

# **Contents**

About the SDE+	3				
New in SDE+ 2016	4				
Biomass	6	Hydro	18	Solar	25
1. Which installations qualify for a SDE+ subsidy in 2016?	? 7	1. Which installations qualify for a SDE+ subsidy in 2016?	' 19	1. Which installations qualify for a SDE+ subsidy in 2016	5? 2 <i>6</i>
2. Characteristics and changes compared with 2015	9	2. Characteristics and changes compared with 2015	19	2. Characteristics and changes compared with 2015	26
3. Phasing and rates for Biomass	10	3. Phasing and rates for Hydro	19	3. Phasing and rates for Solar	26
4. Calculation examples for Biomass	13	4. Calculation example for Hydro	20	4. Calculation examples for Solar	27
Geothermal	15	Wind	21	Subsidy applications spring 2016	28
1 1111111111111111111111111111111111111					
1. Which installations qualify for a SDE+ subsidy in 2016?	? 16	1. Which installations qualify for a SDE+ subsidy in 2016?	, 55	Points of interest	30
2. Characteristics and changes compared with 2015	16	2. Characteristics and changes compared with 2015	22	Final steps to receiving the SDE+	30
3. Phasing and rates for Geothermal	17	3. Phasing and rates for Wind	23	Fundamentals of the SDE+	31
4. Calculation example for Geothermal	17	4. Calculation example for Wind	24	Table base amounts SDE+ spring 2016	32

## **About the SDE+**

#### General

The SDE+ is an incentive scheme for the production of renewable energy in the Netherlands. Renewable energy is generated from clean, inexhaustible sources.

There will be two periods for SDE+ subsidy applications in 2016, one being in spring and the other in autumn.

For the SDE+ spring round, applications can be made between 9 am on 22 March 2016 and 5 pm on 28 April 2016.

The SDE+ autumn 2016 round is planned in October.

#### What is the SDE+?

The SDE+ is an operating (feed-in-tariff) subsidy. Producers receive a guaranteed payment (subsidy) for the energy they generate from renewable sources (as opposed to funding for any equipment or services they need to make this production possible, as in the case of an investment subsidy). The SDE+ is aimed at companies and (non-profit) organisations intending to produce renewable energy.

The production of renewable energy is not always profitable and it can cost more than fossil energy. The SDE+ compensates for the difference in price between fossil and renewable energy over a period of 8, 12 or 15 years, depending on the type of technology used. Similarly, the amount of the subsidy depends on the technology used and the amount of renewable energy produced. For 2016, SDE+ subsidy applications may be made in two one-month rounds (spring and autumn), with each round set its own overall budget and divided into four phases. For each phase a maximum phase amount is set. The subsidy available increases with each phase. There is a single budget for all categories in each round of applications. The 'less expensive' forms of technology may apply for a subsidy in the first phase. It is also possible to apply for a subsidy at a lower amount than the maximum base amount applicable to the technology in question; such applications are said to be in the 'free category'. Subsidies amouting to mutiples of tenth of a eurocent per kilowatt-hour, up to the maximum amount available for the phase in question and higher than the base energy price, may be applied for.

## Fundamentals of the SDE+

- 1. One integral budget ceiling;
- 2. Phased application for subsidies;
- 3. A maximum phase amount; and
- 4. A 'free category', in which you can apply for subsidies amouting to mutiples of tenth of a eurocent per kilowatt-hour

## Which energy sources does SDE+ apply to?

In 2016, SDE+ subsidies are available for the production of:

- Renewable electricity;
- Renewable gas; and
- Renewable heat or combined heat and power (CHP).

## For energy from:







Hydro





Biomass

Geothermal

. . .

## Who can apply for the SDE+?

The primary target groups are companies, institutes and (non-profit) organisations. The national government is not allowed to apply for SDE+ subsidies.

## New in SDE+ 2016

## Main changes compared with 2015

- Applications for an SDE+ subsidy may be made in two rounds in 2016. There are four phases in each round, with a maximum phase amount set in each phase.
- In the 'free category' renewable energy producers can apply for subsidies of multiples of a tenth of a eurocent per kilowatt-hour.
- No SDE+ subsidy is given for feeding renewable electricity into the grid if the electricity price is negative for six hours or longer. This new ruling does not apply to the following projects:
- o Projects smaller than 500 kW (for wind energy less than 3 MW) and
- o Projects for which a subsidy has already been granted and where a subsidy was applied for before 1 December 2015.
- The maximum average wind speed for use in wind energy output calculations is that calculated by the <u>SDE+ Windviewer</u>.
- When wind turbines are replaced, a subsidy is only granted if:
- o The existing wind turbine had been in use for at least 15 years at the time of replacement and for at least 13 years at the time the subsidy was applied for; and/or
- o The capacity of the new wind turbine is at least 1 MW more than that of the existing one.

- The category 'Wind on interconnecting wind defences' from 2015 has been renamed 'Wind turbines on primary flood defences'. The new category is more extensive than the old one: it now also includes wind turbines located at the water's edge within the core protection zone of a primary flood defence system.
- The category 'Geothermal heat from a depth of 500 metres or more' has been extended so that the use of existing oil or gas wells and the drilling of an extra well also come into consideration for subsidy.
- The duration of the subsidy on the category 'Wood pellet boilers for industrial steam production at 10 MWth or more' has been reduced from 12 to 8 years.
- The lower limit of the category 'Solar thermal' has been changed from an aperture surface area of 100 m<sup>2</sup> to 200 m<sup>2</sup>.
- A feasibility study must be performed for all 'Solar-PV' projects where a subsidy of more than 500 kWp (whether or not divided over several applications) is applied for.
   A connection suitable for large-scale consumers remains obligatory here.

#### 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 for the difference between the cost price of renewable energy and the earnings of fossil energy. The maximum SDE+ contribution is thus equal to the base amount minus the correction amount. It follows that the SDE+ contribution you receive depends on energy price trends. If the energy price goes up you get a lower SDE+ contribution but your energy purchaser will pay you more. If on the other hand the energy price falls you will get a higher SDE+ contribution but will receive less from your energy purchaser.

The subsidy granted to you by the Netherlands Enterprise Agency in its grant is the maximum subsidy over the entire period of the subsidy (8, 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 grant and budget claim. The base energy price is the lower limit for the correction amount. The correction amount cannot be lower than this. If the correction amount is equal to the base energy price, the maximum subsidy is reached.

The final subsidy payments are calculated per year based on the amount of energy produced and the actual energy price.

The subsidy applies up to a maximum number of full load hours and has a maximum period, depending on the technology.

Maximum SDE+ contribution = maximum base amount – correction amount

Maximum base amount (cost price of renewable energy)

**SDE+ contribution** 

Correction amount (cost price of fossil energy)

### Base energy price

## Negative electricity price

No SDE+ subsidy is given for feeding renewable electricity into the grid if the price of electricity is negative for six hours or longer. Small projects (with a nominal power of less than 500 kW per connection) and projects where the subsidy was applied for before 1 December 2015 are exempt from this new ruling. The limit for wind energy projects is 3 MW. Further information on the calculation of the SDE+ subsidy may be found on the SDE website.

#### Terms

#### Full load hours

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

## Latest term for operation

The period (after the grant) within which the installation must produce energy.

## Subsidy period

The maximum number (in years) in which the subsidy can be received.

### Banking

The Stimulation of Sustainable Energy Production Decision (Besluit SDE) allows for the possibility of banking. This means unused production which is subsidised can be used in later years. In addition, producers can also carry over any excess output (i.e. electricity generated over and above the maximum subsidisable level) to a following year. This can be used if production is lower than expected in a later year. The latest form of banking is maximised to 25% of the subsidisable annual production. This ruling applies to:

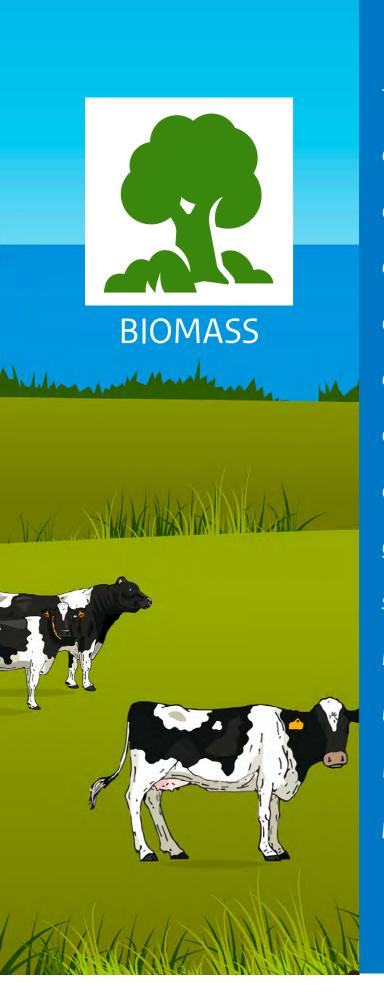
- All new projects with the exception of categories involving auxiliary firing and co-firing;
- Existing projects for which an SDE or SDE+ grant has already been issued, with the exception of wind projects where the wind factor provides an alternative to banking in covering the operator's risk of losing out on subsidy.

