

2012 Annual Report SDE+, SDE en MEP

This is a shortened version of the 2012 Annual Report.



Foreword

The Netherlands has big ambitions in the field of renewable energy. The current contribution of energy from wind, solar, hydro, biomass and geothermal sources is 4.4%.

In order to contribute to the country its renewable energy ambitions, the SDE+ subsidy scheme first opened in 2012 for producers of renewable heat. We can now use heat in addition to electricity and gas to achieve our objectives. With renewable heat you can produce green energy at a relatively low cost. We have received a lot of subsidy applications for this.

This fits with the strategy which we ourselves also use as subsidy providers: achieving the highest possible yield with the lowest possible investment. We will do this as carefully as possible with the budget entrusted to us (€ 1.7 billion in 2012). We are also doing this transparently. We have therefore produced this annual report. The Dutch citizens and companies will also see it soon on their energy bill. In this report we will show you exactly how many euros are going into renewable energy projects.

Our approach is also applicable in Europe. Not only has the EU now officially approved the recent changes to the SDE+, such as the expansion with renewable heat generation, we are also receiving more and more foreign visitors. In particular they want

to know more about the way we organise competition between projects, and so keep our costs low.

The SDE+ 2013 is now open for use. With a budget of 3 billion euro, the current government has made its green ambitions clear. The opportunities are out there, and we look forward to your enquiries.



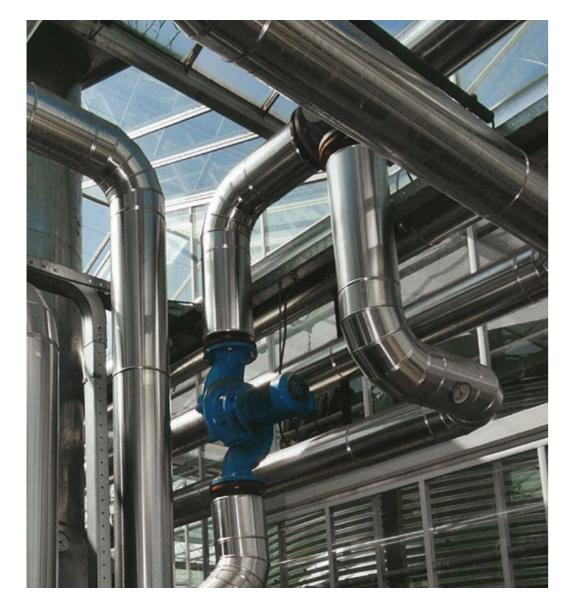
Ronald Roosdorp

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Ministry of Economic Affairs



Explanation of this annual report



- This annual report covers the applications received from the SDE rounds in 2008, 2009 and 2010, the SDE+ in 2011 and 2012, the OV-MEP (a transitional subsidy between the MEP and the SDE), and as-yet-undetermined, producing MEP projects. In this report, the OV-MEP is included in the results of the MEP.
- The reference date for this annual report is March 1, 2013. The data are summarised in the total overviews.

- The cash expenditure for the calendar year 2012 includes
 advance payments, annual adjustments and the (re)payments
 after determination following the end of the subsidy period.
 The last of these is especially relevant for the MEP.
- The production figures for the calendar year 2012 relate to the subsidisable production notified to NL Agency before March 1, 2013. Note: not all production data of 2012 were submitted by March 1, 2013.
- The data in this annual report are based on the NL Agency subsidy administration system. The data may therefore differ from other publications in which (also) other sources may be used.
- The energy produced in the calendar year 2012 has been translated into a 'human scale': the number of households per year that can be supplied with renewable energy produced with SDE+, SDE and/or MEP subsidies. An average household (2.2 persons) consumes around 3,500 kilowatt hours (kWh) per year.¹
- The results are shown for the following categories: biomass, geothermal, water, wind and solar.
 In addition to renewable gas and renewable electricity, the total overviews now also include renewable heat and CHP (combined heat and power, or cogeneration).

