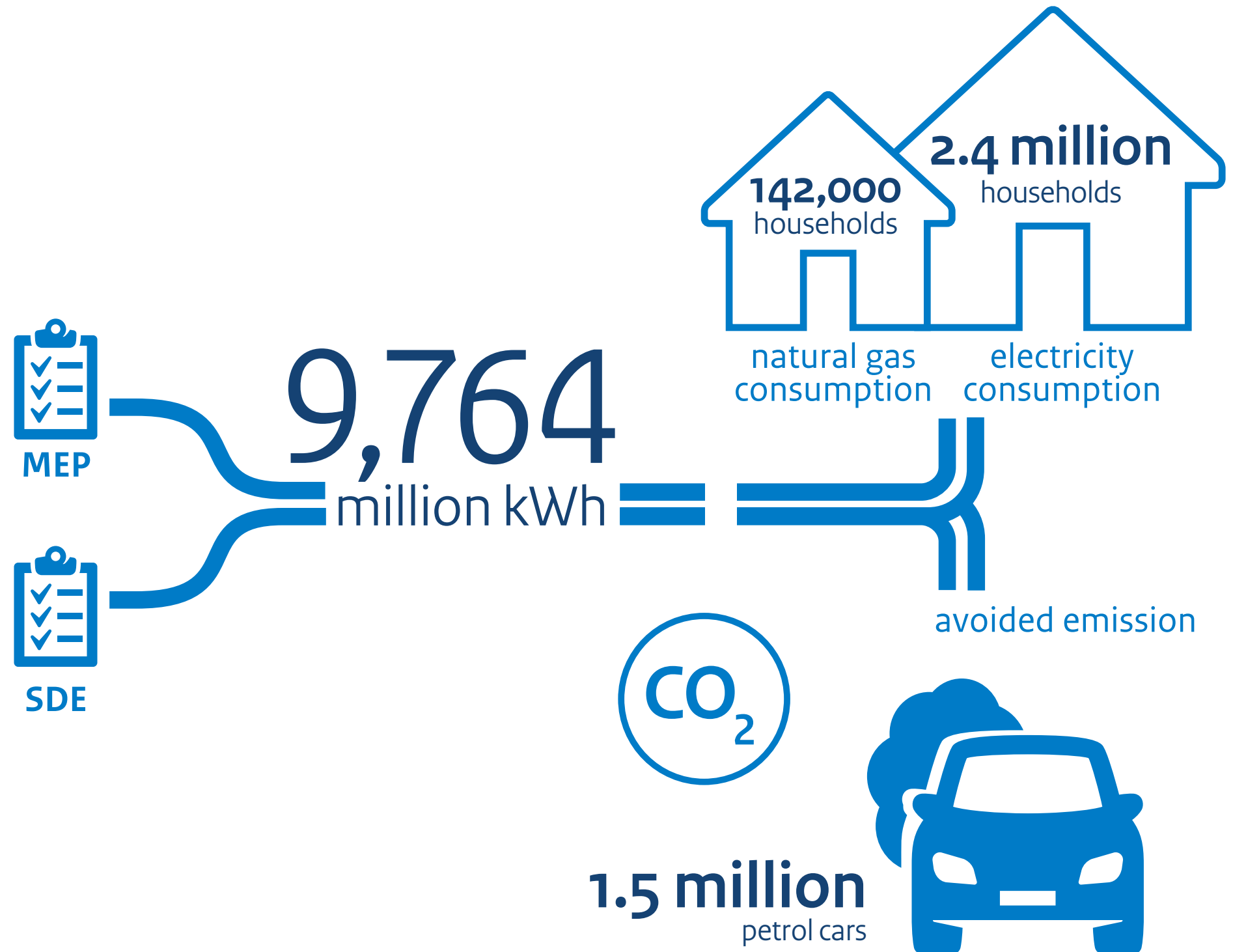
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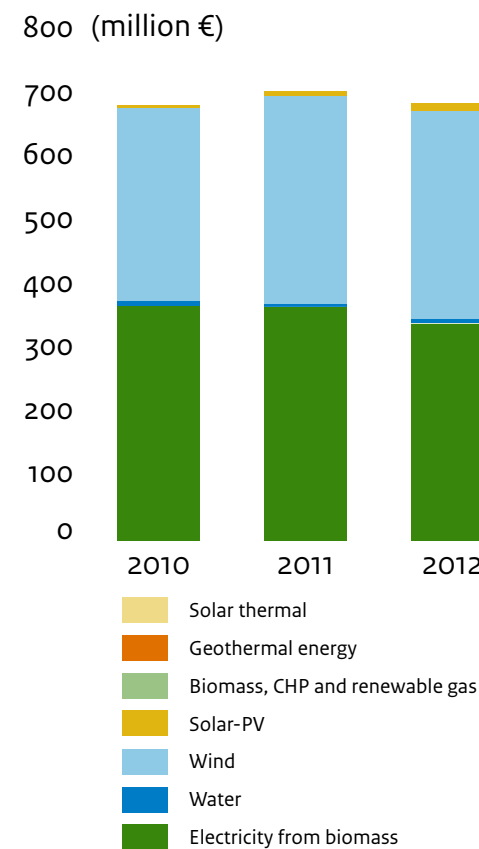
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Cash expenditure for SDE+, SDE, OV-MEP and MEP

In 2014, more than half of cash expenditure on renewable energy projects was spent on wind projects. The MEP, OV-MEP, SDE and SDE+ expenditure amounted to almost 602 million euros that year. More than 70% of the expenditure went to projects which were subsidised by MEP or OV-MEP.

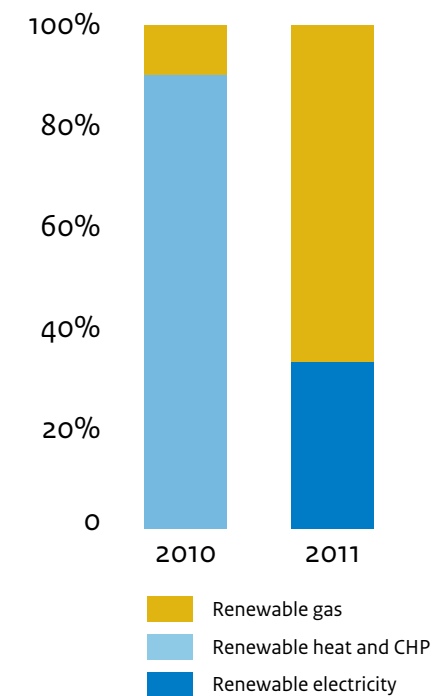
Figure 3 Total cash expenditure per technology– SDE+, SDE, OV-MEP and MEP 2010 to 2014



SDE+ 2014 results

In 2014, SDE+ had an available budget of 3.5 billion euros. A total of 4,014 applications with a gross maximum budget of almost 5.7 billion euros were received. The total available budget of 3.5 billion euros was allocated to 3,174 projects. 47.6% of the available budget was allocated to electricity; 33.6% to electricity; and 18.8% to renewable gas.

Figure 4 Allocation of the available budget per energy carrier – SDE 2010 and SDE+ 2011 to 2014.



SDE+, SDE, OV-MEP and MEP projects 2010 – 2014

The allocation of the available budgets shows a strong variation in the different sources in the past few years. 70% of the available budget was allocated to green gas projects in 2011, whilst in 2012, a large portion of the budget was spent on heat projects. This is a result of the SDE+ working with a single budget for all categories, which is drafted in a phased structure from 2011 onwards. Renewable heat projects could apply for subsidies for the first time

in 2012. The maximum basic amounts for renewable heat projects are mainly in the first or the second phase.

In 2014, almost half of the budget went to renewable electricity, a large of part of which was allocated to solar-PV projects in later phases.

Table 1 SDE+ 2014 subsidy allocations

| Category | Number of approved subsidy applications | Maximum production eligible for subsidy | Allocated budget |
|-------------------------------------|---|---|------------------|
| Renewable electricity | | (GWh) | (million €) |
| Wind energy | 57 | 5,055 | 341 |
| Solar-PV | 2,973 | 13,239 | 1,312 |
| Biomass | 2 | 219 | 12 |
| Hydropower | 2 | 12 | 1 |
| Total renewable electricity | 3,034 | 18,525 | 1,667 |
| Renewable heat and CHP | | (GWh) | (million €) |
| Biomass, including waste | 96 | 15,976 | 933 |
| Geothermal energy | 5 | 8,309 | 239 |
| Solar thermal | 14 | 31 | 3 |
| Total renewable heat and CHP | 115 | 24,316 | 1,175 |
| Renewable gas | | (GWh) | (million €) |
| Green gas | 25 | 11,308 | 658 |
| Total renewable gas | 25 | 11,308 | 658 |
| Total SDE+ 2014 | 3,174 | 54,150 | 3,500 |

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Alongside MEP, OV-MEP, SDE and SDE+, the Dutch government has rolled out a large number of alternative plans to encourage the use of renewable energy. A number of these are discussed here.

Energy Investment Allowance (*Energie Investeringsaftrek, EIA*)

In the period from 2010 to 2013, more than half of the total reported amount of investment in renewable energy projects was spent on wind projects. In 2013, companies reported 745 million euros of investments in renewable energy technologies. In 2014, the available budget was lowered to 111 million euros from 151 million euros in 2013. Since the start of the SDE+ 2014, it was no longer possible to apply for EIA for renewable energy projects in combination with SDE+. The 2014 figures relating to EIA are not known at the time this report is published (see table 2, page 10).

The Green Funds scheme (*Regeling Groenprojecten*)

The Green Funds scheme is a common regulation of the Dutch Ministry of Infrastructure and Environment and the Dutch Ministry of Finance. They use this regulation to encourage sustainable and innovative projects, including construction projects. The Dutch government gives tax advantages to 'green' savers and investors. By doing so, banks can grant a loan with a lower interest rate to an investor with a green

project. Investors in green projects need to apply for a 'green certificate' (*groenverklaring*). The Netherlands Enterprise Agency checks the projects on behalf of the Ministry of Economic Affairs. The number of green certificates for sustainable energy projects has shown a slight increase in comparison with 2013. However, the allocated project capital for sustainable energy projects decreased from 365 million euros in 2013 to 283 million euros in 2014. This was caused by a number of large-scale wind and geothermal projects with a green certificate in 2013 (see table 3, page 11).

Experiments with Dutch Electricity Act 1998 (*Elektriciteitswet*)

Thanks to the 'Besluit experimenten decentrale duurzame elektriciteitsopwekking' (decision to decentralise sustainable energy production), cooperations and owners' associations will be given the freedom to experiment with sustainable energy, and they will also be able to take on tasks usually performed by network operators within the scope of these projects. The scheme was prepared in 2014. Part of the preparation process was to liaise with private companies. The Decision and the Ministerial Decree were published in 2015. The first application period started on 1 May 2015. While the scheme itself does not provide any subsidies, it can be combined with programmes that do allocate subsidies.

Alternative government incentives for renewable energy 2010 – 2014

Table 2 Energy Investment Allowance (EIA) for renewable energy projects 2010 – 2013

| | 2010 | 2011 | 2012 | 2013 |
|---|--------------|--------------|--------------|--------------|
| Number of applications | | | | |
| Total | 1,535 | 2,728 | 4,797 | 6,513 |
| Wind turbines | 147 | 245 | 52 | 73 |
| Photovoltaic solar energy systems | 760 | 1,737 | 3,538 | 5,887 |
| Solar collection systems | 210 | 309 | 720 | 121 |
| Geothermal collection systems | 77 | 87 | 137 | 84 |
| Biomass (heat and electricity) | 223 | 222 | 222 | 245 |
| Other | 118 | 128 | 127 | 103 |
| Reported investments (million €) | | | | |
| Total | 201.6 | 638.0 | 262.8 | 745.4 |
| Wind turbines | 78.0 | 417.8 | 48.8 | 346.4 |
| Photovoltaic solar energy systems | 32.1 | 64.0 | 89.4 | 215.6 |
| Solar collection systems | 8.3 | 5.1 | 11.1 | 3.5 |
| Geothermal collection systems | 27.1 | 29.7 | 37.3 | 102.4 |
| Biomass (heat and electricity) | 14.5 | 50.1 | 40.2 | 45.8 |
| Other | 41.6 | 71.3 | 36.0 | 31.7 |

Source: EIA annual reports. EIA data for 2014 is not yet available

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Table 3 Number of green certificates and allocated project capital for renewable energy projects 2010 – 2014

| | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|-------------|--------------|--------------|--------------|--------------|
| Number of certificates issued | | | | | |
| Total | 65 | 44 | 49 | 228 | 237 |
| Biogas upgrading installation | - | 1 | - | 2 | 4 |
| Biofuel production installation | | | | | 1 |
| Wind energy | 10 | 12 | 12 | 21 | 27 |
| Solar cells | 30 | 14 | 23 | 182 | 193 |
| Solar collectors | 8 | 6 | 1 | 6 | 1 |
| Geothermal energy | 1 | - | - | 5 | 1 |
| Hydropower | - | - | - | - | 1 |
| Heat pumps | 16 | 11 | 13 | 12 | 9 |
| Reported project capital (million €) | | | | | |
| Total | 69.4 | 112.6 | 119.8 | 364.8 | 282.9 |
| Biogas upgrading installation | - | 2.4 | - | 2.0 | 6.0 |
| Biofuel production installation | - | - | - | - | 2.6 |
| Wind energy | 43.4 | 83.7 | 105.1 | 312.4 | 244.3 |
| Solar cells | 2.4 | 20.0 | 7.4 | 14.2 | 17.8 |
| Solar collectors | 1.7 | 1.2 | 0.2 | 0.7 | 0.04 |
| Geothermal energy | 4.8 | - | - | 29.7 | 3.1 |
| Hydropower | - | - | - | - | 4.3 |
| Heat pumps | 17.0 | 5.3 | 7.2 | 5.8 | 4.7 |

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Intervention programme integrated stimulation of renewable energy (*Integrale Stimulering Duurzame Energie ISDE*)

Alongside financing issues, there are also other obstacles which limit the upscaling of renewable energy projects. The Dutch Government is taking action to remove those obstacles. It is focusing on laws and regulations which hinder the development of renewable energy, the level of support for projects, spatial development, integrating decentralised energy production in the gas and electricity infrastructure and aspects relating to sustainability. For every source mentioned in this report, the Dutch Government has rolled out intervention programmes that include a range of activities which contribute to the development and implementation of renewable energy resources.

State coordination scheme (*Rijkscoördinatierегeling*)

Wind farms with a capacity of over 100 MW automatically fall under the State coordination scheme. Up until now, four licensing procedures for wind projects under the State coordination scheme have been completed. These are comprised of two offshore wind farms and two onshore wind farms. Four wind farm application procedures are still in progress. The State coordination scheme allows for a variety of decisions, such as licenses and exemptions, required for a project to be taken simultaneously in joint consultation. Aside from licences and exemptions, these projects often additionally require a State land-use plan. These are spatial decisions made by the State, comparable to a zoning plan.



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Green Deal

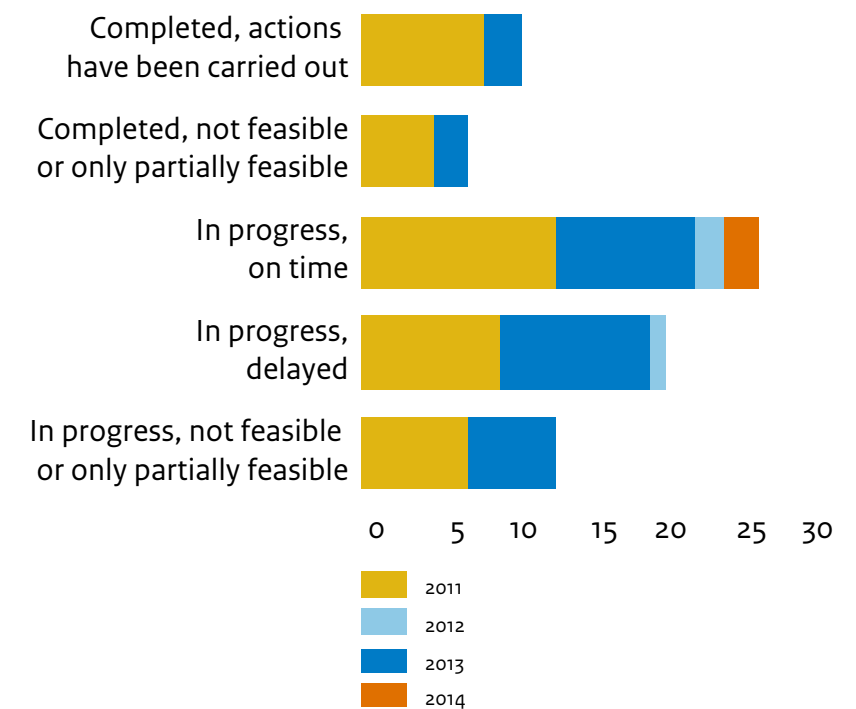
By introducing Green Deals, the Dutch government aims to give the freedom to innovative civil society initiatives in order to speed up the transition to a sustainable economy. The Deals come in the form of agreements between the government of the Netherlands and private companies. The goal is to promote innovation and remove obstacles so that projects are more likely to be carried out and similar projects repeated. The Green Deals comprise all Green Growth topics, including energy. A significant proportion of the Deals contribute to the development of sustainable energy.

Of the 176 Deals from the period 2011 to 2014, 77 include projects in the field of sustainable energy development. The Deals come in many forms. Some deals focus on implementing one single project, whereas others focus on a set of projects.

On 1 June 2014, eighteen Green Deals were completed in this area. For eleven of these Green Deals, all operations contained in the Deal were completed.

The Dutch Government has been active with regards to legalities and regulations for a range of Deals. An example of this is the use of struvite as manure. This Deal was successful. However, despite adjustments in the law and regulations, there are also deals that did not always produce the results the Deal party had hoped for.

Figure 5 Progress in Green Deals for the period 2011 to 2014 in the field of Sustainable Energy



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Heat

Almost 60% of the total energy consumption in the Netherlands is for heating. The attention given to making heat production sustainable and reducing the demand for heating is crucial if the goals of the Dutch Energy Agreement for Sustainable Growth (*Energieakkoord*) are to be met and if Dutch households are to be wholly sustainable in terms of energy consumption by 2050.

Gas is the main source for heat production. In connection with the issues surrounding gas extraction in Groningen and the depleting Dutch gas reserves, the urgency to reduce the demand for heat and to create a sustainable heat supply has intensified.

The Dutch Energy Agreement for Sustainable Growth (*Energieakkoord*) and the Ministry of Economic Affairs highlight the importance of a sustainable heat supply.

- The committee of the Dutch Energy Agreement for Sustainable Growth added Heat as a new and integral area in the Agreement.
- The Dutch Minister of Economic Affairs, Henk Kamp, sent a letter to the Dutch House of Representatives on 2 April 2015 detailing his vision for heat supply in the Netherlands. The Minister wrote about how the heat supply can be modernised and made sustainable, and why priority should be given to this process.

In the implementation plan, the cabinet of the Netherlands has given details of its intentions to roll out policy incentives to tackle the challenge posed by heat supply.

The report discusses the developments in the broad range of heat sources. The following renewable energy sources could be implemented: geothermal energy, including seasonal thermal energy storage (STES) and wells, solar thermal energy, biomass and aérothermal heating, including heat pumps.

Heating plans for Dutch municipalities and provinces

The 'Warmteplannen provincies' (heating plans for Dutch provinces) action plan was started in September 2014 and rolled out under the direction of the Ministry of Infrastructure and Environment and the Association of Provinces of the Netherlands (IPO). These plans shed light on the opportunities to utilise heat on a regional, city or neighbourhood level. Alongside this, the Dutch municipalities started to exchange information in 2014 about heat supply networks and making their heat supply sustainable. The exchange focused on the supply infrastructure for heat.



Heat

Course for alternative renewable energy

The course for alternative renewable energy was started in September 2014. This initiative was borne from the Dutch Energy Agreement for Sustainable Growth (*Energieakkoord*). The control group is comprised of the Ministry of Economic Affairs, the Ministry of Infrastructure and Environment (I&M), the Ministry of Foreign Affairs (BZK), Stichting DE Koepel (Koepel foundation for sustainable energy), the Netherlands Enterprise Agency, the Association of Provinces of the Netherlands (IPO), the Dutch province of Overijssel, the Association of Netherlands Municipalities (*Vereniging van Nederlandse Gemeenten*) and the municipality of Rotterdam. The members of this group have made it their goal to meet the 186 PJ objective for energy produced from alternative renewable energy sources, such as solar, geothermal, aerothermal, biomass, whilst excluding cofiring practices and mobility, by 2023.

On 18 December 2014 the Alternative Renewable Energy inventory (*inventarisatie 'Overige Hernieuwbare Energie'*) was presented to Ed Nijpels, chairman securing committee Dutch Energy Agreement.