## **Calculation example: SDE+ contribution**

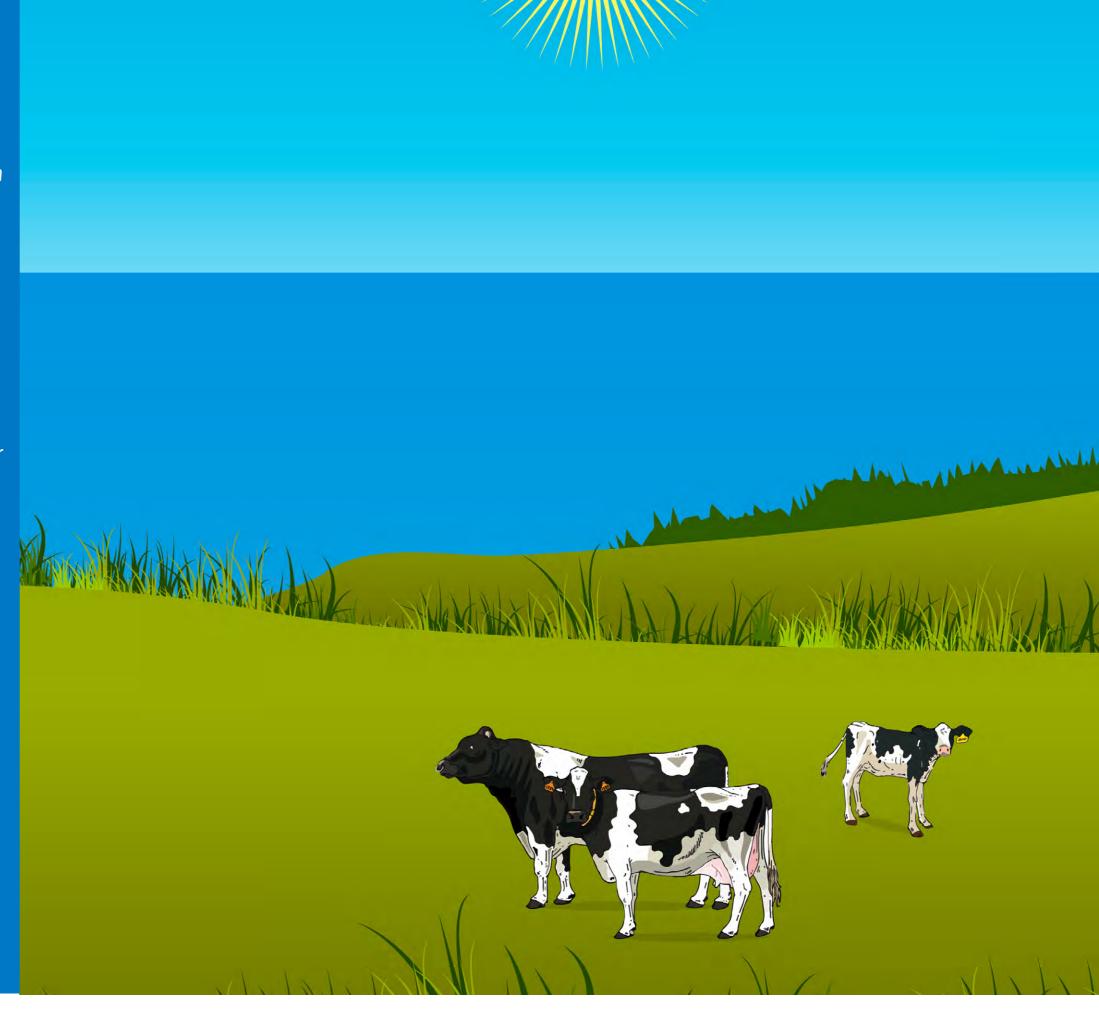
New 3 MWe hydroelectric power plant, drop of ≥ 50 cm

Maximum phase amount phase 1 (free category)	9.0 €ct/kWh
Maximum phase amount phase 4 (free category)	15.0 €ct/kWh
Provisional correction amount 2016	4.2 €ct/kWh
Provisional SDE+ 2016 contribution applied for in phase 1 at 9.0 €ct/kWh	9.0 – 4.2 = 4.8 €ct/kWh = 48 €/MWh
Provisional SDE+ 2016 contribution applied for in phase 4 at 15.0 €ct/kWh	15.0 – 4.2 = 10.8 €ct/kWh = 108 €/MWh
Maximum number of full load hours eligible for subsidy	5,700
Maximum annual production eligible for subsidy for new 3 Mwe hydroelectric power plant	3 * 5,700 = 17,100 MWh
Provisional annual SDE+ 2016 contribution for phase 1 at 9.0 €ct/kWh	48 * 17,100 = € 820,800
Provisional annual SDE+ 2016 contribution for phase 4 at 15.0 €ct/kWh	108 * 17,100 = € 1,846,800

The SDE+ contribution indicated is a provisional contribution, based on the provisional correction amount for 2016. The provisional correction amount will be finalised in the calender year following the year of production, with an adjustment based on advance sums already paid. The correction amount (provisional and final) is re-established each year, on the basis of the evolution of the energy price. The base amount or the phase amount determined for the 2016 SDE+ applies to the entire duration of the SDE+ subsidy.



The SDE+ supports the production of energy from biomass in 2016. You can apply for subsidies on mono- and co-fermentation of manure, all-purpose fermentation, thermal conversion, co-firing of biomass in coal-fired power stations, wastewater and sewage treatment and gasification. You can also apply for a subsidy to extend the lifespan of installations previously subsidised under (OV)MEP (Regulation for Environmental Quality of Electricity production).



## 1. Which installations qualify for a SDE+ subsidy in 2016?



## Mono- and co-fermentation of manure

You can apply for subsidies when renewable gas, renewable heat and/or renewable electricity are the end products. Installations previously subsidised under (OV)MEP which have reached the end of their 10-year subsidy period also qualify for the SDE+ subsidy under the 'extended lifespan' category. These need to be at least 7 years old when the SDE+ subsidy is applied for. Owners of such installations have the option of switching to renewable gas or renewable heat.

For the co-fermentation of manure the rule applies that if you request an extended lifespan for your installation and there is also a 'grant for heat extension', the latter grant will be cancelled once the grant period begins for the extended lifespan.

## All-purpose fermentation

You can apply for subsidies when renewable gas, renewable heat and/or renewable electricity are the end products. Owners of installations with MEP subsidies have the option of switching to renewable gas or renewable heat, and may also be able to apply for an SDE+ subsidy under the 'extended lifespan' category in 2016 if the installation in question is at least 7 years old when the subsidy is applied for. If an 'extended lifespan' subsidy is applied for and the installation already has an 'extended heat' subsidy, the latter will in any case be terminated just before the extended lifespan subsidy period begins.

#### Thermal conversion

You can apply for subsidies when renewable gas, renewable heat and/or renewable electricity are the end products. In addition, for installations previously subsidised under the MEP, an 'extended lifespan' subsidy can be applied for as long as the plant is at least 7 years old when the application is submitted.

There are four different categories of biomass boilers for which qualify for subsidies in 2016. They differ in their power rating and the type of biomass they can handle as follows:

- Liquid biomass boiler with a power of ≥ 0.5 MWth;
- Solid or liquid biomass boiler with a power of ≥ 0.5 MWth and < 5 MWth;</li>
- Solid or liquid biomass boiler with a power of ≥ 5 MWth;
- Wood pellet boiler for industrial steam production with a power of ≥ 10 MWth.

The permitted biomass for the last category is wood pellets, with the exception of A-grade and B-grade wood.

In the case of the first and the last category, verifiable evidence must be provided that the biomass source meets the relevant sustainability requirements. The requirements for liquid biomass follow from the EU Renewable Energy Directive (RED). The information on the sustainability criteria for wooden pellets is provided under 'Sustainability criteria'.

You can also apply for a subsidy for the category 'Thermal conversion of biomass for CHP'. The following requirements apply here:

- The two categories under this heading that existed in 2015
  have been combined into one category with a single package
  of entry requirements in 2016. For the new category,
  installations must have a capacity of 100 MWe or less, and the
  electrical efficiency should be at least 10%;
- If liquid biomass is used, it must be shown that this meets the sustainability criteria of RED;
- No B-grade wood must be used as fuel;
- At least 95% of the energy produced by the fuel must be biogenic (renewable).

## **Auxiliary firing and co-firing**

The auxiliary firing and co-firing of biomass in coal-fired power stations was added to SDE+ in 2015. If an installation already used the auxiliary firing and co-firing of biomass under the MEP regulations, an SDE+ subsidy can be applied for it under the category 'Existing capacity for auxiliary firing and co-firing of biomass in coal-fired power stations'. Here, the investments needed to enable biomass to be used in these installations have already been made.

Subsidy applications for existing and new coal-fired power stations where biomass has not yet been used can be made under the category 'New capacity for co-firing of biomass in coal-fired power stations'.

## Sustainability criteria

The condition set for three categories in which solid biomass is used is that these satisfy sustainability criteria.

This relates to the categories 'Existing capacity for additional firing and co-firing', 'New capacity for additional firing and co-firing', and 'Boiler for the production of industrial steam from wood chips'. The sustainability criteria are applicable to various types of biomass, such as woody biomass and residual matter from the agricultural sector.

