





# About the SDE+

## General

The SDE+ is an incentive for the production of renewable energy in the Netherlands. Renewable energy is generated from clean, inexhaustible sources. This is why it is called 'renewable energy'.

## What is the SDE+?

The SDE+ is an operating (feed-in-tariff) subsidy. In other words: producers receive a subsidy for the production of renewable energy, and not for the acquirement of production installations, such as with investment subsidies. The SDE+ is aimed at companies and (non-profit) organisations that would like to produce renewable energy. The cost price of renewable energy is higher than that of fossil energy. Likewise, the production of renewable energy is not always profitable.

The SDE+ compensates for the difference between the cost price of fossil energy and that of renewable energy, over a period of 5, 12 or 15 years, depending on the relevant technology. This difference is called the unprofitable component. The subsidy amount depends on the technology used and the amount of renewable energy produced. The SDE+ has one budget for all categories and is opened in phases. The 'less expensive' forms of technology may apply for the

subsidy during the first phase. The subsidy amount increases per phase. It is also possible to apply for a so-called free category, in certain cases. In 2013, the SDE+ will be open from 4 April at 9.00 hours until 19 December 2013 at 17.00 hours.

## Pillars of the SDE+ are

1. One budget ceiling
2. Phased opening
3. A maximum base amount
4. A free category

## Which renewable energy sources does the SDE+ apply to?

In 2013, the SDE+ is opened for the production of:

- Renewable electricity
- Renewable gas
- Renewable heat or a combination of renewable heat and power (CHP)

For energy from:

[Biomass](#) [Geothermal](#) [Hydro](#) [Wind](#) [Solar](#)

The technologies that come into consideration for the SDE+ subsidy are listed in the tab pages below.

## To whom does the SDE+ apply?

Primary target groups for the SDE+ are companies, organisations, and non-profit organisations. The national government is excluded from participation.



# New in the SDE+ 2013

## The most important changes compared to 2012

- An extra phase of 8 Euro cent/kWh; thus the scheme knows six phases in 2013, compared to five phases in 2012.
- Wind differentiation through an increased maximum number of full load hours in the free category for onshore wind energy.
- An extra category for geothermal heat with a depth of at least 2700 metres.
- Upper limit for the eligible annual geothermal production per installation.
- For fermenters the same base amount applies for solo and hub installations.
- The use of an existing boiler and gas engine is allowed for fermentation, and the same applies to boilers for liquid biomass.
- For installations with an existing SDE or SDE+ decision, the renewable electricity produced is also eligible if used for own consumption (except for the production installation itself).
- New categories are: renovation of existing hydro-electric power stations with at least a new turbine, renewable gas production with waste water and sewage treatment plants with thermal pressure hydrolysis, manure mono-fermenters for renewable gas and CHP.

## The SDE+ contribution

The cost price for the production of renewable energy is recorded in the base amount for the technology. The earnings for (fossil) energy are recorded in the correction amount.

The SDE+ compensates the unprofitable component or the difference between the cost price for renewable energy and the earnings for (fossil) energy:

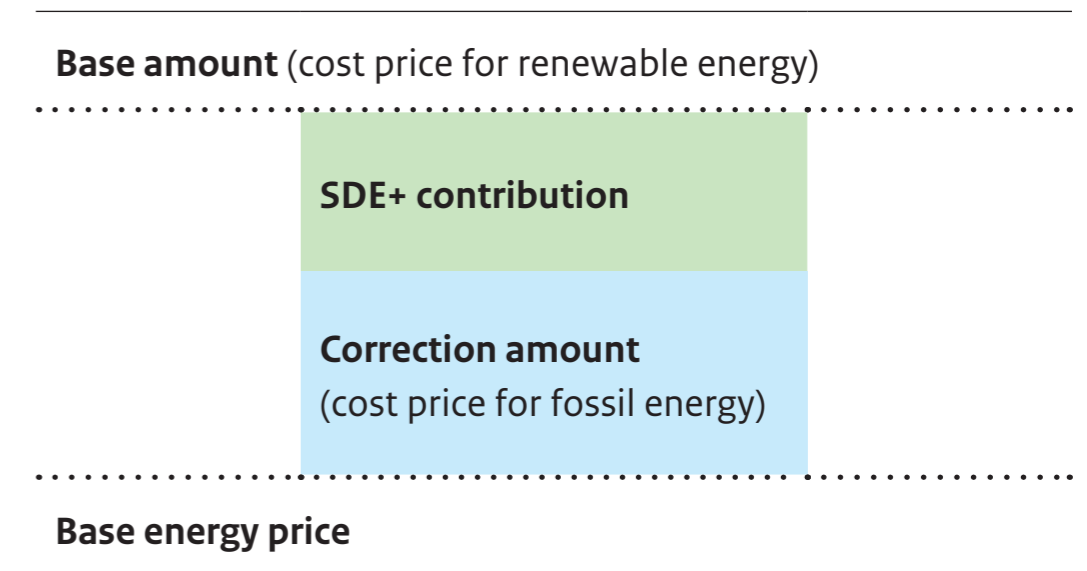
$SDE+ \text{ contribution} = \text{base amount} - \text{correction amount}$ .

The amount of the SDE+ contribution is accordingly dependent on the evolution of the energy price. With a higher energy price you will receive less SDE+, while receiving more from your energy purchaser. With a lower energy price you will receive more SDE+, while receiving less from your energy purchaser.

The subsidy granted to you by NL Agency in the decision, is the maximum subsidy over the whole period of the subsidy (5, 12 or 15 years). This maximum is determined based on the indicated capacity and the maximum number of full load hours for the technology. The base energy price is used to determine the decision and budget claim. The base energy price is the lower limit for the correction amount. The correction amount cannot be below this amount. The maximum subsidy will have been reached when the correction amount is equal to the base

energy price. The final subsidy payments are calculated per year based on the amount of energy produced and the actual energy price. The subsidy applies to a maximum number of full load hours and has a maximum period, depending on the technology.

$SDE+ \text{ contribution} = \text{base amount} - \text{correction amount}$



Visit [the SDE+ website](#) for more information concerning the calculation of the SDE+ subsidy.

## Terms

### Full load hours

The maximum number of production hours in full load (= nominal capacity) per year for which the subsidy is paid.

### Latest term for operation

The period (after the decision) within which the installation must produce energy. Decisions for installations with an electricity production capacity greater than 125 MWe must be submitted for approval to the European Commission, in connection with government support. These decisions will only take effect after approval from the European Commission. In these cases, the latest term for operation and contract obligation (of one year), will only start after approval from the Commission.

### Subsidy period

The maximum period (in years) in which you can receive the subsidy.

