

## Part III.8 — Supplementary Information Sheet for the notification of an evaluation plan

Member States should use this form to notify an evaluation plan according to Article 1(2)(a) of Commission Regulation (EU)<sup>1</sup> No 651/2014 and in case a notified aid scheme should be evaluated according to the relevant Commission guidance.

<sup>2</sup>Please refer to the Commission Staff Working Document “Common methodology for State aid evaluation” for guidance on the drafting of an evaluation plan.

### 1. Identification of the aid scheme to be evaluated

1) Title of aid scheme:

Promoting sustainable energy production and climate transition (SDE + +).....

2) Does the evaluation plan concern:

a)  a scheme subject to evaluation pursuant to Article 1(2)(a) of Regulation (EU) No 651/2014?

b)  a scheme notified to the Commission pursuant to Article 108(3) TFEU?

3) Reference of the scheme (to be completed by the Commission):

.....  
4) Please list any existing ex-ante evaluations or impact assessments for the aid scheme and ex-post evaluations or studies conducted in the past on predecessors of the aid scheme or on similar schemes. For each of those studies, please provide the following information: a) a brief description of the objectives of the study, the methodologies used, results and conclusions, and b) specific methodological challenges that the evaluations and studies might face (e.g. availability of data relevant for the assessment of the current evaluation plan). If appropriate, please identify relevant areas or topics not covered by previous evaluation plans that should be subject of the current evaluation. Please provide the summaries of such evaluations and studies in annex and, when available, the internet links to the documents concerned:

**1CE Delft and SEO (2016) Evaluation of the SDE + scheme (ex-post evaluation)<sup>3</sup>**

(a) **Objective:** The primary purpose of this evaluation is to evaluate the effectiveness

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Commission<sup>1</sup> Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (OJ L 187, 26.6.2014, p. 1).

<sup>2</sup> SWD (2014) 179 final, 28.5.2014. [http://ec.europa.eu/competition/state\\_aid/modernisation/state\\_aid\\_evaluation\\_methodology\\_nl.pdf](http://ec.europa.eu/competition/state_aid/modernisation/state_aid_evaluation_methodology_nl.pdf)

<sup>3</sup> <https://www.ce.nl/publicaties/1888/evaluatie-van-de-sde-plus-regeling>

and efficiency of the SDE + instrument for the period 2011-2015 and to indicate where possible ways of increasing it in the future.

**Methodologies:**This evaluation study is based on four sources of research:

— Literature and file research;

Data analysis;

Survey among project promoters (with a SDE + decision and a control group consisting of project developers with a rejected grant application);

Focus discussions.

**Results and conclusions:**Production with SDE + is likely to have a high level of additional and free riders.The SDE + scheme is more efficient than predecessors and there seems to be an exchange between target range (amount of renewable energy) and efficiency (subsidy execution).The analysis of the data shows that the intended competitive incentive actually results in savings on the grant issued compared to a system such as the SDE, in which a maximum basic amount was allocated.

The SDE + scheme is assessed by surveyed applicants as a relatively complex scheme.However, the administrative burden is considered reasonable in relation to the (expected) grant amount and, as a general rule, are not perceived as a barrier to the grant application for future projects.

(b) **Methodological challenges:**a low response to the survey from the control group.

## **2Trinomics (2019) Review SDE + + methodology (ex ante evaluation)<sup>4</sup>**

(a) **Objective:**The objective is to support the Ministry of EZK through a thorough analysis of the current design of the SDE + +.The focus is on assessing the changes compared to the current SDE + which are envisaged for the opening in 2020.These changes include changes to the design of the scheme (concept, methodology, assumptions) and in the wider selection of techniques eligible for funding in the new scheme.

The following research targets are defined:

1 Assess the most important design choices:“works well”, in particular:

a. assumptions, assumptions and methodology for determining the CO2 emissions avoided and the need for subsidies;

b. assumptions and principles for determining starting amount, amount of correction, floor price and conditions for granting new techniques.

2 Selection of five ‘new’ techniques, covering:

a. practical feasibility:is there a good fit between these techniques and the design of the SDE + +?

b. system effects:how do the new techniques affect the functioning of the system as a whole?Where do they rank in terms of subsidy needs?And can the volume of applications for new techniques have a substantial impact on the availability of resources for other techniques?

3 Assess the coherence of the scheme, distinguishing between:

a. internal consistency of the SDE + + and mutual coherence of applied principles and assumptions for the different techniques;

consistency with other policy instruments and objectives.

4 Identify and assess the main risks arising from the new design and selection of techniques.

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<sup>4</sup><https://www.rijksoverheid.nl/documenten/rapporten/2019/11/12/bijlage-1-review-sde-methodiek>

**Methodologies:**Literature review and interviews

**Results and conclusions:**It has been possible to create a workable instrument that can be driven by expected cost-effective GHG reduction.No points of attention have been identified so that the methodology as a whole would not work in practice.

In the light of the recent approach to the climate agreement with commitments and targets by sector, it is questionable in due course whether the high degree of technology neutrality — such as in the SDE ++ is desirable.When it is envisaged to move away from technology neutrality and competition between sectors, there is scope to address the inherent challenges in the desire to support a wider range of GHG reduction measures in an alternative way.

In order to stimulate GHG reduction measures — in addition to sustainable energy generation — the subsidy needs per tonne of CO2 avoided should be determined for each project.For this conversion more variables, assumptions and predictions are relevant than if only sustainable energy generation techniques are compared on a cost per kWh of renewable energy.This results in the effectiveness of the SDE ++ depending on the projection of emission factor projections in 2030 and the long term electricity, gas and ETS prices.This increased influence of estimates of future developments ensures that the SDE ++ is inevitably less robust than the SDE +.These challenges are inherent in broadening climate policy and are not caused by the design of the SDE ++ scheme.

(b) **Methodological challenges:**some points of the SDE ++ were not yet fully developed, thus limiting the available information on these points.This was addressed through regular contact between the sponsor and the evaluation team, with the latest developments being transmitted orally.