The producer must make a reasonable case to support claims that the biomass used satisfies the sustainability criteria for solid biomass. These requirements are included in appendix 4 of the Implementing Regulations sustainable energy production (Algemene uitvoeringsregeling stimulering duurzame energieproductie). The SDE+ website sets out these requirements under Downloads on the Sustainability criteria page. In addition, work is being done on the embedding and certification of the sustainability criteria in the Environmental Management Act (Wet Milieubeheer). The expectation is that this process can be completed in 2017, before the largest share of the additional firing and co-firing projects go into production. Until then, enforcement will be based on a reporting obligation. Further information on this process can be found on the SDE website.

It is further stipulated in the national Energy Agreement for Sustainable Growth that co-firing of biomass may amount to no more than 25 PJ per annum, or 55,555,555,555 kWh over the entire 8-year subsidy period.

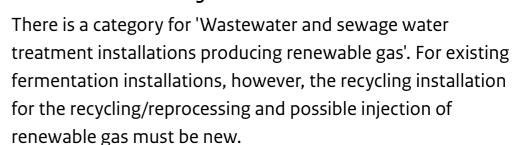
## Wastewater treatment installation / Sewage treatment installation, thermal pressure hydrolysis

Water treatment installations that are equipped with thermal pressure hydrolysis will be eligible for the SDE+ subsidy in 2016. Also fermentation installations that are already equipped with a gas engine will be eligible. However, the installation for thermal pressure hydrolysis must be new to qualify for subsidy.

## Sewage treatment installation thermophilic fermentation of secondary sludge

Thermophilic fermentation installations in which sewage sludge (including at least 50% secondary sludge) is processed qualify for subsidy. In this regard, the secondary sludge must mainly come from other sewage treatment installations other than the sewage treatment installation where the fermentation installation is located. The biogas produced is converted into electricity and/or heat using a CHP plant. The fermentation installation must also be new for this category to qualify for subsidy.

## Wastewater treatment installations / Sewage water treatment installation renewable gas



### Gasification

A category for the production of renewable gas by the gasification of biomass is introduced in the 2016 SDE+ incentive scheme. The production of syngas is not subsidised, as this has to be converted into methane before it can be fed into the gas mains.





## 2. Characteristics and changes compared with 2015

#### Extended heat

The category 'Extended heat' has been discontinued. Projects falling under this heading can be diverted to other categories.

## Thermal conversion of biomass for CHP

With effect from 2016, no distinction is made between installations with different power ratings in the category 'Thermal conversion of biomass for CHP', since it is found in practice that the smaller installations use the same technology as the larger ones in this category.

## **Auxiliary firing and co-firing**

Up to 15% of the annual renewable energy production may be realised using biomass in coal-fired power stations, by way of experiment. Starting in 2016, this biomass may also consist of A-grade wood.

## Wood pellet boilers for industrial steam production

The subsidy period for the category 'Wood pellet boilers for industrial steam production' is being reduced from 12 years to 8, which is more in line with the investment period for this type of installation.

### Conversion of MEP into SDE+

To stimulate the application of renewable heat, MEP subsidies for CHP installations can be converted into a SDE+ subsidy. In this SDE+ category, a lower subsidy applies for the production of electricity. To compensate for that difference and to subsidise the production of heat, a base amount is included for the remaining term of the MEP subsidy: 1 year MEP-compensation .

### Determining the capacity in the case of combined generation

In the case of combined generation of electricity and heat, a distinction is made between the heat capacity and the electrical capacity of an installation. Producers can vary the ratio between heat and electricity production.

For grant applications, the nominal electrical capacity (in line with the specifications of the manufacturer), the nominal heat capacity (in line with the specifications of the manufacturer), and the total capacity of the production installation for which a grant is being applied for must be stated. The total capacity can never be greater than the sum of the nominal electrical capacity and the nominal heat capacity. Whenever there is a combination of a steam turbine and a boiler, for example, then the total capacity for which a grant is requested can never be higher than the nominal heat capacity of the boiler.

## Determining the electrical efficiency of the production installation

The regulation includes requirements for the electrical efficiency of the installation. The electrical efficiency is determined as follows:

- For a combustion engine: the electrical capacity divided by the sum of the electrical capacity and the heat capacity and
- For a boiler with a steam turbine or ORC: the electrical capacity divided by the heat capacity of the boiler.

## 3. Phasing and rates for Biomass



Renewable heat and CHP

	Phase 1 From 9 am, 22 March	Phase 2 From 5 pm, 29 March	<b>Phase 3</b> From 5 pm, 4 April	Phase 4 From 5 pm, 11 April to 5 pm, 28 April	Base energy price	Provisional correction amount 2016	Maximum full load hours per annum	Maximum subsidy period (years)	Operation must start at the latest within (years)
Renewable heat and CHP from Biomass	Maximum base an	nount / phase amo	unt (€ / kWh)		(€/kWh)				
<ul><li>All-purpose fermentation for heat</li><li>All-purpose fermentation</li><li>Extended lifespan</li></ul>	0.060 0.056	0.060 0.056	0.060 0.056	0.060 0.056	0.025 0.014	0.031 0.017	7,000 7,000	12 12	4 3
<ul><li>All-purpose fermentation for CHP</li><li>All-purpose fermentation</li><li>Extended lifespan</li></ul>	0.087	0.087	0.087	0.087	0.029	0.032	5,742	12	4
	0.086	0.086	0.086	0.086	0.030	0.033	5,855	12	3
Fermentation of manure for heat  Co-fermentation  Co-fermentation extended lifespan  Mono-fermentation	0.078*	0.078*	0.078*	0.078*	0.025	0.031	7,000	12	4
	0.066*	0.066*	0.066*	0.066*	0.014	0.017	7,000	12	3
	0.090	0.109	0.109	0.109	0.025	0.031	7,000	12	4
Fermentation of manure for CHP  Co-fermentation  Co-fermentation extended lifespan  Mono-fermentation	0.090	0.110	0.114*	0.114*	0.029	0.032	5,732	12	4
	0.090	0.101*	0.101*	0.101*	0.030	0.033	5,855	12	3
	0.090	0.110	0.130	0.150**	0.039	0.042	8,000	12	4
<ul> <li>Thermal conversion for heat</li> <li>Liquid biomass boiler ≥ 0.5 MWth</li> <li>Solid or liquid biomass boiler</li> <li>≥ 0.5 MWth and &lt; 5 MWth</li> <li>Solid or liquid biomass boiler</li> </ul>	0.071	0.071	0.071	0.071	0.025	0.031	7,000	12	4
	0.052	0.052	0.052	0.052	0.025	0.031	4,000	12	4
	0.043	0.043	0.043	0.043	0.014	0.017	7,000	12	4
<ul> <li>Solid of liquid biofflass boller</li> <li>≥ 5 MWth</li> <li>Wood pellet boiler ≥ 10 MWth</li> </ul>	0.043	0.043	0.045	0.043	0.014	0.017	7,000	8	4

<sup>\*</sup> These base amounts differ from those recommended by ECN.\*\* This is the maximum base amount for renewable electricity.



## Renewable heat and CHP (continued)

	Phase 1 From 9 am, 22 March	Phase 2 From 5 pm, 29 March	<b>Phase 3</b> From 5 pm, 4 April	Phase 4 From 5 pm, 11 April to 5 pm, 28 April	Base energy price	Provisional correction amount 2016	Maximum full load hours per annum	Maximum subsidy period (years)	Operation must start at the latest within (years)
Renewable heat and CHP from Biomass	Maximum base ar	mount / phase amo	unt (€ / kWh)		(€ / kWh)				
Thermal conversion for CHP • Biomass ≤ 100 MWe	0.077	0.077	0.077	0.077	0.020	0.023	7,500	12	4
Thermal conversion for CHP Extended lifespan ≤ 50 MWe • No MEP compensation • 1 year MEP compensation	0.063 0.066	0.063 0.066	0.063 0.066	0.063 0.066	0.023 0.023	0.026 0.026	4,429 4,429	12 12	3 3
Existing capacity for auxiliary firing and co-firing of biomass in coal-fired power stations	0.090	0.107	0.107	0.107	0.039	0.042	5,839	8	3
New capacity for co-firing of biomass in coal-fired power stations	0.090	0.110	0.114	0.114	0.039	0.042	7,000	8	3
Wastewater treatment and sewage treatment  Thermal pressure hydrolysis	0.090	0.093	0.093	0.093	0.039	0.042	8,000	12	4
Sewage treatment     Thermophilic fermentation of secondary sludge	0.060	0.060	0.060	0.060	0.029	0.032	5,729	12	4



## Renewable gas

	Phase 1 From 9 am, 22 March	<b>Phase 2</b> From 5 pm, 29 March	<b>Phase 3</b> From 5 pm, 4 April	Phase 4 From 5 pm, 11 April to 5 pm, 28 April	Base energy price	Provisional correction amount 2016	Maximum full load hours per annum	Maximum subsidy period (years)	Operation must start at the latest within (years)
Renewable gas from Biomass	Maximum base a	mount / phase amo	unt (€ / kWh)		(€/kWh)				
<ul><li>All-purpose fermentation</li><li>All-purpose fermentation</li><li>Extended lifespan</li></ul>	0.060 0.059	0.060 0.059	0.060 0.059	0.060 0.059	0.020 0.020	0.022 0.022	8,000 8,000	12 12	4 3
<ul><li>Fermentation of manure</li><li>Co-fermentation</li><li>Co-fermentation, extended lifespan</li><li>Mono-fermentation</li></ul>	0.064 0.064 0.064	0.076* 0.067* 0.078	0.076* 0.067* 0.092	0.076* 0.067* 0.106**	0.020 0.020 0.020	0.022 0.022 0.022	8,000 8,000 8,000	12 12 12	4 3 4
Gasification of biomass	0.064	0.078	0.092	0.106**	0.020	0.022	7,500	12	4
Wastewater treatment or sewage treatment alone	0.032	0.032	0.032	0.032	0.020	0.022	8,000	12	4

<sup>\*</sup> These base amounts differ from those recommended by ECN.\*\* This is the maximum base amount for renewable gas.