## Calculation example SDE+ contribution

New 3 MWe hydro-electric power station and a drop height  $\geq 50$  cm

Base amount from phase 5	€ 11.8 ct/kWh
Preliminary correction amount for 2013	€ 4.8 ct/kWh
Preliminary contribution SDE+ 2013 from phase 5	€ 11.8 – 4.8 = 7.0 ct/kWh
Maximum number of eligible full load hours	7,000
Maximum subsidy period	15 years
Maximum annual production eligible for a subsidy for new 3 MWe hydro-electric power station	3 * 7,000 = 21,000 MWh
Preliminary SDE+ contribution for 2013 when applied for from phase 5	70 * 21,000 = € 1,470,000

The SDE+ contribution shown above is a Preliminary contribution, based on the preliminary correction amount for 2013. The Preliminary correction amount will be finalised in the calendar year following the year of production, with an adjustment based on already paid out advance sums. The correction amount is again established each year (Preliminary and final) on the basis of the evolution of the energy price. The base amount determined for the 2013 SDE+ applies for the entire period of the SDE+ subsidy.

# Biomass



In 2013, the SDE+ will support the production of energy from biomass. You may apply for a subsidy for fermentation of manure and co-fermentation with manure, all-purpose fermentation, thermal conversion, fermentation of effluent and sewer water purification, and heat from existing waste incineration and fermenters. It is also possible to apply for a subsidy for an extended life-time for installations that were subsidised before from within MEP (the subsidy scheme for Environmental quality of electricity production).

## 1. Which installations come into consideration for the SDE+ subsidy in 2013?

### **Fermentation of manure and co-fermentation with manure**

Renewable gas, heat and/or electricity are subsidised as end products. It is also possible to apply for a subsidy for an extended life-time for installations that were subsidised before from within the subsidy scheme for fermentation installations (OV)MEP. The installation should be at least 8.5 years old at the moment of application for the subsidy. There is also the possibility for extension of the subsidy for heat, for (OV)MEP installations that have not yet reached the end of their subsidy period. This applies to the fermentation of manure and the fermentation of agricultural vegetable matter (cat 1. A-G1 in the Fertilizer Act), such as the fermentation of corn, for example.

A new category has been defined for mono-fermentation, where the subsidy applies for utilisation in CHP, as well as for upgrading to a natural gas quality.

### **All-purpose fermentation**

Renewable gas, heat and/or electricity are subsidised as end products. In 2012, the first decisions were issued with regard to the MEP subsidy (Environmental quality of electricity production) for extended life-time. Owners of these installations are given the option to switch to renewable gas

or heat. In 2013 it is also possible to apply for a subsidy for an extended life-time for installations that were subsidised before from within the (OV)MEP. The installation should be at least 8.5 years old at the moment of application for the subsidy. In addition, it is possible for (OV)MEP installations and biomass installations with SDE subsidies from 2008, to obtain a supplement for heat production.

### **Thermal conversion**

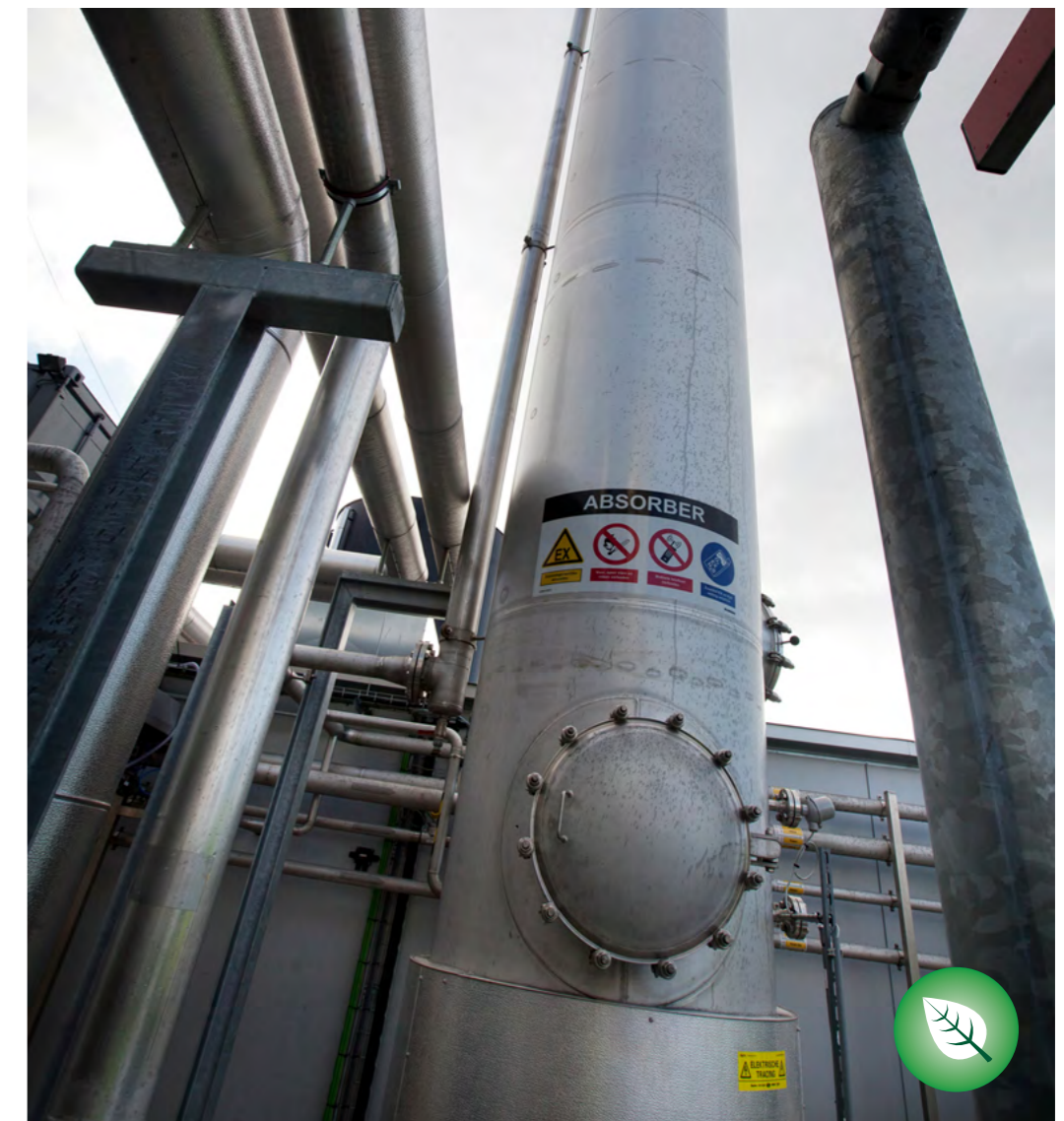
Renewable gas, heat and/or electricity are subsidised as end products. In 2012, the first decisions were issued with regard to the extended life-time from within MEP (the subsidy scheme for Environmental quality of electricity production). In 2013 it is also possible to apply for a subsidy for an extended life-time for installations that were subsidised before from within the (OV)MEP. The installation should be at least 8.5 years old at the moment of application for the subsidy.