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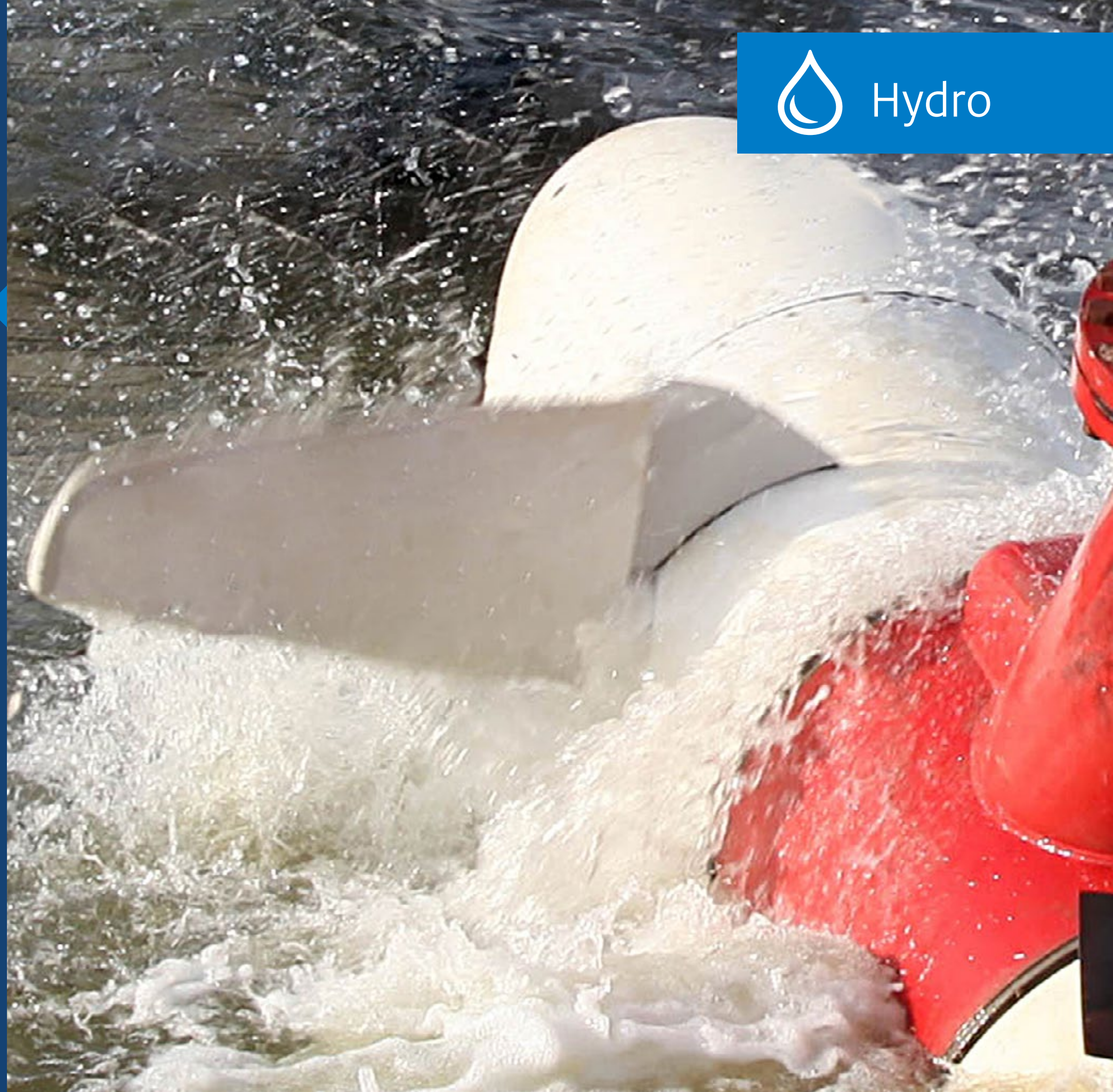
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Since 2003, subsidies have been allocated for 48 MWe of hydropower capacity. 24 MWe of this was taken into production. Of the eight projects with SDE or SDE+ subsidies, two were realised. These two relatively small projects were amongst those subsidised by the SDE 2009.

In 2014, a total of 7.5 million euros worth of MEP subsidies went to hydropower projects. There was no expenditure for the two SDE subsidised hydropower projects.

Figure 6 Hydropower - electricity production from SDE+, SDE and MEP subsidies 2010 – 2014

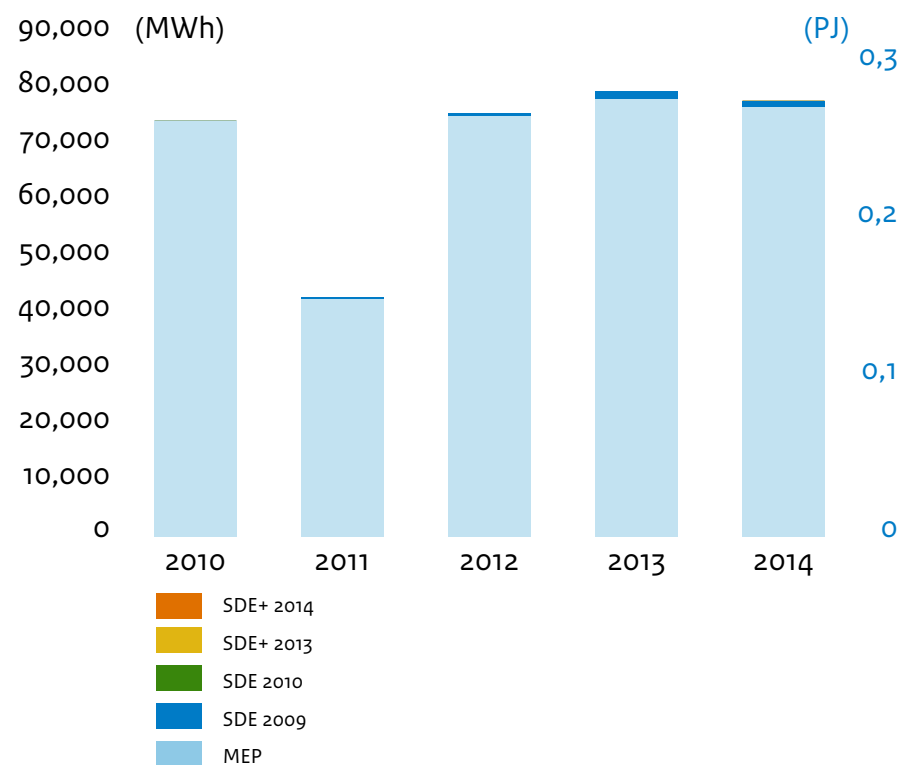
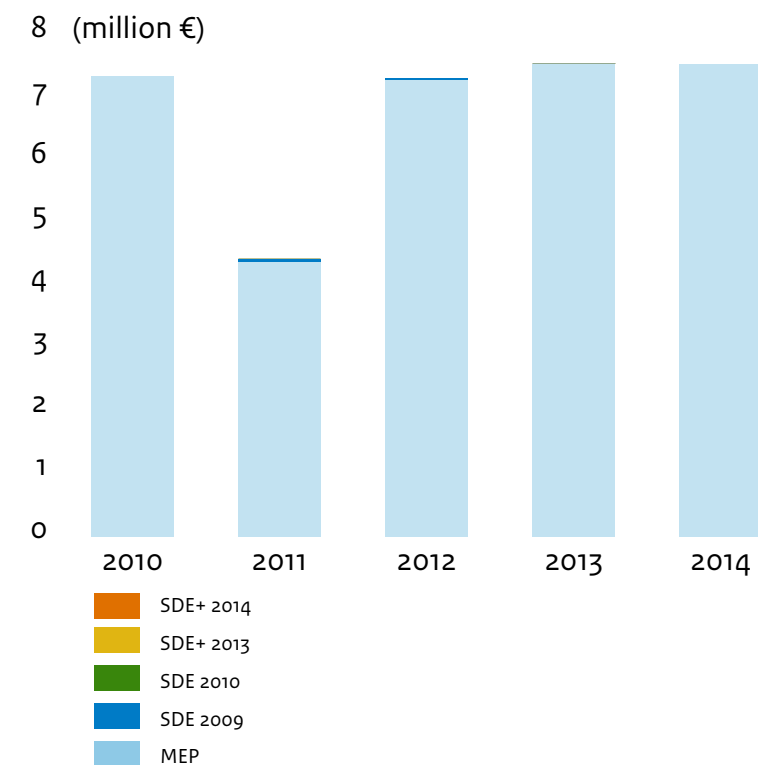


Figure 7 Hydropower - cash expenditure from SDE+, SDE and MEP subsidies 2010 – 2014



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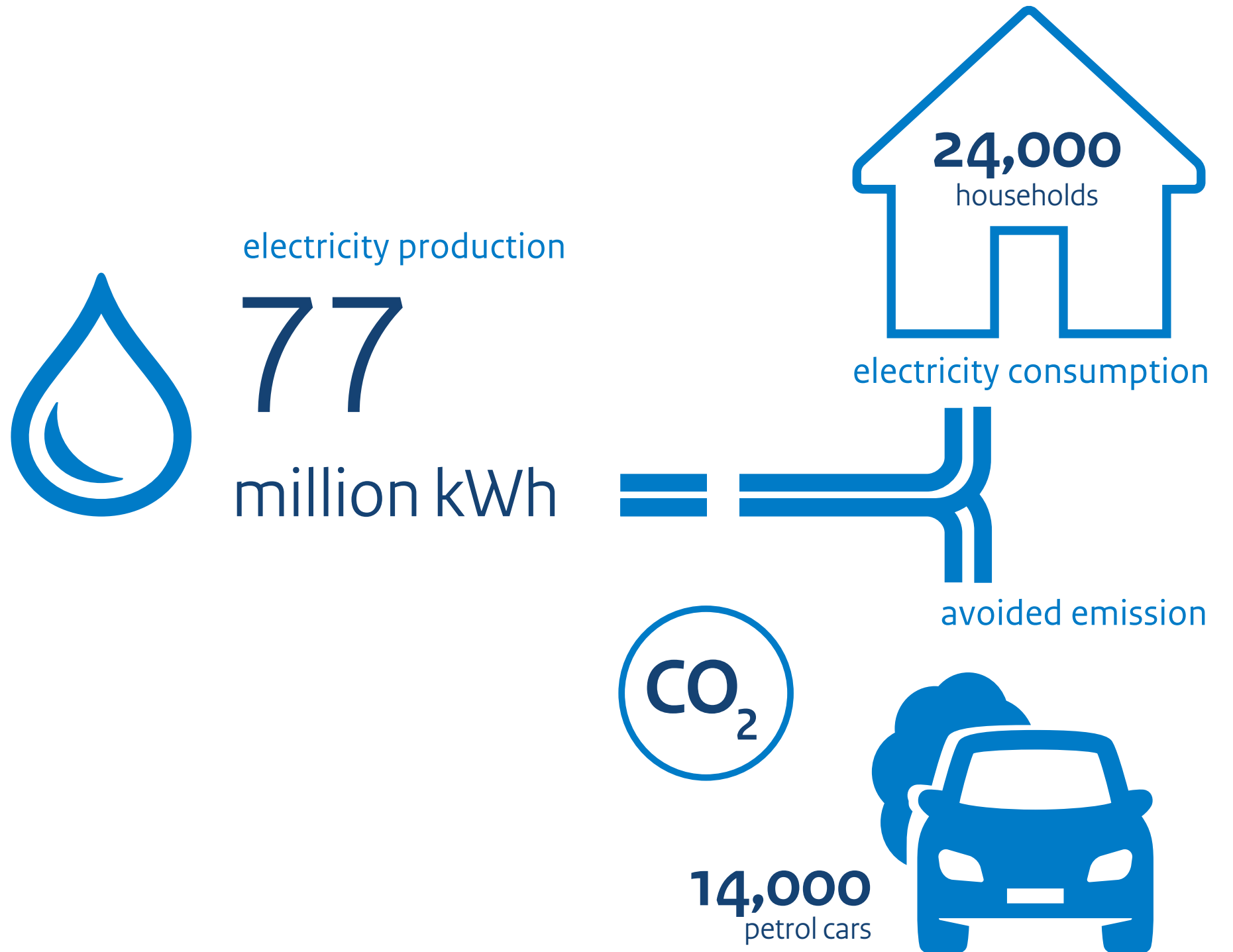
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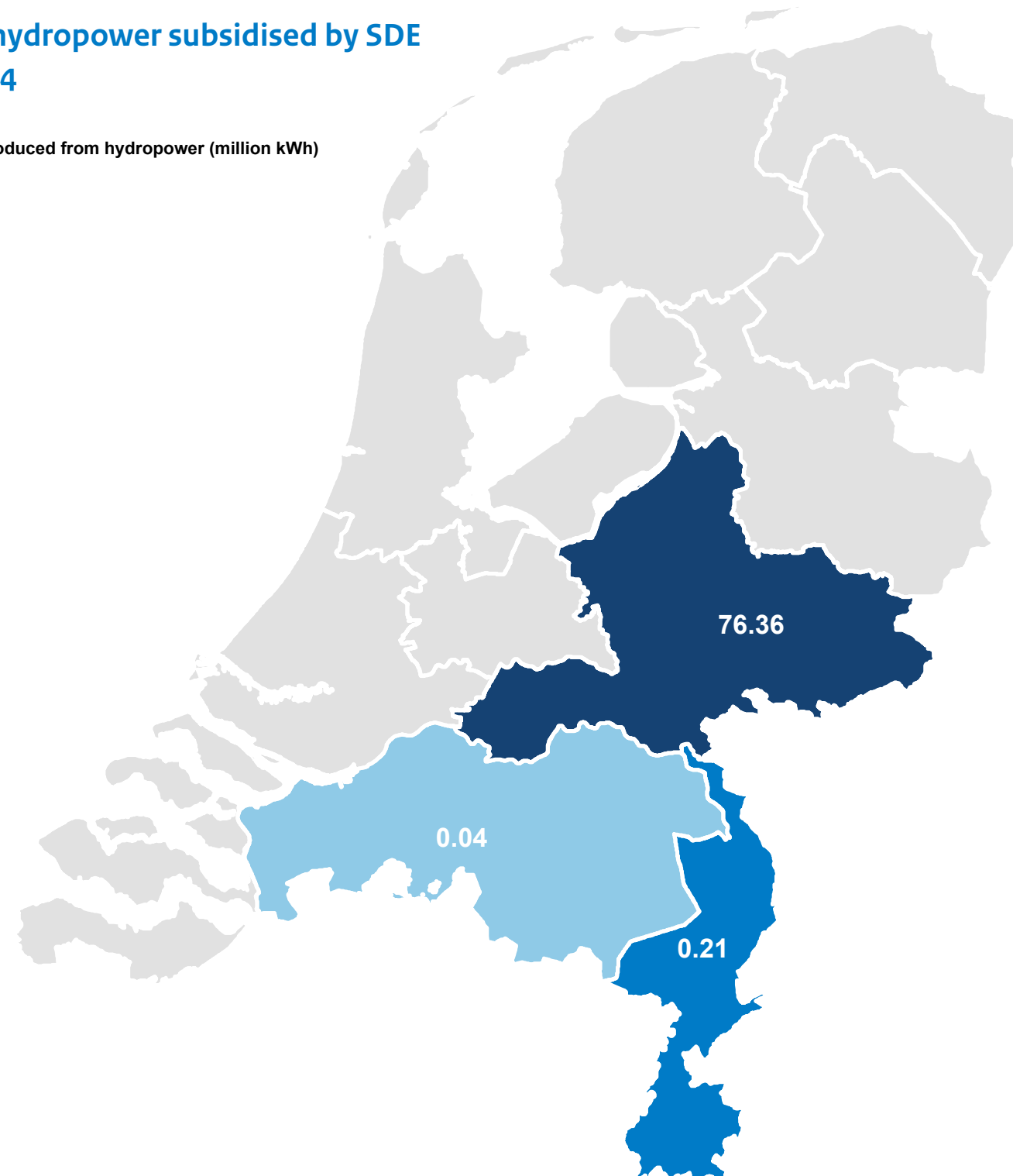
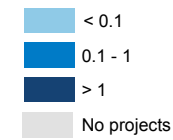
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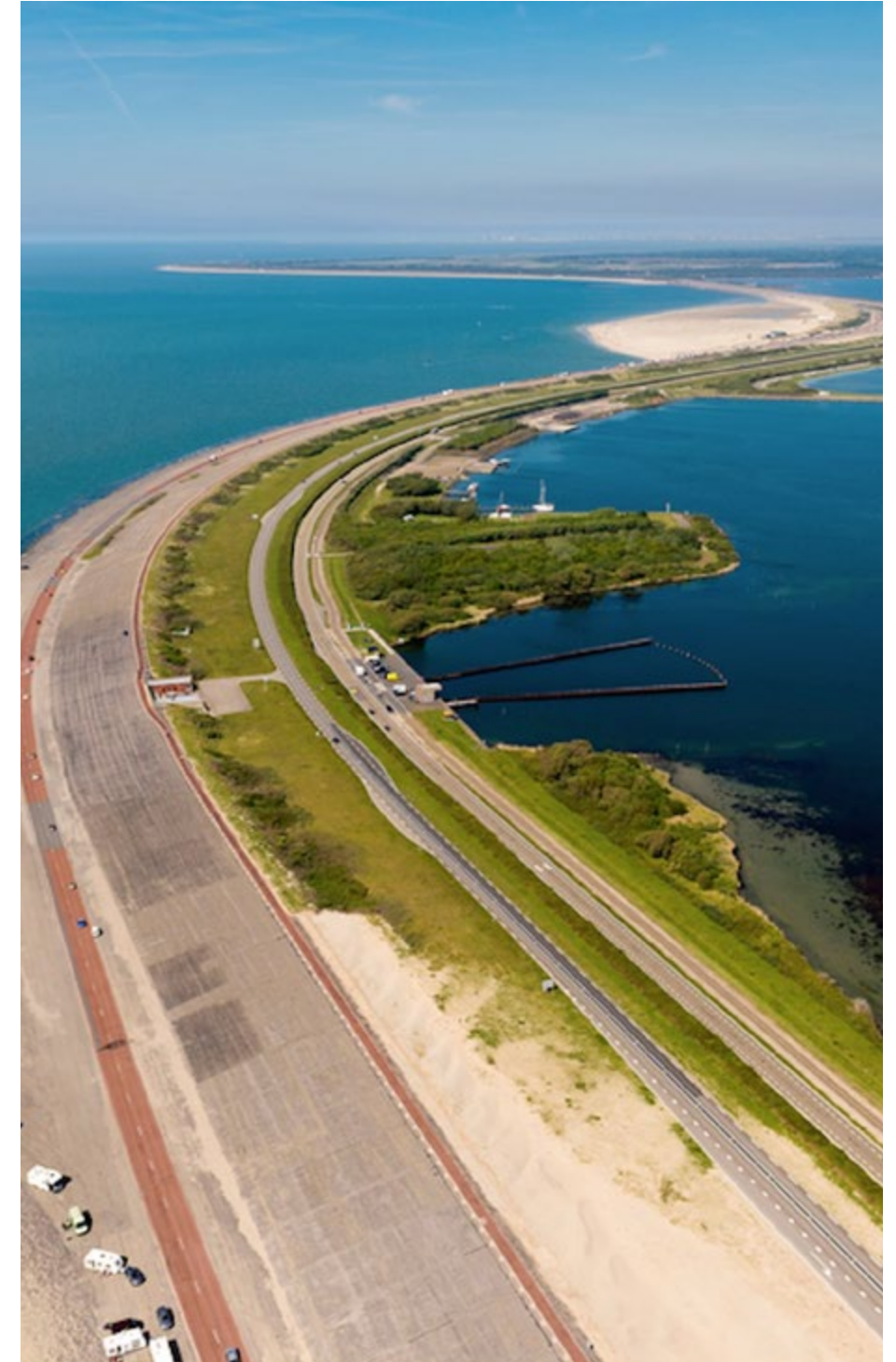
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Hydropower projects can also receive support from other government initiatives such as the Green Funds scheme (*Regeling Groenprojecten*) and the Green Deals. In 2014, one green certificate was issued to a project with a total capital of 4.3 million euros.

Green Deal

Parties are working on the development and creation of a tidal energy plant in Brouwersdam as part of the Green Deal for the Province of Zeeland. The intended plant will use the Grevelingen lake, situated between the provinces of South Holland and Zeeland, to provide it with the required amount of tidal energy via an opening in the dam which is yet to be made. This has the potential to produce sustainable energy for 25,000 to 35,000 households and also includes space for any upscaling.

The parties are assessing the feasibility of the project together with the Dutch province of Zeeland and the Ministry of Infrastructure and Environment.





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The MEP, SDE and SDE+ schemes allocated subsidies for 3,413 MWe of wind power capacity. More than 70% of this capacity involves onshore wind farms, whilst 30% involves offshore wind farms.

228 MWe of offshore wind capacity was allocated and developed with MEP subsidy. 2014 saw the initial building phase of three wind farms, subsidised by SDE tender from 2009. The two Gemini wind farms are planned to be built north of the Frisian island of Schiermonnikoog and will have a total production capacity of 600 MWe. The Luchterduinen wind farm is to be built on the North Sea and will have a total production capacity of 129 MWe.

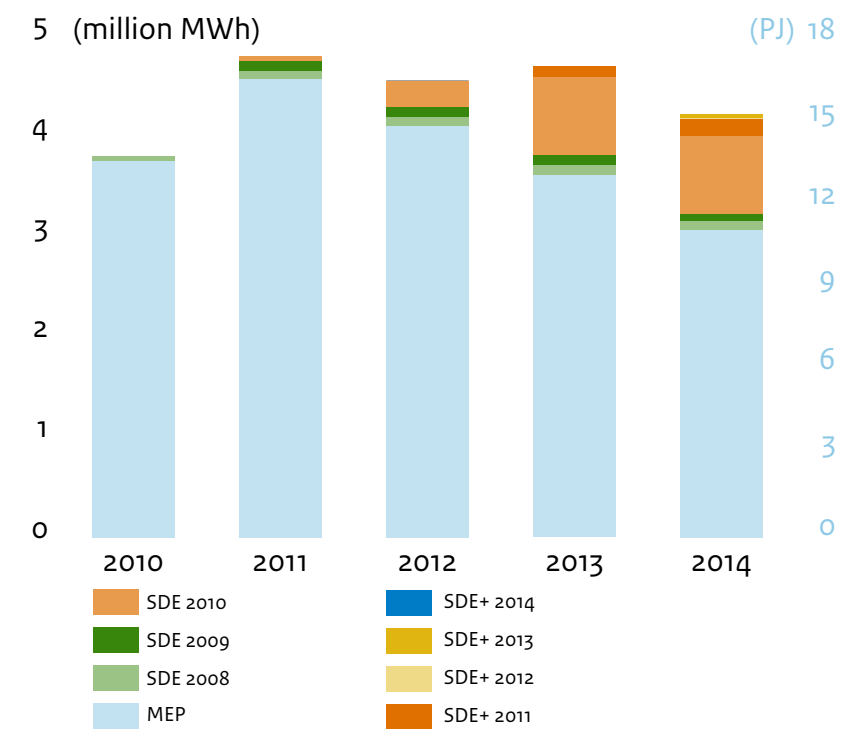
The road-map for offshore wind farms has been developed in consultation with the parties concerned as part of the Dutch Energy Agreement on Sustainable Growth (Energieakkoord). The road-map describes how the offshore wind capacity is being increased from 1,000 MW to 4,500 MW in 2023. Three possible areas to build the wind farms have been designated:

- The Borssele Wind Farm Zone
- The South Holland coast Wind Farm Zone
- The North Holland coast Wind Farm Zone

A new Offshore Wind Energy Act is drafted. TenneT has been appointed as offshore grid operator. The opening of the first SDE+ tender for sites I and II of the Borssele wind farm zone, producing in total 700 MWe, is planned for December 2015.