## 2. Objectives of the aid scheme to be evaluated<sup>5</sup>

**2.1.** Please describe the aid scheme.Please indicate the needs and problems the scheme intends to address, which are the intended categories of beneficiaries (e.g. size, sectors, location, indicative number):

In the coalition agreement, the government announced the mobilisation of the funds for the sustainable energy production incentive scheme (SDE +) from sustainable energy production to GHG emission reduction.Under the SDE ++, the contribution to the 49 percent emission reduction target in 2030 and cost-effectiveness is central to achieving this goal.The SDE ++ is the main subsidy instrument to achieve this climate target.

The SDE ++ is an operating grant aimed at still unprofitable climate friendly technologies.Key elements are (1) focus on greenhouse gas emissions savings, (2) an upfront set budget per technique or sector (technology neutrality with no, unless

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Beyond providing a general description of the objectives and eligibility rules of the scheme, the<sup>5</sup> aim of this section is to assess how the eligibility and exclusion rules of the scheme may be used to identify the effect of aid.In some cases, the precise eligibility rules may not be known in advance.In those cases the best available expectations should be provided.

principle<sup>6</sup>), (3) competition between grants (due to the continuation of the tender scheme) and (4) multi-annual certainty for investors.

In addition (as is currently the case in the SDE +), different basic amounts (based on the cost of techniques), maximum grant amounts and maximum duration of the grant will be used. The subsidy amounts are adjusted for the actual relevant market price, such as the average electricity price or the CO<sub>2</sub> price. The basic amounts and competition between techniques ensure that there are no large excess profits and the scheme complies with European State aid rules.

The SDE ++ will stimulate the roll-out of market-ready CO<sub>2</sub> reducing techniques. The SDE ++ is the last step of proven climate-friendly techniques towards self-employment through the market. Decreasing basic amounts or periodic recalibration by technique, ensure that the support is temporary and stimulates only techniques that can be expected to be rolled out without subsidy money in the foreseeable future.

Efficiency and scarcity of subsidies to be provided means that funding should in principle be used as a last resort. In order to determine whether a technique is eligible, the technique must be designed to reduce greenhouse gas emissions to or removal of greenhouse gases from the atmosphere, there must be potential that can now be used, an unprofitable margin and the setting of standards on major implementation issues and/or unacceptable road leakage from CO<sub>2</sub> emissions to the rest of the world.

For the opening round in 2020, in addition to the techniques already in place in the SDE +, 5 CO<sub>2</sub> reducing techniques passed on to the SDE ++ frameworks: electric boilers, heat pumps, CCS, large-scale hydrogen production with electrolysis, and use of waste heat.

From a performance perspective, the SDE ++ scheme focuses on considerable scale techniques. This translates into certain techniques in installations with a minimum power of 500 kW. There are no restrictions on sectors or sites. Thousands of applications are expected in each opening round, as is now the case in the SDE + rounds. The opening rounds under the SDE ++ should ultimately lead to approximately EUR 1 billion in cash expenditure in 2030, to projects with between 2020 and 2030. ....

**2.2.** Please indicate the objectives of the scheme and the expected impact, both at the level of the intended beneficiaries and as far as the objective of common interest is concerned:

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<sup>6</sup>In principle and where possible, the SDE ++ scheme does not provide for caps to ensure the cost-effectiveness and practicability of the scheme. This 'No, unless' policy leads. However, care will be taken to ensure that the cost-effective target range (in sectors or in whole) is not compromised. In these cases, the deployment of ceilings can ensure that the ambitions of the different sectors are not frustrated. At the same time, the possible deployment of ceilings is important for the instrument to continue to stimulate cost-effective techniques. Three ceilings will be considered. See also: Parliamentary letter 26 April 2019, <https://www.rijksoverheid.nl/documenten/kamerstukken/2019/04/26/kamerbrief-over-verbreding-van-de-sde-naar-de-sde>

The introduction of the Climate Change Act and the publication of the Climate Agreement in 2019 gave a strong boost to the Dutch climate policy. The central objective is a 49 % greenhouse gas emission reduction in 2030 compared to 1990 and a reduction of 95 % in 2050. One of the envisaged policy instruments to contribute to these objectives is the SDE ++. The extension of the SDE + to the SDE ++ aims to allow the design of the scheme to close to the new objective and, as far as possible, to preserve the successful core elements of the SDE +. The main changes (1) are the placing on the market of projects on the basis of subsidy needs per tonne of CO<sub>2</sub> equivalent, instead of competition based on the cost of renewable energy, and (2) adding techniques that can lead to CO<sub>2</sub> reduction but no renewable energy is generated.

At the level of the targeted beneficiaries, the expected impact is to reduce CO<sub>2</sub> directly or indirectly. In new techniques such as heat pumps and CCS, CO<sub>2</sub> reduction directly in the beneficiary area, the existing techniques such as Zon-PV and wind power, indirectly reduce CO<sub>2</sub> reduction, avoid CO<sub>2</sub> emissions from fossil power plants. In both cases, it contributes to the sectoral climate targets and thus the headline target of a 49 % reduction in 2030 compared to 1990 levels. This is the objective of common interest. ...

**2.3.** Please indicate possible negative effects, on the aid beneficiaries or on the wider economy, that might be directly or indirectly associated with the aid scheme.<sup>7</sup>

The SDE ++ covers only the unprofitable margin, which does not crowd out private investments. The scheme is technology neutral and has no regional or sectoral preferences. The SDE ++ creates an intended market distortion that benefits the greening of the economy, by stimulating investments in CO<sub>2</sub> reducing techniques. This can be done to the detriment of investments in technologies that emit CO<sub>2</sub>. This is not considered to constitute undue market distortion, in line with point 90 of the EEAG. ...

**2.4.** Provide: (a) the annual budget allocated to the scheme; (b) the duration of the scheme<sup>8</sup>; (c) the aid instrument (s), (d) and eligible costs:

budget

The budget of the SDE ++ is set each year within the 2030 greenhouse gas emission reduction target, also taking into account the forecast of projects that may be ready to participate in the opening round in a specific year. Each year a subbudget will be made available (instead of one application for all projects that will contribute to the 2030 GHG target), which should lead to cost reductions in different technologies over the years, thus achieving a cost-effective long-term energy transition.