### **Waste incineration**

A category was also opened in 2013 for waste incineration. This provides waste incineration facilities with the option of modifying their installation so that heat can be derived and applied in a useful way. It should, in this case, involve installations that do not receive (have not received) MEP or SDE(+) subsidies.

### **Waste water treatment installation / Sewage treatment installation**

In 2013, water purification installations with thermal pressure hydrolysis will be eligible for the SDE+ subsidy. The text is formulated in such a way that even those existing purification installations that are already equipped with a gas engine will be eligible. In addition, a category was opened for the production of renewable gas. This only involves solo installations.



## 2. Characteristics and changes compared to 2012

### **Fermentation of manure**

Installations that add less than 5% co-products for the fermentation of manure will be able to apply for subsidy in the new fermentation category for more than 95% animal manure. ECN has calculated a higher base amount for this type of installation, compared to that for co-fermentation of manure. This higher base amount will only be reached in phase 5. If you would like to apply for subsidy for the fermentation of manure category in phase 1 through 4, you can also apply for subsidy for co-fermentation: you will then have more freedom in terms of the products that can be utilised.

### **Fermentation of vegetable matter (Category 2 Fertilizer Act)**

Fermentation installations for vegetable matter, such as fermenters for corn, for example, that receive the (OV)MEP subsidy, can receive an extra subsidy for heat expansion. They may be eligible for this under the same conditions (rate and full load hours) as those that were already formulated in 2012 for installations for the fermentation of manure. The input should comply with category 2, Appendix Aa, under IV of the Fertilizer Act.

### **Subsidy for electricity regarding own consumption**

Installations for which a subsidy has been granted under SDE 2008-2012, will also receive a subsidy for own consumption, as from 1 February 2013. If CertiQ also hands in certificates for electricity that is not fed in the national network, you will not have to undertake any further action. NL Agency will, in that case, also include in its calculation for the subsidy to be paid out, the electricity for which certificates were handed in with the indication 'non-network delivery'.

### **Sustainability requirements for liquid biomass**

In the case of thermal conversion of liquid biomass (boiler or CHP), the producer must prove the sustainability, after the production year, indicating that the liquid biomass which was used, complies with the sustainability criteria of the European Commission. The producer will demonstrate this by means

of certificates issued by a certification system approved by the European Commission: [http://ec.europa.eu/energy/renewables/biofuels/sustainability\\_schemes\\_en.htm](http://ec.europa.eu/energy/renewables/biofuels/sustainability_schemes_en.htm)

### **Installations for fermentation**

In the case of new installations for fermentation, or the expansion of existing installations for fermentation, the fermenter should be new. The gas engine, boiler or upgrading installation may also consist of existing equipment.

### **Hubs**

The same rate will apply in 2013 for solo and hub installations. For new applications, there is no longer a need to differentiate between hubs and non-hubs for biomass fermenters. Only in the case of waste water and sewage treatment plants will hub structures not be eligible for a subsidy.







### 3. Phasing and rates for Biomass

#### Renewable heat and CHP

	Phase 1 4 Apr 9.00 to 13 May 17.00	Phase 2 13 May 17.00 to 17 Jun 17.00	Phase 3 17 Jun 17.00 to 2 Sep 17.00	Phase 4 2 Sep 17.00 to 30 Sep 17.00	Phase 5 30 Sep 17.00 to 4 Nov 17.00	Phase 6 4 Nov 17.00 to 19 Dec 17.00	Base energy price	Preliminary correction amount for 2013	Max. full load hours per year	Max. subsidy period (years)	Latest term for operation
<b>Biomass: Renewable heat and CHP</b>	<b>Base amount per phase (€ / GJ)</b>						<b>(€ / GJ)</b>				
<b>All-purpose fermentation heat</b>											
• All-purpose fermentation	14.7	14.7	14.7	14.7	14.7	14.7	6.4	9.5	7000	12	4
• Extended life-time	14.2	14.2	14.2	14.2	14.2	14.2	3.7	5.7	7000	12	1.5
• Heat expansion	6.3	6.3	6.3	6.3	6.3	6.3	3.7	5.7	7000	5	1.5
<b>All-purpose fermentation CHP</b>											
• All-purpose fermentation	19.444	22.222	25.000	26.0	26.0	26.0	9.4	10.3	5739	12	4
• Extended life-time	19.444	22.222	22.5	22.5	22.5	22.5	9.5	10.3	5749	12	1.5
<b>Fermentation of manure heat</b>											
• (Co-) fermentation	19.444	20.6	20.6	20.6	20.6	20.6	6.4	9.5	7000	12	4
• Extended life-time	17.1	17.1	17.1	17.1	17.1	17.1	3.7	5.7	7000	12	1.5
• Heat expansion	8.2	8.2	8.2	8.2	8.2	8.2	0	0	4000	5	1.5
<b>Vegetable matter</b>											
• Heat expansion	8.2	8.2	8.2	8.2	8.2	8.2	0	0	4000	5	1.5
<b>Fermentation of manure CHP</b>											
• (Co-) fermentation	19.444	22.222	25.000	30.556	31.1	31.1	9.4	10.3	5732	12	4
• Extended life-time	19.444	22.222	25.000	26.4	26.4	26.4	9.5	10.3	5749	12	1.5
• Mono-fermentation	19.444	22.222	25.000	30.556	36.111	37.1	9.4	10.3	5741	12	4
<b>Thermal conversion heat</b>											
• Heat expansion	6.3	6.3	6.3	6.3	6.3	6.3	3.7	5.7	7000	5	1.5
• Boiler liquid biomass > 0.5 MWth	19.444	21.7	21.7	21.7	21.7	21.7	6.4	9.5	7000	12	4
• Boiler solid biomass > 0.5 MWth	11.5	11.5	11.5	11.5	11.5	11.5	6.4	9.5	7000	12	4
<b>Thermal conversion CHP</b>											
• Extended life-time	18.7	18.7	18.7	18.7	18.7	18.7	7.1	8.4	4429	12	1.5
• Biomass >10 MWe and ≤100 MWe	19.444	21.8	21.8	21.8	21.8	21.8	5.2	6.9	7500	12	4
• Biomass ≤ 10 MWe	19.444	22.222	25.000	30.556	36.111	40.9	6.5	7.9	4241	12	4