Terms used:

- SDE or SDE+: Stimulating renewable energy production in the Netherlands.
- MEP: Environmental Quality of Electricity Production subsidy.
- Number of allocations: the number of positively approved subsidy applications (on March 1, 2013).
- Allocated budget: the total available budget for subsidy applications. This is the maximum amount reserved for a project.
- Allocated subsidisable production: the maximum amount
 of renewable energy in megawatt hours (MWh), gigajoules
 (GJ) or standard cubic metres (Nm³) for which a positive
 subsidy has been allocated before March 1, 2013.
- Allocated capacity: the (production) capacity in megawatts (MW) megawatts of thermal energy (MWth), megawatts of electricity (MWe) or standard cubic metres per hour (Nm³/h) for which a positive subsidy has been allocated (before March 1, 2013), excluding the capacity that has been withdrawn, or the capacity for which the subsidy end date has been reached.
- Realised capacity: the subsidisable (production) capacity
 of installations that are currently in use, and of which
 the producers are registered as being a producer of
 renewable energy.
- Published budget: the total budget which the government makes available to stimulate renewable energy production.



¹ Source: Milieucentraal, 2013.

Results

The available SDE+ 2012 budget was € 1.7 billion.

The full budget of € 1.7 billion was allocated to 234 projects.

The total applications submitted exceeded the available budget. In 2012 a total of 1,059 applications were submitted, claiming a combined total of 4.58 billion euro.

The SDE+ 2012 is supporting renewable heat for the first time.

The results show there was a great deal of need for this.

The largest part of the available budget of € 1.7 billion was allocated to renewable heat projects, of which more than € 800 million went to geothermal projects.

Table 1 shows the subsidy allocations from the SDE+ 2012, split into the following categories: renewable electricity, renewable heat and CHP, and renewable gas.

Table 1. SDE+ 2012 subsidy allocations

The values in the table have been rounded off. The sum of the individual values may therefore differ slightly from the total.

Category	Number of allocations	Allocated capacity	Allocated subsidisable production	Allocated budget
Renewable electricity		(MW)	(GWh)	(€ m)
Wind energy	1	2	61	2.3
Solar PV	110	17	256	3.3
Biomass	1	1	81	2.0
Hydropower	-	-	-	-
Osmosis	-	-	-	-
Total renewable electricity	112	20	398	7.7
Renewable heat and CHP		(MWth and MWe)	(PJ)	
Waste combustion	4	433	68	279.2
Biomass	82	331	57	545.6
Geothermal	30	345	122	829.0
Solar thermal	2	0	0	0.1
Total renewable heat and CHP	118	1,110	247	1,653.9
Renewable gas		(Nm³/h)	(Nm³ m)	
Green gas hub	-	-	-	-
Green gas	4	1,470	130	38.5
Total renewable gas	4	1,470	130	38.5
Total SDE+ 2012	234			1,700

Allocated production capacity of SDE+, SDE and MEP

In the 2012 SDE+ round, 1,130 MW was allocated to electrical and thermal capacity and 1,470 Nm³/h to renewable gas production capacity. Together with the allocated capacity from previous round, the total allocated capacity for the SDE+ and SDE reached 2,256 MWe², 1,110 MWth and MWe and 35,652 Nm³/h.

The current allocated production capacity of the MEP is 2,026 MW. The allocated production capacity for large-scale biomass installations in the MEP (>50 MW) is not included in this figure. The total allocated capacity for the SDE+, SDE and the MEP together thereby comes to 5,392 MW (4,282 MWe and 1,110 MWth and MWe). Figures 1 and 2 show the geographical spread of this production capacity across the Netherlands. In the next few years the total production subsidised from the MEP will decrease, because increasing numbers of projects have exceeded the maximum subsidy period. Production from the SDE+ and SDE will continue to increase.