The annual commitment budget for the SDE ++ is based on three criteria:

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<sup>7</sup> Examples of negative effects are regional and sectorial biases or crowding out of private investments induced by the aid scheme.

<sup>8</sup> Aid schemes defined in Article 1(2)(a) of Regulation (EU) No 651/2014 are excluded from the scope of the Regulation six months after their entry into force. After having assessed the evaluation plan, the Commission may decide to extend the application of the Regulation to such schemes for a longer period. Member States are invited to precisely indicate the intended duration of the scheme.

1The availability of projects:we want the compulsory budget to be a binding constraint, therefore RVO makes a prudent assessment of the forecast of realisable projects and the maximum amounts for which subsidy is expected to be requested in the annual project monitor.On the basis of this Project Monitor, we can set a maximum commitment budget for the opening round.

2The available resources:the amount of cash to be spent on the SDE + + is fixed for each year.On the basis of the decisions already taken and the cash expenditure anticipated for that purpose, it is possible to calculate the amount of space available in future cash and how this translates into an appropriate commitment budget.The commitment budget exceeds the available cash resources, as the commitment budget is the maximum amount of grants.In reality, expenditure will be lower due to cancellation and delay of projects, under-production or a higher market price of the product.

3The target range:we calculate the number of more projects we need to achieve our 2030 GHG targets and how this translates into annual grant expenditure.On the basis of this calculation, we can also set a maximum obligation budget.

These three criteria lead to an obligation budget for a given year.

We expect the SDE + + + annual opening round, but two rounds are still open.The main reasons for opting for one application round are that the annual liability budget of the SDE + + will be lower than for the SDE + in previous years and that the availability of projects for new CO<sub>2</sub> — reducing technologies (not included in the SDE +) are expected to be relatively small in the initial years of the SDE + + scheme.Table 1 shows the annual budgets within the SDE + 2011-2019 (excluding separate offshore wind tenders).

**Table 1 Annual commitment budget for SDE +, 2011-2019**

Years	Appropriations budget (EUR billion)
2011	1.5
2012	1.7
2013	3
2014	3.5
2015	3.5
2016	9
2017	12
2018	12
2019	10
2020	SDE + (spring):4 SDE + + (autumn):5

(b) Duration of the procedure

The SDE + + scheme runs from 2020 to 2030.

c) Aid instrument

The SDE ++ scheme is an aid scheme under which aid can be granted to individual beneficiaries. It contains operating aid for CO<sub>2</sub> — reducing projects.

(D) Eligible costs

The SDE ++ scheme reimburses the unprofitable margin of the eligible CO<sub>2</sub> reducing techniques. Under the cost of the reduced quantity of CO<sub>2</sub>: The average sum of investment and operating costs attributable to the reduced amount of CO<sub>2</sub> plus a reasonable profit margin divided by the expected amount of reduced quantity of CO<sub>2</sub>. Innovative technologies are considered to be a reliable technology. Therefore, higher maintenance costs or lower full load hours are not taken into account due to the excessive decommissioning of the installation. Costs incurred prior to a SDE ++ application are not included. The following costs shall not be included and be deemed to be paid from the return on equity contributed: arrangement fees, participation costs and preparation costs (e.g. costs of geological studies, feasibility studies or permits). The cost is adjusted for the market value of the energy produced and/or reduced CO<sub>2</sub>. .....

**2.5.** Please provide a summary of the eligibility criteria and the methods for selecting the aid beneficiaries. In particular, please describe the following: (a) methods for selecting beneficiaries (e.g. scoring); (b) the indicative budget available for each group of beneficiaries; (c) the possibility of exhaustion of the budget for certain groups; (d) the scoring rules, if used by the scheme; (e) maximum aid intensities, and (f) the criteria that the granting authority will take into account when assessing applications:

a) Methods for selecting beneficiaries

The opening rounds are divided into phases which make the most cost-effective applications eligible for a decision. This is expressed in the subsidy intensity (EUR per tCO<sub>2</sub> reduced). On the day of budget exhaustion, applications are ranked against cost effectiveness.

(b) Indicative budget

Table 2 provides an indicative breakdown of the available cash resources in 2030.

**Table 2 indicative breakdown, based on the current expectation of subsidy needs of the technology, from the cash of the SDE ++ in 2030**

	Indicatieve verdeling vrije kasmiddelen SDE++ in 2030
Hernieuwbare elektriciteit	€ 200 miljoen
Hernieuwbare warmte en groengas	€ 135 miljoen
Hernieuwbare warmte kleinschalig (ISDE)	€ 100 miljoen
Geavanceerde Hernieuwbare Brandstoffen voor Vervoer	Cumulatief € 200 miljoen*
CO <sub>2</sub> -reductie industrie	€ 550 miljoen
<b>Totaal:</b>	<b>€ 985 miljoen</b>

\* Er is cumulatief €200 miljoen beschikbaar, over een aantal jaar gespreid in aanloop naar 2030. Dit ten behoeve van de productie van geavanceerde hernieuwbare brandstoffen voor vervoer via de SDE++ i.c.m. normering dat past binnen de voorwaarden van de SDE++ regeling (waaronder kosteneffectieve CO<sub>2</sub>-reductie).

All techniques compete with each other for cost-effectiveness. The cheapest techniques then get the money. In this way, most CO<sub>2</sub> reduction per euro is achieved. This means that the distribution of funds in practice can also be addressed differently. In principle and where possible, the SDE ++ scheme does not provide for caps to ensure the cost-effectiveness and practicability of the scheme. This 'No, unless' policies continue to lead. However, we remain aware that the cost-effective target range (in sectors or as a whole) is not compromised. In these cases, the deployment of ceilings can ensure that the ambitions of the different sectors are not frustrated. At the same time, the possible deployment of ceilings is important for the instrument to continue to stimulate cost-effective techniques.

#### (c) exhaustion of budget for certain groups

All techniques and hence all groups compete with each other, with cost-effectiveness. There is therefore an opportunity for the budget of an opening round to be exhausted before the groups with the least cost-effective projects can apply for funding. These will then have to wait for the next opening round. This is in line with the objective of the SDE ++.

#### D) scoring rules

See description under point a.