Renewable heat and CHP *Continued from page 9*

	Phase 1 4 Apr 9.00 to 13 May 17.00	Phase 2 13 May 17.00 to 17 Jun 17.00	Phase 3 17 Jun 17.00 to 2 Sep 17.00	Phase 4 2 Sep 17.00 to 30 Sep 17.00	Phase 5 30 Sep 17.00 to 4 Nov 17.00	Phase 6 4 Nov 17.00 to 19 Dec 17.00	Base energy price	Preliminary correction amount for 2013	Max. full load hours per year	Max. subsidy period (years)	Latest term for operation
<b>Biomass: Renewable heat and CHP</b>	Base amount per phase (€ / GJ)						(€ / GJ)				
<b>Existing waste incineration installation</b> • Expansion	11.7	11.7	11.7	11.7	11.7	11.7	6.9	10.6	3780	5	1.5
	Base amount per phase (€ / kWh)						(€ / kWh)				
<b>Waste water treatment / Sewage treatment</b> • Thermal pressure hydrolysis	0.070	0.080	0.090	0.096	0.096	0.096	0.047	0.048	8000	12	4

Renewable gas

	Phase 1 4 Apr 9.00 to 13 May 17.00	Phase 2 13 May 17.00 to 17 Jun 17.00	Phase 3 17 Jun 17.00 to 2 Sep 17.00	Phase 4 2 Sep 17.00 to 30 Sep 17.00	Phase 5 30 Sep 17.00 to 4 Nov 17.00	Phase 6 4 Nov 17.00 to 19 Dec 17.00	Base energy price	Preliminary correction amount for 2013	Max. full load hours per year	Max. subsidy period (years)	Latest term for operation
<b>Biomass: Renewable gas</b>	Base amount per phase (€ / Nm <sup>3</sup> )						(€ / Nm <sup>3</sup> )				
<b>All-purpose fermentation</b> • All-purpose fermentation • Extended life-time	0.4828 0.4828	0.5517 0.5517	0.594 0.567	0.594 0.567	0.594 0.567	0.594 0.567	0.170 0.170	0.259 0.259	8000 8000	12 12	4 1.5
<b>Fermentation of manure</b> • (Co-) fermentation • Extended life-time • Mono-fermentation	0.4828 0.4828 0.4828	0.5517 0.5517 0.5517	0.6207 0.6207 0.6207	0.740 0.656 0.7586	0.740 0.656 0.836	0.740 0.656 0.836	0.170 0.170 0.170	0.259 0.259 0.259	8000 8000 8000	12 12 12	4 1.5 4
<b>Biomass gasification</b>	0.4828	0.5517	0.6207	0.7586	0.8966	1.0345	0.170	0.259	7500	12	4
<b>Waste water treatment / Sewage treatment solo</b>	0.312	0.312	0.312	0.312	0.312	0.312	0.170	0.259	8000	12	4

## 4. Biomass calculation examples



Calculation example SDE+ contribution – Thermal conversion > 10 MWe and ≤ 100 MWe (cogeneration)

Base amount phase 1 (free category)	19.444 €/GJ
Base amount from phase 2	21.8 €/GJ
Preliminary correction amount for 2013	6.9 €/GJ
Preliminary SDE+ contribution for 2013 phase 1	$19.444 - 6.9 = 12.544$ €/GJ
Preliminary SDE+ contribution for 2013 from phase 2	$21.8 - 6.9 = 14.9$ €/GJ
Maximum number of eligible full load hours	7,500
Total nominal capacity	15 MWe + 45 MWth = 60 MW
Maximum eligible annual production at an installation with a capacity of 60 MW	$60 * 7,500 = 450,000$ MWh (corresponds with) 1,620,000 GJ
Electric capacity percentage: $15/60 * 100\% = 25\%$ . The electric capacity percentage is greater than 10% and the CHP therefore suffices.	
Annual production of heat and electricity for which you are applying for a subsidy: 1,500,000 GJ. The annual production for which you are applying for a subsidy is lower than the maximum annual production to be subsidised. In this case, the subsidy is granted for a maximum of 1,500,000 GJ/year.	
<b>Preliminary SDE+ contribution for 2013 when applied for phase 1</b>	<b><math>12.544 * 1,500,000 = € 18,816,000,-</math></b>
<b>Preliminary SDE+ contribution for 2013 when applied from phase 2</b>	<b><math>14.9 * 1,500,000 = € 22,350,000,-</math></b>

Calculation example SDE+ contribution – All-purpose fermentation renewable gas

Base amount phase 1 (free category)	48.28 €/Nm <sup>3</sup>
Base amount from phase 3	59.4 €/Nm <sup>3</sup>
Preliminary correction amount for 2013	25.9 €/Nm <sup>3</sup>
Preliminary SDE+ contribution for 2013 phase 1	$48.28 - 25.9 = 22.38$ €/Nm <sup>3</sup>
Preliminary SDE+ contribution for 2013 from phase 3	$59.2 - 25.9 = 33.3$ €/Nm <sup>3</sup>
Maximum number of eligible full load hours	8,000
Maximum eligible annual production at an installation with a capacity of 500 Nm <sup>3</sup> /hour	$500 * 8,000 = 4,000,000$ Nm <sup>3</sup>
<b>Preliminary SDE+ contribution for 2013 when applied for phase 1</b>	<b><math>0.2238 * 4,000,000 = € 895,200,-</math></b>
<b>Preliminary SDE+ contribution for 2013 when applied from phase 3</b>	<b><math>0.333 * 4,000,000 = € 1,332,000,-</math></b>

Calculation example SDE+ contribution – Boiler solid biomass

Base amount from phase 1	11.5 €/GJ
Preliminary correction amount for 2013	9.5 €/GJ
Preliminary SDE+ contribution for 2013 from phase 1	$11.5 - 9.5 = 2.0$ €/GJ
Maximum number of eligible full load hours	7,000
Maximum eligible annual production at an installation with a thermal capacity of 2 MWth: $2 * 7,000 = 14,000$ MWh (corresponds with) 50,400 GJ	
Annual production of an installation with a thermal capacity of 2 MWth, for which you are applying for a subsidy: 53,280 GJ. The annual production for which you are applying for a subsidy is higher than the maximum annual production to be subsidised. In this case, the subsidy is granted for a maximum of 50,400 GJ/year.	
<b>Preliminary SDE+ contribution for 2013 when applied for phase 1</b>	<b><math>2.0 * 50,400 = € 100,800,-</math></b>

# Geothermal



In 2013, you will be able to call on the SDE+ scheme for installations that use geothermal heat as an energy source. Subsidies are available for geothermal heat and geothermal in combination with heat and power. This year, an upper limit will be applicable for the eligible annual production per installation.

## 1. Which installations come into consideration for the SDE+ subsidy in 2013?

There are three geothermal categories in the SDE+ for 2013:

- Geothermal heat
- Geothermal heat with a depth of at least 2700 metres
- Geothermal in combination with heat and power



## 2. Characteristics and changes compared to 2012

Compared to 2012, an upper limit will apply to the maximum eligible production per production installation. An extra category with a higher maximum eligible production is in place for deeper geothermal heat (deeper than 2700 metres). This is indicated in the chart below.