Calculation example: SDE+ contribution – Thermal conversion ≤ 100 MWe (cogeneration)

Provisional annual SDE+ 2016 contribution from phase 1 at 7.7 €ct/kWh	54 * 330,000 = € 17,820,000						
Scenario: The annual production of electricity + heat for which a subsidy is applied for is 330,000 MWh. This is lower than the maximum subsidisable annual production of 337,500 MWh. In this case, a subsidy is granted for maximum 330,000 MWh/annum.							
Electrical efficiency must be greater than 15%.							
Maximum annual production eligible for subsidy for boiler with 45 MW power rating	45 * 7,500 = 337,500 MWh						
Total nominal power	45 MWth						
Maximum number of full load hours eligible for subsidy	7,500						
Provisional SDE+ 2016 contribution applied for from phase 1 at 7.7 €ct/kWh	7.7 – 2.3 = 5.4 €ct/kWh = 54 €/MWh						
Provisional correction amount 2016	2.3 €ct/kWh						
Maximum base amount from phase 1	7.7 €ct/kWh						

Calculation example: SDE+ contribution – Co-fermentation of manure, renewable gas

Maximum phase amount phase 1 (free category)	6.4 €ct/kWh
Maximum base amount from phase 2	7.6 €ct/kWh
Provisional correction amount 2016	2.2 €ct/kWh
Provisional SDE+ 2016 contribution applied for in phase 1 at 6.4 €ct/kWh	6.4 – 2.2 = 4.2 €ct/kWh = 42 €/MWh
Provisional SDE+ 2016 contribution applied for from phase 2 at 7.6 €ct/kWh	7.6 – 2.2 = 5.4 €ct/kWh = 54 €/MWh
Maximum number of full load hours eligible for subsidy	8,000
Maximum annual production eligible for subsidy for installation with 3 MW power rating (corresponding to about 306 Nm³/hour)	3 * 8,000 = 24,000 MWh
Provisional annual SDE+ 2016 contribution for phase 1 at 6.4 €ct/kWh	42 * 24,000 = € 1,008,000
Provisional annual SDE+ 2016 contribution from phase 2 at 7.6 €ct/kWh	54 * 24,000 = € 1,296,000



#### Calculation example SDE+ contribution – solid Biomass boiler ≥ 0.5 MWth and < 5 MWth

Maximum base amount from phase 1	5.2 €ct/kWh
Provisional correction amount 2016	3.1 €ct/kWh
Provisional SDE+ 2016 contribution applied for from phase 1 at 5.2 €ct/kWh	5.2 – 3.1 = 2.1 €ct/kWh = 21 €/MWh
Maximum number of full load hours eligible for subsidy	4,000
Maximum annual production eligible for subsidy for installation with 2 MWth thermal power rating	2 * 4,000 = 8,000 MWh

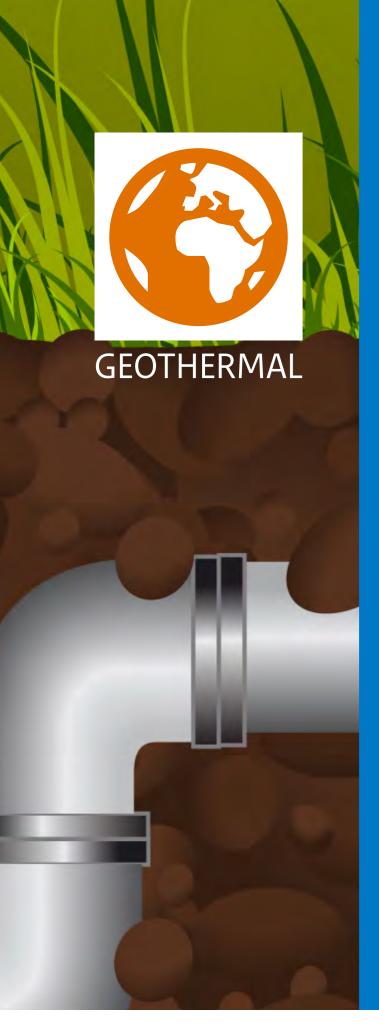
Scenario: The thermal power rating of the installation for which you have applied for a subsidy is 2 MWth and the installation is expected to run for 4,500 hours per annum at full load. The annual production of your installation is then 9,000 MWh. This is higher than the maximum annual production eligible for subsidy. In this case a subsidy is granted for the maximum 8,000 MWh/annum allowed.

Provisional annual SDE+ 2016 contribution	21 * 8,000 = € 168,000
from phase 1 at 5.2 €ct/kWh	

If your business case shows that your project is profitable with less than the maximum possible subsidy, you have the option of applying for a lower subsidy. As projects for which a subsidy is applied for compete on the basis of the sum applied for, applying for a lower subsidy gives you a better chance of having your application approved. Your project therefore has an advantage compared with less cost-effective projects.

Subsidy applied for in phase 1 (free category)	5.0 €ct/kWh		
Provisional correction amount 2016	3.1 €ct/kWh		
Provisional SDE+ 2016 contribution applied for in phase 1 at 5.0 €ct/kWh	5.0 – 3.1 = 1.9 €ct/kWh = 19 €/MWh		
Maximum number of full load hours eligible for subsidy	4,000		
Maximum annual production eligible for subsidy for installation with 2 MWth thermal power rating	2 * 4,000 = 8,000 MWth		
Provisional annual SDE+ 2016 contribution for phase 1 at 5.0 €ct/kWh	19 * 8,000 = € 152,000		

The <u>'Calculation'</u> page of the SDE website describes (in Dutch) how the SDE+ subsidy is determined and how much is paid out. The SDE+ contribution for 2016 indicated here is a provisional contribution, based on the provisional correction amount for 2016. The provisional correction amount will be finalised in the calender year following the year of production, with an adjustment based on advance sums already paid. The correction amount (provisional and final) is re-established each year, on the basis of the evolution of the energy price. The base and phase amount determined for the 2016 SDE+ applies to the entire duration of the SDE+ subsidy.



You can apply for 2016 SDE+ subsidies for installations that use geothermal heat as an energy source. Subsidies are available for geothermal heat and geothermal in combination with heat/power (CHP). The category 'Geothermal heat, depth ≥ 500 metres' has been extended. The use of existing oil and gas wells and the drilling of an extra well are included from 2016.



## 1. Which installations qualify for a SDE+ subsidy in 2016?

The SDE+ subsidy scheme contains the following five geothermal categories in 2016:

- Geothermal heat from a depth of at least 500 metres;
- Geothermal heat from a depth of at least 500 metres, where one or both wells of the doublet is an existing oil or gas well;
- Geothermal heat from a depth of at least 500 metres, where the production installation is expanded;
- Geothermal heat from a depth of at least 3,500 metres;
- Geothermal combined heat and power from a depth of at least 500 metres (CHP).

## 2. Characteristics and changes compared with 2015

The category 'Geothermal heat from a depth of at least 500 metres' was expanded in 2016 to include the use of existing oil and gas wells and the drilling of an extra well in existing geothermal heat projects.

The nominal capacity for geothermal must be determined at a probability of at least 50% (P50).

The nominal capacity of the entire combined heat and power (CHP) installation is regarded as equivalent to the heat capacity of the geothermal well.



### **Geological** research

In order to obtain a better assessment of the energy production, a geological research will be requested from 2014 in support of the budget claim. The geological research must comply with the 'SDE+ Geological Research Model' (Model Geologisch Onderzoek SDE+). The 'SEI Geothermal Geological Research report' (Geologisch Onderzoek SEI Aardwarmte) or 'RNES Geothermal Geological Research report, 2014' or '2015', (Geologisch Onderzoek RNES Aardwarmte, 2014 or 2015) may also be used for this. The geological research models are only available in Dutch.

### **Exploration permit**

When applying for a subsidy in the Geothermal category, an exploration permit must be issued as required by the Dutch Mining Act. This permit must be obtained before you apply for a SDE+ subsidy and should be included with your subsidy application.