Figure 1. Allocated renewable electrical and thermal capacity (MW) of the SDE+, SDE and MEP per province

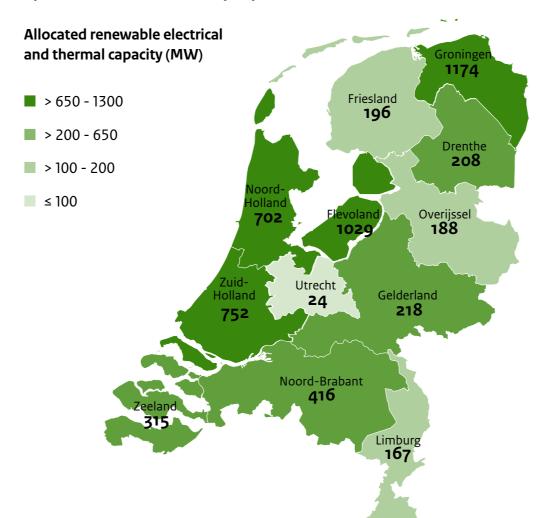
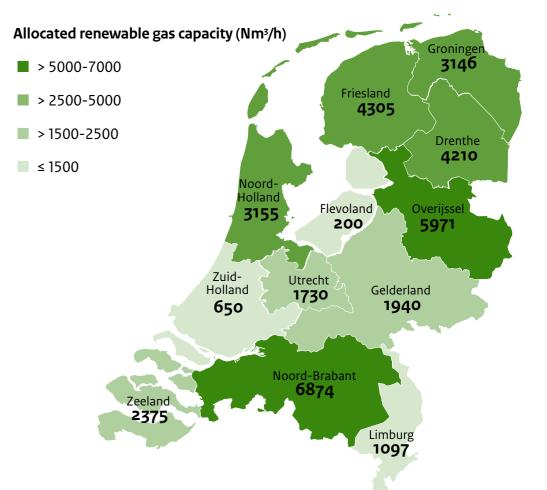


Figure 2. Allocated renewable gas capacity (Nm³/h) of the SDE+ and SDE per province





² Including offshore wind and Windpark NOP

Realised production capacity of the SDE+, SDE and MEP

Beneficiaries of subsidies from the SDE+ and SDE have a maximum of five years from the moment the subsidy is allocated to bring the installation into production.

Decisions from the SDE+ 2012 have recently been issued. The realisation of these projects will take some time. On March 1, 2013, 596 MWe, 140 MWth and MWe, and 7,340 Nm³/h of the allocated capacity from the SDE+ and SDE were in operation (see tables 2-4). For the MEP this figure is 1,976 MW. Tables 2 and 4 show the allocated capacities on March 1, 2012 and on March 1, 2013. The new category of renewable heat and CHP in table 3 only has March 1, 2013 as a reference date. Table 2 and 3 show that the total allocated production capacity of renewable electricity and renewable heat and CHP has increased from 4,601 MWe to 5,392 MWth and MWe. Table 4 shows that the allocated production capacity of renewable gas has increased from 34,212 Nm³/h to 35,652 Nm³/h.

Table 2. Allocated production capacity and realised capacity for renewable electricity of the SDE+, SDE and MEP (MW).

The values in the table have been rounded off. The sum of the individual values may therefore differ slightly from the total.

	Allocated capacity (MW) on reference date 01-03-2012	Allocated capacity (MW) on reference date 01-03-2013	Realised capacity (MW) on reference date 01-03-2013
SDE electric	2,280	2,256	596
MEP	2,321	2,026	1,976
Total	4,601	4,282	2,572

Table 3. Allocated production capacity and realised capacity for renewable heat and CHP of the SDE+

	Allocated capacity (MWth and MWe) on reference date 01-03-2013	
SDE+ renewable heat and CHP	1,110	140

Table 4. Allocated production capacity and realised capacity for renewable gas of the SDE+ and SDE (Nm³/h)

	Allocated capacity (Nm³/h) on reference date 01-03-2012		Realised capacity (Nm³/h) on reference date 01-03-2013
SDE(+) gas	34,212	35,652	7,340

Renewable production and expenditure

In 2012, almost 9,902 gigawatt hours (GWh) of green electricity was produced within the SDE and the MEP. This is sufficient to supply electricity to more than 2.8 million households for one year, and cut CO₂ emissions by 6,500 kilotons. Onshore wind turbines (circa 37%) and large-scale biomass installations (circa 45%) produced the most green electricity.