Category	Maximum eligible annual production
Geothermal heat	245,520 GJ
Geothermal heat with a depth $\geq 2700$ m	356,400 GJ
Geothermal heat/power	178,129 GJ

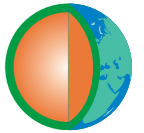
This implies, for installations with a greater annual production than the maximum eligible annual production, that the excess production share will not be subsidised.

The nominal geothermal capacity should be determined at a probability of at least 50% (p50).

The calculation of the nominal capacity for a heat and power installation is based on the sum of the nominal heat capacity and electrical capacity, in which case both do not need to occur at the same time; refer to the example below.

### Example

Let us say that geothermal heat can be utilised to the utmost during summer months for the production of electricity, such as, for example, in an ORC (organic rankine cycle). The electric capacity of the ORC is 1 MWe. The simultaneous useful heat capacity is 0.5 MWth. During winter months, the steam turbine can be switched off and all heat produced can be utilised in a useful manner as heat with a capacity of 4 MWth. The total nominal capacity of the CHP is therefore  $1 + 4 = 5$  MW.



### 3. Phasing and rates for Geothermal

	Phase 1 4 Apr 9.00 to 13 May 17.00	Phase 2 13 May 17.00 to 17 Jun 17.00	Phase 3 17 Jun 17.00 to 2 Sep 17.00	Phase 4 2 Sep 17.00 to 30 Sep 17.00	Phase 5 30 Sep 17.00 to 4 Nov 17.00	Phase 6 4 Nov 17.00 to 19 Dec 17.00	Base energy price	Preliminary correction amount for 2013	Max. full load hours per year	Max. subsidy period (years)	Latest term for operation
<b>Geothermal</b>	Base amount per phase (€ / GJ)						(€ / GJ)				
<b>Geothermal CHP</b> • ≥ 500 m deep, max 178,129 GJ/year	19.444	22.222	24.0	24.0	24.0	24.0	5.5	7.1	4158	15	4
<b>Geothermal heat</b> • ≥ 500 m deep, max 245,520 GJ/year • ≥ 2700 m deep, max 356,400 GJ/year	11.8 12.8	11.8 12.8	11.8 12.8	11.8 12.8	11.8 12.8	11.8 12.8	3.7 3.7	5.7 5.7	5500 5500	15 15	4 4

### 4. Geothermal calculation example

Calculation example SDE+ contribution – Geothermal deeper than 2700 metres (heat)

Base amount from phase 1	12.8 €/GJ
Preliminary correction amount for 2013	5.7 €/GJ
Preliminary SDE+ contribution for 2013 from phase 1	$12.8 - 5.7 = 7.1$ € / GJ
Maximum number of eligible full load hours	5,500
Maximum eligible annual production at an installation with a capacity of 10 MW	$10 * 5,500 = 55,000$ MWh (corresponds with) 198,000 GJ
Maximum eligible annual production per production installation for the geothermal category deeper than 2700 metres	356,400 GJ
Annual production for which you are applying for a subsidy: 198,000 GJ. In this case, the subsidy is granted for a maximum of 198,000 GJ/year.	
<b>Preliminary SDE+ contribution for 2013 when applied from phase 1</b>	<b><math>7.1 * 198,000 = € 1,405,800,-</math></b>

# Hydro



In 2013, the SDE+ will also subsidise installations that generate hydro-power, free flowing energy and power through osmosis. Contrary to the past, a distinction will no longer be made between hydro-electric power stations with a drop of more or less than five metres. The 'renovation of existing hydro-electric power stations' category is new in the SDE+ 2013.

## 1. Which installations come into consideration for the SDE+ subsidy in 2013?

### **Hydro-power**

- New hydro-electric power stations with a drop  $\geq 50$  cm
- Renovation of existing hydro-electric power stations with new turbines and a drop  $\geq 50$  cm

### **Free flowing energy**

Water turbines that use tidal power, for example, with a drop  $< 50$  cm. In all cases, it involves energy from water which is not pumped especially for the purpose of generating energy.

### **Osmosis**

A production installation with which renewable electricity is produced through osmosis; by means of the different salt concentration of two bodies of water.

## 2. Characteristics and changes compared to 2012

Contrary to previous years, a distinction is no longer made between hydro-electric power stations with a drop of more or less than five metres. These categories have been combined. The renovation of existing hydro-electric power stations is a new category in the SDE+ 2013. An eligibility condition for this subsidy is that all turbines should be replaced with new ones in existing structures. The other components do not have to be new.







### 3. Phasing and rates for Hydro

	Phase 1 4 Apr 9.00 to 13 May 17.00	Phase 2 13 May 17.00 to 17 Jun 17.00	Phase 3 17 Jun 17.00 to 2 Sep 17.00	Phase 4 2 Sep 17.00 to 30 Sep 17.00	Phase 5 30 Sep 17.00 to 4 Nov 17.00	Phase 6 4 Nov 17.00 to 19 Dec 17.00	Base energy price	Preliminary correction amount for 2013	Max. full load hours per year	Max. subsidy period (years)	Latest term for operation
<b>Water</b>	Base amount per phase (€ / kWh)						(€ / kWh)				
<b>Hydro-electric power station</b> • New drop ≥ 50 cm • Renovation drop ≥ 50 cm	0.070 0.062	0.080 0.062	0.090 0.062	0.110 0.062	0.118 0.062	0.118 0.062	0.047 0.047	0.048 0.048	7000 4300	15 15	4 4
<b>Free flowing energy drop &lt; 50 cm</b>	0.070	0.080	0.090	0.110	0.130	0.150	0.047	0.048	2800	15	4
<b>Osmosis</b>	0.070	0.080	0.090	0.110	0.130	0.150	0.047	0.048	8000	15	4

### 4. Hydro-power calculation example

Calculation example SDE+ contribution – Renovation of 12 MW hydro-electric power station and a drop ≥ 50 cm

Base amount from phase 1	6.2 €ct/kWh
Preliminary correction amount for 2013	4.8 €ct/kWh
Preliminary SDE+ contribution for 2013 from phase 1	6.2 – 4.8 = 1.4 €ct/kWh
Maximum number of eligible full load hours	4,300
Maximum eligible annual production for new 12 MW hydro-electric power station: 12 * 4,300 = 51,600 MWh	
<b>Preliminary SDE+ contribution for 2013 when applied from phase 1</b>	<b>14 * 51,600 = € 722,400</b>

# Wind



In 2013, you can also apply for the SDE+ subsidy for wind turbines: for onshore wind energy, wind in a lake and offshore wind energy. The number of eligible full load hours for onshore wind energy in the free category is higher this year, compared to last year.