	Phase 1 From 9 am, 22 March	<b>Phase 2</b> From 5 pm, 29 March	<b>Phase 3</b> From 5 pm, 4 April	Phase 4 From 5 pm, 11 April to 5 pm, 28 April	Base energy price	Provisional correction amount 2016	Maximum full load hours per annum	Maximum subsidy period (years)	Operation must start at the latest within (years)
Geothermal	Maximum base ar	mount / phase amo	unt (€ / kWh)		(€/kWh)				
Geothermal CHP • ≥ 500 m deep	0.090	0.110	0.112	0.112	0.017	0.020	4,091	15	4
Geothermal heat  • ≥ 500 m deep  • ≥ 500 m deep	0.056 0.056	0.056 0.056	0.056 0.056	0.056 0.056	0.014 0.014	0.017 0.017	5,500 5,500	15 15	4 4
Conversion of existing oil and/or gas wells  • ≥ 500 m deep  Extension of production installation  • ≥ 3.500 m deep	0.056 0.062	0.056 0.062	0.056 0.062	0.056 0.062	0.014 0.014	0.017 0.017	5,500 7,000	15 15	4

## 4. Calculation example for Geothermal

Calculation example SDE+ contribution – Geothermal heat at a depth ≥ 3,500 metres

Maximum base amount from phase 1	6.2 €ct/kWh
Provisional correction amount 2016	1.7 €ct/kWh
Provisional SDE+ 2016 contribution applied for from phase 1 at 6.2 €ct/kWh	6.2 – 1.7 = 4.5 €ct/kWh = 45 €/MWh
Maximum full load hours eliglible for subsidy	7,000
Annual production of installation consisting of 1 doublet with a 20 MW power rating	20 * 7,000 = 140,000 MWh
Provisional annual SDE+ 2016 contribution from phase 1 at 6.2 €ct/kWh	45 * 140,000 = € 6,300,000

The <u>'Calculation'</u> page of the SDE website describes (in Dutch) how the SDE+ subsidy is determined and how much is paid out. The SDE+ contribution for 2016 indicated here is a provisional contribution, based on the provisional correction amount for 2016. The provisional correction amount will be finalised in the calender year following the year of production, with an adjustment based on advance sums already paid. The correction amount (provisional and final) is re-established each year, on the basis of the evolution of the energy price. The base and phase amount determined for the 2016 SDE+ applies to the entire duration of the SDE+ subsidy.



In 2016, the SDE+ will also subsidise installations that generate energy from hydro power, free flowing energy and osmosis. The category 'Free flowing energy' also includes wave energy.



# 1. Which installations qualify for a SDE+ subsidy in 2016?

# 0

## Hydro

- New hydroelectric power stations with a drop of ≥ 50 cm and
- Renovation of existing hydroelectric power stations with new turbines and a drop of ≥ 50 cm.

## Free flowing energy

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

## Wave energy

Installations that convert wave energy into renewable electricity-subsidies for these come under the 'Free flowing energy' category.

#### Osmosis

You can apply for a subsidy for an installation that generates renewable electricity by means of the different salt concentration between two bodies of water.

## 2. Characteristics and changes compared with 2015

This year too, there is a requirement for the category 'renovation of existing hydroelectric power stations' that all turbines, for which the subsidy is requested, must be new ones placed in existing structures. The other components do not have to be new.

## 3. Phasing and rates for Hydro

	Phase 1 From 9 am, 22 March	<b>Phase 2</b> From 5 pm, 29 March	<b>Phase 3</b> From 5 pm, 4 April	Phase 4 From 5 pm, 11 April to 5 pm, 28 April	Base energy price	Provisional correction amount 2016	Maximum full load hours per annum	Maximum subsidy period (years)	Operation must start at the latest within (years)
Hydro	Maximum base ar	mount / phase amo	unt (€ / kWh)		(€/kWh)				
<ul> <li>Hydroelectric power plant</li> <li>New, drop of ≥ 50 cm</li> <li>Renovation with new turbine, drop of ≥ 50 cm</li> </ul>	0.090 0.090	0.110 0.108	0.130 0.108	0.150 0.108	0.039 0.039	0.042 0.042	5,700 2,600	15 15	4 4
Free flowing energy, drop of < 50 cm, and wave energy	0.090	0.110	0.130	0.150	0.039	0.042	3,700	15	4
Osmosis	0.090	0.110	0.130	0.150	0.039	0.042	8,000	15	4

## 4. Calculation example for Hydro

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Calculation example: SDE+ contribution – Renovation of 12 MWe hydroelectric power plant, drop of ≥ 50 cm

Maximum phase amount phase 1 (free category)	9.0 €ct/kWh
Maximum base amount from phase 2	10.8 €ct/kWh
Provisional correction rate 2016	4.2 €ct/kWh
Provisional SDE+ 2016 contribution applied for in phase 1 at 9.0 €ct/kWh	9.0 – 4.2 = 4.8 €ct/kWh = 48 €/MWh
Provisional SDE+ 2016 contribution applied from phase 2 at 10.8 €ct/kWh	10.8 – 4.2 = 6.6 €ct/kWh = 66 €/MWh
Maximum number of full load hours eligible for subsidy	2,600
Maximum annual production for renovated 12 MWe hydroelectric power plant	12 * 2,600 = 31,200 MWh
Provisional annual SDE+ 2016 contribution for phase 1 at 9.0 €ct/kWh	48 * 31,200 = € 1,497,600
Provisional annual SDE+ 2016 contribution from phase 2 at 10.8 €ct/kWh	66 * 31,200 = € 2,059,200

The <u>'Calculation'</u> page of the SDE website describes (in Dutch) how the SDE+ subsidy is determined and how much is paid out. The SDE+ contribution for 2016 indicated here is a provisional contribution, based on the provisional correction amount for 2016. The provisional correction amount will be finalised in the calender year following the year of production, with an adjustment based on advance sums already paid. The correction amount (provisional and final) is re-established each year, on the basis of the evolution of the energy price. The base and phase amount determined for the 2016 SDE+ applies to the entire duration of the SDE+ subsidy.



## 1. Which installations qualify for a SDE+ subsidy in 2016?

## SDE+ 2016 includes the following three subsidy categories for wind energy:

- Onshore wind:
- Wind on primary flood defences;
- · Wind on lake.

## 2. Characteristics and changes compared with 2015

### Wind map

Each Dutch municipality is assigned to one of the following four wind speed categories:

- ≥ 8.0 m/s
- ≥ 7.5 and < 8.0 m/s
- ≥ 7.0 and < 7.5 m/s
- < 7.0 m/s

The map of 'Wind speeds for individual Dutch municipalities' shows the average wind speed for each Dutch municipality and is based on a wind map produced by the Royal Dutch Meteorological Institute KNMI.

The wind map used for SDE+ 2016 is the same as used in 2015. A subsidy amount is calculated for each wind speed category. It follows that the maximum subsidy you can apply for depends on the municipality where your installation is located.

### Wind on primary flood defences

The category 'Wind on inter-connecting flood defences' was created in 2015. This category has been extended in 2016 to include wind turbines within the core defence zone, that is wind turbines at the water's edge in flood defences bordering on the North Sea, the Western and Eastern Scheldt Estuary, the Wadden Sea, the Dollard or the Ems. This category has now been renamed 'Wind on primary flood defences'.

#### Wind on lake

A wind turbine with the foundation entirely located in the water of a lake with an area of at least 1 km<sup>2</sup>. The midpoint of the foundation must be at least 25 m from the shore of the lake. This ruling applies, for example, to the IJsselmeer and the lakes in the Dutch province of Zeeland. In case the existing or removed installation has a higher power rating, you can only apply for a subsidy for the replacement of wind turbines if the nominal and actual power ratings of each new wind turbine are at least 1 MW more than those of the old one.

## Replacement of wind turbines

The category 'Replacement of wind turbines' as used in 2015 has been scrapped in 2016, and the remaining wind energy categories have been redefined. Subsidies for the replacement of wind turbines are only available under the following conditions:

- The nominal and actual power ratings of each new wind turbine are at least 1 MW more than those of the old one; or
- The wind turbine to be replaced or that has been replaced is 15 years old at the time of replacement, and was in use for at least 13 years when the subsidy was applied for.

## Windviewer and wind report

A wind report, including a calculation of the wind energy yield, must be included as part of the feasibility study for wind projects. The maximum average wind speed used in such calculations for SDE+ 2016 is derived from the Windviewer, which gives the average wind speed at any height between 20 and 160 metres for any location in the Netherlands. This information is based on wind data collected by the Royal Dutch Meteorological Institute KNMI in the period 2004-2013. The introduction of the SDE+ Windviewer removes the requirement that the above-mentioned wind reports must be prepared by an independent agency.

## Separate tender arrangement for 'Offshore wind'

As of this year, the Dutch government will invite companies to submit bids to build offshore wind farms in a designated offshore wind zones. Winning bidders will gain the related SDE+ subsidy, permits and grid connection agreements. However, the tender procedure for offshore wind is being conducted separately from the main SDE+ programme and is therefore not discussed further in this document.







	Phase 1 From 9 am, 22 March	Phase 2 From 5 pm, 29 March	Phase 3 From 5 pm, 4 April	Phase 4 From 5 pm, 11 April to 5 pm, 28 April	Base energy price	Provisional correction amount 2016	Maximum full load hours per annum	Maximum subsidy period (years)	Operation must start at the latest within (years)
Wind	Maximum base ar	mount / phase amou	ınt (€ / kWh)		(€/kWh)				
Onshore wind  - ≥ 8.0 m/s  - ≥ 7.5 and < 8.0 m/s  - ≥ 7.0 and < 7.5 m/s  - < 7.0 m/s	0.070 0.076 0.082 0.090	0.070 0.076 0.082 0.093	0.070 0.076 0.082 0.093	0.070 0.076 0.082 0.093	0.030 0.030 0.030 0.030	0.038 0.038 0.038 0.038	* * *	15 15 15 15	4 4 4 4
Wind on primary flood defences  - ≥ 8.0 m/s  - ≥ 7.5 and < 8.0 m/s  - ≥ 7.0 and < 7.5 m/s  - < 7.0 m/s	0.075 0.082 0.087 0.090	0.075 0.082 0.087 0.099	0.075 0.082 0.087 0.099	0.075 0.082 0.087 0.099	0.030 0.030 0.030 0.030	0.038 0.038 0.038 0.038	* * *	15 15 15 15	4 4 4 4
Wind in lake, water ≥ 1 km²	0.090	0.110	0.114	0.114	0.030	0.038	*	15	4

<sup>\*</sup> Net P50 value of full load hours taken from applicant's wind report. This value is determined on an individual basis for each project.