In 2014, all subsidised wind energy projects combined produced 4,197 million kWh.

Figure 8 Wind energy - electricity production from SDE+, SDE and MEP subsidies 2010 – 2014



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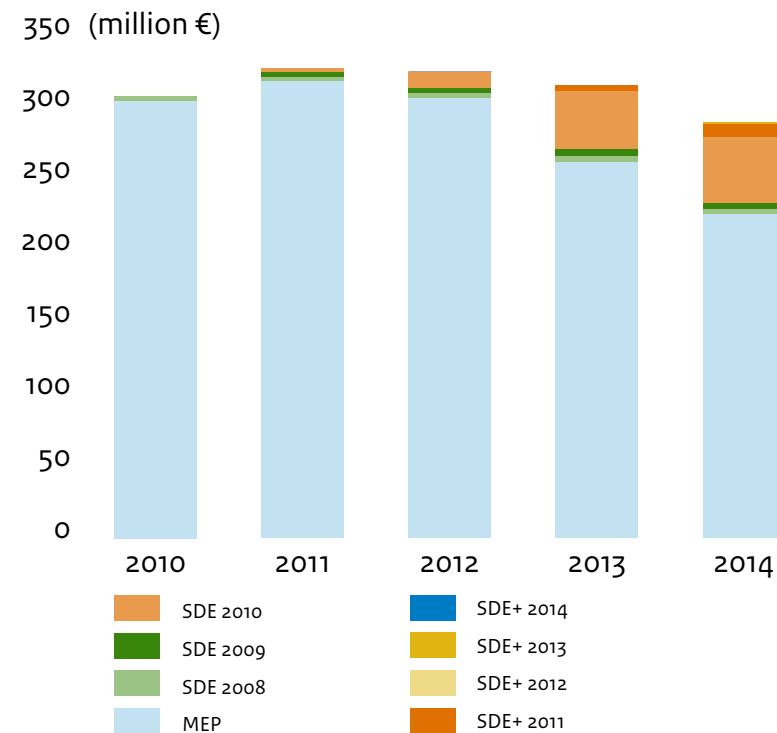
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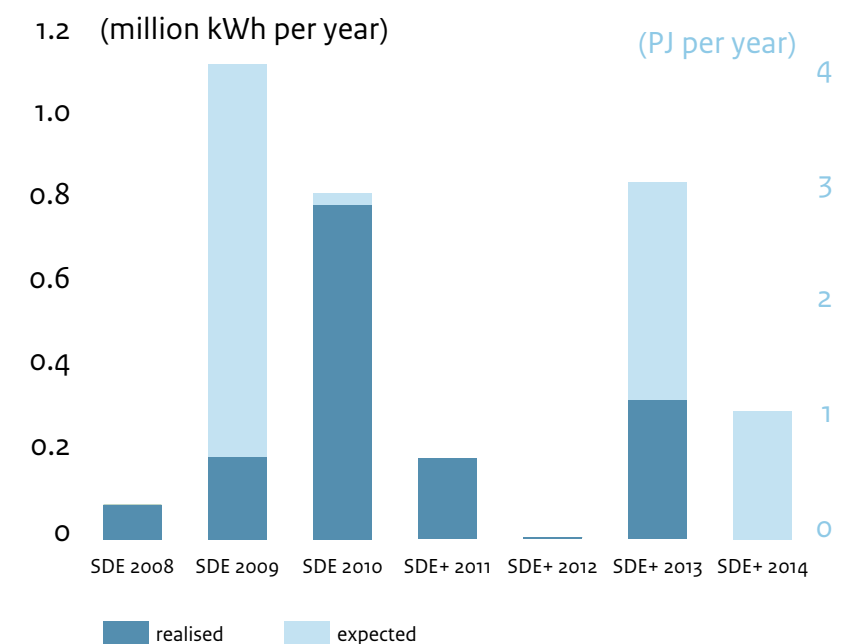
In 2014, more than half of the cash expenditure for renewable energy went to wind energy. The total expenditure for wind projects from MEP, SDE and SDE+ amounted to 289 million euros. 78% of this expenditure concerns projects which were subsidised by the MEP.

Figure 9 Wind energy - cash expenditure from SDE+, SDE and MEP subsidies 2010 – 2014



Many projects which are allocated a subsidy have been completed. However, building operations on a cluster of five wind farms in the Noordoostpolder (North East Polder), for which subsidies were allocated from the 2009 SDE budget, are still in progress.

Figure 10 Realisation of onshore wind projects with SDE+ and SDE



Energy production from SDE+, SDE and MEP projects in 2014

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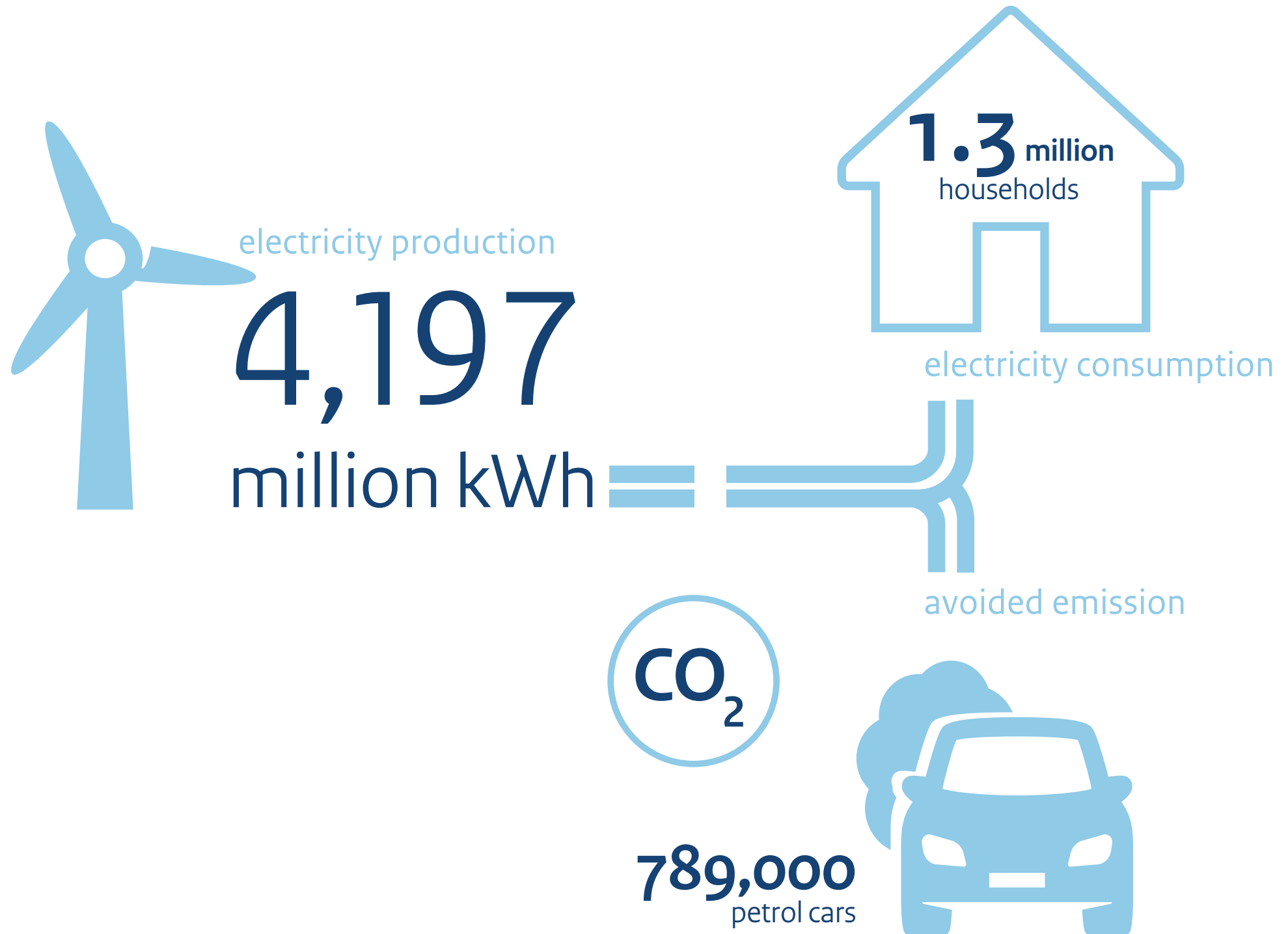
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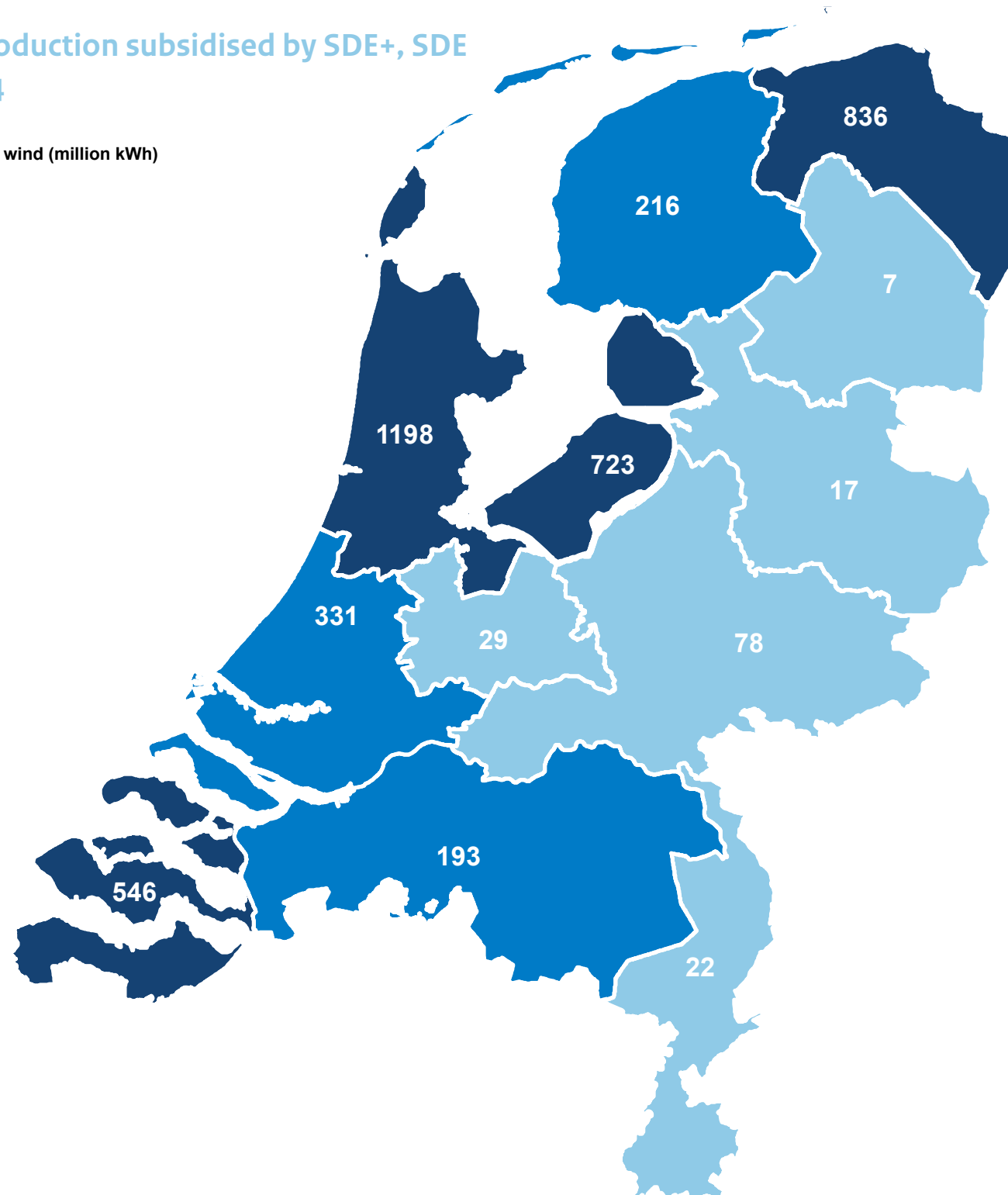
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Wind energy production subsidised by SDE+, SDE and MEP in 2014

Renewable electricity from wind (million kWh)



Alternative government incentives for wind energy 2010 – 2014

Alternative governmental schemes are also used to support wind energy projects. The Energy Investment Allowance (*Energie Investeringsaftrek, EIA*) and the Green Funds scheme are the two most important additional financial instruments. Applying the State coordination scheme (*Rijkscoördinatieregeling*) can substantially reduce

the lead-time of the wind energy projects. Please consult [Overview of renewable energy](#) for detailed information on these schemes. The intervention programme integrated stimulation of renewable energy and the Green Deals provide (financial) support alongside these schemes.

Energy Investment Allowance (*Energie Investeringsaftrek, EIA*) and the Green Funds scheme (*Regeling Groenprojecten*)

Table 4 Reported Energy Investment Allowance (EIA) and the Green Funds scheme investments for wind energy 2010 – 2014

| | 2010 | 2011 | 2012 | 2013 | 2014 |
|--|------|-------|-------|-------|-------|
| EIA | | | | | |
| Reported investments (million €) | 78.0 | 417.8 | 48.8 | 346.4 | *) |
| Number of applications | 147 | 245 | 53 | 73 | *) |
| Green Funds scheme (<i>Regeling Groenprojecten</i>) | | | | | |
| Reported project capital (million €) | 43.4 | 83.7 | 105.1 | 312.4 | 244.3 |
| Number of certificates issued | 10 | 12 | 12 | 21 | 27 |

Source: EIA and the Green Funds scheme annual reports

*) EIA data for 2014 is still not available

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Intervention programme integrated stimulation of renewable energy (*Integrale Stimulering Duurzame Energie ISDE*)

In 2014, the Netherlands Enterprise Agency gave the onshore wind monitoring duties to the onshore wind energy work group Wind op Land, including the Dutch central government, the Netherlands Enterprise Agency, the Association of Provinces of the Netherlands (IPO), the Association of Netherlands Municipalities (Vereniging van Nederlandse Gemeenten), the Dutch wind energy association (NWEA), the Association of Energy Network Operators in the Netherlands (Netbeheer Nederland) and the Dutch action group for nature and environment Natuur en Milieu. The monitoring group was formed to provide information annually to the Dutch House of Representatives on the progress of onshore wind projects. All Dutch provinces apart from Friesland have met the first performance targets which laid out that provinces would have designated space planned for wind projects by 31 December 2014.

At the end of 2014, there was a total capacity of 2,533 MWe of wind energy, more than 42% of 6,000 MWe. Alongside this, there are projects planned which will have a capacity of more than 3,500 MWe. Many of these projects are still in the preliminary

stages. The most significant key issues have been pinpointed. These need to be resolved so that the remaining 3,500 MWe can be implemented on schedule by 2020. All parties are working to speed up processes. An updated version of the risk assessment handbook has been made available. There is now also a wind map which forms the basis for the SDE+ onshore wind energy scheme.

Green Deal

In line with the structural vision for its wind farm, 'Wind power Wieringermeer' wants to implement an established capacity of 300 to 400 MWe of onshore wind energy. They hope to achieve this with the help of the Green Deal 'Versterken draagvlak for Windplan Wieringermeer' (increasing support for Windplan Wieringermeer). One of the goals of the deal is to establish profit-sharing arrangements for people who live around the wind farm. The deal also aims to improve the economic benefits the wind farm can bring to local companies. The parties hope to put the first wind turbines in place in 2016.





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SDE+, SDE and MEP have allocated subsidies for 653 MWe in solar power projects. After the reference date of 1 March 2015, many more SDE+ 2014 solar energy projects have been allocated. In 2014, this resulted in 2,973 allocated applications with a maximal subsidisable production of 13,239 GWh.

This is several times the amount of the maximal subsidisable production by SDE up until 2013, which amounted to 2,551 GWh.

In 2014, a total of 14.1 million euros of subsidy were allocated to solar power projects.

Figure 11 Solar power (Solar-PV) - electricity production from SDE+, SDE and MEP subsidies 2010 - 2014

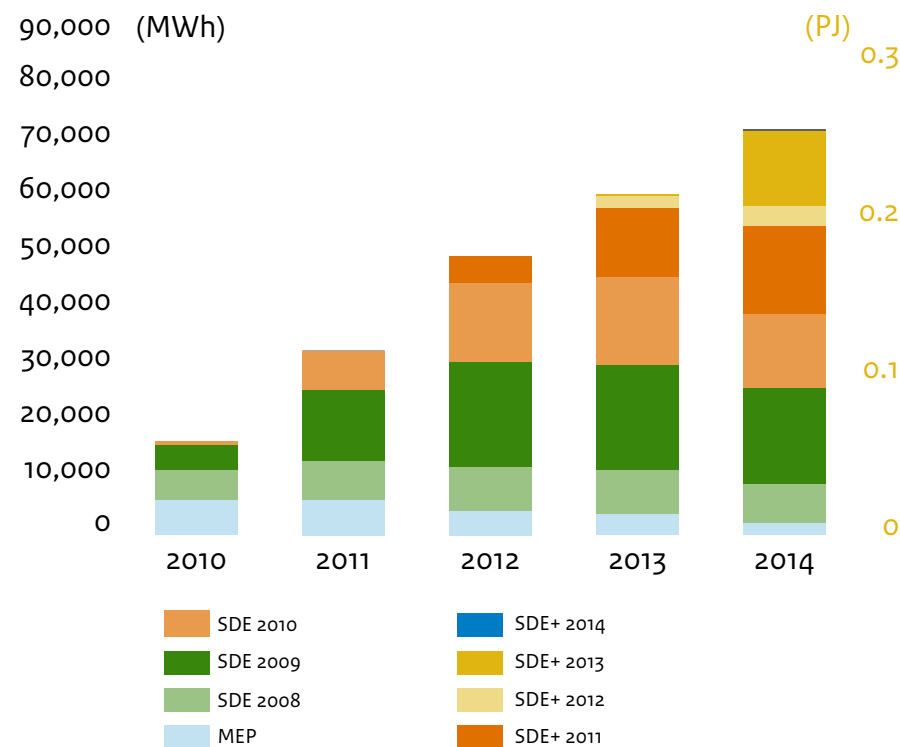
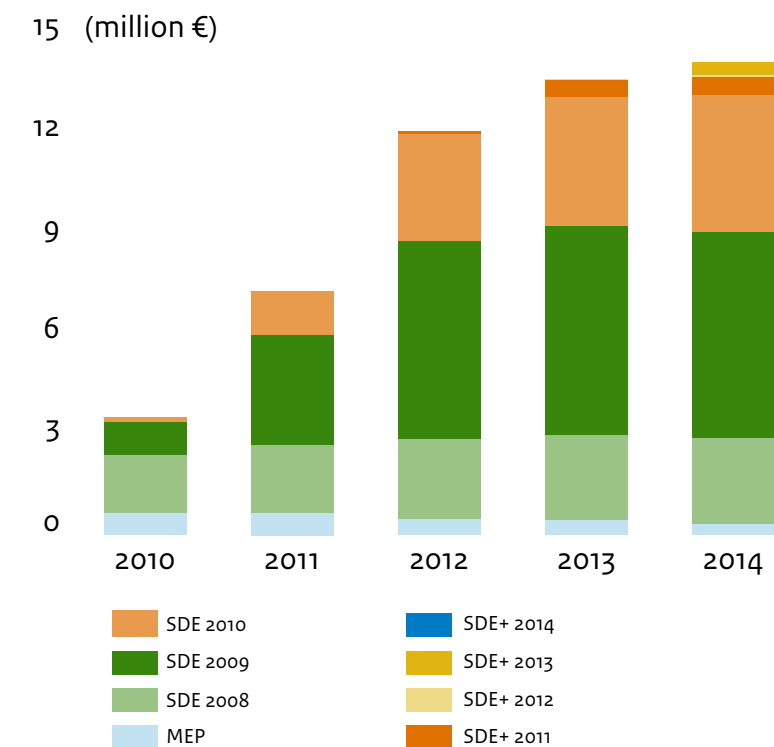


Figure 12 Solar power (solar-PV) - cash expenditure from SDE+, SDE and MEP subsidies 2010 - 2014