Figure 3 shows the realised renewable energy production, split between the various categories. Besides green electricity it also includes the production of green gas and renewable heat. As we can see in figure 3, the largest portion of subsidisable renewable production in 2012 was generated from wind energy and biomass. The biomass production shown is the production of green electricity and green gas. NL Agency paid out € 694 million to SDE+, SDE and MEP subsidies in 2012.

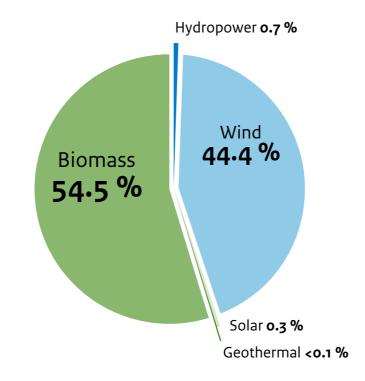
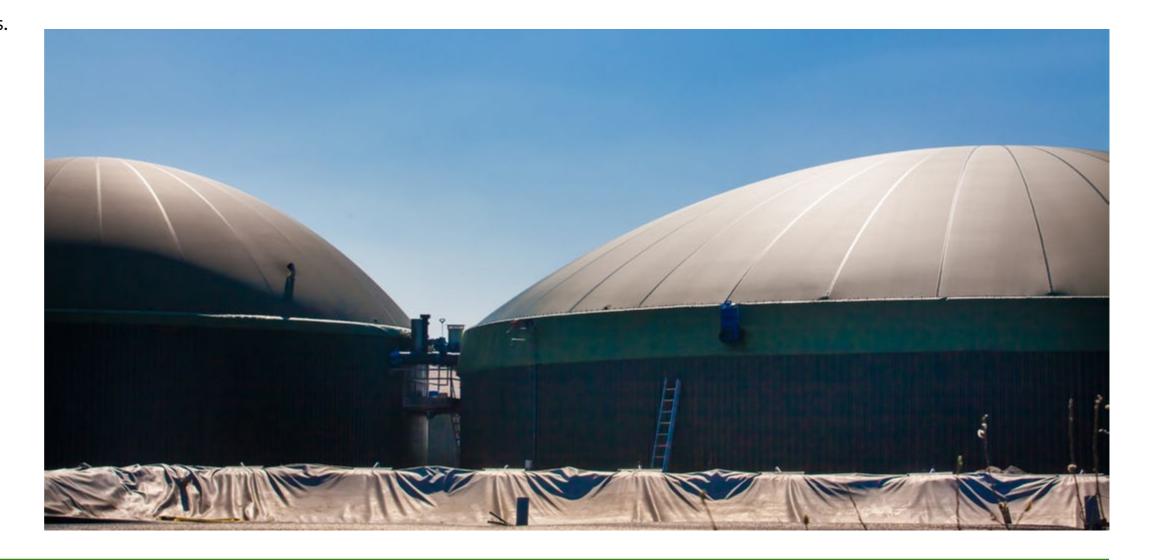


Figure 3. Realised renewable production of the SDE+, SDE and MEP (GJ) in 2012

(102.36 Nm 3 = 1 MWh = 3.6 GJ). Based on production figures submitted to NL Agency before March 1, 2013.



Total overviews

Explanation of table 5

The data do not include projects of which the end date of the subsidy has been reached by March 1, 2013, or withdrawn applications. With waste combustion plants, the total allocated capacity is used. From this capacity, 53% of the production is classified as renewably generated electricity. In the category

biomass <10 MW, the OV-MEP (co-fermentation) applications are also included. The allocated production capacity of the biomass category >50 MW has been omitted. In these so-called 'additional and co-firing projects in power plants' it is not possible to determine the amount of renewable power

because the use of renewable fuels is variable. The allocated maximum subsidisable production of the MEP has been omitted. For the MEP there is no clear maximisation of the subsidisable production.