## 4. Calculation example for Wind

1

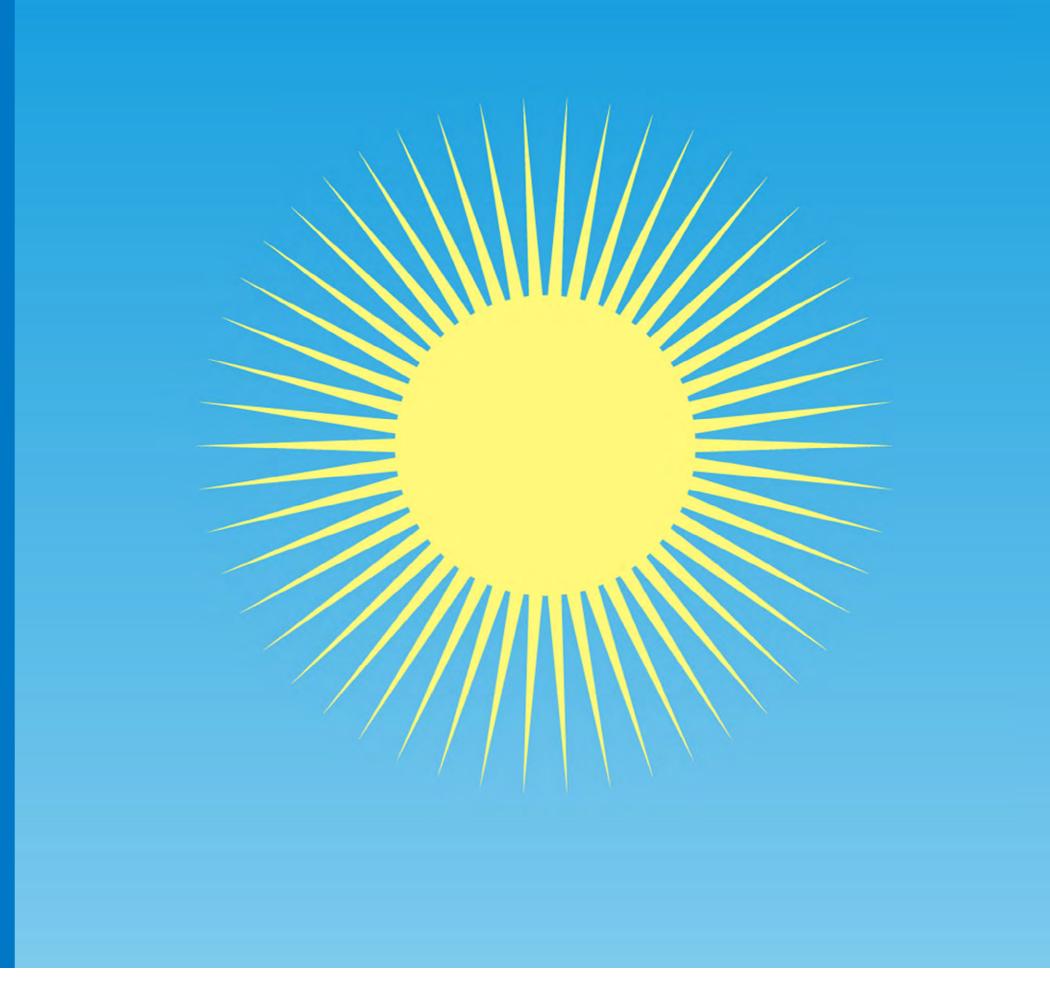
Calculation example: SDE+ contribution – Onshore wind < 7.0 m/s, for example a project in the municipality of Amersfoort

Maximum phase amount phase 1 (free category)	9.0 €ct/kWh
Maximum base amount from phase 2	9.3 €ct/kWh
Maximum number of full load hours eligible for subsidy (the net P50 value taken from the applicant's wind report. This value is determined on an individual basis for each project.)	1,920
Provisional correction amount 2016	3.8 €ct/kWh
Provisional SDE+ 2016 contribution applied for in phase 1 at 9.0 €ct/kWh	9.0 – 3.8 = 5.2 €ct/kWh = 52 €/MWh
Provisional SDE+ 2016 contribution applied for from phase 2 at 9.3 €ct/kWh	9.3 – 3.8 = 5.5 €ct/kWh = 55 €/MWh
Maximum annual production for 3 MW installation	3 * 1,920 = 5,760 MWh
Provisional annual SDE+ 2016 contribution for phase 1 at 9.0 €ct/kWh	52 * 5,760 = € 299,520
Provisional annual SDE+ 2016 contribution for from phase 2 at 9.3 €ct/kWh	55 * 5,760 = € 316,800

The <u>'Calculation'</u> page of the SDE website describes (in Dutch) how the SDE+ subsidy is determined and how much is paid out. The SDE+ contribution for 2016 indicated here is a provisional contribution, based on the provisional correction amount for 2016. The provisional correction amount will be finalised in the calender year following the year of production, with an adjustment based on advance sums already paid. The correction amount (provisional and final) is re-established each year, on the basis of the evolution of the energy price. The base and phase amount determined for the 2016 SDE+ applies to the entire duration of the SDE+ subsidy.



2016 SDE+ subsidies are available for the production of electricity and heat from solar technology. The 'Solar-PV from 15 kWp' category is only open for installations connected to a large-scale energy connection. Subsidies for the 'Solar thermal' category are only available for installations with an aperture surface area ≥ 200 m² and covered solar collectors.



## 1. Which installations qualify for a SDE+ subsidy in 2016?

### Renewable electricity

Subsidies are available for photovoltaic solar panels (Solar-PV) with a capacity of ≥ 15 kWp and a large-scale energy connection.

#### Renewable heat

You can apply for a subsidy for 'Solar collectors with an aperture area  $\geq$  200 m<sup>2</sup>', as long as all the collectors used are covered.

## 2. Characteristics and changes compared with 2015

#### Solar-PV

You can only apply for a subsidy in the category 'Solar-PV ≥ 15 kWp' in 2016 if the installation has a large-scale energy connection (i.e. a connection to the electricity grid with a rating of more than 3 \* 80A). The costs associated with the acquisition of an installation suitable for large-scale energy connection may be high. The grid operator will be able to provide further information on these costs.

If you are submitting an application and you are not the owner of the intended location for the production installation, you will be obliged to submit a declaration from the owner with your application. In this declaration, the owner gives his/her authorisation to have the production installation built and operated at the intended location.

## Feasibility study

If you are applying for a subsidy for an installation with a rating of more than 500 kWp, you must perform a feasibility study and

include the results of this study in your application.

With effect from 2016, such a feasibility study is also required if you are applying for a subsidies for several installations with a combined total power rating of more than 500 kWp in the same round of applications.

### **Environmental permit**

An environmental permit is usually required for solar-PV installations in a field set-up. If no environmental permit is required, you must enclose the relevant documentation to confirm this.

#### Solar thermal

SDE+ 2016 subsidies are only available in the Solar thermal category for installations with an aperture area of 200 m² or more, where the collectors are covered. This means that a light-permeable layer (such as a glass plate or tube) must be mounted above the light-absorbing surface to provide insulation. The minimum aperture area of these collectors has been changed from 100 m² to 200 m² in 2016.

## 3. Phasing and rates for Solar

	Phase 1 From 9 am, 22 March	Phase 2 From 5 pm, 29 March	Phase 3 From 5 pm, 4 April	Phase 4 From 5 pm, 11 April to 5 pm, 28 April		Provisional correction amount 2016	Maximum full load hours per annum	Maximum subsidy period (years)	Operation must start at the latest within (years)
Solar	Maximum base amount / phase amount (€ / kWh)			(€/kWh)					
Solar-PV ≥ 15 kWp and connection > 3*80 A	0.090	0.110	0.128	0.128	0.035	0.044	950	15	3
Solar collectors aperture area ≥ 200 m <sup>2</sup>	0.090	0.103	0.103	0.103	0.025	0.031	700	15	3

## 4. Calculation examples for Solar



Calculation example: SDE+ contribution –  $Solar-PV \ge 15$  kWp (electricity)

Provisional annual SDE+ 2016 contribution	
Provisional annual SDE+ 2016 contribution for phase 1 at 9.0 €ct/kWh	46 * 190 = € 8,740
Maximum annual production eligible for subsidy for 200 kWp installation#	200 * 950 = 190,000 kWh = 190 MWh
Maximum number of full load hours eligible for subsidy#	950
Provisional SDE+ 2016 contribution when 12.8 €ct/kWh applied for from phase 3	12.8 – 4.4 = 8.4 €ct/kWh = 84 €/MWh
Provisional SDE+ 2016 contribution when 9.0 €ct/kWh applied for in phase 1	9.0 – 4.4 = 4.6 €ct/kWh = 46 €/MWh
Provisional correction amount 2016	4.4 €ct/kWh
Maximum base amount from phase 3	12.8 €ct/kWh
Maximum phase amount for phase 1 (free category)	9.0 €ct/kWh

<sup>#</sup> You do not need to give a production estimate (power \* hours at full load) when making a subsidy application for 'Solar-PV ≥ 15 kWp'. The Netherlands Enterprise Agency will base its grant on the assumption that the maximum number of full load hours eligible for subsidy is 950.