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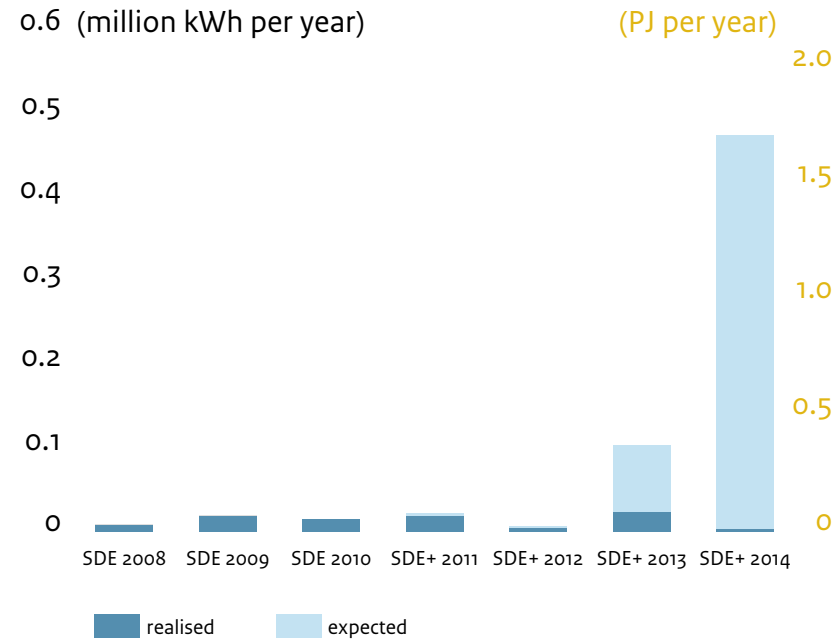
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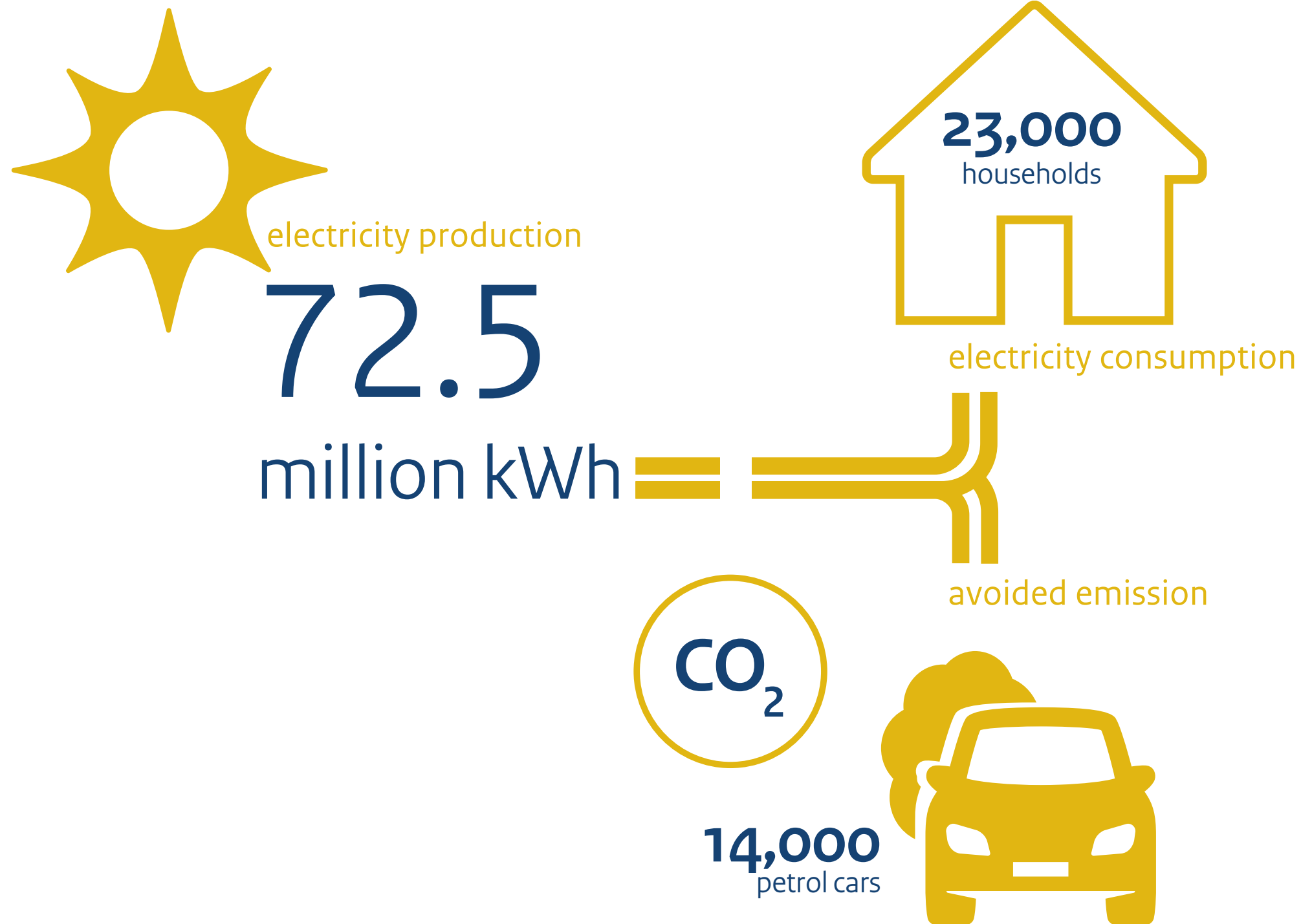
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Figure 13 Realisation of solar power (solar-PV) projects with SDE+ and SDE



Energy production from SDE+, SDE and MEP projects in 2014



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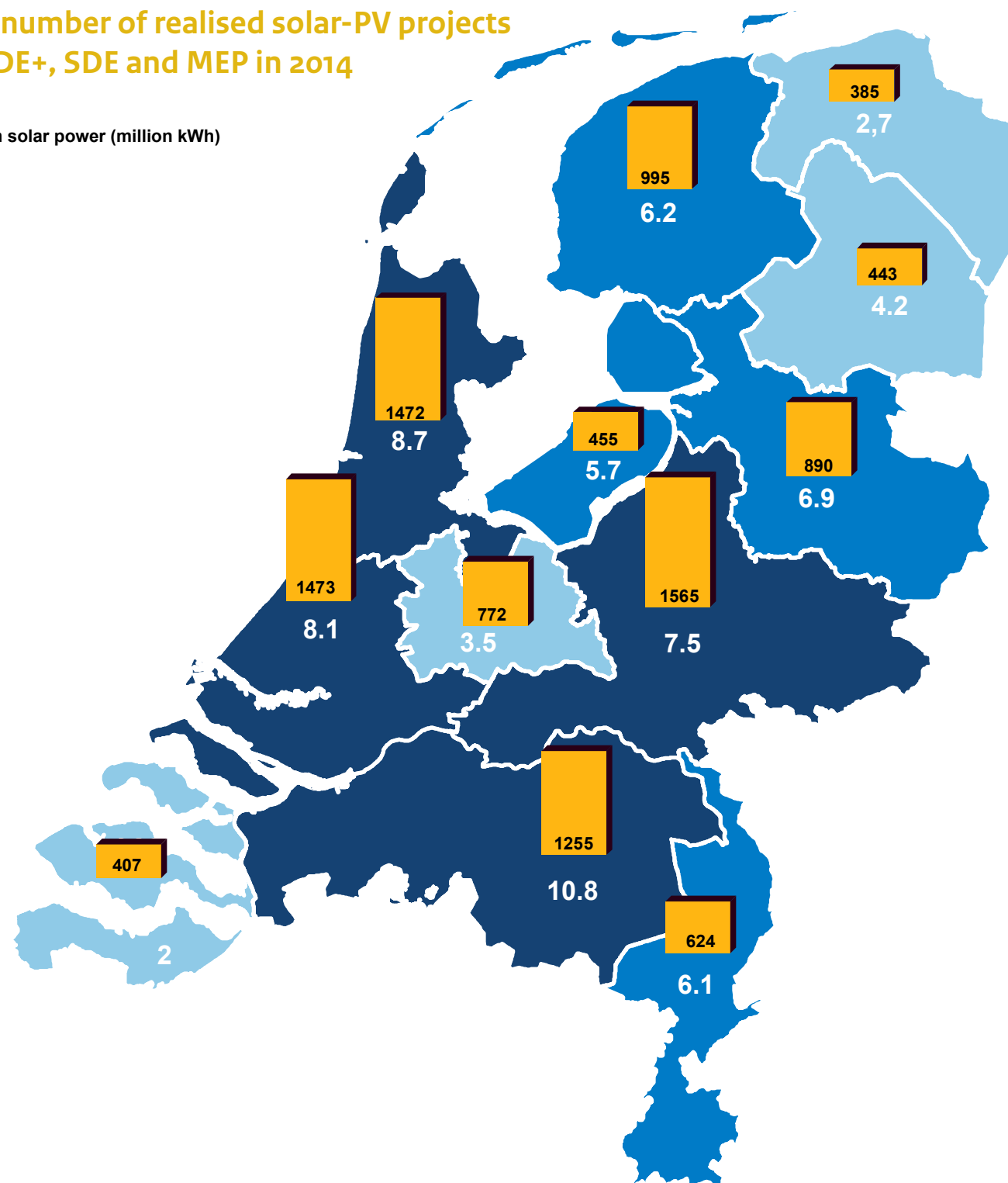
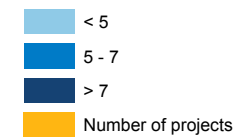
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Production and number of realised solar-PV projects subsidised by SDE+, SDE and MEP in 2014

Renewable electricity from solar power (million kWh)



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Alternative government incentives for solar power 2010 – 2014

The Dutch government provides support for solar power in many ways. Alongside financial support from the MEP, SDE and SDE+ schemes, support is also provided by means of the Energy Investment Allowance (*Energie Investeringsaftrek, EIA*), the Green Funds scheme (*Regeling Groenprojecten*) and (partial) exemptions from energy tax. There are also subsidy schemes and financial support available both on provincial and municipality level as well as through the intervention programme integrated stimulation of renewable energy (*Integrale Stimulering Duurzame Energie*) and Green Deals. The following paragraph will describe the Green Deal ‘Solar Energy’.

Netting and energy tax exemptions

Homeowners and tenants with their own solar panels are exempt from energy tax on the electricity they have generated. They are allowed to deduct their private use from the generated electricity. This process is commonly known as netting or offset. An advantage of this process is that the value of the electricity that is fed back into the grid is determined by the price of electricity including tax and transport costs.

Energy Investment Allowance (*Energie Investeringsaftrek, EIA*) and the Green Funds scheme (*Regeling Groenprojecten*)

Table 5 Reported Energy Investment Allowance (EIA) and the Green Funds scheme investments for solar power 2010 – 2014.

| | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|------|-------|-------|-------|------|
| EIA | | | | | |
| Reported investments (million €) | 32.1 | 64.0 | 89.4 | 215.6 | *) |
| Number of applications | 760 | 1,737 | 3,538 | 5,887 | *) |
| Green Funds scheme (Regeling Groenprojecten) | | | | | |
| Reported project capital (million €) | 2.4 | 20.0 | 7.4 | 14.2 | 17.8 |
| Number of certificates issued | 30 | 14 | 23 | 182 | 193 |

Source: EIA and the Green Funds scheme annual reports
 *) EIA data for 2014 is still not available

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For households this is about 23 euro cents per kWh, including a 12 euro cent per kWh energy tax component. If in a given year more electricity is produced than is consumed, then the energy company pays a feed-in tariff for the 'surplus' electricity.

The number of projects on the market which make use of netting opportunities is rising annually. As a rough guide, the Dutch solar power market is divided into small-scale projects that use netting opportunities and large-scale projects that are completed with SDE+ subsidies. The former make up around 60% of the market, whilst the latter make up around 40%.

In 2014, the de regeling verlaagd tarief energie-belasting (regulation for reduced energy taxes) was introduced for cooperations and owners' associations. Just like netting, this regulation is for small-scale consumers. Instead of individual installations on roofs which feed electricity directly into the house, this regulation promotes larger collective installations in the area within the 'postcoderoosregeling' (regulation for local collective solar power projects). In 2014, there were many initiatives for 'postcoderoosprojecten' (local renewable solar power projects). However, it has proved difficult to make these projects financially viable on the basis of this regulation.

Intervention programme integrated stimulation of renewable energy (Integrale Stimulering Duurzame Energie ISDE)

The ISDE programme aims to promote solar energy production by providing information to the public and companies and building up knowledge networks. In 2014, an information service called 'Zonnewijzer' was developed in cooperation with AEDES (Dutch association of housing corporations) to help housing corporations with questions they have relating to solar energy. Together with the knowledge platform for renewable energy HIER opgewekt, the Netherlands Enterprise Agency put on informational events for local initiatives and acted as a sort of information desk.

Focus areas also include new applications and improved building integration. NEN7520, a new norm for solar energy integration on roofs and façades, was published in 2014. The updated norm includes a new installation method. For larger-scale applications, there have been many developments in terms of the knowledge available about aesthetic and spatial integration of photovoltaic power stations. The solar app helps initiators and interested parties in the sector to come together. The app is an initiative by TKI Solar Energy and the Netherlands Enterprise Agency.



Energy production from SDE+ projecten 2012 – 2014

Since 2012, solar thermal energy projects with an aperture surface of 100 m² or more are eligible for SDE+ subsidy. From the SDE+ budget, a total of 4 MW subsidy has been allocated to fourteen solar thermal energy projects, of which 1 MW has been realised. A total budget of 2.7 million euros has been set aside for these projects. Of the fourteen solar thermal energy projects, one was realised in 2014. There was almost no cash expenditure.



heat production in 2014

219,200 kWh



natural gas use



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Alternative government incentives for solar thermal energy 2010 – 2014

The government encourages the development of solar thermal energy via the Energy Investment Allowance (EIA) and the Green Funds scheme (Regeling Groenprojecten). Alongside this, much attention is being given to quality monitoring in the Green Deals and other schemes. The quality hallmark Zonnekeur is continually improving quality in the solar energy sector.

Green Deal

The Green Deal ‘Solar Energy’ focused on increasing the reliability of solar energy systems. A concrete result of this focus was the certification of installation companies, such as ‘Zonnekeur’, more cooperation with network operators, a fact sheet about the cost-effectiveness of solar energy and the gathering and distribution of monitoring data related to solar energy systems. All these factors make it easier to invest in solar energy projects.

Energy Investment Allowance (Energie Investeringsaftrek, EIA) and the Green Funds scheme (Regeling Groenprojecten)

Table 6 Reported EIA and the Green Funds scheme investments in solar thermal energy 2010 – 2014.

| | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|------|------|------|------|------|
| EIA | | | | | |
| Reported investments (million €) | 8.3 | 5.1 | 11.1 | 3.5 | *) |
| Number of applications | 210 | 309 | 720 | 121 | *) |
| Green Funds scheme (Regeling Groenprojecten) | | | | | |
| Reported project capital (million €) | 1.7 | 1.2 | 0.2 | 0.7 | 0.04 |
| Number of certificates issued | 8 | 6 | 1 | 6 | 1 |

Source: EIA and the Green Funds scheme annual reports
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Energy production from SDE+ projects 2012 – 2014

From the SDE+ budget, subsidy was allocated to a total of 477 MW geothermal projects, of which 140 MW has been realised. A number of projects have withdrawn their application. Despite this, the allocated capacity was 521 MW in 2013.

In 2014, a total of 6.7 million euros of subsidy were allocated to geothermal energy projects.

The highest potential for projects to be developed, is located in South Holland. This is particularly due to the large concentration of greenhouses.

Figure 14 Geothermal – heat production from SDE+ 2012 – 2014

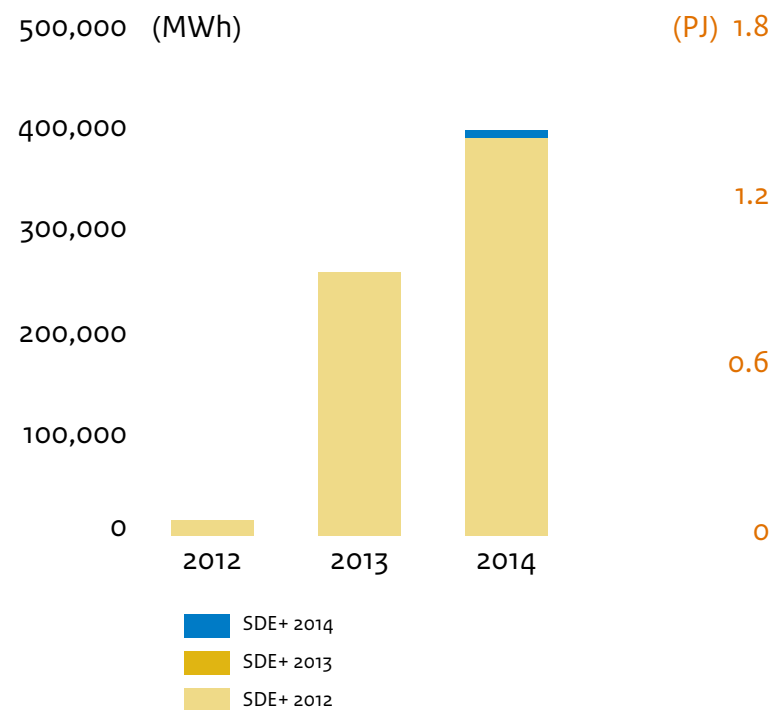
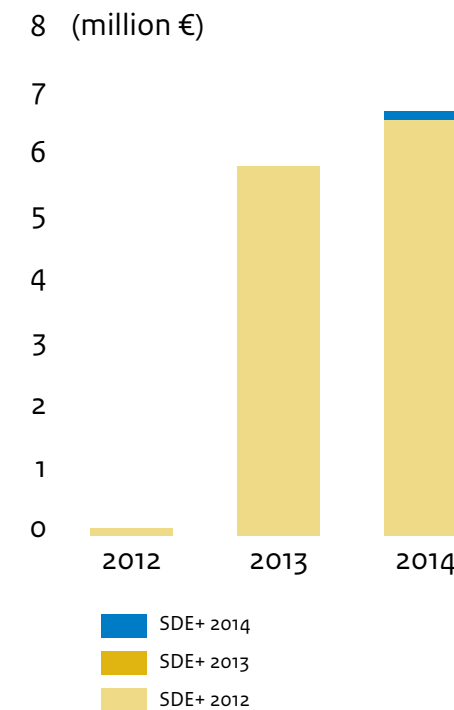


Figure 15 Geothermal energy - cash expenditure from SDE+ subsidies 2012 – 2014



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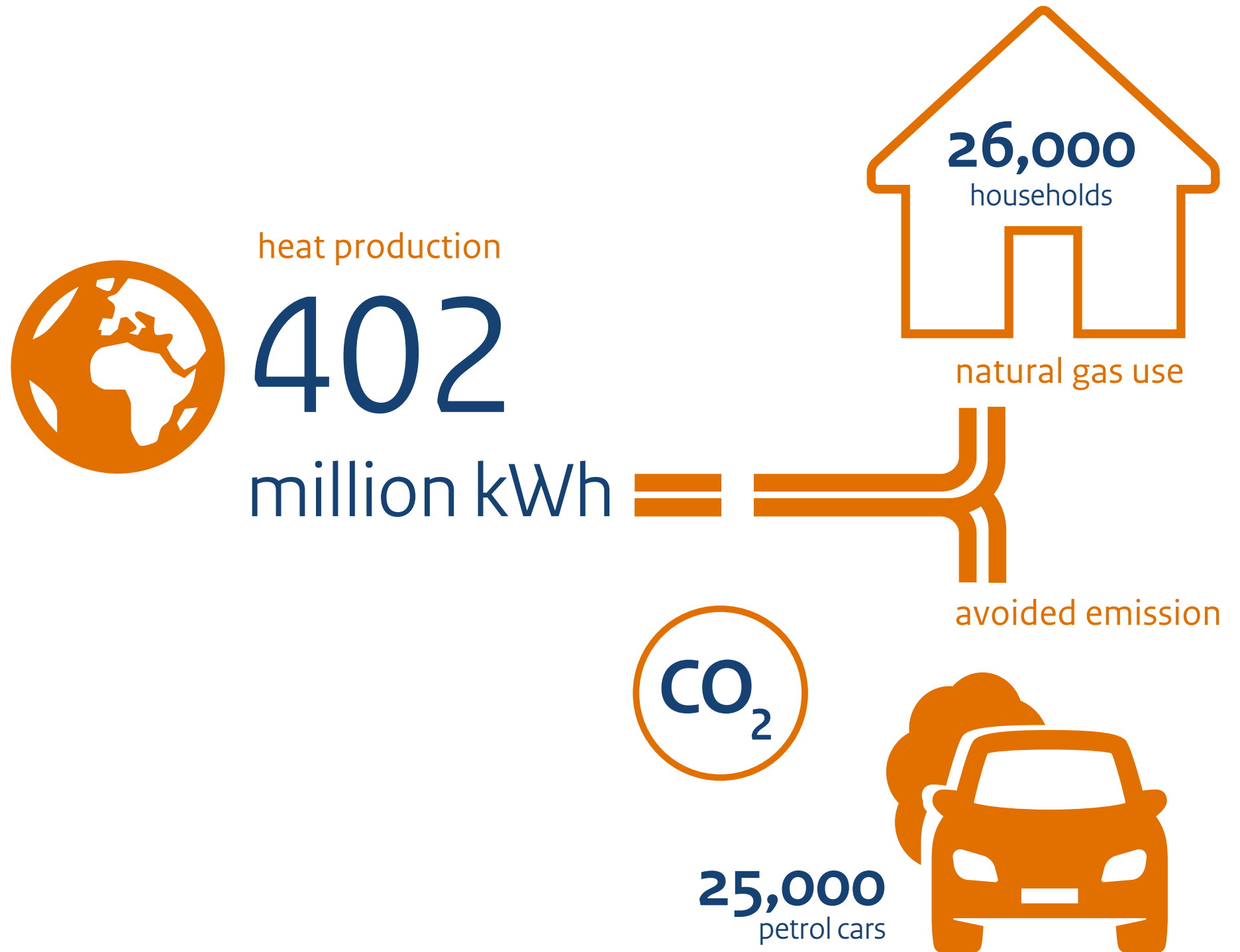
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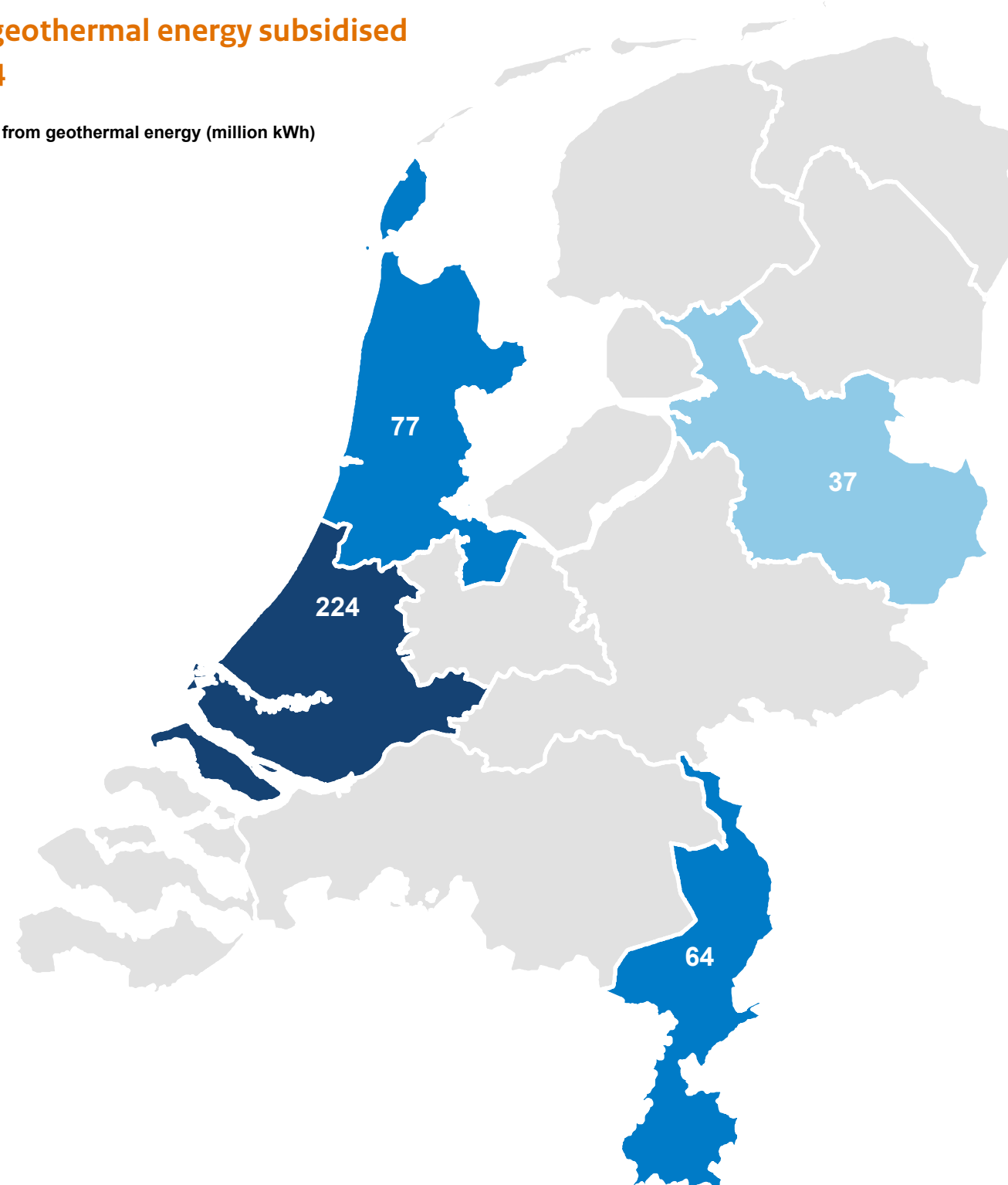
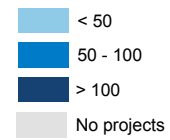
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Renewable heat and CHP from geothermal energy (million kWh)