## 1. Which installations come into consideration for the SDE+ subsidy in 2013?

### Onshore wind energy

- Turbines with a nominal capacity < 6 MW
- Turbines with a nominal capacity ≥ 6 MW

### Wind in a lake

Turbines with their foundation in a lake of at least 1 km<sup>2</sup>, such as in IJsselmeer or in the Zeeland waters, for example.

### Offshore wind energy

Turbines in the territorial waters or in the Dutch Exclusive Economic Zone.



## 2. Characteristics and changes compared to 2012

### Wind factor

The 'wind factor' is applied in the SDE+. This is done to prevent the producer from receiving less in subsidy payments over the entire period, compared to that which is necessary for profitable operation of the project. In an extreme year, the wind yield can deviate from the average expected wind yield, by up to 20%. The SDE+ subsidy is paid out over a maximum number of full load hours per year. In a poor wind year, a wind turbine operator will receive less in subsidy payments. The operator will not be able to compensate for this during a good year, because an upper limit is in place for the subsidy. The subsidy is therefore paid out at a maximum of 80% of the full load hours.

With the establishment of the base amount, the calculated base amount is multiplied by a correction factor of 1.25 (= 1/80%), the so-called 'wind factor'. This ensures that operators do not receive a lower subsidy amount with this adjusted maximum of 80%. The same applies to the free category. This adjustment is also applied in the establishment of the base electricity price and with the annual establishment of the correction amount. The wind factor applies to the wind categories and 'banking' is not allowed in this case.

In the SDE+, subsidies will be granted in the order in which (complete) applications were received. If multiple applications are received on the same day, NL Agency will grant the subsidies, starting with the lowest base amount. In the case of wind, the classification will take the base amount into consideration, without implementation of the wind factor. As a result, wind projects will not be disadvantaged in this classification, compared to those technologies without a wind factor.

### Higher number of full load hours in the free category for onshore wind energy

Wind differentiation is new in 2013. This implies that a distinction will be made through a higher number of full load hours in the free category for onshore wind energy. The number of full load hours with which a windmill can produce per year, depends to a great extent on the location of the windmill. Windmills in windy locations run for more full load hours and therefore require a lower base amount. For this reason, the number of full load hours for onshore wind energy is differentiated in the various free categories: a higher base amount is accompanied by a lower number of full load hours, and vice versa. This form of differentiation is not applied to 'wind in a lake' or 'offshore wind', because it is not likely that these will yield more full load hours than the reference installation. The 'offshore wind' category will only be considered for subsidy in the free category.



### 3. Phasing and rates for Wind

	Phase 1 4 Apr 9.00 to 13 May 17.00	Phase 2 13 May 17.00 to 17 Jun 17.00	Phase 3 17 Jun 17.00 to 2 Sep 17.00	Phase 4 2 Sep 17.00 to 30 Sep 17.00	Phase 5 30 Sep 17.00 to 4 Nov 17.00	Phase 6 4 Nov 17.00 to 19 Dec 17.00	Base energy price	Preliminary correction amount for 2013	Max. subsidy period (years)	Latest term for operation
<b>Wind</b>	<b>Base amount per phase (€ / kWh)</b>						<b>(€ / kWh)</b>			
<b>Onshore wind &lt; 6 MW</b> (max. full load hours)	0.0875 (2640)	0.1000 (2240)	0.1125 (1920)	0.119 (1760)	0.119 (1760)	0.119 (1760)	0.054	0.055	15	4
<b>Onshore wind ≥ 6 MW</b> (max. full load hours)	0.0875 (2880)	0.1000 (2880)	0.1125 (2504)	0.116 (2400)	0.116 (2400)	0.116 (2400)	0.054	0.055	15	4
<b>Wind in a lake</b> (max. full load hours)	0.0875 (2560)	0.1000 (2560)	0.1125 (2560)	0.1375 (2560)	0.153 (2560)	0.153 (2560)	0.054	0.055	15	4
<b>Offshore wind</b> (max. full load hours)	0.0875 (3200)	0.1000 (3200)	0.1125 (3200)	0.1375 (3200)	0.1625 (3200)	0.1875 (3200)	0.054994	0.055570	15	5

**Note:** A wind turbine that complies with the description for ‘wind in a lake’, also complies with the description for ‘onshore wind’. The ‘onshore wind’ category does, however, have more eligible production hours than the ‘wind in a lake’ category. If you would like to apply in one of the first phases, it would be better to do so in the ‘onshore wind’ category.

### 4. Wind calculation example

Calculation example SDE+ contribution – Onshore wind < 6 MW

Base amount phase 1 (free category)	8.75 €ct/kWh
Maximum number of full load hours phase 1	2,640
Base amount phase 2 (free category)	10.00 €ct/kWh
Maximum number of full load hours phase 2	2,240
Preliminary correction amount for 2013	5.5 €ct/kWh
Preliminary SDE+ contribution for 2013 phase 1	8.75 – 5.5 = 3.25 €ct/kWh
Preliminary SDE+ contribution for 2013 phase 2	10.00 – 5.5 = 4.50 €ct/kWh

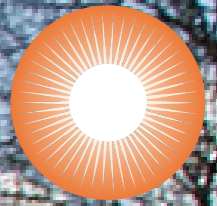
Maximum eligible annual production at an installation with a capacity of 3 MW:  
 With application in phase 1: 3 \* 2,640 = 7,920 MWh  
 With application in phase 2: 3 \* 2,240 = 6,720 MWh

**Preliminary SDE+ contribution for 2013 when applied for phase 1**      **32.5 \* 7,920 = € 257,400,-**

**Preliminary SDE+ contribution for 2013 when applied for phase 2**      **45.0 \* 6,720 = € 302,400,-**

The indicated amounts and full load hours are after application of the wind factor (1.25).

# Solar



In 2013, the SDE+ also offers a subsidy for the production of heat and power using solar panels. The solar-PV category from 15 kWp is only open for installations that are connected to a large-scale energy connection. The 'solar thermal' category is open for subsidy applications involving installations with an aperture surface area  $\geq 100 \text{ m}^2$  and covered solar collectors.



## 1. Which installations come into consideration for the SDE+ subsidy in 2013?

### Renewable electricity

Photovoltaic solar panels (solar-PV) with a capacity  $\geq 15$  kWp.

### Renewable heat

Solar thermal with an aperture surface area  $\geq 100$  m<sup>2</sup>, in which case only covered solar collectors are used.

## 2. Characteristics and changes compared to 2012

### Solar-PV

In 2013, the solar-PV  $\geq 15$  kWp category will only be open for installations that are connected to a large-scale energy connection (a connection to the electricity supply network exceeding 3 \* 80 Amp). If you are submitting an application for a solar-PV installation, and you are not the owner of the intended location for the production installation, you will be obligated to submit a declaration from the owner with your application. In this declaration the owner gives his/her authorisation to have the production installation installed, as well as for the operation thereof at the intended location.