#### maximum aid intensities

The maximum subsidy intensity at which techniques can be claimed in the SDE ++ is EUR 300 per tonne of CO<sub>2</sub> in 2020. Techniques with higher grant intensity may benefit from the SDE ++, but this may not cover the entire unprofitable margin. The stimulation of techniques with a higher grant intensity than EUR 300 per tonne of CO<sub>2</sub> does not fit in a cost-effective energy transition such as the SDE ++. The maximum grant intensity will be reduced gradually towards 2030 in order to give market players an additional incentive to reduce the cost of different techniques.

(f) Criteria for assessment

Feasibility studies shall be carried out in order to assess the applications. If, on the basis of the information provided, RVO considers that it is not realistic that the project will be carried out within the set deadline, the grant application will be rejected. ....

**2.6.** Please mention specific constraints or risks that might affect the implementation of the scheme, its expected impacts and the achievement of its objectives:

Apart from the uncertain effects of the coronary crisis on the general economy, there are no specific constraints or risks that might affect the implementation of the scheme.

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**3. Evaluation questions**

**3.1.** Please indicate the specific questions that the evaluation should address by providing quantitative evidence of the impact of aid. Please distinguish between: (a) issues relating to the direct impact of the aid on the beneficiaries; issues that concern the indirect impact, and (c) issues that concern the proportionality and appropriateness of the aid. Please explain how the evaluation questions relate to the objectives of the scheme:

(a) Issues relating to the direct impact of the aid on the beneficiaries

The evaluation questions were presented in Table 3 (4.1). Figure 1 shows the Theory of Change of the SDE ++, which presents graphically how the evaluation questions relate to the objective of the scheme.

The *output* (direct results of the aid measures activities) of the SDE ++ is evaluated on the basis of questions A1 and A2 in Table 3, which measure the applications and decisions:

Output:
A1. What kind of projects are available?
A2. To what extent are effective CO2 reducing techniques not sufficiently incentivised or not sufficiently incentivised by the design of the scheme?

issues of indirect impact

The *outcome* (short term effect of the output of the output) of the SDE ++ is evaluated on the basis of questions A3 to A6 in Table 3:

Outcome:
A3. What has been done for projects?

A4.To what extent have the monitoring and control mechanisms used avoided implementation?
A5.To what extent are projects achieved after the rejection of an application (without the SDE ++ grant)?
A6.To what extent has the SDE ++ received a competitive advantage over competitors without SDE ++?

The *impact* (long-term target of SDE ++ ) of the SDE ++ is evaluated against questions A7 to A9 in Table 3.

Impact:
A7.To what extent has the SDE ++ contributed to CO2 reduction?
A8.To what extent has the SDE ++ contributed to the sectoral goals of the Climate Agreement?
A9.Is it plausible, given the other policy, that the SDE ++ will provide sufficient CO2 reduction to achieve the 2030 sectoral targets?

The evaluation questions A1 to A9 (and A10) should ultimately answer the main question for aid effectiveness:

Effectiveness:To what extent are the expected outputs, outputs and impacts achieved?
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issues relating to the proportionality and appropriateness of the aid

The evaluation questions which evaluate the proportionality and appropriateness of the aid will be subject to efficiency (efficiency).

This is assessed on the basis of questions B1 to B5 in Table 3.

B1.How much CO2 is reduced per euro?
B2.To what extent does the system of opening rounds make it possible to apply for the maximum technique specific subsidy intensities?
B3.To what extent does competition between different techniques lead to more applications below the maximum technique specific subsidy intensities?
B4.To what extent have ceilings led to less cost-effective decisions?
B5.To what extent did it occur and what were the reasons for the underspending?

The evaluation questions B1 to B5 should ultimately answer the main question of the effectiveness of the aid:

Efficiency (efficiency):are the financial and other inputs efficiently used to achieve the expected results?
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## 4. Result indicators

**4.1.** Please use the following table to describe which indicators will be built to measure outcomes of the scheme, as well as the relevant control variables, including the sources of data, and how each result indicator corresponds to the evaluation questions. In particular, please specify: (a) the relevant evaluation question; (b) the indicator; (c) the data source; (D) the frequency of data collection (e.g. annual, monthly); (e) the level at which the data is collected (e.g. at company level, at enterprise level, at regional level), and (f) the population covered in the data source (e.g. beneficiaries of aid, non-beneficiaries, all undertakings).

**Table 3 Evaluation Questions and Indicators**

Evaluation questions	Indicator	Source	Freq uency	Level	Populatio n
<i>A. Effectiveness: to what extent are the expected outputs, outputs and impacts achieved?</i>					
Output: A1. What kind of projects are available?	# and EUR projects, by technique (category)	RVO database	Years	Application/ decision	> 1000 a year
A2. To what extent are effective CO2 reducing techniques not sufficiently incentivised or not sufficiently incentivised by the design of the scheme?	EUR/tCO2 per engineering # applications by technique # decisions by technique Reason for non-applications	RVO's directory & project monitor, PBL final advice and other research Survey, interviews	Years	Application/ decision	> 1000
Outcome: A3. What has been done for projects?	# and EUR projects realised by technique (category) # and EUR repealed decisions (non-recovery) % by technique	RVO database	Years	Application/ decision	> 1000 a year
A4. To what extent have the monitoring and control mechanisms used avoided implementation?	# and EUR opening rounds without budget exhaustion # and EUR requests not having budget exhaustion Reason for rejection # and EUR decisions not delivered within the digestion time limit Reason for non-	RVO database, submission requirements (licence conditions, bank guarantees, feasibility studies, etc.),	Years	Application/ decision	> 100 a year