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Alternative government incentives for deep geothermal energy 2010 – 2014

In addition to the SDE+ subsidies, the government supports geothermal projects in a number of ways. Good examples of these are the Green Funds scheme (*Regeling Groenprojecten*), *Garantierегeling Aardwarmte* (the guarantee scheme for drilling activities for geothermal energy), making data available regarding the location of geothermal potential and agreeing Green Deals.

Energy Investment Allowance (*Energie Investeringsaftrek, EIA*) and the Green Funds scheme (*Regeling Groenprojecten*)

The EIA does not make a distinction between deep or shallow geothermal energy projects. In 2013, a total of 84 applications for geothermal energy production systems were received with a reported investment amount of 102.4 million euros. Table 7 shows the applications and the reported investments for technologies used in deep and shallow geothermal energy production. The figures for 2014 are as yet unknown.

The Green Funds scheme (*Regeling Groenprojecten*) issued in total seven certificates to geothermal energy projects, five of which were in 2013. In 2014, one green certificate was issued with a total project capital of 3.1 million euros.

Garantierегeling Aardwarmte (guarantee scheme for drilling activities for geothermal energy)

The *Garantierегeling Aardwarmte* (guarantee scheme for drilling activities for geothermal energy) insures against the risk of unsuccessful drilling for geothermal energy. The project developer pays a premium, but is compensated when the result of drilling is not as expected. The scheme is crucial for geothermal energy projects. Without the guarantee scheme, investing millions in geothermal energy would bear too large a risk and banks would be reluctant to grant loans.

On 2 October 2014, the guarantee scheme was made available for the fourth time. This scheme was part of the new ‘*Regeling Nationale EZ subsidies*’ (national scheme for subsidies from the Ministry of Economic Affairs). The shortened name is *RNES Aardwarmte*. The total budget of the fourth version of the scheme is 43.67 million euros, of which 12.75 million euros are reserved for projects that are deeper than 3,300 m. In comparison with the third version, the scheme has been expanded to include projects that drill to more shallow depths and also includes a guarantee which covers a second well.



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Alternative government incentives for deep geothermal energy 2010 – 2014

At the end of 2014, the guarantee was allocated to twelve projects from earlier versions of the scheme and three new proposals were submitted in the fourth version. Of the twelve projects, three have been completed and one is in the final phase of completion.

The results of the geothermal projects are published via RVO.nl

Green Deal

There is a wide range of Green Deals available for geothermal energy. These include projects which focus on preparing areas for use as deep and shallow geothermal energy plants, as well as the realisation of geothermal projects. Whilst the Dutch government has adjusted the guarantee scheme, this has not brought the desired result for all parties concerned. As a result of this and other issues, financing geothermal projects remains a difficult task.



Alternative government incentives for shallow geothermal energy 2010 – 2014

Shallow geothermal energy is not subsidised by the SDE+ scheme. It is, however, stimulated by other programmes such as the EIA, the Green Funds scheme (*Regeling Groenprojecten*) and the Intervention programme integrated stimulation of renewable energy (*Integrale Stimulering Duurzame Energie, ISDE*).

Energy Investment Allowance (*Energie Investeringsaftrek, EIA*)

In the period 2010 to 2013, the EIA received more than 290 million euros worth of applications for different geothermal techniques.

Table 7 Reported Energy Investment Allowance (EIA) and the Green Funds scheme investments in deep and shallow geothermal energy 2010 – 2014.

| | 2010 | 2011 | 2012 | 2013 | 2014 |
|--|------|------|------|-------|------|
| Number of applications for EIA | | | | | |
| Geothermal heat generation systems | 77 | 87 | 137 | 84 | *) |
| Storage of cold and heat in the soil (aquifer) | 68 | 52 | 66 | 54 | *) |
| Ground heat exchangers | 23 | 11 | 10 | 5 | *) |
| Reported EIA investments (million €) | | | | | |
| Geothermal heat generation systems | 27.1 | 29.7 | 37.3 | 102.4 | *) |
| Storage of cold and heat in the soil (aquifer) | 24.2 | 20.5 | 27.0 | 19.1 | *) |
| Ground heat exchangers | 1.7 | 1.6 | 0.6 | 0.2 | *) |
| Number of certificates issued from the Green Funds scheme | | | | | |
| Geothermal | 1 | - | - | 5 | 1 |
| Heat pumps | 16 | 11 | 13 | 12 | 9 |
| Reported Green Funds scheme investments (million €) | | | | | |
| Geothermal | 4.8 | - | - | 29.7 | 3.1 |
| Heat pumps | 17.0 | 5.3 | 7.2 | 5.8 | 4.7 |

Source: EIA and the Green Funds scheme annual reports
*) EIA data for 2014 is still not available

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Alternative government incentives for shallow geothermal energy 2010 – 2014

The Green Funds scheme (*Regeling Groenprojecten*)

In recent years, the Green Funds scheme (Regeling Groenprojecten) has consistently issued between five and seven million euros for heat pump projects. In 2014, there were nine projects in this category with a total budget of 4.7 million euros (see table 7).

Intervention programme integrated stimulation of renewable energy (*Integrale Stimulering Duurzame Energie ISDE*)

In 2014, ISDE invested efforts in encouraging the use of shallow geothermal energy by providing relevant information and setting up knowledge networks. Thanks to this effort, there are now twenty successful seasonal thermal energy storage systems (STES), known as 'sterprojecten' (star projects), published in the tool for seasonal thermal energy storage systems (www.wkotool.nl). If you click on the 'sterren' (stars) button on the map, you will be able to read reports provided by users and operators of STES installations (Dutch only).

The tool indicates the suitability of the ground and possible development restrictions in the surrounding areas, such as groundwater protection areas. Alongside this, the tool also shows savings in energy

and CO₂ emissions, as well as the payback period of a specific location.

The Netherlands Enterprise Agency is a knowledge partner of the [Dutch Sustainable Housing Platform](#) (Platform Duurzame Huisvesting). This platform brings together players in the sector, knowledge organisations and umbrella organisations. In 2014, the platform developed an [infographic](#) (Dutch only) to give tips for purchasing geothermal systems.

Finally, preparations were started in 2014 to develop the end user platform for geothermal energy (Eindgebruikersplatform Bodemenergie). The development of this platform is being led by the trade association BodemenergieNL. The end user platform for thermal energy storage aims to increase the number of seasonal thermal energy storage systems (STES) in the Netherlands, to improve people's opinion of the technology, to optimise existing systems and to represent the interests of end users of STES systems.

Read more about Seasonal Thermal Energy Systems (STES) in part two of the 2013 report on renewable energies 'View on innovation' [rapportage hernieuwbare energie 2013 deel 2](#). (Dutch only)

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Energy production from SDE+, SDE, MEP and OV-MEP projects 2010 – 2014

In 2014, a total of 244.6 million euros of subsidy were allocated to biomass electricity projects. Of this total, 82% went to projects which are subsidised via the MEP and OV-MEP schemes; 18% went to SDE or SDE+ projects.

Figure 16 Biomass - electricity production from SDE+, SDE, OV-MEP and MEP subsidies 2010 – 2014

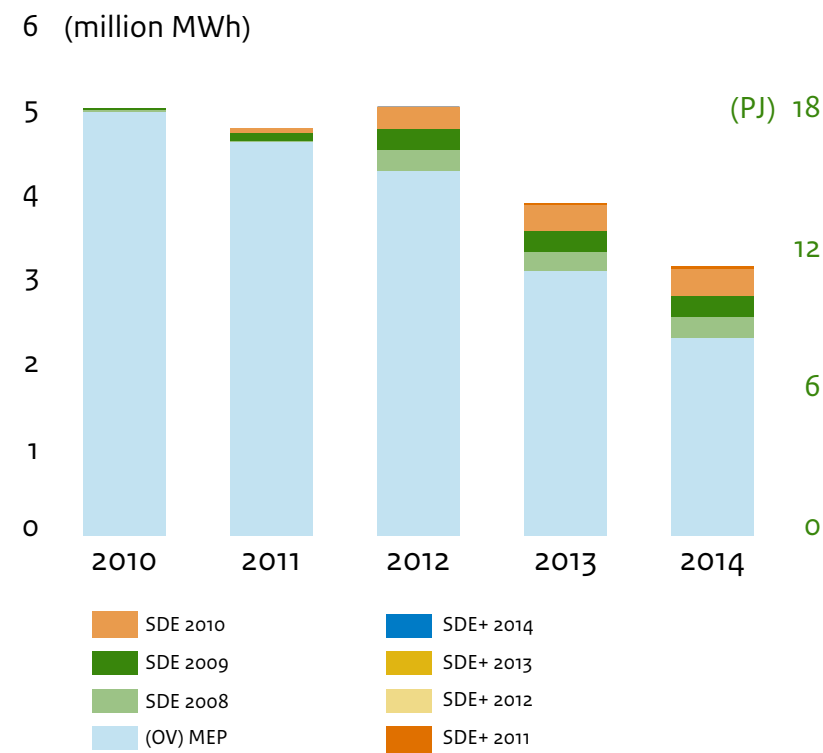
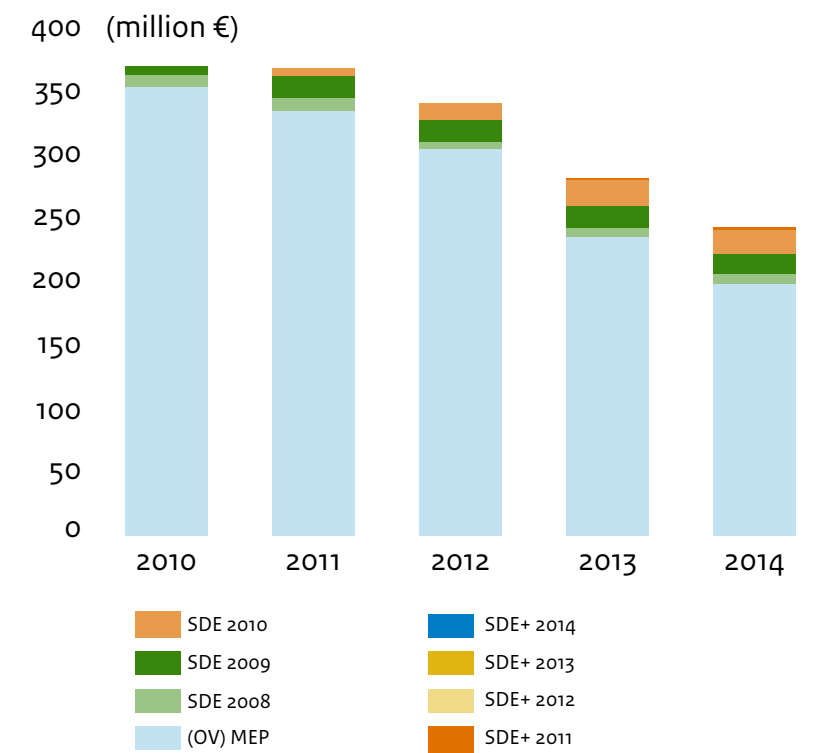


Figure 17 Electricity from biomass - cash expenditure from SDE+, SDE, OV-MEP and MEP subsidies 2010 – 2014



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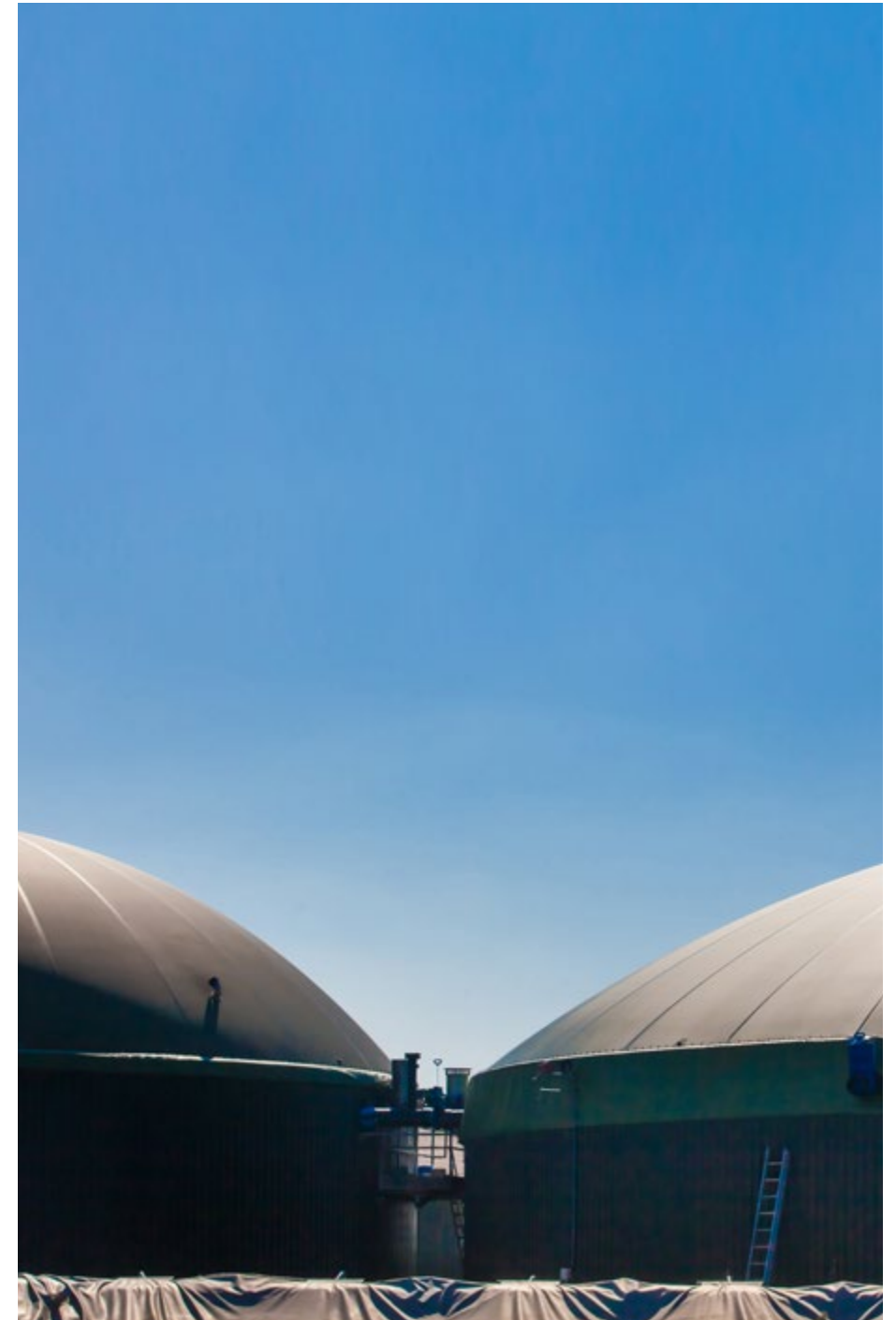
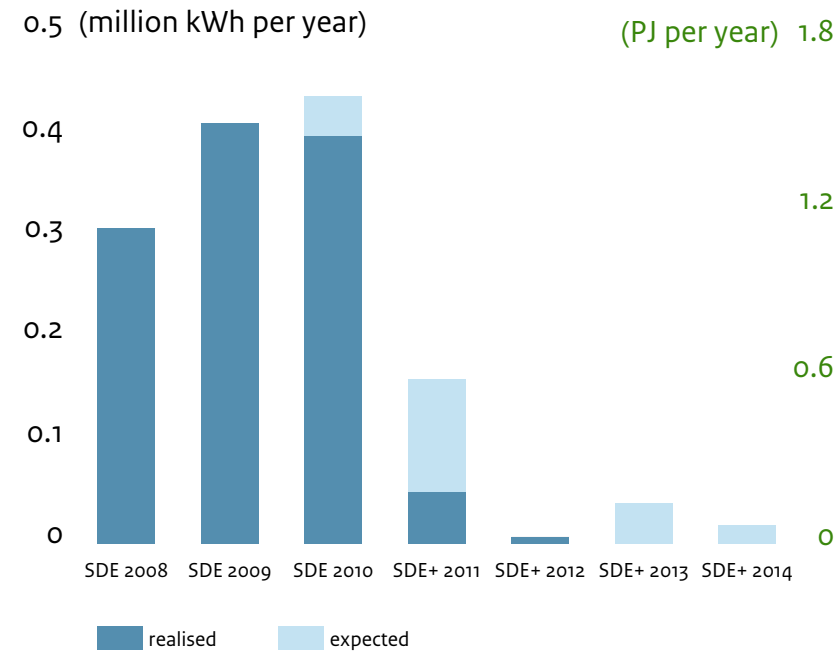
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Figure 18 Realisation of biomass electricity projects with SDE and SDE+