The <u>'Calculation'</u> page of the SDE website describes (in Dutch) how the SDE+ subsidy is determined and how much is paid out. The SDE+ contribution for 2016 indicated here is a provisional contribution, based on the provisional correction amount for 2016. The provisional correction amount will be finalised in the calender year following the year of production, with an adjustment based on advance sums already paid. The correction amount (provisional and final) is re-established each year, on the basis of the evolution of the energy price. The base and phase amount determined for the 2016 SDE+ applies to the entire duration of the SDE+ subsidy.

Calculation example: SDE+ contribution – Solar collector, aperture area  $\geq 200 \text{ m}^2$  (heat)

Maximum phase amount for phase 1 (free category)	9.0 €ct/kWh
Maximum base rate from phase 2	10.3 €ct/kWh
Provisional correction rate 2016	3.1 €ct/kWh
Provisional SDE+ 2016 contribution when 9.0 €ct/kWh applied for in phase 1	9.0 – 3.1 = 5.9 €ct/kWh = 59 €/MWh
Provisional SDE+ 2016 contribution when 10.3 €ct/kWh applied for from phase 2	10.3 – 3.1 = 7.2 €ct/kWh = 72 €/MWh
Maximum number of full load hours eligible for subsidy#	700
Maximum power of installation with aperture area of 200 m <sup>2</sup> #	200 * 0.7 = 140 kW
Maximum annual production eligible for subsidy for installation with aperture area of 200 m <sup>2</sup> #	140 * 700 = 98,000 kWh = 98 MWh
Provisional annual SDE+ 2016 contribution for phase 1 at 9.0 €ct/kWh	59 * 98 = € 5,782
Provisional annual SDE+ 2016 contribution from phase 2 at 10.3 €ct/kWh	72 * 98 = € 7,056

<sup>#</sup> When applying for a subsidy for a solar collector, you have to fill in the aperture area and the power. The maximum power of the installation in kW is equal to the aperture area in m<sup>2</sup> times 0.7. You do not need to give a production estimate (power \* hours at full load). The Netherlands Enterprise Agency will base its grant on the assumption that the maximum number of full load hours eligible for subsidy is 700.

# Subsidy applications spring 2016: 22 March – 28 April

You can apply for SDE+ subsidies quickly and easily via the online eLoket of the Netherlands Enterprise Agency.

The SDE+ round of applications for spring 2016 runs from 9 am on 22 March to 5 pm on 28 April 2016. This first round is divided into four phases, and the base amount increases per phase. The application procedure described is available in Dutch only.

### 1. Sign in with eLoket (e-Service)

You must identify yourself with a user name and password before you can use eLoket. Businesses and organisations can identify themselves with eHerkenning (eRecognition). Private individuals have to use the DigiD service for that purpose.

## 2. Create a profile

If you are using eLoket for the first time, you will have to create your profile. Here you enter your contact details once, along with the Chamber of Commerce number or the citizen service number (BSN-nummer) of the identification used. You must also enter your details as intermediary if you want to apply on behalf of another party.

## 3. Create a draft application

You can log on by clicking on 'Apply for SDE+' (SDE+ aanvragen) on the SDE website. This brings you directly to the screen containing the application forms menu. If you log in via the start page of eLoket, you will find the application form for the SDE+ on the 'New application' (Nieuwe aanvraag) tab.

In the forms catalogue that is then displayed, click on 'SDE+ 2016'. In the 'Select theme' (Thema selecteren) tab, you need to specify the production installation category you would like to make an application for. In the 'Create form' (Formulier aanmaken) tab, you need to answer several questions before the correct form is created for you.

### 4. Filling in the application form

You are then directed to the application form containing the questions relevant for your application. Before moving on to the next tab, you can verify your input with the 'Verification' (Controleren) button. You will be notified if any information is missing or incorrect. You can add appendices to the last tab of the application form. Mandatory appendices are indicated with an asterisk (\*). Check the entire application for errors before submitting your actual application. If you get any error messages, navigate to the tab indicated to correct your input. You can submit your application from 9 am on 22 March 2016. You can save your draft application at any time. If you would like to submit your application at a later stage, sign in again and follow the steps under '5' in order to submit your application.

#### 5. Submission

To submit a correctly completed form, click on 'To submission' (Naar verzenden) in the 'Verification' (Controleren) tab. Here, you will verify that all the information is accurate. All questions and answers appear in sequence on the screen. You indicate which phase and amount per kWh you are submitting the application for, and tick 'Declared and signed' (Verklaring en ondertekening). Hereafter you perform the final submission of the application by clicking on 'Sign and submit' (Ondertekenen en verzenden). You will receive an confirmation via the e-mail address indicated in your profile.

#### 6. Retrieval

Your application form will be saved automatically when you navigate to a new tab. You can also choose to save the information in between. Saved applications can be found in 'My overview' (Mijn overzicht). Submitted applications get a project number. This number can be used in any correspondence relating to your application.

## 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 wish to proceed with a project if all applications in the bundle are honoured. If, on one day, the budget claim of the applied subsidies exceeds the available budget, applications will be classified in order of the amounts of subsidy applied for. In case of a bundled application, the highest amount of the applications in the bundle will apply. Bundles will be considered as single application when lots must be drawn amongst applications with the same base amount.

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

Click on the link below to request one. Count on a turnaround time of several days. An eHerkenning trust level 1 will be required when applying for the SDE+ subsidy.

www.eherkenning.nl and www.digid.nl

## Preparing your application: which appendices do you need to include?

The SDE+ 2016 application form indicates which appendices are required in each category.

## Permission from the owner

Is someone else the owner of the intended location for the production installation? Under the SDE+, you will need prior permission from the owner of the intended location or you need to obtain permission at the moment of the application. In the

application form, you must indicate whether you are the owner of the intended location. If you are not, you must include a formal declaration of permission from the owner of the location with your application. In this declaration, the owner gives his/her authorisation to have the production installation built and operated at the intended location.

## Feasibility study

From a nominal requested capacity of 0.5 MW, or 500 kWp, it is mandatory to include a feasibility study on the project with the application. The feasibility study must comprise, in any case, an operation calculation, a proof of your equity, a financial plan and a detailed timeframe regarding the commissioning of the production installation. In addition, a wind report is a mandatory appendix for wind projects. Extra details may be requested depending on the project. Information on the feasibility study can be found on our SDE website (only available in Dutch). With effect from 2016, such a feasibility study is also required if you are applying for a subsidy for several solar-PV installations with a total power rating of more than 500 kWp in the same round of applications.

## **Geological investigation**

If you are submitting an application in the Geothermal category, you will also require a geological survey. This survey should be submitted along with your application. The geological survey must comply with the <u>'SDE+ Geological Research Model'</u> (Model Geologisch Onderzoek SDE+).

The <u>'SEI Geothermal Geological Research report'</u> (Geologisch Onderzoek SEI Aardwarmte) or <u>'RNES Geothermal Geological Research report, 2014'</u> or <u>'2015'</u>, (Geologisch Onderzoek RNES Aardwarmte, 2014 or 2015) may also be used for this. The geological research models are only available in Dutch.

### Permits required

In most cases, one or more permits will be required for production installations. When you submit your application, these permits must already have been issued by the competent authorities. As an applicant, you are deemed to be aware of the permit requirements for the production installation for which you are applying for a subsidy.

In accordance with the SDE Decision, the application form asks whether permits are required for the production installation based on:

- The Environmental Law (General Provisions) Act (Wet algemene bepalingen omgevingsrecht);
- Chapter 6, paragraph 6, of the Water Decree (Water permit);
   and/or
- The Mining Act.

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

If environmental permits are required, you should submit the relevant permit(s) plus the application forms for the permit(s) with your subsidy application.

If according to the The Environmental Law (General Provisions)
Act (Wet algemene bepalingen omgevingsrecht) you require one
or more notifications to the competent authority, you should
include the responses of the relevant authorities to these
notifications when you submit your subsidy application.

## **Points of interest**

- You can submit your subsidy application from 9 am on 22 March 2016 to 5 pm on 28 April 2016.
- Make sure your application is complete, including proper justification for your project, a thorough feasibility study and all necessary permits and appendices. Please check you have filled in the digital application form completely.
- During the above-mentioned application period, you can only submit one application per production installation category and per address where the production installation will be built.
- The amount of subsidy applied for can vary. The maximum base amount depends on the technology used. You can also apply for a subsidy at a lower amount, in what is known as the 'free category'.
- The Netherlands Enterprise Agency will process the applications in the order of entry (i.e. on a first come, first served basis). Applications will be classified in order of the amount of subsidy applied for in the event that more subsidies are applied for on one day than SDE+ budget available. In such a case, the application for the lowest amount will be ranked first in the classification system. If the budget limit falls between applications with an equal amount, lots will be drawn amongst the applications.

- For the allocation of the subsidy budget, applications received at or after 5 pm will be considered as having been received on the next working day.
- Applications for wind categories and applications for production installations that form a part of a renewable gas hub can be submitted as a bundled application. More information on bundled applications can be found on the SDE+ website (Only available in Dutch).
- Subsidies can only be granted on the basis of complete applications, including all necessary permits and appendices.