	realisation	interviews, survey			
A5.To what extent are projects achieved after the rejection of an application (without the SDE ++ grant)?	# projects carried out after application for rejection	Survey, case studies external research bureau	Years	Project	No estimate possible
A6.To what extent has the SDE ++ received a competitive advantage over competitors without SDE ++?	Costs project with SDE ++ compared to project costs excluding SDE ++	RVO's database, final advice on PBL	Years		
Impact: A7.To what extent has the SDE ++ contributed to CO2 reduction?	# Mton CO2 reduced Conversion and emission factor Average marginal option in electricity market during maturity	RVO's database, final opinion PBL, keV, data EPEX, electricity market analysis	Years	Application/ decision Report	> 1000 a year 1 per year
A8.To what extent has the SDE ++ contributed to the sectoral goals of the Climate Agreement? A9.Is it plausible, given the other policy, that the SDE ++ will provide sufficient CO2 reduction to achieve the 2030 sectoral targets?	# Mton CO2 reduced by sector % of target Mt CO2 reduction in 2030, by sector	RVO database, keV	Years	Application/ decision	> 1000 a year
A10.What were the critical success factors in achieving these results?	Qualitative	interviews, survey, focus groups, via external evaluation study			
<b><i>B. Efficiency (efficiency):are the financial and other inputs efficiently used to achieve the expected results?</i></b>					
B1.How much CO2 is reduced per euro?	EUR/tCO2	RVO database	Years	Application/ decision	> 1000 a year
B2.To what extent does the system of opening rounds make it possible to apply for the maximum technique specific subsidy intensities?	Requested EUR/tCO2 per project and technique, compared to maximum grant intensity	RVO database	Years	Application	> 1000 a year
B3.To what extent does competition between different techniques lead to more applications below the maximum technique specific subsidy intensities?	Requested EUR/tCO2 per project and technique, compared to maximum grant intensity, within a phase	RVO database	Years	Application	> 1000 a year

B4.To what extent have ceilings led to less cost-effective decisions?	EUR/tCO2 applications rejected on the basis of exceeding a ceiling  EUR/tCO2 approved applications without ceiling	RVO database	Years	Application	
B5.To what extent did it occur and what were the reasons for the underspending?	SDE ++ budget and budget delivery of projects  # opening rounds without budget exhaustion and EUR remaining budget  # and EUR requests not having budget exhaustion  Reason for rejection  # and EUR decisions not delivered within the digestion time limit  Reason for non-realisation	RVO database, interviews, survey	Years	Application/ decision	> 100 a year
<p><b>C. Consistency:to what extent is the SDE ++ scheme coherent (i.e.:all actions resulting from the SDE ++ are complementary and contribute to the common goal) and does not contain any contradictions (i.e.:the objectives of the actions resulting from the SDE ++ are potentially contradictory, or the actions create inefficiencies/perverse incentives?)</b></p>					
C1.To what extent are decisions combined by market parties with other (subsidy) schemes?	# decisions with a combination  EUR complementary grants per decision	RVO database, interviews, survey	Years	Application/ decision	> 1
C2.To what extent do the components of the SDE ++ work together to achieve the objectives?	Qualitative	Policy documents SDE ++, interviews			
C3.To what extent are the policies in the SDE ++ coherent with other policies having similar objectives?	Qualitative	Literature, policy papers at the local & central government & EU, interviews			
C4.To what extent are the policies in the SDE ++ coherent with the goals of the Climate Agreement?	Qualitative	Policy documents SDE ++, interviews			

Please explain why the chosen indicators are the most relevant for measuring the expected

impact of the scheme:

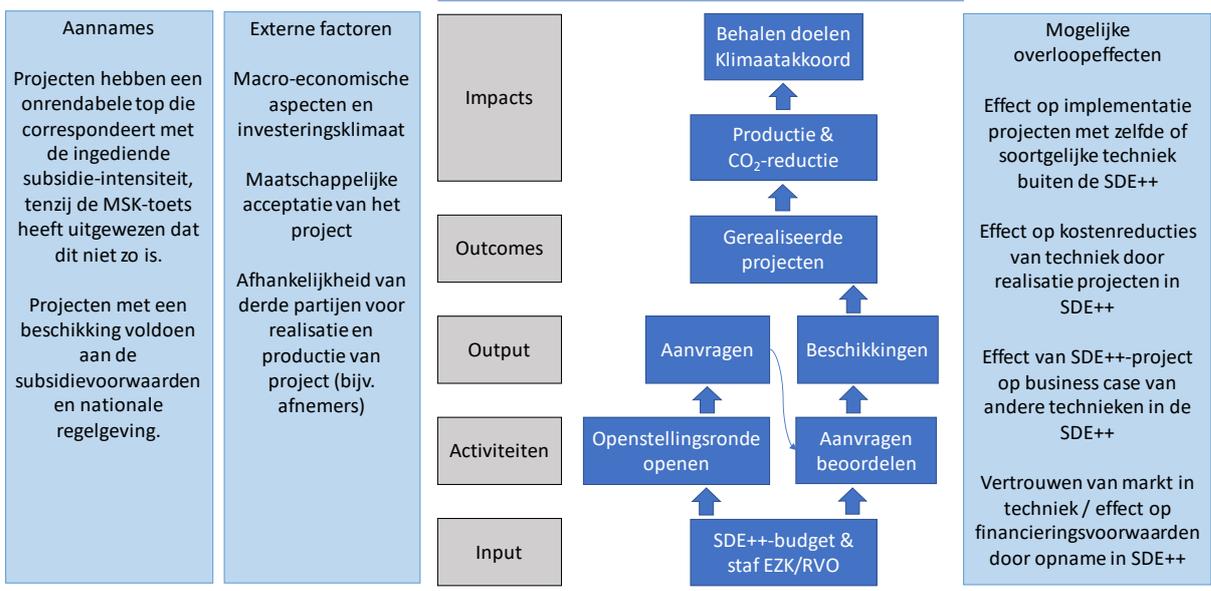


Figure 1 Theory of Change SDE ++

Figure 1 shows the Theory of Change of the SDE ++. The Theory of Change shows which inputs and activities are intended to be the outputs, outputs and eventual impacts. The indicators in the table reflect inputs, outputs, outputs and impacts that can be measured. The indicators are SMART: concrete, measurable, information is available and sourced from reliable sources. They thus fulfil the criteria for a robust evaluation. The only indicator where the data collection depends on external sources that are not publicly accessible is “# realised projects following rejection of applications”. This should be overtaken by independent evaluators through surveys, interviews and other own literature and market research. Depending on the information available, this evaluation question will be of a more quantitative or qualitative nature. Previous ex-post evaluations show that this information can be obtained with some success to obtain the arm.