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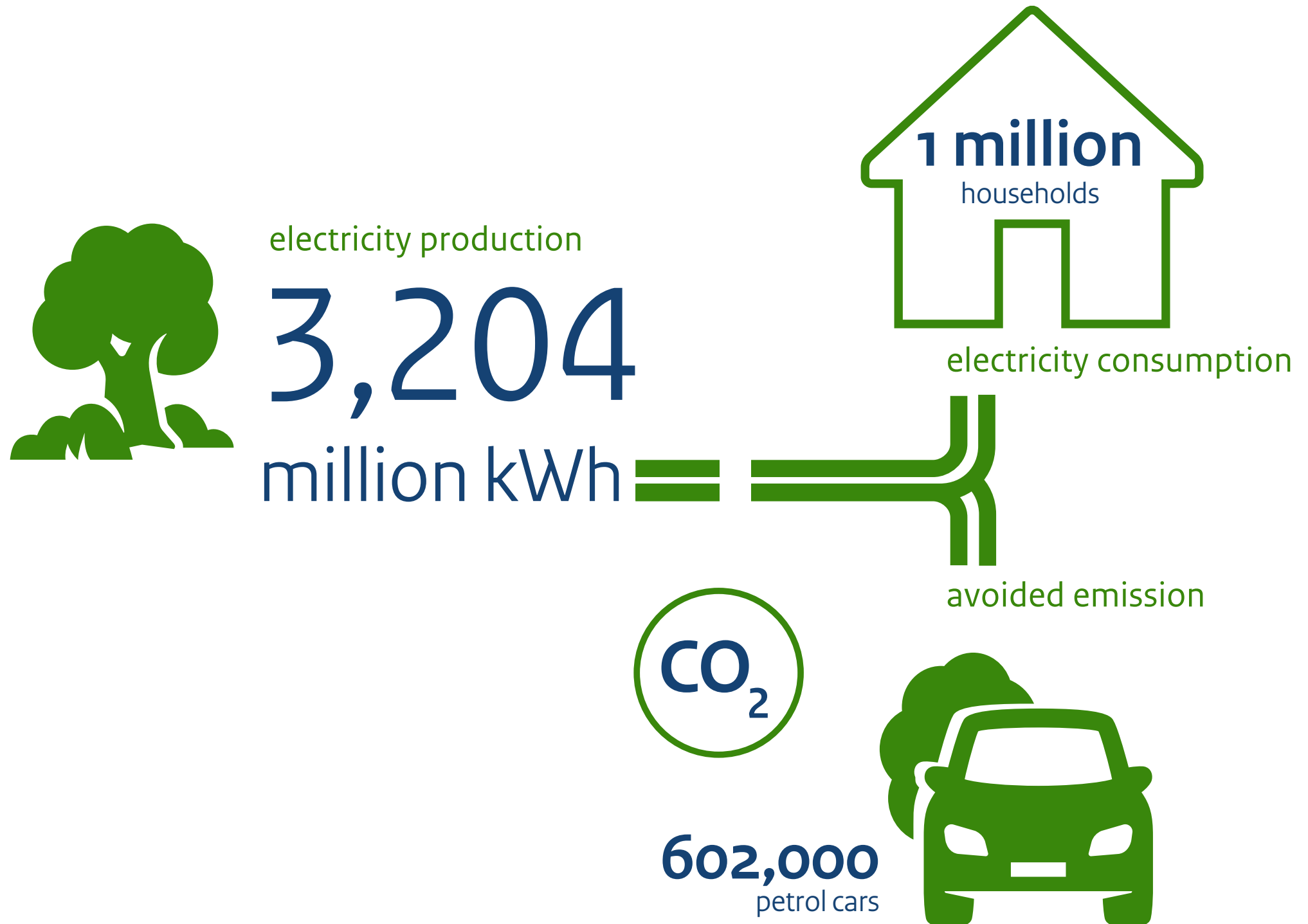
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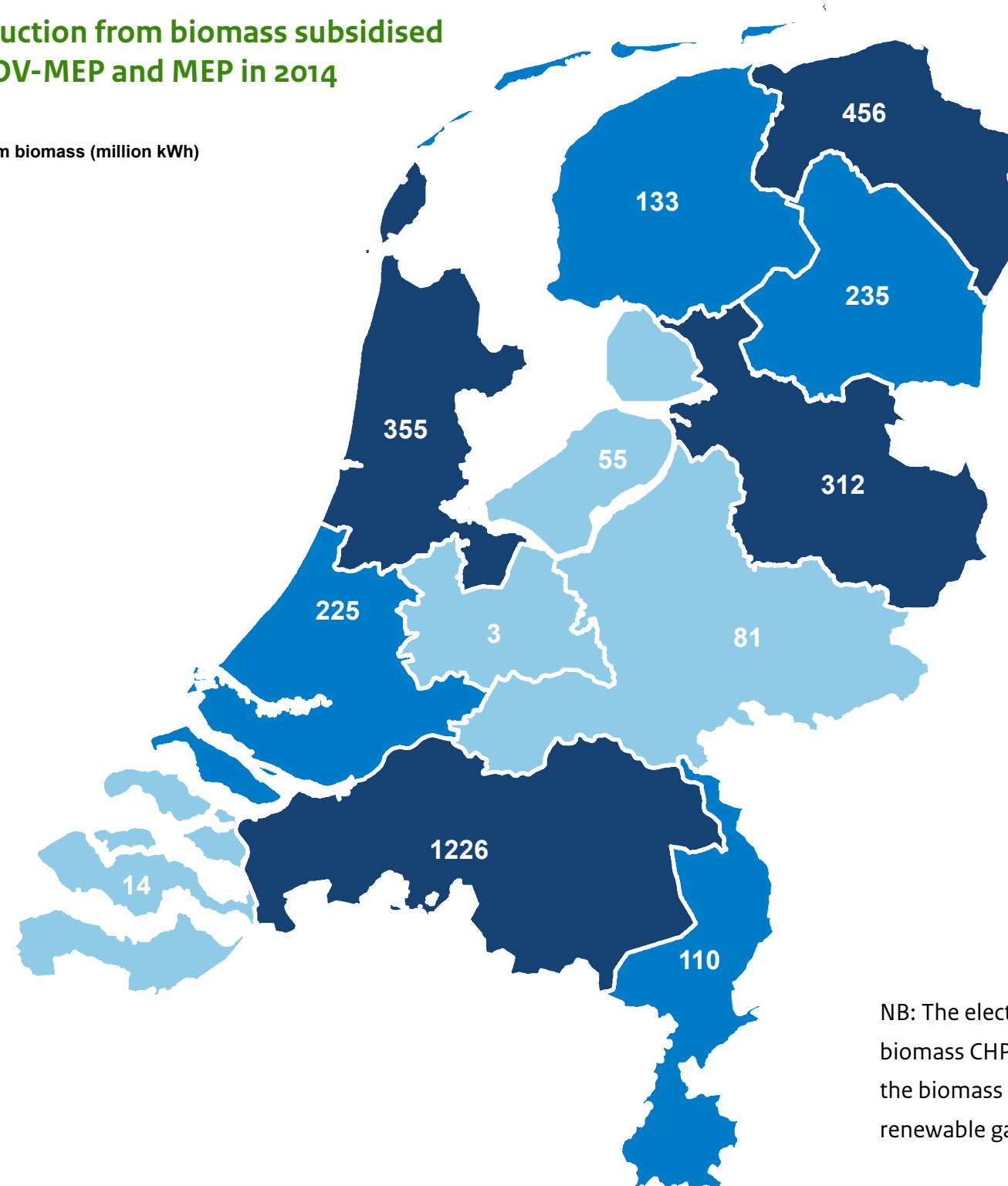
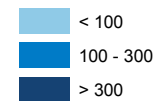
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Electricity production from biomass subsidised by SDE+, SDE, OV-MEP and MEP in 2014

Renewable electricity from biomass (million kWh)



NB: The electricity production from biomass CHP installations falls into the biomass category heat, CHP and renewable gas



Alternative government incentives for electricity from biomass 2010 – 2014

Alternative government schemes are also used to support biomass projects. The Energy Investment Allowance (EIA) and the Green Funds scheme (Regeling Groenprojecten) are the two most important additional financial programmes. Alongside this, support is provided from Intervention programme integrated stimulation of renewable energy (Integrale Stimulering Duurzame Energie, ISDE) and the Green Deals programme. The results of the EIA are described below. You will find more information about other government support in the following paragraphs.

Energy Investment Allowance (Energie Investeringsaftrek, EIA)

The EIA encourages different biomass technologies. There was a total of 269 applications in 2013. The majority of these concerned biomass fired boilers.

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Alternative government incentives for electricity from Biomass 2010 – 2014

Table 8 Reported EIA investments for biomass technologies 2010 – 2014
(Source: EIA annual reports, EIA data for 2014 is still not available)

| | 2010 | 2011 | 2012 | 2013 |
|--|-------------|-------------|-------------|-------------|
| Number of applications for EIA | | | | |
| Total biomass technologies | 249 | 282 | 246 | 269 |
| Aerobic biomass reactor | 0 | 0 | 1 | 0 |
| Biofuel production installation | 7 | 27 | 1 | 3 |
| Biogas upgrading installation | 19 | 33 | 22 | 21 |
| Biomass fired boiler | 201 | 176 | 198 | 208 |
| Fermentation installation for dry biomass | 0 | 0 | 5 | 28 |
| Biomass fired cogeneration plant that uses a piston engine | 0 | 41 | 19 | 3 |
| Biomass cogeneration plant | 22 | 5 | 0 | 6 |
| Reported EIA investments (million €) | | | | |
| Total biomass technologies | 30.2 | 99.2 | 47.8 | 57.8 |
| Aerobic biomass reactor | 0.0 | 0.0 | 0.0 | 0.0 |
| Biofuel production installation | 9.1 | 24.3 | 0.0 | 4.3 |
| Biogas upgrading installation | 6.6 | 24.8 | 7.6 | 7.7 |
| Biomass fired boiler | 9.1 | 15.1 | 34.5 | 24.8 |
| Fermentation installation for dry biomass | 0.0 | 0.0 | 2.4 | 18.6 |
| Biomass fired cogeneration plant that uses a piston engine | 0.0 | 14.0 | 3.3 | 0.6 |
| Biomass cogeneration plant | 5.4 | 21.0 | 0.0 | 1.8 |

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Energy production from SDE+ and SDE projects 2010 – 2014

SDE and SDE+ allocated subsidies to renewable gas projects with a total capacity of 421 MW. 128 MW of this capacity has been realised. The total allocated capacity for the range of biomass categories, renewable heat and CHP is 1,894 MW. 849 MW of this capacity has been realised.

In 2014, the cash expenditure for renewable heat, CHP and renewable gas produced from biomass was 40 million euros.

Figure 19 Renewable heat, CHP and renewable gas from biomass - energy production from SDE+ and SDE subsidies 2010 – 2014

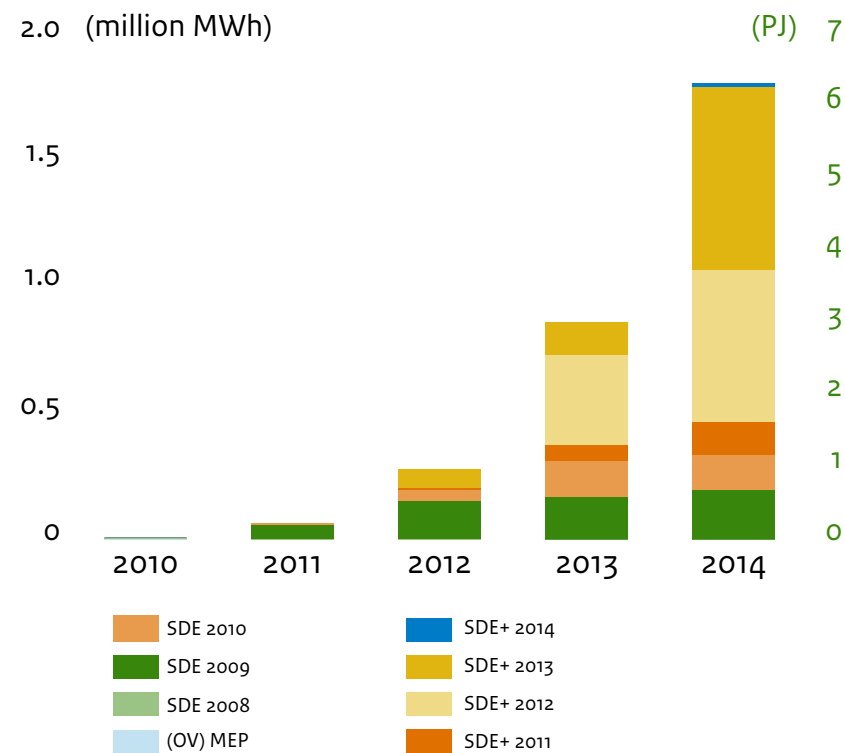
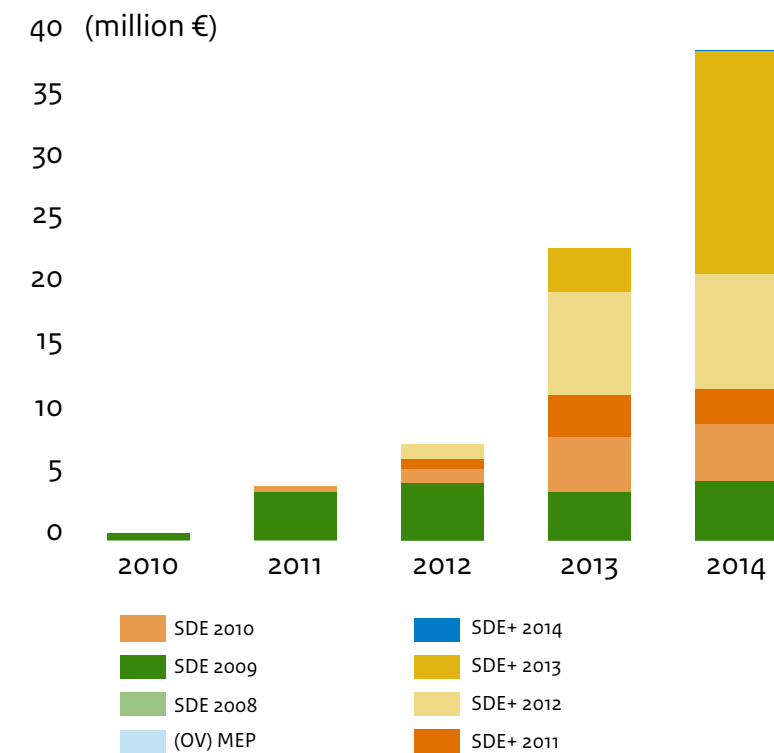


Figure 20 Renewable heat, CHP and renewable gas from biomass - cash expenditure from SDE+ and SDE subsidies 2010 – 2014



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Figure 21 Realisation renewable heat and CHP from biomass projects with SDE+ and SDE

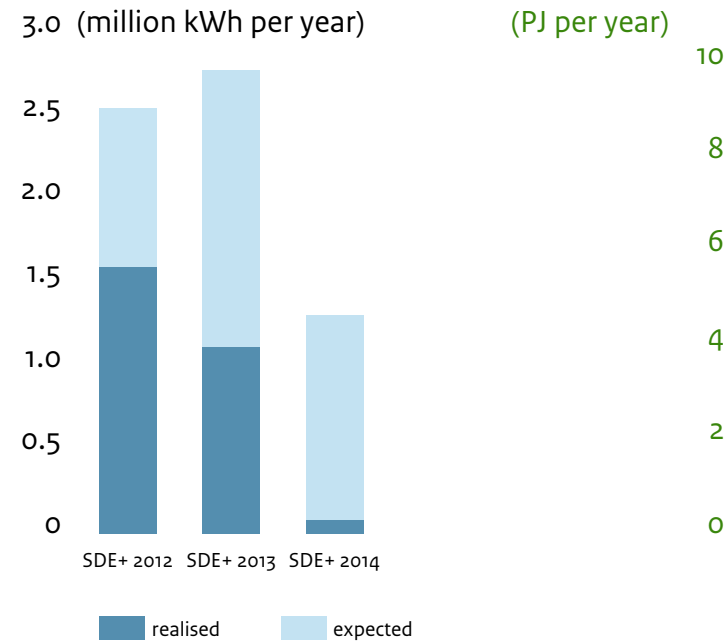
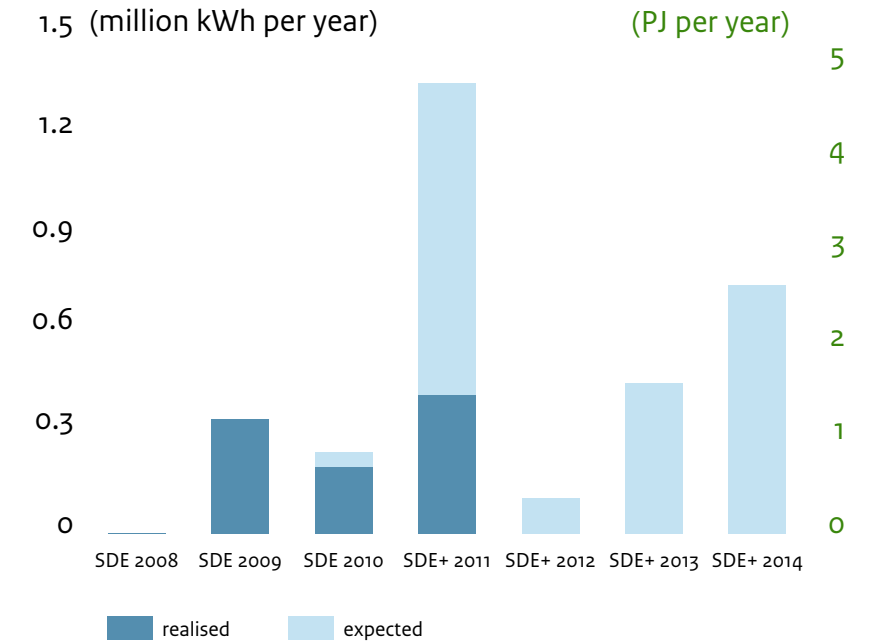


Figure 22 Realisation of renewable gas from biomass projects with SDE+ and SDE



Energy production from SDE+ and SDE projects in 2014

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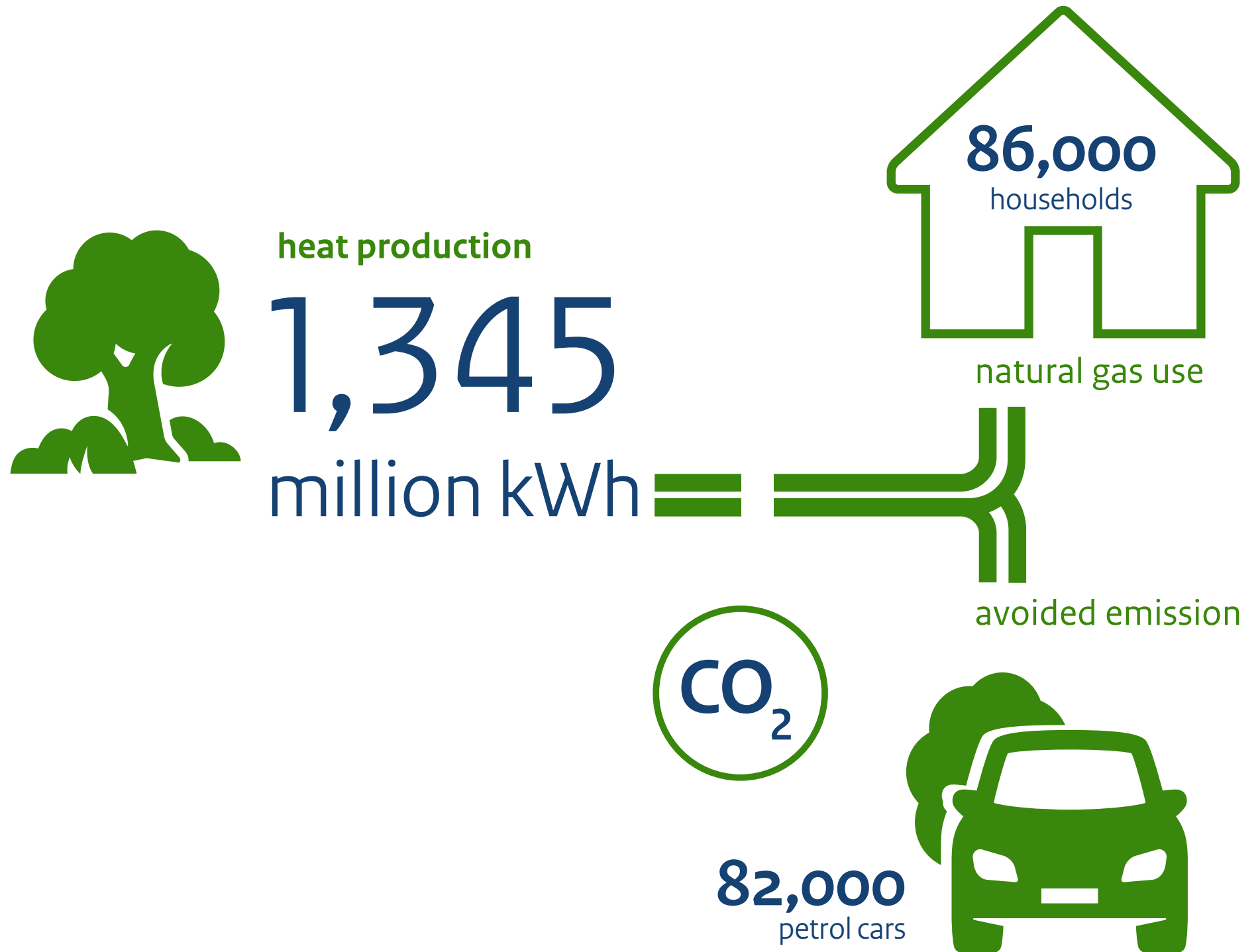
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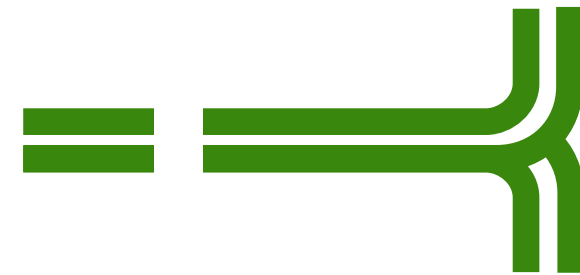
production of renewable gas