Table 5. Total overview of subsidy allocations and realisation of renewable electricity (part 1/3)

Reference date: March 1, 2013. The values in the table have been rounded off. The sum of the individual values may therefore differ slightly from the total.

Incentive scheme and category	Sub-category	No. of positively approved subsidy applications	Allocated budget (€ m)		Allocated capacity (MW)	Realised capacity (MW)
Wind energy						
SDE 2008	Onshore wind energy	21	72	1,223	46	46
SDE 2009	Onshore wind energy	58	1,352	16,952	466	36
	Offshore wind energy	3	5,385	33,166	719	-
SDE 2010	Onshore wind energy	70	902	12,740	473	199
SDE+ 2011	Onshore wind energy	12	198	2,932	109	9
SDE+ 2012	Onshore wind energy	1	2	61	2	-
SDE total		165	7,911	67,074	1,816	291
MEP	Onshore wind energy	637	1,824		1,333	1,333
	Offshore wind energy	2	790		228	228
MEP total		639	2,614		1,561	1,561
Total Wind energy		804	10,525		3,377	1,852

Table 5. (part 2/3)

Incentive scheme and category	Sub-category	No. of positively approved subsidy applications	Allocated budget (€ m)	Allocated subsidisable production (GWh)		Realised capacity (MW)
Solar PV						
SDE 2008		4,762	45	128	10	10
SDE 2009		2,459	101	285	22	22
SDE 2010		2,958	66	224	18	17
SDE+ 2011		623	33	695	46	8
SDE+ 2012		107	3	255	17	0
SDE total		10,909	248	1,587	113	56
MEP		521	6		9	9
Total Solar PV		11,430	253		122	65

Hydropower					
SDE 2009	2	0	1	0	0
SDE 2010	1	54	687	12	-
SDE total	3	54	688	12	0
MEP	6	93		24	24
Total hydropower	9	147		36	24

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Table 5. (part 3/3)

Incentive scheme and category	Sub-category	No. of positively approved subsidy applications	Allocated budget (€ m)		Allocated capacity (MW)	Realised capacity (MW)
Biomass - electricity						
SDE 2008	Waste combustion	2	171.4	4,250.00	78	78
	Biomass	4	27.5	420	4	4
SDE 2009	Waste combustion	2	123.7	2,805	49	49
	Biomass	25	516.6	3,960	44	28
SDE 2010	Waste combustion	5	173.2	3,736	79	74
	Landfill gas/biogas from water treatment installations	1	0.5	40	1	1
	Biomass	29	429.3	3,122	33	15
SDE+ 2011	Landfill gas/biogas from water treatment installations	1	0.2	12	0	0
	Biomass	18	243.5	2,386	25	1
SDE+ 2012	Landfill gas/biogas from water treatment installations	1	2.0	81	1	-
SDE total		88	1,688.0	20,811	315	250
(OV-)MEP	Waste combustion	1	59.7		74	74
	Landfill gas	20	10.6		12	12
	Biomass < 10 MW	129	918.4		141	141
	Biomass 10 - 50 MW	6	1,254.6		205	155
	Biomass > 50 MW	6	906.3		-	-
(OV-)MEP total		162	3,149.7		432	382
Total biomass electricity		250	4,837.7		746	631
Total SDE and MEP electricity		12,493	15,763		4,282	2,572

Table 6. Total overview of subsidy allocations and realisation of renewable heat and CHP

Reference date: March 1, 2013. The values in the table have been rounded off. The sum of the individual values may therefore differ slightly from the total. Not all production data of 2012 were received by NL Agency on March 1, 2013. The SDE+ and SDE grant advance payments based on the expected production and provisional correction amounts. Each year an adjustment takes place based on actual production and the final correction amounts.