In the Theory of Change, some assumptions, external factors and possible spill-over effects have been identified for illustrative purposes. These may still change and/or be completed during the review phase of the evaluation study. ....

## 5. Envisaged methods to conduct the evaluation

**5.1.** In light of the evaluation questions, please describe the envisaged methods to be used in the evaluation to identify the causal impact of the aid on the beneficiaries and to assess other indirect impacts. In particular, please explain why these methods have been chosen and other methods rejected (e.g. for reasons related to the design of the scheme)<sup>9</sup>:

<sup>9</sup> Please make reference to SWD (2014) 179 final of 28.5.2014.

The nature of the evaluation lends itself to a quasi-experimental study with intake and intake and control. However, the long recovery periods for the SDE ++ projects, which may reach 4 years after receipt of the decision, do not allow for the application of a complete difference-in-difference method with baseline measurement before the time of the decision and the listing after realisation of the project. The evaluation will take place in 2023. For the purpose of this limitation, two options are considered:

Option 1. Difference in difference method where the difference between firms without a grant decision (by rejection of application or no application) and grant decision firms are measured (outputs). The difference in difference method is defined in Annex I of SWD (2014) 179 final. The advantage of this method is that a baseline measurement and measurement can take place, making the evaluation more robust than option 2 (see below). However, the disadvantage is that only outputs can be measured, not the outputs and impacts. In view of this limitation, Option 2 seems more appropriate for the purpose of the evaluation.

Option 2. Cross-sectional method, whereby the difference between non-grant decisions (by rejection of an application or no application) and companies with subsidy decision and projection is measured (outputs, outputs, impacts). The advantage of this method is that there is one survey time, which makes it possible to measure the outputs (realised projects) and impacts (CO<sub>2</sub> reduction). The disadvantage is that more corrections are needed to take into account possible non-observable and observable differences between the beneficiaries and control groups. Therefore, this option corrects the potential impacts of a selection effect, corrected by a *pipeline sampling* strategy and the statistical matching of the control group through *indemnification score matching*. RVO carries out a project monitor every year, in order to estimate how many project applications are prepared from the market for the following year. After the random selection of beneficiaries of the aid, a selection for the control group may be made from the list of organisations that have indicated in the project monitors that they are preparing a project application. The questions in the survey provide an opportunity not only to answer the evaluation questions but also to implement the statistical match between the beneficiaries and the control group. This means checking for socio-economic characteristics that can partially explain the difference in the measurement of impacts. These results allow appropriate weights to be applied to the respondents in the control group so that they are statistically similar to the beneficiaries.

In both options, specific attention will be given to the rationale of the control group not to submit an application (yet).

The following mutually reinforcing and complementary methodologies are envisaged for carrying out the evaluation:

1 Data collection and analysis: existing literature review where the RVO database is the most important source, and additional interviews with grant recipients and trade associations by technique, with officials from the Ministry of Economic Affairs and Climate Policy (EZK), with the Rijksdienst voor Ondernemend Nederland (RVO), with European policy makers and other experts.

2 Survey: to submit a large scale survey to all companies that have ever submitted a SDE ++ grant application to RVO and companies that have indicated to RFOs a project

monitor that they plan to submit an application. This survey was designed to identify reasons and obstacles to project development, to identify the use of the auction system and to complete the completion of approved projects and to link them to intentions. In addition to the rationale and obstacles of the applicants themselves, they also address questions such as the extent to which information is considered adequate, the complexity of the scheme and the administrative burden. Finally, the survey looks at a possible follow-up of investment proposals that have been rejected within the SDE ++. Unsuccessful applicants and future applicants are the control group for successful applicants, which is also used to estimate the additional impact of the SDE ++ for CO2 reduction. It is also possible to estimate the percentage of companies that realise their project without subsidy. The sample is determined by taking into account, inter alia, different statuses of application, technique category and opening year.

3 Focus groups: further deepening of the data analysis and survey results through discussions with financial institutions, policy makers, implementing bodies, industry associations and project promoters on the experience with the SDE ++ scheme and how the scheme responds to investment and financing proposals.

4 Interviews: further deepening of the results through individual interviews with beneficiaries and members from the control group. ....

- 5.2.** Please describe precisely the identification strategy for the evaluation of the causal impact of the aid and the assumptions on which the strategy relies. Please describe in detail the composition and the significance of the control group:

The control group is crucial for a robust evaluation, in order to be able to correct the results when measuring the results for external factors that may have had a significant or even bigger impact on the results than the aid granted itself. As described above, the control group will consist of companies that have submitted an application but have not received a decision and those who have not yet submitted an application but have indicated in the annual project monitor that they plan to do so. The assumption is that this group is the most comparable to the beneficiaries because they also apply for a project under the SDE ++. ....

- 5.3.** Please explain how the envisaged methods address potential selection bias. Can it be claimed with sufficient certainty that observed differences in the outcomes for the aid beneficiaries are due to the aid?

By means of a matching technique, such as the propensity score matching or matching matching, it will be adjusted for possible differences between the beneficiaries and the control group that can affect the difference in results. In addition to the results expected from the aid, the survey will also address socio-economic characteristics of the beneficiaries and control groups. If differences between the beneficiaries and control groups can be explained by these covariables, the probability of receiving a SDE ++ decision can be approached with a regression, which can then be corrected in the control group. ....

- 5.4.** If relevant, please explain how the envisaged methods intend to address specific challenges related to complex schemes, for example schemes that are implemented in a differentiated manner at regional level and schemes that use several aid instruments:

N.a. ....

**6. Data collection**

**6.1.** Please provide information on the mechanisms and sources for collecting and processing data about the aid beneficiaries and about the envisaged counterfactual<sup>10</sup>. Describe all relevant information related to the selection phase: data collected on aid applicants, data submitted by applicants and selection outcomes. Please also explain any potential issue as regards data availability:

See Section 6.2 .....

**6.2.** Please provide information on the frequency of the data collection relevant for the evaluation. Are observations available on a sufficiently disaggregated level that is to say at the level of individual undertakings?