466
million
kWh



30,000
households

natural gas use



avoided emission



CO₂



28,000
petrol cars



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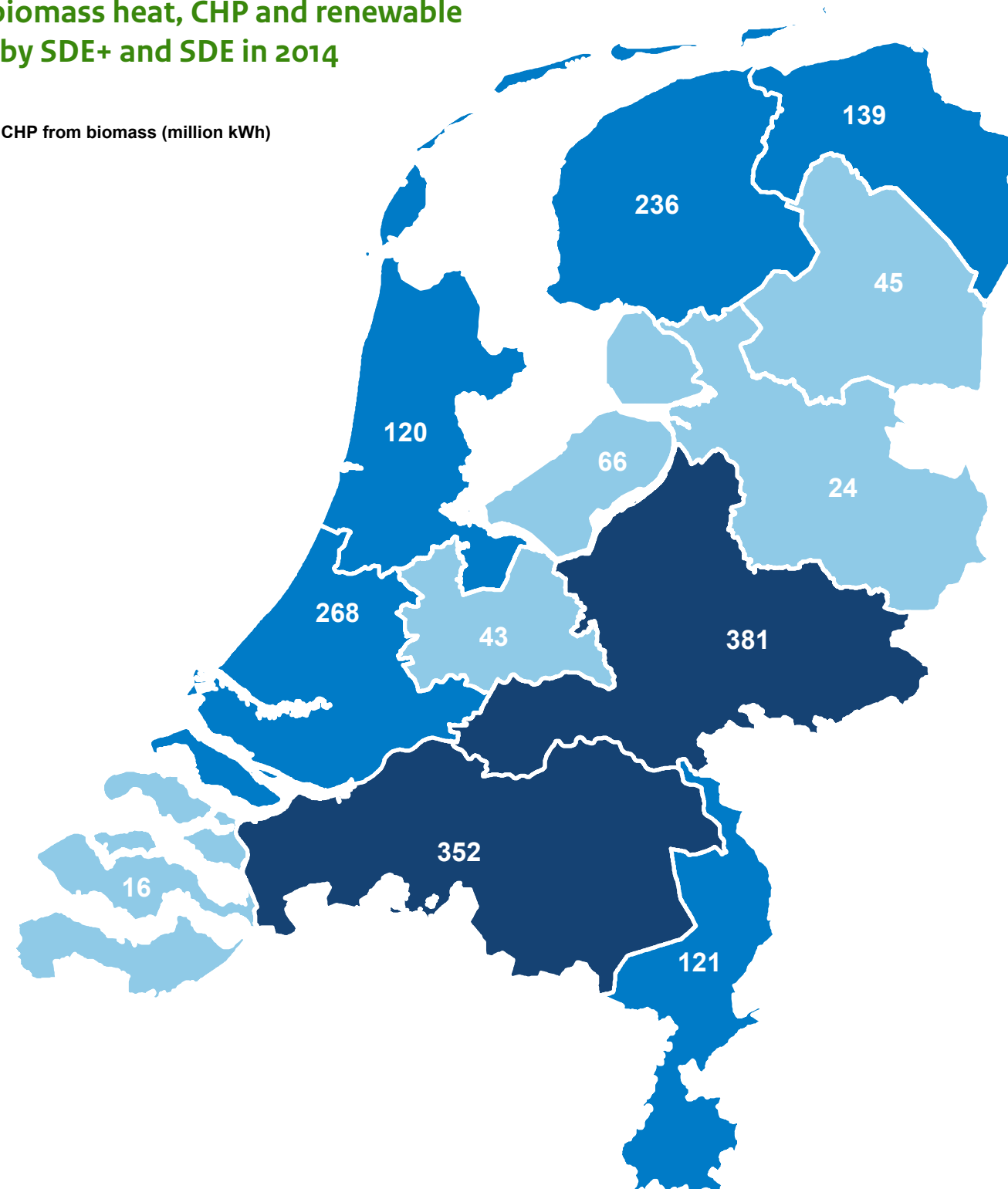
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Production of biomass heat, CHP and renewable gas subsidised by SDE+ and SDE in 2014

Renewable gas, heat and CHP from biomass (million kWh)



Alternative government incentives for heat, CHP and renewable gas from biomass 2010 – 2014

The Energy Investment Allowance (EIA) and the Green Funds scheme (*Regeling Groenprojecten*) are the two most important additional financial schemes. The EIA results are listed in table 8.

Green Funds scheme (*Regeling Groenprojecten*)

In 2014, the Green Funds scheme issued four green certificates to biogas upgrading installations and one green certificate to a biofuel production installation. The total project capital of these five green certificates amounted to 8.6 million euros.

Green Deal

By using Green Deals, involved parties aim to get products to market maturity level more quickly or to make them available on the market. Two innovation agendas (gasification and fermentation) have been made for the benefit of Topsector Energy. These have been consolidated under the name Topconsortia for Kennis en Innovatie (TKI's) (Dutch top consortia for knowledge and innovation).

The entrepreneur in the mushroom growing factor 't Voske in North Brabant aims for his company to be energy-neutral. To make this possible, the company wants to reuse the spent mushroom compost acquired after picking the mushrooms to produce energy. The combustion installation for spent mushroom compost has been developed and implemented thanks to the help from the Green Deal 'Sustainable

Heat from Biomass'. The energy produced will be used to heat the business, whilst part of the energy will be supplied to the neighbouring greenery.

Intervention programme integrated stimulation of renewable energy (*Integrale Stimulering Duurzame Energie ISDE*)

In the Dutch Energy Agreement for Sustainable Growth (*Energieakkoord*), an arrangement was made with environmental protection organisations which specifies that only biomass production which meets sustainability requirements can be encouraged for use in co-firing and large scale heat production. With the support of the Netherlands Enterprise Agency, these sustainability requirements were drawn up by the environmental protection organisations and energy companies, and were published in 2015. Alongside this, the Netherlands Enterprise Agency has begun setting up a certification system to verify the sustainability of biomass.

Since 2015, the categories 'Existing capacity for auxiliary and co-firing of biomass in coal-fired power stations', 'New capacity for co-firing of biomass in coal-fired power stations' and 'Wood pellet boiler for the production of industrial steam' were added to the SDE+ scheme. The majority of the wood chips needed will be imported from outside the EU and must satisfy sustainability criteria.

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Biofuels certification and developments in the market

Biofuels are the most significant form of renewable energy in the transportation sector. With its 'Gasvormige en Vloeibare klimaatneutrale Energiedragers' (gaseous and liquid climate-neutral energy sources) ([GAVE](#)), RVO.nl provides support to the Ministry of Infrastructure and Environment with policy developments in the field of renewable energy in transport. The GAVE team has expertise in subjects such as the implementation of European guidelines in the field of biofuels in Dutch law and regulations, the sustainability of bioenergy, double counting biofuels, developments on the international market and developments in policy and in technology.

Certification

In the Netherlands, the sustainability of biofuels must be indicated by obtaining a certification from a sustainability system which is recognised by the EU. The official annual report of the Dutch Emissions Authority (Nederlandse Emissieautoriteit) to the Dutch House of Representatives included information about the sustainability systems used and the so-called double counting biofuels. The proportion of these double counting biofuels on the Dutch market is growing quickly: 40% in 2011, 51% in 2012 and 60% in 2013.

Dutch industry met set targets each year during the period 2011 to 2013. The 2014 target is set at 5.5%. This will increase gradually to the European Renewable Energy Directive of 10% in 2020.

Table 9 Annual obligatory proportion and implementation of proportion of biofuels in transport fuels

| | 2010 | 2011 | 2012 | 2013 |
|----------------------------------|------|------|------|------|
| Annual obligatory proportion (%) | 4.00 | 4.25 | 4.50 | 5.00 |
| Average implementation (%) | 4.01 | 4.31 | 4.54 | 5.05 |
| Implementation for petrol (%) | 4.02 | 3.78 | 3.99 | 4.07 |
| Implementation for diesel (%) | 4.01 | 4.62 | 4.86 | 5.62 |

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Biofuels certification and developments in the market

Sustainable fuel vision with LEF

LEF's sustainable fuel vision of June 2014 describes the implementation of a range of sustainable fuels and how transportation can be made more efficient. The vision is a follow-up of the Dutch Energy Agreement for Sustainable Growth (*Energieakkoord voor duurzame groei*). It contains ambitious long-term goals for transportation in the Netherlands that are aimed at reduced the emissions of harmful greenhouse gases. The Netherlands Enterprise Agency is playing an active part in this fuel vision as well as in the action programme which is drafted in the second half of 2014.

BioGrace greenhouse gas calculation tool

As initiator and coordinator of the BioGrace projects from 2010 to 2012 and BioGrace-II from 2012 to 2015, the Netherlands Enterprise Agency has developed two greenhouse gas emission calculators to calculate possible reductions in emissions. Initiatives have been put to harmonise how greenhouse gas emissions are calculated throughout the European Union.



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Green Funds scheme (Regeling Groenprojecten)

As part of the Green Funds scheme (Regeling Groenprojecten) in 2014, one green certificate was issued to a biofuel installation with a project capital of 2.6 million euros.

Intervention programme integrated stimulation of renewable energy (Integrale Stimulering Duurzame Energie ISDE)

ISDE's focus is to stimulate the production of bioenergy. The programme deals with fermentation, combustion and sustainability criteria for solid biomass. Important focus areas include increasing the availability of affordable biomass electricity, as well as guaranteeing quality and sustainability. In terms of decentralised biomass combustion, there are opportunities for growth and even chances that the capacity will have doubled by 2020.

The Netherlands Enterprise Agency is joint initiator and involved in the following projects:

- cascading to get more from biomass energy;
- a report about the fermentation of grasses 'Biogas from gras – een onderbenut potentieel. Een studie naar kansen for grasvergistig';
- a roadmap for renewable gas;
- the 'GMP+ responsible biomass scheme'. This scheme certifies biomass procedures in order to ensure the quality of co-fermentation of manure;
- praktijkdag Bio-energie (gathering of private sector companies, knowledge institutions and government bodies to discuss developments in the bioenergy sector);
- an easy process of granting permits through the Steunpunt Vergunninglening (free support provided to municipalities, provinces and environmental services to help with processing permit applications for bioenergy installations);
- monitoring the quality of the renewable gas that is fed into the Dutch natural gas network;
- research into the assessment of biomass combustion according to the NEN7120 Dutch energy performance coefficient (*energieprestatiecoëfficiënt, EPC*).



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Successful cooperation at Wind farm Kreekraksluis

Wind farm Kreekraksluis is the result of a successful cooperation between agricultural entrepreneurs, clustered in 'Scheldewind', energy suppliers Delta and Eneco and project developer Winvast. The collective joined forces and decided to replace 26 outdated Delta wind turbines at the Kreekrak sluices with 31 modern turbines. This resulted in the total energy production of the park increasing by a factor of between seven to ten. With a collective capacity of 77.5 MW, the new wind turbines produce 200,000 MWh of green energy annually - enough to supply 55,000 households. The CO₂ reduction amounts to 138,000 tonnes. Thanks to these figures, the park in Zeeland is making its contribution to the 6,000 MW of onshore wind energy in 2020 specified in the Dutch Energy Agreement for Sustainable Growth (*Energieakkoord*). Scheldewind will receive SDE+ subsidy for the generated renewable energy for fifteen years.



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Solar farm Ouddorp is a textbook example in running a CO₂ neutral recreational park

If there is a place where solar energy can be exploited, then you will find it in the province of Zeeland, as the area enjoys the most sunlight hours in the country. With the help of the SDE scheme and Eneco, the energy cooperation Deltawind has constructed one of the largest solar farms in the Netherlands. The park contains 2,900 solar panels and covers 1.3 hectares of agricultural land. The initiative for the solar farm came from the owner of De Klepperstee recreational park in Ouddorp. He wanted to run a CO₂ neutral recreational park. Deltawind was commissioned with building and managing the park, which has been in use since 2012. The panels are connected directly to the electricity grid of the supplier, Eneco. The solar farm meets all the park's electricity needs and produces more energy than was previously estimated. As school children and other people who are interested in the development are welcome to visit the park, the project is making its contribution to raising public awareness of how renewable energy can be implemented.



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Cultivating tomatoes with geothermal heat

Less dependent on the gas market and lower energy bills. That is the approach of Harting Holland. The company started with the support of the SDE+ subsidy a geothermal project. Harting Holland took a good look at what other entrepreneurs had to deal with during their geothermal energy projects, and with this in mind decided to increase the diameter of its well to the next size up. This increase in size meant that 20% more water, which comes out of the ground at 87 °C, could be pumped up through the well. Drilling work on the 2.5 km deep wells could begin once permits had been applied for and geological research had been carried out in the area. The hot ground water currently heats around 75% of the 30 hectares of tomato greenhouses at Harting Holland. Heat from geothermal energy also satisfies all the heating requirements of the greenhouses of neighbour De Bruijn, which measures over seventeen hectares.



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Oil and steam from wood

The Empyro pyrolysis oil plant in Hengelo, Overijssel, converts biomass products such as wood chips and shavings, straw, chicken litter or rice husks into oil with a high energy density. This technology has substantial benefits in terms of storage, transport and the variety of usages it offers, including for industry. The process involved in manufacturing pyrolysis oil also produces heat and electricity. Chemical company AkzoNobel takes away the steam produced during the pyrolysis oil manufacturing process, while the dairy company FrieslandCampina uses the pyrolysis oil for steam production. The project reduces the use of natural gas and CO₂ emissions. Both Empyro and FrieslandCampina receive subsidies from the SDE+ scheme. FrieslandCampina receives subsidy for the steam production with pyrolysis oil, while Empyro receives subsidy for the steam supply to AkzoNobel and the electricity produced using a steam turbine.



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Changes in the SDE+ 2014

- As of 2014, projects which apply for a SDE+ subsidy are no longer eligible for the Energy Investment Allowance (EIA) tax scheme.
- The submission deadline for extended life service of thermal conversion of biomass, the fermentation of organic waste, glycerine, fatty acids and sludge from drinking water preparation and the co-fermentation of manure has been extended from one and a half years to three years before the MEP or OV-MEP subsidy expires.
- Feasibility study: projects that applied for a total nominal capital of ≥ 0.5 MW, 500 kWp respectively 50 Nm³ per hour must be enclosed with the feasibility study when submitting an application. The feasibility study consists of the following sections:
 - operation calculations;
 - calculating the return on projects;
 - founding one's own capital and financing plans.
- A geological investigation is required for geothermal energy projects.
- The formal permission from the owner of the intended location at which the production installation is to be constructed must be submitted together with the application.
- A producer with an installation for mono-fermentation of manure is considered a producer of renewable energy. The heat component is not subsidised under the SDE+ 2014 scheme.

Explanation of the total overviews

- Tables provide an overview of the applications in the SDE rounds 2008 – 2010, the SDE+ 2011 – 2014 as well as the OV-MEP (transitional subsidy arrangement between MEP and the SDE) and the not yet determined producing MEP projects.
- The reference date for this report is 1 March 2015 except for table 'SDE+ 2014 subsidy allocations'. The data is summarised in the overviews.
- The productions for calendar year 2014 reference the eligible productions that have been reported to RVO.nl prior to 1 March 2015. The production forecast used for funding purposes for 2014 was used for installations that had not yet communicated the production figures before that date.
- The data in this report is based on RVO.nl's Subsidy-Administration system. This data may deviate from other publications that (also) make use of alternative sources.
- Conversion factors
1 kWh = 0.0036 GJ
1 kWh = 0.102359965 Nm³



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Table D1 Allocated production capacity and realised capacity for renewable electricity from SDE+, SDE and MEP (MW)

| | Allocated capacity (MW) reference date 01-03-2014 | Allocated capacity (MW) reference date 01-03-2015 | Realised capacity (MW) reference date 01-03-2015 |
|--------------------------|--|---|--|
| SDE electricity | 2,741 | 3,322 | 1,197 |
| MEP | 1,775 | 1,461 | 1,461 |
| Total electricity | 4,516 | 4,783 | 2,658 |

Table D2 Allocated production capacity and realised capacity for renewable heat and CHP from SDE+ (MWth and MWe)

| | Allocated capacity (MWth and MWe) reference date 01-03-2014 | Allocated capacity (MWth and MWe) reference date 01-03-2015 | Realised capacity (MWth and MWe) reference date 01-03-2015 |
|-----------------------------|--|--|--|
| SDE+ renewable heat and CHP | 2,150 | 2,375 | 980 |

Table D3 Allocated production capacity and realised capacity renewable gas from SDE+ and SDE (MW)

| | Allocated capacity (MW) reference date 01-03-2014 | Allocated capacity (MW) reference date 01-03-2015 | Realised capacity (MW) reference date 01-03-2015 |
|------------------|---|---|--|
| SDE and SDE+ gas | 398 | 421 | 128 |

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Table D4 Biomass state of affairs

| | Number of approved subsidy applications | Allocated budget | Allocated subsidisable production | Allocated capacity | Realised capacity |
|-------------------------------------|---|------------------|-----------------------------------|--------------------|-------------------|
| Renewable electricity | | (million €) | (GWh) | (MW) | (MW) |
| SDE and SDE+ | 76 | 1,334 | 18,950 | 294 | 264 |
| MEP and OV-MEP | 137 | 2,472.7 | | 375 | 375 |
| Total renewable electricity | 213 | 3,806.7 | | 669 | 639 |
| Renewable heat and CHP | | (million €) | (GWh) | (MWth and MWe) | (MWth and MWe) |
| SDE+ | 250 | 3,050.9 | 78,639 | 1,894 | 848.9 |
| Total renewable heat and CHP | 250 | 3,050.9 | 78,639 | 1,894 | 849 |
| Renewable gas | | (million €) | (GWh) | (MW) | (MW) |
| SDE and SDE+ | 71 | 1,831.5 | 38,566 | 421 | 128 |
| Total renewable gas | 71 | 1,831.5 | 38,566 | 421 | 128 |
| Total Biomass | 534 | 8,689.1 | | | |

* The capacity for large scale biomass installations from the MEP (for installations larger than 50 MW) has not been included



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Table D5 Renewable production and cash expenditure Biomass in 2014

| | Production in 2014 | Cash expenditure in 2014 |
|-------------------------------------|--------------------|--------------------------|
| Renewable electricity | (MWh) | (million €) |
| SDE and SDE+ | 855,207 | 45.0 |
| MEP and OV-MEP | 2,348,883 | 199.7 |
| Total renewable electricity | 3,204,091 | 244.6 |
| Renewable heat and CHP | (MWh) | (million €) |
| SDE+ | 1,344,980 | 27.9 |
| Total renewable heat and CHP | 1,344,980 | 27.9 |
| Renewable gas | (MWh) | (million €) |
| SDE and SDE+ | 465,741 | 12.0 |
| Total renewable gas | 465,741 | 12.0 |
| Total Biomass | 5,014,812 | 284.5 |

Table D6 Geothermal energy state of affairs

| | Number of approved subsidy applications | Allocated budget (million €) | Allocated subsidisable production (GWh) | Allocated capacity (MW) | Realised capacity (MW) |
|--------------------------------|---|------------------------------|---|-------------------------|------------------------|
| SDE+ | 36 | 1,097.5 | 41,853 | 477 | 130 |
| Total Geothermal energy | 36 | 1,097.5 | 41,853 | 477 | 130 |



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Table D7 Renewable production and cash expenditure Geothermal energy in 2014

| | Production in 2014 (MWh) | Cash expenditure in 2014 (million €) |
|--------------------------------|--------------------------|--------------------------------------|
| SDE+ | 402,394 | 6.7 |
| Total Geothermal energy | 402,394 | 6.7 |

Table D8 Hydropower state of affairs

| | Number of approved subsidy applications | Allocated budget (million €) | Allocated subsidisable production (GWh) | Allocated capacity (MW) | Realised capacity (MW) |
|-------------------------|---|------------------------------|---|-------------------------|------------------------|
| SDE | 8 | 67.6 | 1,228 | 23 | <1 |
| MEP | 5 | 79.0 | | 24 | 24 |
| Total Hydropower | 13 | 146.6 | | 48 | 24 |

Table D9 Renewable production and cash expenditure Hydropower in 2014

| | Production in 2014 (MWh) | Cash expenditure in 2014 (million €) |
|-------------------------|--------------------------|--------------------------------------|
| SDE+ | 12 | 0.0 |
| MEP | 76,600 | 7.5 |
| Total Hydropower | 76,612 | 7.5 |



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Table D10 Wind energy state of affairs

| | Number of approved subsidy applications | Allocated budget (million €) | Allocated subsidisable production (GWh) | Allocated capacity (MW) | Realised capacity (MW) |
|--------------------------|---|------------------------------|---|-------------------------|------------------------|
| SDE - onshore wind | 271 | 3,423.5 | 50,811 | 1,636 | 835 |
| SDE - offshore wind | 3 | 5,384.8 | 33,166 | 1,636 | - |
| MEP - onshore wind | 268 | 1,130.1 | | 830 | 830 |
| MEP - offshore wind | 2 | 765.2 | | 228 | 228 |
| Total Wind energy | 544 | 10,703.6 | | 3,413 | 1,893 |

Table D11 Renewable production and cash expenditure Wind energy in 2014

| | Production in 2014 (MWh) | Cash expenditure in 2014 (million €) |
|--------------------------|--------------------------|--------------------------------------|
| SDE onshore wind | 1,147,255 | 64.2 |
| SDE - offshore wind | - | - |
| MEP - onshore wind | 2,301,605 | 154.4 |
| MEP - offshore wind | 748,395 | 70.1 |
| Total Wind energy | 4,197,256 | 288.8 |



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Table D12 Solar energy state of affairs

| | Number of approved subsidy applications | Allocated budget | Allocated subsidisable production | Allocated capacity | Realised capacity |
|------------------------------------|---|------------------|-----------------------------------|--------------------|-------------------|
| Renewable electricity | | (million €) | (GWh) | (MW) | (MW) |
| SDE and SDE+ | 12,852 | 1,007.7 | 9,632 | 650 | 98 |
| MEP | 280 | 2.5 | | 4 | 4 |
| Total renewable electricity | 13,132 | 1,010.2 | | 653 | 101 |
| Renewable heat | | (million €) | (GWh) | (MWth) | (MWth) |
| SDE+ | 14 | 2.7 | 42 | 4 | 1 |
| Total renewable heat | 14 | 2.7 | 42 | 4 | 1 |
| Total Solar energy | 13,146 | 1,013.0 | | | 102 |