Incentive scheme and category	Sub-category	No. of positively approved subsidy applications		Allocated subsidisable production (TJ)	•	
SDE+ 2012	Heat extension from waste combustion	4	279.2	68,102	433.1	-
	Biomass	82	560.3	58,048	330.9	77.2
	Geothermal	30	829.0	121,909	345.5	62.8
	Solar thermal	2	0.1	11	0.3	-
Total renewable heat and CHP		118	1,668.6	248,070	1,110	140

Table 7. Total overview of subsidy allocations and realisation of renewable gas

Reference date: March 1, 2013. The values in the table have been rounded off. The sum of the individual values may therefore differ slightly from the total.

Incentive scheme and category Biomass - gas	Sub-category	No. of positively approved subsidy applications		Allocated subsidisable production (Nm³/h m)		Realised capacity (Nm³/h)
SDE 2008	Green gas	1	0	3	40	40
SDE 2009	Green gas	11	236	576	6,783	5,128
SDE 2010	Green gas	9	192	446	4,778	702
SDE+ 2011	Green gas	25	932	1,941	20,730	1,470
	Green gas hub	4	68	178	1,852	-
SDE+ 2012	Green gas	4	38	130	1,470	-
Total biomass gas		54	1,466	3,274	35,652	7,340

Explanation of table 8

The production figures for 2012 refer to the registered production notified to NL Agency before March 1, 2013.

Not all production data of 2012 were received by NL Agency on March 1, 2013. The SDE+ and SDE grant advance payments based on the expected production and provisional correction amounts. Each year an adjustment takes place based on actual production and the final correction amounts.

In waste combustions installations we use the total allocated capacity. From this capacity, 53% of the production is classified as renewably generated electricity.

In the category of biomass <10 MW, OV-MEP (co-fermentation) applications have been included.

Table 8. Total overview of renewable production and cash expenditure for renewable electricity in 2012 (part 1/3)

The values in the table have been rounded off. The sum of the individual values may therefore differ slightly from the total.

Incentive scheme and category	Sub-category	Production in 2012 (MWh)	Cash expenditure 2012 (€ m)
Wind energy			
SDE 2008	Onshore wind energy	88,660	3.7
SDE 2009	Onshore wind energy	94,559	3.4
	Offshore wind energy	-	-
SDE 2010	Onshore wind energy	249,830	11.0
SDE+ 2011	Onshore wind energy	7,193	0.2
SDE+ 2012	Onshore wind energy	-	-
SDE total		440,242	18.3
MEP	Onshore wind energy	3,269,506	226.9
	Offshore wind energy	789,257	78.5
MEP total		4,058,763	305.4
Total Wind energy		4,499,005	323.6

Solar PV		
SDE 2008	4,746	2.4
SDE 2009	13,665	5.9
SDE 2010	8,592	3.2
SDE+ 2011	2,228	0.1
SDE+ 2012	2	-
SDE total	29,233	11.6
MEP	3,187	0.5
Total Solar PV	32,420	12.0

Table 8. Total overview of renewable production and cash expenditure for renewable electricity in 2012 (part 2/3)

Table 8. Total overview of renewab	le production and c	cash expenditure fo	r renewable electric	ity in 2012 (part 3/3)

Incentive scheme and category	Sub-category	Production in 2012 (MWh)	Cash expenditure 2012 (€ m)
Hydropower			
SDE 2009		5	0.0
SDE 2010		-	-
SDE total		5	0.0
MEP		75,117	7.2
Total Hydropower		75,123	7.2

Incentive scheme and category	Sub-category	Production in 2012 (MWh)	Cash expenditure 2012 (€ m)
Biomass - electricity			
SDE 2008	Waste combustion	245,606	5.4
	Biomass	15,781	0.5
SDE 2009	Waste combustion	184,668	4.1
	Biomass	123,743	13.3
SDE 2010	Waste combustion	226,786	3.8
	Landfill gas/biogas from water treatment installations	1,274	-
	Biomass	80,707	9.2
SDE+ 2011	Landfill gas/biogas from water treatment installations	-	0.0
	Biomass	4,389	0.5
SDE+ 2012	Landfill gas/biogas from water treatment installations	-	-
SDE total		882,954	36.7
(OV-)MEP	Waste combustion	251,600	8.5
	Landfill gas	34,818	0.7
	Biomass < 10 MW	605,896	59.9
	Biomass 10 - 50 MW	855,733	77.9
	Biomass > 50 MW	2,664,240	159.5
(OV-)MEP total		4,412,287	306.5
Total biomass electricity		5,295,241	343.3