### Solar thermal

For the 'solar thermal' category, an application can be submitted for the SDE+ 2013 for installations with an aperture surface area  $\geq 100$  m<sup>2</sup>, where only covered solar collectors are used. In a covered solar collector, a light-permeable layer which ensures insulation (such as a glass plate or tube) sits on top of a light absorbing surface.

## 3. Phasing and rates for Solar

	Phase 1 4 Apr 9.00 to 13 May 17.00	Phase 2 13 May 17.00 to 17 Jun 17.00	Phase 3 17 Jun 17.00 to 2 Sep 17.00	Phase 4 2 Sep 17.00 to 30 Sep 17.00	Phase 5 30 Sep 17.00 to 4 Nov 17.00	Phase 6 4 Nov 17.00 to 19 Dec 17.00	Base energy price	Preliminary correction amount for 2013	Max. full load hours per year	Max. subsidy period (years)	Latest term for operation
<b>Solar</b>	Base amount per phase (€ / kWh)						(€ / kWh)				
<b>Solar-PV</b> • $\geq 15$ kWp	0.070	0.080	0.090	0.110	0.130	0.148	0.055	0.055	1000	15	3
	Base amount per phase (€ / GJ)						(€ / GJ)				
<b>Solar thermal</b> • Aperture surface area $\geq 100$ m <sup>2</sup>	19.444	22.222	25.000	30.556	33.3	33.3	11.0	14.2	700	15	3



## 4. Solar calculation examples

Calculation example SDE+ contribution - Solar-PV  $\geq 15$  kWp (power)<sup>1</sup>

Base amount phase 1 (free category)	7.0 €ct/kWh
Base amount phase 6	14.8 €ct/kWh
Preliminary correction amount for 2013	5.5 €ct/kWh
Preliminary SDE+ contribution for 2013 phase 1	$7.0 - 5.5 = 1.5$ €ct/kWh
Preliminary SDE+ contribution for 2013 phase 6	$14.8 - 5.5 = 9.3$ €ct/kWh
Maximum number of eligible full load hours	1,000
Max. eligible annual production at an installation with a capacity of 100 kWp: $100 * 1,000 = 100,000$ kWh = 100 MWh.	
<b>Preliminary SDE+ contribution for 2013 when applied for phase 1</b>	<b><math>15.0 * 100 = € 1,500,-</math></b>
<b>Preliminary SDE+ contribution for 2013 when applied for phase 6</b>	<b><math>93.0 * 100 = € 9,300,-</math></b>



Calculation example SDE+ contribution – Solar thermal aperture surface area  $\geq 100$  m<sup>2</sup> (heat)<sup>2</sup>

Base amount phase 1 (free category)	19.444 €/GJ
Base amount from phase 5	33.3 €/GJ
Preliminary correction amount for 2013	14.2 €/GJ
Preliminary SDE+ contribution for 2013 phase 1	$19.444 - 14.2 = 5.244$ €/GJ
Preliminary SDE+ contribution for 2013 from phase 5	$33.3 - 14.2 = 19.1$ €/GJ
Maximum number of eligible full load hours	700
Maximum capacity of an installation with an aperture surface area of 100 m <sup>2</sup> : $100 * 0.7 = 70$ kW. Maximum eligible annual production of an installation with an aperture surface area of 100 m <sup>2</sup> : $70 * 700 = 49,000$ kWh (corresponds with) 176.4 GJ.	
<b>Preliminary SDE+ contribution for 2013 when applied for phase 1</b>	<b><math>5.244 * 176.4 = € 925.04</math></b>
<b>Preliminary SDE+ contribution for 2013 when applied from phase 5</b>	<b><math>19.1 * 176.4 = € 3,369.24</math></b>

<sup>1</sup> For a solar-PV  $\geq 15$  kWp application you do not have to provide a production framework (= capacity \* full load hours). NL Agency will base its decision on the maximum number of full load hours (1,000).

<sup>2</sup> For a solar thermal application you must enter the aperture surface area and the capacity. The maximum capacity of the installation in kW is equal to the aperture surface area in m<sup>2</sup>, multiplied by a factor of 0.7. You do not have to provide a production framework (= capacity \* full load hours). NL Agency will base its decision on the maximum number of full load hours (700).

# Subsidy applications

**Would you like to utilise the SDE+? Applying for the SDE+ subsidy is fast and easy through the online service of NL Agency eLoket. The SDE+ 2013 is open from 4 April at 9.00 hours until 19 December 2013 at 17.00 hours. The opening of the subsidy scheme takes place in six phases and the base amount increases per phase.**

## **1 Sign in to eLoket (e-Service)**

You must identify yourself with a username and password before you can use eLoket. Businesses and organisations can identify themselves with the eHerkenning (eRecognition) service. Private individuals do it with the DigiD service.

## **2 Create your profile**

If you are using eLoket for the first time, you will have to create your profile. You will complete your contact information only once, accompanied by the CoC number or personal identification number (BSN number) for the type of identification used. You will also enter your own information if you want to apply on behalf of another party, in the form of an authorized representative.

## **3 Create your draft application**

You can reach eLoket through the eLoket homepage or through the SDE+ website. If you enter eLoket by way of the eLoket homepage, you will find the questionnaires for the SDE+ under the 'S' on the 'New application' tab page. Did you enter eLoket by way of the SDE+ website? If so, you will be taken directly to the SDE+ application screen. Under the 'Topic selection' tab page you will subsequently indicate which production-installation category you would like the subsidy to be applied for. Under the 'Create form' tab page you will answer several questions before the correct form is created for you.

## **4 Fill in**

You are now directed to the application form with the questions relevant to your application. Before moving on to the next tab page, you can verify your input with the 'Verification' button. If any information is missing or incorrect, you will be notified. You will add the appendices to the last tab page of the application form. Mandatory appendices are indicated with an \*. Check the entire application for errors before submitting your actual application. Are you still receiving error messages? Navigate to the indicated tab page to correct your input.

You can submit your application from 4 April 2013 9.00 hours (opening), for an application in phase 1. You can save your draft application at any time. If you would like to submit your application at a later stage, you will simply have to sign in and follow the steps under '5' in order to submit your application.

## **5 Submission**

If you would like to submit a (correctly completed) form, click on 'To submission' under the 'Verification' tab page. Here you will verify that all information is accurate, once more. All questions and answers appear in sequence on the screen. You indicate which phase and base amount you are submitting the application for, and check mark 'Declared and signed'. You then perform the final submission of the application by clicking on 'Sign and submit'. You will receive an email confirmation on the address listed in your profile.