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Table D13 Renewable production and cash expenditure Solar energy in 2014

| | Production in 2014 (MWh) | Cash expenditure in 2014 (million €) |
|------------------------------------|--------------------------|--------------------------------------|
| Renewable electricity | | |
| SDE and SDE+ | 70,419 | 13.8 |
| MEP and OV-MEP | 2,052 | 0.3 |
| Total renewable electricity | 72,471 | 14.1 |
| Renewable heat | | |
| SDE+ | 219 | <0.1 |
| Total renewable heat | 219 | <0.1 |
| Total Solar energy | 72,690 | 14.1 |



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Table D14 Total overview of subsidy allocations and realisation of renewable electricity

| Incentive scheme and category | Subcategory | Number of approved subsidy applications | Allocated budget (million €) | Allocated subsidisable production (GWh) | Allocated capacity (MW) | Realised capacity (MW) |
|-------------------------------|---------------|---|------------------------------|---|-------------------------|------------------------|
| <i>Wind energy</i> | | | | | | |
| SDE 2008 | Onshore wind | 20 | 71.5 | 1,223 | 46 | 46 |
| SDE 2009 | Onshore wind | 58 | 1,351.0 | 16,952 | 466 | 90 |
| | Offshore wind | 3 | 5,384.8 | 33,166 | 719 | - |
| SDE 2010 | Onshore wind | 67 | 866.1 | 12,341 | 457 | 442 |
| SDE+ 2011 | Onshore wind | 11 | 194.3 | 2,903 | 108 | 107 |
| SDE+ 2012 | Onshore wind | 1 | 2.3 | 61 | 2 | 2 |
| SDE+ 2013 | Onshore wind | 65 | 628.9 | 12,746 | 398 | 148 |
| SDE+ 2014 | Onshore wind | 49 | 309.5 | 4,585 | 158 | - |
| SDE total | | 274 | 8,808.3 | 83,977 | 2,355 | 835 |
| MEP | Onshore wind | 268 | 1,130.1 | | 830 | 830 |
| | Offshore wind | 2 | 765.2 | | 228 | 228 |
| MEP total | | 270 | 1,895.3 | | 1,058 | 1,058 |
| Total Wind energy | | 544 | 10,703.6 | | 3,413 | 1,893 |

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|-------------------------------|-------------|---|------------------------------|---|-------------------------|------------------------|
| <i>Continuation of table</i> | | | | | | |
| Solar power | | | | | | |
| SDE 2008 | | 4,690 | 43.4 | 125 | 10 | 10 |
| SDE 2009 | | 2,452 | 98.8 | 285 | 22 | 22 |
| SDE 2010 | | 2,926 | 65.2 | 224 | 18 | 18 |
| SDE+ 2011 | | 396 | 13.4 | 289 | 19 | 18 |
| SDE+ 2012 | | 36 | 1.0 | 74 | 5 | 4 |
| SDE+ 2013 | | 508 | 108.3 | 1,555 | 104 | 23 |
| SDE+ 2014 | | 1,844 | 677.6 | 7,081 | 472 | 3 |
| SDE total | | 12,852 | 1,007.7 | 9,632 | 650 | 98 |
| MEP | | 280 | 2.5 | | 4 | 4 |
| Total Solar power | | 13,132 | 1,010.2 | | 653 | 101 |
| Hydropower | | | | | | |
| SDE 2009 | | 2 | <1 | 1 | <1 | <1 |
| SDE 2010 | | 1 | 54.3 | 687 | 12 | - |
| SDE+ 2013 | | 4 | 13.2 | 539 | 11 | - |
| SDE+ 2014 | | 1 | <1 | 1 | <1 | - |
| SDE total | | 8 | 68.5 | 1,228 | 23 | <1 |
| MEP | | 5 | 79.0 | | 24 | 24 |
| Total Hydropower | | 13 | 147.5 | | 48 | 24 |

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|--------------------------------------|--|---|------------------------------|---|-------------------------|------------------------|
| <i>Continuation of table</i> | | | | | | |
| Biomass electricity | | | | | | |
| SDE 2008 | Waste combustion | 2 | 166.7 | 4,250 | 78 | 78 |
| | Biomass | 3 | 22.4 | 354 | 4 | 4 |
| SDE 2009 | Waste combustion | 2 | 119.6 | 2,805 | 49 | 49 |
| | Biomass | 21 | 325.5 | 2,760 | 31 | 31 |
| SDE 2010 | Waste combustion | 4 | 153.4 | 3,577 | 77 | 74 |
| | Landfill gas/biogas from water treatment installations | 1 | 0.5 | 40 | 1 | 1 |
| | Biomass | 24 | 323.9 | 2,420 | 26 | 21 |
| SDE+ 2011 | Landfill gas/biogas from water treatment installations | 1 | 0.2 | 12 | <1 | <1 |
| | Biomass | 13 | 194.6 | 1,953 | 21 | 6 |
| SDE+ 2012 | Landfill gas/biogas from water treatment installations | 1 | 1.9 | 81 | 1 | 1 |
| SDE+ 2013 | Landfill gas/biogas from water treatment installations | 2 | 13.0 | 480 | 5 | - |
| SDE+ 2014 | Landfill gas/biogas from water treatment installations | 2 | 12.3 | 219 | 4 | - |
| SDE total | | 76 | 1,334 | 18,950 | 294 | 264 |
| MEP and OV-MEP | Waste combustion | 1 | 59.7 | | 74 | 74 |
| | Landfill gas | 16 | 6.7 | | 8 | 8 |
| | Biomass < 10 MW | 113 | 810.6 | | 134 | 134 |
| | Biomass 10 to 50 MW | 5 | 1,182.8 | | 160 | 160 |
| | Biomass > 50 MW | 2 | 413 | | - | - |
| Total MEP and OV-MEP | | 137 | 2,472.8 | | 375 | 375 |
| Total Biomass electricity | | 213 | 3,806.7 | | 669 | 639 |
| Total SDE and MEP electricity | | 13,902 | 15,668 | | 4,783 | 2,658 |

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Table D15 Total overview of subsidy allocations and realisation of renewable heat and CHP

| Incentive scheme and category | Subcategory | Number of approved subsidy applications | Allocated budget (million €) | Allocated subsidisable production (GWh) | Allocated capacity (MW) | Realised capacity (MW) |
|-------------------------------------|--------------------------------------|---|------------------------------|---|-------------------------|------------------------|
| SDE+ 2012 | Heat extension from waste combustion | 3 | 258.1 | 17,997 | 413 | 321 |
| | Biomass | 71 | 509.9 | 13,601 | 294 | 137 |
| | Geothermal energy | 21 | 588.3 | 24,411 | 250 | 113 |
| | Solar thermal | 1 | < 0.1 | 1 | <1 | - |
| SDE+ 2013 | Heat extension from waste combustion | 1 | 23.3 | 1,351 | 155 | - |
| | Biomass | 82 | 1,346.8 | 29,932 | 735 | 353 |
| | Geothermal energy | 10 | 269.9 | 9,134 | 124 | - |
| | Solar thermal | 3 | 0.6 | 14 | 1 | 1 |
| SDE+ 2014 | Biomass, including waste | 93 | 912.7 | 15,759 | 297 | 38 |
| | Geothermal energy | 5 | 239.3 | 8,309 | 103 | 17 |
| | Solar thermal | 10 | 2.1 | 27 | 3 | - |
| Total renewable heat and CHP | | 300 | 4,151.1 | 120,534 | 2,375 | 980 |



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Table D16 Total overview of subsidy allocations and realisation of renewable gas

| Incentive scheme and category | Subcategory | Number of approved subsidy applications | Allocated budget (million €) | Allocated subsidisable production (GWh) | Allocated capacity (MW) | Realised capacity (MW) |
|---|---------------|---|------------------------------|---|-------------------------|------------------------|
| Renewable gas from biomass | | | | | | |
| SDE 2008 | Green gas | 1 | <1 | 24 | <1 | <1 |
| SDE 2009 | Green gas | 7 | 156.3 | 4,085 | 50 | 50 |
| SDE 2010 | Green gas | 7 | 120.7 | 2,901 | 31 | 25 |
| SDE+ 2011 | Green gas | 18 | 711.6 | 14,580 | 156 | 37 |
| | Green gas hub | 3 | 67.0 | 1,492 | 16 | 16 |
| SDE+ 2012 | Green gas | 4 | 38.5 | 1,274 | 14 | - |
| SDE+ 2013 | Green gas | 14 | 266.6 | 5,352 | 58 | - |
| SDE+ 2014 | Green gas | 17 | 470.4 | 8,857 | 94 | - |
| Total renewable gas from biomass | | 71 | 1,831.2 | 38,566 | 421 | 128 |



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Table D17 Total overview of renewable production and cash expenditure renewable electricity in 2014

| Incentive scheme and category | Subcategory | Production in 2014 (MWh) | Cash expenditure in 2014 (million €) |
|-------------------------------|---------------|--------------------------|--------------------------------------|
| <i>Wind energy</i> | | | |
| SDE 2008 | Onshore wind | 81,296 | 4.1 |
| SDE 2009 | Onshore wind | 79,175 | 4.2 |
| | Offshore wind | - | - |
| SDE 2010 | Onshore wind | 768,640 | 45.7 |
| SDE+ 2011 | Onshore wind | 169,077 | 8.6 |
| SDE+ 2012 | Onshore wind | 3,650 | 0.1 |
| SDE+ 2013 | Onshore wind | 45,416 | 1.6 |
| SDE+ 2014 | Onshore wind | - | - |
| SDE total | | 1,147,255 | 64.2 |
| MEP | Onshore wind | 2,301,605 | 154.4 |
| | Offshore wind | 748,395 | 70.1 |
| MEP total | | 3,050,001 | 224.5 |
| Total Wind energy | | 4,197,256 | 289 |

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Table D17 Total overview of renewable production and cash expenditure renewable electricity in 2014

| Incentive scheme and category | Subcategory | Production in 2014 (MWh) | Cash expenditure in 2014 (million €) |
|-------------------------------|-------------|--------------------------|--------------------------------------|
| <i>Continuation of table</i> | | | |
| <i>Solar-PV</i> | | | |
| SDE 2008 | | 7,136 | 2.6 |
| SDE 2009 | | 17,022 | 6.1 |
| SDE 2010 | | 13,241 | 4.1 |
| SDE+ 2011 | | 15,763 | 0.5 |
| SDE+ 2012 | | 3,393 | 0.1 |
| SDE+ 2013 | | 13,440 | 0.4 |
| SDE+ 2014 | | 424 | <0.1 |
| SDE total | | 70,419 | 13.8 |
| MEP | | 2,052 | 0.3 |
| Total Solar-PV | | 72,471 | 14.1 |
| <i>Hydropower</i> | | | |
| SDE 2009 | | 12 | <0,1- |
| SDE 2010 | | - | - |
| SDE+ 2013 | | - | - |
| SDE+ 2014 | | - | - |
| SDE total | | 12 | <0,1- |
| MEP | | 76,600 | 7.5 |
| Total Hydropower | | 76,612 | 7.5 |

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Table D17 Total overview of renewable production and cash expenditure renewable electricity in 2014

| Incentive scheme and category | Subcategory | Production in 2014 (MWh) | Cash expenditure in 2014 (million €) |
|--------------------------------------|--|--------------------------|--------------------------------------|
| <i>Continuation of table</i> | | | |
| Biomass electricity | | | |
| SDE 2008 | Waste combustion | 242,786 | 7.0 |
| | Biomass | 15,668 | 0.8 |
| SDE 2009 | Waste combustion | 114,297 | 2.1 |
| | Biomass | 128,186 | 14.3 |
| SDE 2010 | Waste combustion | 205,679 | 5.1 |
| | Landfill gas/biogas from water treatment installations | 115,205 | 13.4 |
| | Biomass | 27,554 | 2.2 |
| SDE+ 2011 | Waste combustion | 532 | <0.1 |
| | Biomass | 27,554 | 2.2 |
| SDE+ 2012 | Landfill gas/biogas from water treatment installations | 1,942 | <0.1 |
| SDE+ 2013 | Landfill gas/biogas from water treatment installations | - | - |
| SDE+ 2014 | Landfill gas/biogas from water treatment installations | - | - |
| SDE total | | 855,207 | 45.0 |
| MEP and OV-MEP | Waste combustion | 238,552 | 15.3 |
| | Landfill gas | 20,434 | 0.4 |
| | Biomass < 10 MW | 529,985 | 51.5 |
| | Biomass 10 – 50 MW | 1,041,776 | 97.0 |
| | Biomass > 50 MW | 518,137 | 35.5 |
| Total MEP and OV-MEP | | 2,348,883 | 199.7 |
| Total Biomass electricity | | 3,204,091 | 244.6 |
| Total SDE and MEP electricity | | 7,550,430 | 555.0 |

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Table D18 Total overview of renewable production and cash expenditure for renewable gas in 2014

| Incentive scheme and category | Subcategory | Production in 2014 (MWh) | Cash expenditure in 2014 (million €) |
|---|---------------|--------------------------|--------------------------------------|
| Renewable gas from biomass | | | |
| SDE 2008 | Green gas | - | - |
| SDE 2009 | Green gas | 196,822 | 4.7 |
| SDE 2010 | Green gas | 136,053 | 4.5 |
| SDE+ 2011 | Green gas | 132,867 | 2.8 |
| | Green gas hub | - | - |
| SDE+ 2012 | Green gas | - | - |
| SDE+ 2013 | Green gas | - | - |
| SDE+ 2014 | Green gas | - | - |
| Total renewable gas from biomass | | 465,741 | 12.0 |



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Table D19 Total overview of renewable production and cash expenditure for renewable heat and CHP in 2014

| Incentive scheme and category | Subcategory | Production in 2014 (MWh) | Cash expenditure in 2014 (million €) |
|-------------------------------------|--------------------------------------|--------------------------|--------------------------------------|
| SDE+ 2012 | Heat extension from waste combustion | 254,201 | 1.5 |
| | Biomass | 346,412 | 7.7 |
| | Geothermal energy | 393,844 | 6.6 |
| | Solar thermal | - | - |
| SDE+ 2013 | Heat extension from waste combustion | - | - |
| | Biomass | 729,587 | 18.7 |
| | Geothermal energy | - | - |
| | Solar thermal | 219 | <0.1 |
| SDE+ 2014 | Heat extension from waste combustion | 14,781 | <0.1 |
| | Biomass | - | - |
| | Geothermal energy | 8,550 | 0.2 |
| | Solar thermal | - | - |
| Total renewable heat and CHP | | 1,747,594 | 34.6 |



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Table D20 Budget ceiling per subsidy year

| Year | Category | Published budget (million €) |
|------|--|------------------------------|
| 2008 | Renewable electricity | |
| | Onshore wind | 796.0 |
| | Solar-PV | 83.0 |
| | Waste combustion | 187.0 |
| | Landfill gas/biogas from water treatment installations | 10.0 |
| | Biomass | 325.0 |
| | Renewable gas | |
| | Landfill gas/biogas from water treatment installations | 16.0 |
| | Biomass | 42.0 |
| | Total SDE 2008 | 1,459.0 |

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Table D20 Budget ceiling per subsidy year

| Year | Category | Published budget (million €) |
|------------------------------|--|------------------------------|
| <i>Continuation of table</i> | | |
| 2009 | Renewable electricity | |
| | Wind energy ≥ 6 MW onshore | 741.0 |
| | Wind energy ≥ 3 MW on water | 546.0 |
| | Offshore wind | 5,384.8 |
| | Onshore wind | 1,258.1 |
| | Small solar-PV (1,0 - 15 kWp) | 86.5 |
| | Large solar-PV (15 - 100 kWp) | 56.5 |
| | Waste combustion | 158.0 |
| | Landfill gas/biogas from water treatment installations | 7.0 |
| | Biomass | 625.0 |
| | Hydropower < 5 m | 60.0 |
| | Hydropower > 5 m | 15.0 |
| | Renewable gas | |
| | Landfill gas/biogas from water treatment installations | 15.0 |
| | Biomass | 243.0 |
| | Total SDE 2009 | 9,195.9 |

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Table D20 Budget ceiling per subsidy year

| Year | Category | Published budget (million €) |
|--|--|------------------------------|
| <i>Continuation of table</i> | | |
| 2010 | Renewable electricity | |
| | Onshore wind | 937.0 |
| | Small solar-PV (1,0 - 15 kWp) | 69.0 |
| | Large solar-PV (15 - 100 kWp) | 24.0 |
| | Waste combustion | 238.0 |
| | Landfill gas/biogas from water treatment installations | 13.0 |
| | Biomass | 400.0 |
| | Hydropower | 63.0 |
| | CHP | 168.0 |
| | Renewable gas | |
| Landfill gas/biogas from water treatment installations | 24.0 | |
| Biomass | 190.0 | |
| | Total SDE 2010 | 2,126.0 |
| 2011 | Renewable electricity | 500,0 |
| | Renewable gas | 1.000,0 |
| | Total SDE+ 2011 | 1,500.0 |
| 2012 | Total SDE+ 2012 | 1,700.0 |
| 2013 | Total SDE+ 2013 | 3,000.0 |
| 2014 | Total SDE+ 2014 | 3,500.0 |



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Aedes

Association of housing corporations

Base amount

The sum of investment and exploitation expenses, plus a reasonable profit margin, divided by the expected production capacity, per energy technology.

Allocation and production of the SDE+, SDE and MEP projects

The allocated subsidy is a maximum amount. The eventual amount is calculated per year based on the subsidisable quantity of renewable energy produced and the determined correction amount. The subsidy applies to a maximum number of full load hours and has a maximum duration, depending of the category, of ten years for MEP projects or five, eight, twelve or fifteen years for the SDE/ SDE+ projects. Projects must be realised, depending on the category, between eighteen months and five years from the moment a positive subsidy allocation has been received.

DE-Koepel

Koepel foundation for sustainable energy, Duurzame Energie Koepel, promotes the use of sustainable energy.

Energy Investment Allowance (Energie Investeringsaftrek, EIA)

The Energy Investment Allowance (Energie Investeringsaftrek EIA) is a tax scheme. This scheme offers entrepreneurs a direct financial advantage, as they can deduct a part of the investment costs for energy saving and renewable technologies from their profits. This allows them to pay less income or corporate taxes. The average tax benefit of the EIA is 10 percent of the investment costs.



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Energy production from MEP, OV-MEP, SDE and SDE+

The energy production for the fiscal year 2014 relates to the eligible productions that were reported to the Netherlands Enterprise Agency before 1 March 2015. Please note: not all productions were reported prior to 1 March 2015. Forecasts based on the advances for 2014 are used for the overviews for these installations.

Experimenten elektriciteitswet (changes to Electricity Act 1998)

Thanks to the 'Openstellingsregeling experimenten decentrale duurzame elektriciteitsopwekking' (opening regulation for experiments regarding decentralised production of sustainable energy ([Experimenten elektriciteitswet](#))). Cooperatives and Associations of Owners may apply for exemption to experiment with renewable energy and thereby take on grid tasks within the projects.

HIER opgewekt

Knowledge platform for local sustainable energy initiatives.

The Association of Provinces of the Netherlands (Interprovinciaal overleg, IPO)

The Association of Provinces of the Netherlands (Interprovinciaal overleg, IPO) is an umbrella organisation of the twelve Dutch provinces.

Cash expenditure: MEP, OV-MEP, SDE and SDE+

Cash expenditure for the calendar year 2014 includes: advances, annual adjustments and the final payments after the subsidy period has come to an end. The latter only applies for the MEP.

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| | |
|---|---|
| MEP | The decision Environmental Quality of Electricity Production subsidy (Milieukwaliteit van de Elektriciteitsproductie <u>MEP</u>). The subsidy was awarded for a maximum of ten years. This is why there are still projects receiving MEP subsidies. |
| OV-MEP | Subsidy scheme for generating renewable energy in fermentation installations (<u>OV-MEP</u>). |
| NWEA | The Dutch Wind Energy Association (Nederlandse Wind Energie Associatie, NWEA) represents the interests of the wind energy sector. |
| The Green Funds scheme (Regeling Groenprojecten) | In the <u>Regeling Groenprojecten</u> investors with a green certificate can qualify for green financing. Green financing allows them to borrow money at a lower interest rate, thereby lowering the financing charges of a project. The decision is available for a number of project categories, including sustainable energy. |
| State coordination scheme (Rijkscoördinatieregeling) | The <u>Rijkscoördinatieregeling</u> gives the Dutch national government the possibility to control the decision-making process where projects of national importance are concerned. This relates predominantly to the required licenses and exemptions to realise a project and in many cases it relates to the State land-use plan. The coordination may substantially reduce the decision-making process for a project. |
| RNES Geothermal | The Ministry of Economic Affairs national scheme for subsidies Geothermal (<u>RNES Aardwarmte</u>) is a guarantee scheme for drilling for geothermal. |



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SDE

The Stimulation of Sustainable Energy Production scheme (Stimulerend Duurzame Energieproductie SDE) was implemented in 2008. This subsidy scheme is an exploitation subsidy in which the difference between the cost price of non-renewable energy and that of renewable energy is reimbursed for a period up to fifteen years. The amount of subsidy is dependent on the quantity of the renewable energy produced.

SDE+

At the start of 2011, the SDE was merged into the SDE+. This subsidy scheme contributes to the development of an investment climate in which sustainable energy is profitable and whereby entrepreneurship is encouraged. The decision aims to achieve the goal for sustainable energy in a cost-effective manner. Allowing various techniques for sustainability to compete within an integral budget ceiling and a phased opening structure enables projects with a low base amount to register first. This allows for a higher realisation rate of sustainable energy per euro. A premium on the energy bill finances the SDE+ from 2013 onwards.

SDE-contribution

The SDE-contribution is equal to the base amount minus the correction amount (average non-renewable price per category).

SDE+ subsidy (Stimulation of Sustainable Energy Production)

The amount of the subsidy is calculated per annum based on the quantity of the produced eligible renewable energy and the set correction amount. The subsidy applies up to a maximum of full load hours and has a maximum duration dependent on the category.

VNG

Association of Dutch municipalities (Vereniging van Nederlandse Gemeenten, VNG).



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