Total SDE and MEP electricity	9,901,789	686.2
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Table 9. Total overview of renewable production and cash expenditure for renewable gas in 2012

The values in the table have been rounded off. The sum of the individual values may therefore differ slightly from the total. Not all production data of 2012 were received by NL Agency on March 1, 2013. The SDE+ and SDE grant advance payments based on the expected production and provisional correction amounts. Each year an adjustment takes place based on actual production and the final correction amounts.

		Production in 2012 (€m Nm³)	Cash expenditure 2012 (€ m)
Biomass - gas			
SDE 2008	Green gas	0.1	-
SDE 2009	Green gas	15.5	4.6
SDE 2010	Green gas	5.5	1.1
SDE+ 2011	Green gas	1.2	0.8
	Green gas hub	-	-
SDE+ 2012	Green gas	-	_
Total biomass gas		22.3	6.5

Table 10. Total overview of renewable production and cash expenditure for renewable heat and CHP in 2012

Incentive scheme and category	Sub-category	Production in 2012 (GJ)	Cash expenditure 2012 (€ m)
SDE+ 2012	Heat extension from waste combustion	-	-
	Biomass	10,684	1.1
	Geothermal	< 0.1	0.1
	Solar thermal	-	-
Total renewable heat and CHP		10,684	1.3

Table 11. SDE budget ceiling per subsidy year (part 1/3)

The values in the table have been rounded off. The sum of the individual values may therefore differ slightly from the total.

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

Table 11. SDE budget ceiling per subsidy year (part 2/3)

Year	Category	Published budget (€ m)
2009	Renewable electricity	
	Wind energy ≥ 6 MW on land	741.0
	Wind energy ≥ 3 MW on water	546.0
	Offshore wind energy	5,384.8
	Onshore wind energy	1,258.1
	Solar PV small (1.0 - 15 kWp)	86.,5
	Solar PV large (15 - 100 kWp)	56.5
	Waste combustion	158.0
	Landfill gas or biogas from water treatment installations	7.0
	Biomass	625.0
	Hydropower < 5 m	60.0
	Hydropower > 5m	15.0
	Renewable gas	
	Landfill gas or biogas from water treatment installations	15.0
	Biomass	243.0
	Total SDE 2009	9,195.9

Table 11. SDE budget ceiling per subsidy (part 3/3)

Year	Category	Published budget (€ m)
2010	Renewable electricity	
	Onshore wind energy	937.0
	Solar PV small (1.0 - 15 kWp)	69.0
	Solar PV large (15 - 100 kWp)	24.0
	Waste combustion	238.0
	Landfill gas or biogas from water treatment installations	13.0
	Biomass	400.0
	Hydropower	63.0
	СНР	168.0
	Renewable gas	
	Landfill gas or biogas from water or treatment installations	24.0
	Biomass	190.0
	Total SDE 2010	2,126.0

Table 12. SDE+ budget ceiling per subsidy year

Year	Category	Published budget (€ m)
2011	Renewable electricity	500
	Renewable gas	1,000
	Total SDE+ 2011	1,500
2012	Total SDE+ 2012	1,700

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CO ₂ units used		
Factor	Name	Symbol
10º	ton	ton
10 ³	kiloton	kton
106	megaton	Mton
10 ⁹	gigaton	Gton

Energy units (kilowatt hour)		
Factor	Name	Symbol
10³	kilowatt hour	kWh
106	megawatt hour	MWh
10 ⁹	gigawatt hour	GWh
1012	terawatt hour	TWh

Energy units (Joule)		
10 ⁹	gigajoule	GJ
1012	terajoule	TJ
1015	petajoule	PJ

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The NL Energy and Climate Change division strengthen the community by working on energy and climate solutions for the future.