## **6 Retrieval**

Your application form will automatically be saved when you navigate to the next tab page. You can also choose to save the information in between. Saved applications are available in 'My overview'. Submitted applications have a project number. You may use this number in any correspondence relating to your application.



**Preparation of your application: which appendices should you include in your application?**

Several appendices are required for the SDE+ 2013 application.

**Authorization**

If you are applying for subsidy on behalf of another party, you are acting as an intermediary. This will only be allowed if you have the required permission from the applicant.

**Bundled applications for wind and green gas hubs**

Application bundling is possible for applications in the wind category and applications for production installations that are part of a green gas hub. This can be useful when the joint applicants only want to proceed with the project if all applications in the bundle are honoured. Applications will be classified in order of the base amount if more subsidies are applied for on one day than what the budget will allow for. In the case of a bundled application, the highest base amount will apply. Bundles will be considered as single applications in the event that lots must be drawn amongst applications with the same base amount.

**Do you still require an eHerkenning or DigiD?**

You can request these through the link below. Keep in mind the lead time of several days. An eHerkenning trust level of 1 will be required when applying for the SDE+ subsidy.

[www.eherkenning.nl](http://www.eherkenning.nl) and [www.digid.nl](http://www.digid.nl)

The authorization is in free form. It will, however, contain at least the following information:

- The name of the applicant, in other words, the party assigning the authorization (name of the organisation + contact person).
- The name of the authorised representative (name of the organisation + contact person).
- The scope of the authorization should also be included.

An example authorization is available from [the SDE+ website](#), under 'Applications'.

**Permission from the owner**

Is someone else the owner of the intended location for the production installation? According to the SDE+, you will, in this case, have prior permission from the owner of the intended location, or will obtain permission at the time of application.

You will indicate in the application form whether or not you are the owner of the intended location. If you are not the owner, you must indicate that you have permission from the owner of the intended location.

An added obligation will apply for applicants of solar-PV. If you are applying for a solar-PV installation, and you are not the owner of the intended location for the production installation, you are obligated to submit a statement from the owner with your application. In this statement the owner gives his / her

authorisation to have the production installation installed, as well as for the operation thereof at the intended location.

**Feasibility study with price indication**

Applications for renewable gas must include a feasibility study with price indication from the network operator. This feasibility study is free of charge and will, under normal circumstances, be issued by network operators within 10 working days.

**Required permits**

In most cases, one or more permits will be required for production installations. At the moment on which you submit your application, these permits must already be issued by the relevant authorities. As an applicant you are considered to be up-to-date with the permit requirements for the production installation for which you are applying for a subsidy.

Based on the SDE+ Act, the application form asks whether or not permits are required for the production installation:

- Based on the general stipulations of the Environmental Act (Environmental permit).
- And/or based on Chapter 6, paragraph 6 of the Water Decree (Water permit).
- Based on the Mining Act.

You will indicate on the form whether or not the requested permits are required. If you answer a question with 'yes', you must also include this (these) permit(s) in your application.

# Points of interest

- You may submit your application from 4 April 2013 9.00 hours until 19 December 2013 17.00 hours.
- You can only submit one application per production installation category and per address at which the production installation will be built.
- The base amount which applies for the subsidy grant may vary, depending on the moment at which you submitted the application. Different base amounts will apply for an application in the free category.
- NL Agency will process the applications in the order in which they are received. In other words: first come first served. Applications will be classified in order of the base amount if more subsidies are applied for on one day than what is still available in terms of budget. The application with the lowest base amount will come first in the classification. Lots will be drawn amongst applications with the same base amount, in the event that the budget limit falls between applications. The base amount for all categories will be expressed in €/GJ to one decimal.
- Applications received after 17:00 hours will, for the allocation of the subsidy budget, be considered as having been received on the next working day.

- Applications for wind categories and applications for production installations that form part of a green gas hub can be submitted as a bundled application. More information on bundled applications can be obtained in eLoket on [the SDE+ website](#).

## **Receiving the SDE+**

Has the SDE+ subsidy been granted to you?

If so, you will still have to take several steps in order to actually receive the subsidy:

- The project must be developed and the production installation commissioned.
- You must register with a certifying authority, such as CertiQ or Vertogas.
- The network operator, or in the case of heat, the measuring company, should establish you as a producer of renewable energy and a measurement protocol should be set up.

Once these steps have all been completed, you will receive a monthly advance payment. An annual correction will be applied, based on the actual energy price and the certified meter readings received by NL Agency.



## **Questions concerning the SDE+?**

Contact our helpdesk:

T 088 602 34 50

E [sde@agentschapnl.nl](mailto:sde@agentschapnl.nl)

**Film tip:** [Informational film on the SDE+ 2013](#)

# Pillars of the SDE+

## **1 A primary budget ceiling**

A subsidy ceiling is determined for all categories combined. In 2013, 3 billion Euros will be available to support projects. Applications will be classified in order of the base amount if more subsidies are applied for on one day than what is still available in terms of budget. The application with the lowest base amount will come first in the classification. Lots will be drawn amongst applications with the same base amount, in the event that the budget limit falls between applications. The base amount for all categories will be expressed as €/GJ to one decimal.

## **2 Phased opening**

The SDE+ will be opened in six phases. In 2013, the phases will be opened from 4 April at 9.00 hours until 19 December 2013 at 17.00 hours. Each phase has a maximum base amount that increases from € 7 ct/kWh (converted to € 48.28 ct/Nm<sup>3</sup> or € 19.444 GJ) in phase 1 to € 15 ct/kWh (converted to € 103.45 ct/Nm<sup>3</sup> or € 41.667 GJ) in phase 6. A maximum base amount applies to each technology, and no subsidy will be paid out above this amount. In phase 1, cost-effective technologies with a base amount lower or equal to € 7 ct/kWh, may submit an application. Applicants in phase 1 will have a better chance of sufficient budget still being available, compared to technologies with a higher maximum base amount.

## **3 A maximum base amount**

The SDE+ 2013 has a maximum base amount of € 15 ct/kWh (converted to € 103.45 ct/Nm<sup>3</sup> or € 41.667 GJ). Technologies that are able to produce renewable energy for this amount, or lower, may be eligible for the subsidy.

## **4 A free category**

Each phase includes a free category. This allows innovative entrepreneurs who can produce energy in a way that is cheaper than the calculated base amount for the relevant technology, to gain access to the SDE+ sooner. A base amount that is equal to the upper limit for the relevant phase in which the subsidy is applied for, will apply to projects in the free category. On condition that this amount is lower than the base amount for the relevant technology.

In this way, the free category also offers room for a number of technologies for which the costs are generally higher than € 15 ct/kWh (converted to € 103.45 ct/Nm<sup>3</sup> or € 41.667 GJ). Technologies that only come into consideration in the free category in 2013 are: offshore wind, free flowing energy, osmosis and biomass gasification.



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