The required information from the RVO database is database at the level of individual undertakings (and even further disaggregated down to the level of applications and projects by company). RVO collects information about the applications per opening session and, on an annual basis, information about the current decisions. ....

**6.3.** Is access to the data required to perform the evaluation hampered by laws and regulations on data confidentiality? How are these issues resolved? Please mention other possible challenges related to data collection and how they would be overcome:

The independent reviewers will have to sign a confidentiality clause with EZK and RVO. In this way, they can have access to the necessary business secrets for this evaluation. The independent evaluators will also have to demonstrate the policy within their organisation that ensures careful handling of confidential data. ....

**6.4.** Are there surveys of aid beneficiaries or other undertakings planned? Is it intended to use additional sources of information?

The answer to the first question is yes. Some additional sources of information are listed in the indicators. The most important is the RVO database, which records all information from the applications, decisions and realised projects. The survey gathers additional information that cannot be retrieved from this database, including the questions that are relevant for the correction of selection effects and control. ....

**7. Proposed timeline of the evaluation**

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<sup>10</sup> Please note that the evaluation might require sourcing of both historical data and data that will become progressively available during the deployment of the aid scheme. Please identify the sources for both types of information. Both types of data should preferably be collected from the same source as to guarantee consistency across time.

**7.1.** Please indicate the proposed timeline of the evaluation, including milestones for data collection, interim reports and involvement of stakeholders. If relevant, please provide an annex detailing the proposed timeline:

The evaluation study will take between 6 and 10 months. There will be several intermediate milestones so that the sponsor can keep track of the progress and quality of the research. After a kick-off meeting, the appraisal phase will further elaborate the methodology and timeframe and definitively set out in the review report by the evaluation team. It then follows at least one (draft) interim report, which presents the interim results, followed by a meeting with the monitoring committee, followed by a final interim report on the basis of the feedback. The same process will take place for the final report, whereby a draft report is shared with the monitoring committee and the results are presented and the feedback from the session with the monitoring committee will be included in the final report. Following the delivery of the draft final report, a stakeholder meeting could be organised to review the draft results. Feedback from the stakeholder meeting will be included in the final report. We invite the European Commission to participate in the monitoring committee or otherwise be involved in the evaluation study.

An indication of the timetable is as follows:

- One month after assignment: inception report

Adoption of the final methodology and timetable with milestones and contact points.

- 3-5 months after authorisation: Interim report (draft and final)

Data collection and analysis data processing and exploratory interviews, detailed plan for the survey and other next steps. Discussion of progress.

- 5-9 months after authorisation: Final report (concept and final)

Presentation of (draft) research results in a report. Stakeholder meeting and final report.

More contact points may be established in agreement with the contractor if there is a need to do so during the viewing phase.....

**7.2.** Please indicate the date by which the final evaluation report will be submitted to the Commission:

The European Commission will receive the final report sent to the sponsor (EZK) upon delivery of the final report. This will be in the first half of 2024.

The final report will be sent to the sponsor (EZK) upon delivery of the final report. This is expected to be in autumn 2023 and at the latest in the first half of 2024. The evaluation will evaluate the first three rounds of opening of the SDE + + (2020, 2021, 2022), with the dates of the latter round expected to be available in the RVO database in January 2023. ....

**7.3.** Please mention factors that might affect the envisaged timeline:

The investigation may be delayed if the initial response of stakeholders to the survey is low. It is possible that an additional effort will be made from EZK/RVO to increase the response level. It is also possible that the interim or intermediate final results cannot be considered sufficient by the monitoring committee, in which case an additional effort will be requested from the evaluation team, resulting in some delay. ....

**8. The body conducting the evaluation**

**8.1.** Please provide specific information on the body conducting the evaluation or, if not yet selected, on the timeline, procedure and criteria for its selection:

About 6 to eight weeks before the start of the evaluation study, an invitation to tender will be prepared by EZK. After sending the tender, tenderers have 1-2 weeks of time to submit questions and textual proposals on the invitation to tender and general terms and conditions, which will then be answered by an Information Note. An additional 1-2 weeks later is the final date for receipt of tenders. About 1-2 weeks later the communication will be sent to the award decision. Shortly afterwards, the contract takes effect.

Simultaneously with the publication of the award decision to the contracting party (ies) who intends to provide the contract, the unsuccessful tenderers will be informed of that decision in writing. They shall receive a notice stating the reasons for the rejection and the name of the contracting party or parties. Further information may be obtained by any interested party from the named sponsor's contact person.

The selection procedure and criteria are defined in 8.3.....

**8.2.** Please provide information on the body's independence. How are any conflicts of interest excluded during the selection procedure?

During the selection procedure, the portfolio of the team to be deployed and the overall organisation shall be verified. If any conflicts of interest are plausible, this may be grounds for rejection. The contract is governed by the general conditions governing the provision of service contracts (ARVODI)<sup>11</sup>. It states that, in the event of bribery or conflicts of interest, the contracting authority can terminate the contract with immediate effect. ....

**8.3.** Please indicate the relevant experience and skills of the body conducting the evaluation or how those skills will be ensured during the selection process:

A call for tenders is sent to several consultancies which are considered to be able to carry out the evaluation on the basis of their portfolio and expertise. Tenders will be evaluated on the basis of the following assessment procedure:

- An assessment team will be compiled for the evaluation of the tenders. This assessment

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<sup>11</sup><https://wetten.overheid.nl/BWBR0040889/2018-05-15>

team will be composed of equipment experts.

- The bid evaluation begins with checking whether the tenderers have complied with the requirements of the specifications, such as the submission procedure for submission, closure period, the period of validity of the tender, the cost of the tender, and general terms and conditions.

- Tenders complying with the requirements must meet all the requirements laid down for this contract, which are defined in the invitation to tender. If the tenderer's bid shows that the tenderer does not meet the requirements in full or does not fully agree with all the requirements, it may be excluded from continuing to take part in the tender.