## Final steps to receiving the SDE+

Have you been granted a SDE+ subsidy? If so, you will still have to run through a few more steps to actually receive it:

- You must develop and commission the project.
- You must register with a certifying authority: CertiQ for renewable electricity and heat and Vertogas for renewable gas.
- The network operator, or in case of heat, the metering company, should establish you as a producer of renewable energy and you must set up a measurement protocol.

Once these steps have 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 the Netherlands Enterprise Agency.

30

# Fundamentals of the SDE+

## 1. One combined budget ceiling

One subsidy ceiling has been determined for all the categories together. For the spring 2016 round of applications, € 4 billion will be made available to support projects. Applications will be classified in the order of the amounts of subsidy applied for if more subsidies are received on one day than there is budget for. The application with the lowest amount will be ranked first in the classification system. If the budget limit falls between applications with an equal amount, lots will be drawn for these applications.

## 2. A phased release of funds

SDE+ subsidies are released in phases. There are four phases for the Spring period running between 9 am on 22 March 2016 to 5 pm on 28 April 2016. Each phase has a maximum phase amount rising from 9 €ct/kWh (6.4 €ct/kWh for renewable gas) in phase 1 to 15 €ct/kWh (10.6 €ct/kWh for renewable gas) in phase 4. There is a maximum base amount for each technology, above which no subsidy is granted.

Subsidies for cost-effective technologies with a maximum phase amount less than or equal to 9 €ct/kWh may be applied for in phase 1. There is more chance that budget will be available for these phase 1 applications than for technologies with a higher maximum base amount.

### 3. One maximum phase amount

The maximum phase amount for SDE+ subsidies in 2016 is 15 €ct/kWh (10.6 €ct/kWh for renewable gas). Technologies that are able to produce renewable energy for this amount or lower may qualify for subsidy.

## 4. A free category

You can also apply for a lower subsidy than the maximum base amount for the technology in question. Such applications are said to fall within the 'free category'. Renewable energy producers or those aiming to be renewable energy producers can apply for subsidies in this category for amounts equal to multiples of a tenth of a eurocent per kilowatt-hour. This allows them to tailor their subsidy application more closely to their business case. The amount of subsidy applied for in the 'free category' is lower than the maximum phase amount and higher than the base energy price.

## Table base amounts SDE+ spring 2016

Category	Renewable energy form	Maximum base amount (€/kWh)	Base energy price (€/kWh)	Provisional correction amount 2016 (€/kWh)	Full load hours per annum
Phase 1 - From 9 am, 22 March					
Wastewater treatment / sewage treatment - renewable gas only	gas	0.032	0.020	0.022	8,000
Solid or liquid biomass boiler ≥ 5 MWth	heat	0.043	0.014	0.017	7,000
Solid or liquid biomass boiler ≥ 0.5 and < 5 MWth	heat	0.052	0.025	0.031	4,000
Geothermal heat, depth ≥ 500 metres	heat	0.056	0.014	0.017	5,500
Extended-lifespan all-purpose fermentation for heat	heat	0.056	0.014	0.017	7,000
Wood pellet boiler for industrial steam ≥ 10 MWth	heat	0.057	0.014	0.017	7,000
Extended-lifespan all-purpose fermentation for renewable gas	gas	0.059	0.020	0.022	8,000
Sewage treatment - Thermophilic fermentation of secondary sludge	СНР	0.060	0.029	0.032	5,729
All-purpose fermentation for heat	heat	0.060	0.025	0.031	7,000
All-purpose fermentation for renewable gas	gas	0.060	0.020	0.022	8,000
Geothermal heat, depth ≥ 3.500 metres	heat	0.062	0.014	0.017	7,000
Extended-lifespan thermal conversion of biomass ≤ 50 MWe	СНР	0.063	0.023	0.026	4,429
Extended-lifespan thermal conversion of biomass ≤ 50 MW, 1 year MEP compensation	СНР	0.066	0.023	0.026	4,429
Extended-lifespan co-fermentation of manure for heat	heat	0.066	0.014	0.017	7,000
Onshore wind, ≥ 8.0 m/s	electricity	0.070	0.030	0.038	*
Liquid biomass boiler ≥ 0.5 MWth	heat	0.071	0.025	0.031	7,000
Wind on primary flood defences, ≥ 8.0 m/s	electricity	0.075	0.030	0.038	*
Onshore wind, ≥ 7.5 and < 8.0 m/s	electricity	0.076	0.030	0.038	*
Thermal conversion of biomass ≤ 100 MWe	СНР	0.077	0.020	0.023	7,500
Co-fermentation of manure for heat	heat	0.078	0.025	0.031	7,000

<sup>\*</sup> Net P50 value of full load hours taken from applicant's wind report. This value is determined on an individual basis for each project.

Continuation  $\rightarrow$ 

## Table base amounts SDE+ spring 2016 (continued)

Category	Renewable energy form	Maximum base amount (€/kWh)	Base energy price (€/kWh)	Provisional correction amount 2016 (€/kWh)	Full load hours per annum
Phase 1 - From 9 am, 22 March					
Onshore wind, ≥ 7.0 and < 7.5 m/s	electricity	0.082	0.030	0.038	*
Wind on primary flood defences, ≥ 7.5 and < 8.0 m/s	electricity	0.082	0.030	0.038	*
Extended-lifespan all-purpose fermentation for CHP	СНР	0.086	0.030	0.033	5,855
Wind on primary flood defences, ≥ 7.0 and < 7.5 m/s	electricity	0.087	0.030	0.038	*
All-purpose fermentation for CHP	СНР	0.087	0.029	0.032	5,742
Free category maximum phase amount for Phase 1	gas <sup>1</sup>	0.064			
Free category maximum phase amount for Phase 1	other	0.090			
Phase 2 - From 5 pm, 29 March					
Extended-lifespan co-fermentation of manure for renewable gas	gas	0.067	0.020	0.022	8,000
Co-fermentation of manure for renewable gas	gas	0.076	0.020	0.022	8,000
Onshore wind, < 7.0 m/s	electricity	0.093	0.030	0.038	*
Wastewater treatment/sewage treatment - thermal pressure hydrolysis	electricity	0.093	0.039	0.042	8,000
Wind on primary flood defences, < 7.0 m/s	electricity	0.099	0.030	0.038	*
Extended-lifespan co-fermentation of manure for CHP	СНР	0.101	0.030	0.033	5,855
Solar collector, aperture area ≥ 200 m <sup>2</sup>	heat	0.103	0.025	0.031	700
Existing capacity for auxiliary firing and co-firing of biomass in coal-fired power stations	electricity	0.107	0.039	0.042	5,839
Renovation of hydroelectric power station, drop of ≥ 50 cm	electricity	0.108	0.039	0.042	2,600
Monofermentation of manure for heat	heat	0.109	0.025	0.031	7,000
Free category maximum phase amount for Phase 2	gas <sup>1</sup>	0.078			
Free category maximum phase amount for Phase 2	other	0.110			

Gas is not fully included in European renewable energy targets. As a result, the phase boundaries for gas differ from those for electricity and heat by a factor 0.706. Hence, different projects compete on the basis of the contribution they make to the target.

Net P50 value of full load hours taken from applicant's wind report. This value is determined on an individual basis for each project.

Continuation  $\rightarrow$ 

## Table base amounts SDE+ spring 2016 (continued)

Category	Renewable energy form	Maximum base amount (€/kWh)	Base energy price (€/kWh)	Provisional correction amount 2016 (€/kWh)	Full load hours per annum
Phase 3 - From 5 pm, 4 April					
Geothermal CHP, depth ≥ 500 metres	СНР	0.112	0.017	0.020	4,091
Co-fermentation of manure for CHP	СНР	0.114	0.029	0.032	5,732
Wind in lake, water ≥ 1 km <sup>2</sup>	electricity	0.114	0.030	0.038	*
New capacity for co-firing of biomass in coal-fired power stations	electricity	0.114	0.039	0.042	7,000
Photovoltaic solar panels, ≥ 15 kWp and connection > 3*80A	electricity	0.128	0.035	0.044	950
Free category maximum phase amount for Phase 3	gas <sup>1</sup>	0.092			
Free category maximum phase amount for Phase 3	other	0.130			
Phase 4 - From 5 pm, 11 April to 5 pm, 28 April					
New hydroelectric power station, drop of ≥ 50 cm	electricity	0.150	0.039	0.042	5,700
Free flowing energy, drop of < 50 cm and wave energy	electricity	0.150	0.039	0.042	3,700
Monofermentation of manure for renewable gas	gas	0.106	0.020	0.022	8,000
Monofermentation of manure for CHP	СНР	0.150	0.039	0.042	8,000
Gasification of biomass for renewable gas	gas	0.106	0.020	0.022	7,500
Osmosis	electricity	0.150	0.039	0.042	8,000
Free category maximum phase amount for Phase 4	gas <sup>1</sup>	0.106			
Free category maximum phase amount for Phase 4	other	0.150			

Gas is not fully included in European renewable energy targets. As a result, the phase boundaries for gas differ from those for electricity and heat by a factor 0.706. Hence, different projects compete on the basis of the contribution they make to the target.
 Net P50 value of full load hours taken from applicant's wind report. This value is determined on an individual basis for each project.

## **Further information**

Click here for a (Dutch-language) video clip about SDE+

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