- The tenders which meet all the requirements will then be evaluated on the basis of the information contained in their tender on the basis of their compliance with the requirements set out in the award criteria of the invitation to tender. The tenderer whose tender has been identified as 'the most economically advantageous tender' on the basis of the best value for money will, in principle, be awarded the contract. The award criteria shall consist of the following: (1) research approach; (2) project approach; (3) quality of the team to be deployed; and (4) price, applying different weighting factors to each component. The research approach has the highest weighting factor (around 50 % of total points), followed by the quality of the team to be deployed (around 30 %). To assess the quality of the team, the following information is requested:

An overview of the names, functions and relevant knowledge/experience of the (policy) topic/focus. In addition, it should be clear from the CVs that the staff to be deployed who will work on the performance of the contract have the requested expertise from the terms of reference. The envisaged role/division of tasks of the relevant experts will also be carried out on this contract.

- If tenderers obtain an equal number of points and bid for the same price (rounded off to two decimal places), the award of the contract will be determined by lot. ....

**8.4.** Please indicate which arrangements the granting authority will make to manage and monitor the conduct of the evaluation:

A coordinator is appointed from the Ministry EZK who has a regular contact with the evaluation team and monitors progress. The coordinator will be assisted by a monitoring committee, composed of staff members of EZK, RVO and possibly independent experts such as the PBL, which meets at pre-defined times during the investigation to see the methodology and the interim results of the study and provide feedback to the evaluation team. ....

**8.5.** Please provide information, even if only of an indicative nature, on the necessary human and financial resources that will be made available for carrying out the evaluation:

Human and financial resources have not yet been established. An evaluation team consisting of one or several senior evaluation experts with more than 10 years' relevant experience in policy evaluations, supported by one or more evaluation experts with at least 3 years of relevant experience. Knowledge of energy and climate policies and support measures is a pré. Given the nature of this evaluation, experience with robust, quantitative

evaluation methods will be required within the evaluation team. Given the scope of the evaluation, it is estimated that the required budget will be at least EUR 100.000. A realistic indication, however, cannot yet be given. The budget is only set for a few years.

## 9. Publicity of the evaluation

- 9.1.** Please provide information on the way the evaluation will be made public, that is to say, through the publication of the evaluation plan and the final evaluation report on a website:

The final report of the evaluation will be published at [www.rijksoverheid.nl](http://www.rijksoverheid.nl). .....

- 9.2.** Please indicate how the involvement of stakeholders will be ensured. Please indicate whether the organisation of public consultations or events related to the evaluation is envisaged:

EZK and RVO will support the independent consultant at first contact with stakeholders, for example by sending an invitation to the survey. In addition, it is envisaged to draw the attention of stakeholders to the evaluation of the application and during the project monitor study. RVO has many contacts with many stakeholders who apply to submit or consider submitting applications. EZK has many contact with industry associations, which may also be asked to play a role in involving stakeholders.

- 9.3.** Please specify how the evaluation results are intended to be used by the granting authority and other bodies, for example for the design of successors of the scheme or for similar schemes:

The results will be discussed during the fixed decision-making processes that take place each year on the methodology of the SDE + + and the completion of the opening round in the following year. The results and the resulting recommendations will be taken into account in policy terms. In this way, recommendations have also been taken over in previous evaluations, for example the recommendation in the ex-ante evaluation of Trinomics to calculate the grant intensity based on the long-term price rather than the floor price.

- 9.4.** Are the data collected or used for the evaluation made available for further study and research? Under what conditions?

All projects in the SDE + + grant will be made public. The interactive SDE viewer on the RVO website<sup>12</sup> gives information about these projects at a glance. The SDE viewer can be used to specifically search for projects on site, category, ability, redemption status and/or (expected) redemption year. Under the Government Information (Public Access) Act (Wet openbaarheid van bestuur) (Wet openbaarheid van bestuur), RVO does not provide data from individuals, MTFs and civil-law partnerships, which can be traced to individuals. These data were made anonymous in the statements.

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<sup>12</sup> Accessible at <https://www.rvo.nl/subsidie-en-financieringswijzer/stimulering-duurzame-energieproductie-sde/feiten-en-cijfers/feiten-en-cijfers-sde-algemeen>

Some data in the RVO database, which the evaluators will use, is of a confidential nature and contains business secrets. These data can therefore not be made readily accessible to third parties. Exceptions can only be considered if a confidentiality clause is signed with EZK. In this respect, it could be considered whether the business sensitive data can be made anonymous. ....

**9.5.** Please indicate whether the evaluation plan contains confidential information that should not be disclosed by the Commission:

No. ....

**10. Other information**

**10.1.** Please indicate here any other information you consider relevant for the assessment of the evaluation plan:

The Department appreciates the independent input of the independent evaluation experts. EZK would like to retain the flexibility to make improvements to this initial design of the evaluation at the start of the evaluation study, resulting from the evaluation experts' proposals in their offers or during the kick-off phase of the study. This will not change the nature of the evaluation but only benefit the methodology and conduct of the study.

In DG COMP's correspondence on 20 February 2020 with Case SA.53525 (2019/PN) — Dutch SDE + scheme for greenhouse gas reductions", on page 5 suggestions were made for evaluation questions in the evaluation plan. The table below shows the evaluation questions listed in Table 3.

DG COMP suggestion	Processed in evaluation question
Assessment of the reduction of competition under SDE ++ and the extent to which the process help drive lower levels	B2
Assessment of the extent to which the 'technology neutral' nature of the SDE ++ has led to a greater volume or low cost technologies than would have been found in fully separate bidding processes for the different technology fields (RES, waste heat, heat pums, CCS, electric boilers — and the impact this has on the cost of meeting the GHG reduction objective	B3
Assessment of the extent to which the various volume caps and spots have led to cost increments for the SDE + programme	B4
Assessment of the extent to which the controls to ensure project success	A4
Assessment of the extent to which the CO2 premium paid a	A6

competitive advantage to the competitors active in the same sector but which does not obscure the subsidy	
Assessment of the extent to which the design of the SDE + + was effective in Incentivising investments in heat powders and industrial waste heat	A2
Assessment of the extent to which the SDE + + wax effect was effective in inducing CO2 abamectin, also tapping into account into account the actual carbon factors in the electricity mix	A7

**10.2.** Please list all documents attached to the notification. Please attach a paper copy of the documents concerned or provide direct internet links to these documents: