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

Member States must use this sheet for the notification of an evaluation plan pursuant to Art. 1(2)(a) of Regulation (EU) No 651/2014[1] and in the case of a notified aid scheme subject to an evaluation as provided in the relevant Commission guidelines.

Please refer to the Commission Staff Working Document "Common methodology for State aid evaluation"[2] for guidance on the drafting of an evaluation plan.

1. Identification of the aid scheme to be evaluated

(1) Title of the aid scheme:

Support for photovoltaic power plants with installed capacity above 1 MW of the "RES+" Programme (New renewable energy sources) of the Modernisation fund in the Czech Republic

(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):

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(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 study's objectives, methodologies used, results and conclusions, and (b) specific challenges that the evaluations and studies might have faced from a methodological point of view, for example data availability that are 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 the 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:

No evaluation has been carried out for this type of scheme in the Czech Republic so far, investment support for RES has been carried out under OPIC SA 44161 and SA 60518. Partial support for RES was also possible under other programmes, but these were insignificant installations in their extent. None of these programmes was subject to evaluation.

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1 Commission 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).

2 SWD(2014)179 final of 28.5.2014.

2. Objectives of the aid scheme to be evaluated[3]

2.1. Please provide a description of the aid scheme specifying the needs and problems the scheme intends to address and the intended categories of beneficiaries, for example size, sectors, location, indicative number:

In the Czech Republic, the share of RES in total energy consumption is still very low (around 16 %). More than 43 % of electricity is produced in coal and lignite-fired power plants, which emit app. 45 mil. t CO2 per year. This represents two thirds of the Czech EU ETS sector. The National Energy and Climate Plan sets a target of 22 % of renewable electricity by 2030, but this target is probably to be increased due to expected increased ambition of emission reduction in the EU by 2030.

The SEF launched a call for registration of project intentions at the end of 2020, collecting large database of projects which will be submitted once the call for proposals is launched. There is a strong appetite for PV projects among investors. However, the Czech Republic has no subsidy scheme for PV projects at this scale, unlike Member States like Germany or Poland, which are therefore more attractive for potential investors, and "investment leakage" occurs. This programme will represent a strong incentive for investments in renewables in the Czech Republic, which will enable making use of the potential for PV projects on brownfields and buildings.

Final beneficiaries can be any body based in the Czech Republic and holding a business licence in the energy sector pursuant to Act no. 458/2000 Coll. Significant number of projects is expected from electricity generators according to Art. 10c of the Emission Trading Directive, then legal entities outside the EU ETS sector, municipalities, individuals as well as communities for renewable energy.

The projects can generate power for own consumption on site or provide supply to the grid. All kinds of PV installation is eligible – on the roofs or structures of buildings, brownfields (installation on fertile soil is not eligible unless the PV panels are on high or vertical structures – agrophotovoltaics), floating PV.

Projects from the entire Czech Republic are eligible, including Prague. Projects from Regions affected by the coal phase-out (Moravskoslezský, Karlovarský and Ústecký) will be favoured in the project selection process so that Just Transition is promoted.

During the project intentions registration, more than 8000 projects from over 1000 applicants showed interest in PV installation.

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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:

[3] Beyond providing a general description of the objectives and eligibility rules of the scheme, the 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.

Generally, the impact of the implementation of the scheme is a significant increase in the capacity of electricity production from RES in the Czech Republic, contribution to the low-carbon economy, improvement of environmental quality in the Czech Republic, greening of electricity production and secondarily also industrial production, together with reducing CO2 emissions.

The immediate objective is to promote investments in renewable energy sources by providing investment subsidies for new installed capacity. This particular scheme focuses on projects of photovoltaic power plants with installed capacity above 1 MWe. For sake of grid stability, energy storage technologies can be supported as a part of the project.

The short-term goal of this scheme is creating of a perspective for investors in power sector that there is an instrument designed for support of investments in low-carbon technologies, which is rather ambitious and strict regarding the projects eligibility. Thus, the investing environment will shift from renovation of fossil fuels-fired units towards power generation technologies with lower carbon footprint. Partially this goal was achieved as the last coal-fired boiler in the power sector in the EU ETS was commissioned around the year 2017. This scheme should send a clear signal that low carbon investments in the power generation is the only option possible.

The medium-term goal is to provide support for RES projects throughout the period 2021-2030 so that they contribute to achievement of NECP targets – reduction of GHG emissions by 30% compared to 2005 levels and increase of share of renewable energy to 22% of the gross energy consumption. The NECP target for new PVE capacity is 2088 MWp. These targets are likely to be refined due to increased EU climate ambition and expected "Fit for 55" package, but this scheme should represent major contribution and even fulfilment of the NECP targets. It will also put the Czech Republic on track towards the Paris Agreement goal of climate neutrality by 2050, because the new RES capacity will represent an economic pressure in the merit order in relation to fossil fuels-fired sources that will not have been replaced yet. This scheme should result in new RES capacity of 3074 MWp and production of 17,5 TWh of renewable energy by 2030, saving 6,5 mil. t CO2 annually. The reduction of GHG emissions should be clearly visible from the EU ETS reporting in the EU Transaction Log.

The long-term goal is to replace all coal-fired power plants with low carbon sources. The reduction of installations with coal-fired units, total of coal-based source streams as well as amount of coal combusted in EU ETS installations will be seen in the reporting pursuant to Art. 21 of the Emission Trading Directive 2003/87/EC.

Installations of new renewable energy sources (photovoltaic power plants with installed power output above 1 MWp) translate into the following contributions:

- **Renewable energy capacity installed: 2,958.8 MW**
- **Total CO2 emission reductions: 2,993 kt CO2eq**
- **Energy saved per support: 9.7 TJ/mEUR**
- **Emissions abated per support: 2.7 ktCO2/mEUR**

- **Direct employment created: 1,492 additional jobs**
- **Indirect/induced employment created: 3,145 FTE person-years**
- **Total eligible costs: 2,828.5 mEUR**
- **Total costs including ineligible: 3,803 mEUR incl. VAT**

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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[4]:

Given the targeting of the programme, we do not expect significant negative effects at the level of beneficiaries. The programme is very broadly targeted. The segments of beneficiaries or installations that cannot be supported under this programme are only those for which support is available under other programmes (OPTAC, OPE and others). Within the framework of eligible beneficiaries and eligible projects, support is available to all those who succeed in a competition, the conditions of which are known in advance and allow the project to be set up in such a way as to maximise its chances. In case of no success in a call, the project can be re-formulated and submitted in the next call. This system has been chosen to provide equal chances to all applicants for support. Some risk may lie in increased connection of a significant number of new power generation plants to the distribution/transmission systems. The increased risk may be constituted by the increased costs of developing associated infrastructure which will be reflected in the final electricity prices.

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2.4. Please indicate (a) the annual budget planned under the scheme, (b) the intended duration of the scheme[5], (c) the aid instrument or instruments and (d) the eligible costs:

a) The annual budget for the scheme amounts to 7 billion CZK.

b) The programme is expected to be implemented over a ten-year period, i.e. from the announcement of the first call on 31 May 2021 to 31 December 2030.

c) The support instrument is a direct subsidy.

d) The costs according to Article 41 GBER, paragraph 6 b) - the cost of the new RES (including any accumulation for the needs of the power plant) reduced by the cost of an alternative investment in the form of a less environmentally-friendly source of the same generation capacity. The cost of the alternative investment is taken into account in the calculation module.

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4 Examples of negative effects are regional and sectorial biases or crowding out of private investments induced by the aid scheme.

5 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.

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) the methods used for selecting beneficiaries (e.g. such as scoring), (b) the indicative budget available for each group of beneficiaries, (c) the likelihood of the budget being exhausted for certain groups of beneficiaries, (d) the scoring rules, if they are used in the scheme, (e) the aid intensity thresholds and (f) the criteria the authority granting the aid will take into account when assessing applications:

The project selection method rests on the basis of the lowest subsidy required by the applicant. Projects, after meeting the basic eligibility criteria, are selected through a competitive bidding for the lowest subsidy required for the installation of 1 kWp of electricity. More technologically costly and complex projects are compensated according to the following criteria:

- **Cost-effectiveness (weight 60%)**
- **technical level (weight 30%) - power storage / installation type**
- **advantage for regions affected by decline in coal mining (weight 10 %);**

there is only one common budget within the programme, which is always allocated in parts to individual calls.

The RES+ programme fulfils the provisions of Section 12 of Act No. 383/2012 Coll., as amended, according to which a part of the resources available from the Modernisation Fund will be preferentially used for investment support of projects submitted by operators of electricity generation facilities for the purpose of modernisation, diversification and decarbonisation of the energy sector, such as the construction and development of new renewable sources of electricity. Therefore, the allocation for individual RES will be divided as follows: a) 60 % of the allocation will be earmarked for projects of electricity producers pursuant to Article 10c of Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, b) 40 % of the allocation will be earmarked for projects of all existing and new electricity producers.

Point-based evaluation has been replaced by the project selection method as mentioned above.

The aid intensity thresholds are primarily determined by Article 41 GBER and are further limited by additional ceiling of 50 % of total expenditure (TE). Comparing the two values (GBER maximum and 50 % of TE, the lower intensity is applied).

Eligibility criteria

General eligibility criteria

a) **Only applications for support for which project plans have been submitted under the Call for Proposals (announced between 30 November 2020 and 1 February 2021) are acceptable.**

b) **The applicant must not be a company in difficulty as per Commission Regulation (EU) No. 651/2014 and according to the SEF Guidance for assessment of companies in difficulty, as published at www.sfzp.cz.**

c) **The applicant must not be bankrupt, be in liquidation, have any overdue debts to the state and the public budgets, tax arrears and not be a company with a conflict of interest.[6]**
d) **The project must meet the general and specific conditions applicable to state aid.**

Specific eligibility criteria

a) **If relevant, the electricity producer is obliged to equip the electricity generation facility according to the conditions set out in:**

- **contract for connection to the transmission or distribution system,**
- **Commission Regulation (EU) 2016/631 of 14 April 2016 laying down a network code for requirements for the connection of generations to the electricity system,**
- **the Rules for the Operation of the Transmission or Distribution System (hereinafter the "ROTDS").**

b) **Projects must not be purposely divided into separate applications in order to circumvent the thresholds set by the program, i.e. in particular the GBER threshold. In the case of a project divided into several stages, these stages are considered as separate projects if the time between the next two stages of implementation is longer than 3 years.[7] A set of sub-projects, implemented within one investment plan/decision, which use one (pooling) transfer point to the DS/TS may be also considered to constitute one project.**

c) **Photovoltaic (PV) power plants must not be built on the agricultural land areas[8] or land intended for the performance of the forest function.[9]**

Installation of PV plants on agricultural land is possible only with respect to land falling under protection classes III to V according to the certified soil ecological unit quality (BPEJ), provided that the use of the land for construction of a PV is permitted by the relevant (local) state administration authorities.

d) **Support may be provided only to generation facilities exclusively equipped with PV modules, inverters and batteries that comply with independently verified parameters and proven by certificates issued by accredited certification bodies[10] on the basis of the below-listed sets of standards:**

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[6] For the purposes of this call, a company in which a public official referred to in Section 2(1)(c) of Act No. 159/2006 Coll., on Conflict of Interest, as amended, or a person controlled by him/her owns a share representing at least 25 % of the shareholders' participation in the company, within the meaning of Section 4c of Act No. 159/2006 Coll., on Conflict of Interest, as amended, is considered to be a company in which a conflict of interest exists. If the applicant is a legal person, its ownership structure and beneficial owners within the meaning of Act No 253/2008 Coll., on certain measures against the legalisation of the proceeds of crime and terrorist financing, as amended, must be documented.

[7] In case the applicant is considering to implement the project in several phases, the subsequent implementation of which will take place in a shorter interval than 3 years from the time of completion of the previous phase, such a project will be considered to constitute one single project with a total aggregate installed capacity (for all phases of the project).

[8] Within the meaning of Act No. 334/1992 Coll., on the protection of the agricultural land fund, as amended.

[9] Pursuant to Act No. 289/1995 Coll., on forests and on amendments to certain acts (Forest Act), as amended.

[10] Accredited body according to ČSN (Czech Technical Standard) EN ISO/IEC 17065:2013.

Technology	Set of standards (if relevant)
Photovoltaic modules	IEC 61215, IEC 61730
Inverters	IEC 61727, IEC 62116, IEC 61000-type standards according to the actual type
Batteries	according to battery type (for the most common lithium batteries *IEC 63056:2020 or IEC 62619:2017 or IEC 62620:2014*)

e) The PV modules and inverters used shall have at least the following efficiencies:

Technology	Minimum efficiency
Photovoltaic modules under standard test conditions[11] (STC)	- 19.0 % for monofacial modules made of monocrystalline silicon, - 18.0 % for monofacial modules made of multicrystalline silicon, - 19.0 % for bifacial modules at 0% bifacial gain, - 12.0 % for thin film modules, - not specified for special products and applications.[12]
Inverters	97.0 % (Euro efficiency)

f) Only components with guaranteed service life may be used:

Technology	Required service life guarantee
Photovoltaic modules	- At least 20-year linear performance guarantee with max. drop to 80% of original performance guaranteed by the manufacturer - minimum 10-year product warranty guaranteed by the manufacturer
Inverters	- manufacturer's or supplier's guarantee of at least 10 years for its immediate replacement or adequate replacement in case of failure or damage
Batteries	- Guarantee with a max. drop to 60 % of nominal capacity after 10 years of operation or reaching min. 2,400 times nominal energy (Energy Throughput)[13]

Inverters used must be equipped with continuous or discrete controllability of power supplied to the electrical system, enabling management of power output from the generating facility.

Aid for construction of an electricity storage system may only be granted for systems with a capacity[14] of at least 20 % and up to 60% of the theoretical hourly production at the installed peak power of the PV plant.[15]

[11] Standard Test Conditions – radiation intensity 1000 W/m2, spectrum AM1.5 Global and module temperature 25 °C.

[12] E.g. agro-photovoltaics with sunshare technology, special photovoltaic roofing, technologies for flat roofs with low load capacity.

[13] For example, a battery with a nominal capacity of 1 kWh must be able to deliver a minimum of 2 400 kWh of energy over its lifetime.

Lead-based, NiCad, or NiMH-based technologies will not be supported.

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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:

One of the risks is a reduction in the price or quantity of emission allowances whose sales finance the Modernisation Fund. However, with regard to legislation being prepared to increase the EU's climate ambition by 2030, a fall in the price of allowances is unlikely in the foreseeable future. On the contrary, a reduction in the total quantity of allowances in the system is very likely, as the EU ETS is the EU's main instrument for reducing emissions and its reduction target (43% by 2030 compared to 2005) is likely to increase. However, the resulting effect on funding is difficult to estimate, as the reduction in the quantity of allowances in the system will lead to a further increase in the price. However, the effect should be positive by the logic of such measures and the risk of the Modernisation Fund being underfunded is therefore small.

Another risk is the possibility of short-term problems with the supply of technology. However, we expect the market to be able to respond to demand and stabilise itself in the short term.

Similarly, capacity problems may arise in the short term with the connection to the distribution network. However, the DSOs are kept informed about the preparation of the programme, so we expect again at most partial problems that should not have a major impact on the implementation of the programme.

For this reason, the calls are limited in time to avoid overwhelming market and distribution capacities.

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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) questions related to the direct impact of the aid on the beneficiaries, (b) questions related to the indirect impacts and (c) questions related to the proportionality and appropriateness of the aid. Please explain how the evaluation questions relate to the objectives of the scheme:

Questions and related indicators to be used as base for evaluation:

a) Questions on the *direct effects* of the aid:

[14] Battery storage capacity means 'usable storage capacity'. This capacity must be demonstrated by warranty tests when the system is put into operation.

[15] For the purposes of this call, the installed PV output of 1kWp corresponds to the theoretical hourly production at the installed peak PV output of 1 kWh.

1. Has the aid led to investments in and implementation of projects modernizing, diversifying and decarbonizing the energy sector, such as the construction and development of new renewable sources of electricity? Did the beneficiaries increase energy production from renewables? (if possible: compared to non- successful applicants or another appropriate control group)

   Relevant indicator: Energy production from RES

2. Did the beneficiaries increase RES capacity and/or RES electricity storage capacity? (if possible: compared to non- successful applicants or another appropriate control group)

   Relevant indicator: Newly installed RES capacity; new RES electricity storage capacity

3. Did the beneficiaries increase energy investments in RES projects? (if possible: compared to non- successful applicants or another appropriate control group)

   Relevant indicator: Amount of funds invested in RES

4. Did the impacts vary among different categories of tenders?
   Relevant indicator: Energy production from RES by firm size

b) Questions on the *indirect effects* of the aid:

1. Has the aid led to a decrease in the level of primary non-renewable energy consumption?
   Relevant indicator: reduction in primary non-renewable energy consumption

2. Did the aid result in a reduction of CO^2 emissions?
   Relevant indicator: reduction in CO^2 emissions

3. How many jobs were created in the supplier industry?
   Relevant indicator: Employment created (FTE)

c) Questions on the *wider economic effects* of the aid:

1. Were there adverse effects on electricity prices?
   Suggested indicator: Changes in electricity prices (retail and wholesale) that can be attributed to increase share of RES

2. Was there an impact of the scheme in market position of (large) beneficiaries?
   Relevant indicator: market shares; market concentration; etc.

d) Questions about the *proportionality* and *appropriateness* of the aid:

1. Was the type of public intervention efficient compared to other schemes (e.g. existing and previous CZ scheme and schemes in other EU MS)?
   Relevant indicator: Average aid amount per additional RES production capacity

2. Was the level of aid proportionate?

Relevant indicator: Aid provided; profitability profiles

3. Could the corresponding decarbonisation measures have also been incentivised with a lower budget or aid intensities?
   Relevant indicator: total cost of implementation; aid provided

e) Questions covering background information:

1. How much aid was given?
   Relevant indicator: Total aid provided

2. How many enterprises have received the aid under the scheme?
   Relevant indicator: Number of enterprises that received support (i.e. number of beneficiaries)

3. How many projects were developed under the scheme?
   Relevant indicator: number of implemented projects

4. How much new capacity was installed under the scheme?
   Relevant indicator: newly installed RES capacity

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 mention (a) the relevant evaluation question, (b) the indicator, (c) the source of data, (d) the frequency of collection of data (for example, annual, monthly, etc.), (e) the level at which the data is collected (for example, firm level, establishment level, regional level, etc.), (f) the population covered in the data source (for example, aid beneficiaries, non-beneficiaries, all firms, etc.):

Evaluation question	Indicator	Source	Frequency	Level	Group
a) 1	Energy production from RES	MoIT, ERO	**2023, 2026, 2030, 2035**	**programme**	**Beneficiaries**
a) 2	Newly installed RES capacity; new RES electricity storage capacity	SEF (application) MoIT, ERO	**2023, 2026, 2030, 2035**	**programme**	**Beneficiary/non benefitiary**
a 3)	Amount of funds invested in RES	SEF (application)	**2023, 2026, 2030, 2035**	**programme**	**beneficiaries**
a) 4	Energy production from	SEF	**2023,**	**Programme /**	**beneficiaries**

	RES by firm size	(application)	**2026, 2030, 2035**	**enterprise**	
b) 1	reduction in primary non-renewable energy consumption	MoIT	**2023, 2026, 2030, 2035**	**programme**	**beneficiaries**
b) 2	reduction in CO^2 emissions	MoIT, MoE	**2023, 2026, 2030, 2035**	**programme**	**beneficiaries**
b) 3	Employment created (FTE)	study	**2023, 2026, 2030, 2035**	**Programme / sector**	**Non beneficiary, supplier sector**
c)1	adverse effects on electricity prices	MoIT, ERO, study	**2023, 2026, 2030, 2035**	**enterprise**	**beneficiaries**
c)2	market shares; market concentration	MoIT, ERO, study	**2023, 2026, 2030, 2035**	**enterprise**	**beneficiaries**
d)1	Average aid amount per additional RES production capacity	SEF, MoIT, other	**2023, 2026, 2030, 2035**	**programme**	**beneficiaries**
d) 2	Aid provided; profitability profiles	SEF (application)	**2023, 2026, 2030, 2035**	**enterprise**	**beneficiaries**
d) 3	total cost of implementation; aid provided	SEF	**2023, 2026, 2030, 2035**	**programme**	**Beneficiaries/ sector**
e) 1	Total aid provided	SEF	**2023, 2026, 2030, 2035**	**programme**	**Beneficiaries/ sector**
e) 2	Number of enterprises that received support	SEF	**2023, 2026, 2030, 2035**	**programme**	**Beneficiaries/ sector**
e) 3	number of implemented projects	SEF	**2023, 2026, 2030, 2035**	**programme**	**Beneficiaries/ sector**
e) 4	newly installed RES capacity	SEF	**2023, 2026, 2030, 2035**	**Programme / sector**	**Beneficiaries/ sector**

Please explain why the chosen indicators are the most relevant for measuring the expected impact of the scheme:

The objective of the programme is to maximise the installed capacity and production of energy from RES and also enable new entrants to the market. At the same time, the objective is to implement the maximum number of projects

with the available funds, so we put pressure on beneficiaries to apply for support below the maximum GBER limits through competitive bidding.

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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 the reasons for choosing those methods and for rejecting other methods (for example, reasons related to the design of the scheme)[16]:

With respect to the evaluated scheme, it ~~is not possible~~may prove difficult to determine the causal impact of the support on beneficiaries using conventional methods of comparing the group of supported entities with the control group (see also section 5.2), because potential applicants identified in the pre-registration will most likely seek support in other support programmes if the specific conditions of support under the Modernisation Fund are not suitable for their situation – the hunger for investment into the construction of renewable energy sources is high in the Czech Republic among all categories of applicants – enterprises, public institutions, private individuals, etc. In the Czech Republic, several complementary RES support programmes will be available during the same period (or part of it); these programmes are defined vis-a-vis each other either by the type of beneficiaries or by the installation or consumption. Thus, an assessment of the impacts of the support scheme using methods discussed in SWD (2014)179 final as of 28 May 2014 would show a significant deviation.

In this case, an appropriate method of monitoring the impact of this support would therefore be an ex-post study of changes in the electricity market – reduction of electricity prices, reduction of CO_2 emissions, change in the behaviour of electricity consumers, etc.

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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 specific characteristics of the scheme pose some methodological issues that shall be considered when estimating the causal effect associated with the aid. To begin with, and in accordance with the evidence brought about by similar RES schemes, it seems very implausible that RES technology will be implemented without the aid support. Hence, the possibility to create a control group based on non-successful applicants is undermined, as it is unlikely that unsuccessfully applicants will develop renewables without support.

16 Please make reference to SWD (2014)179 final of 28.5.2014.

In the Czech Republic, several complementary RES support programs are expected to be available during the same period of the RES program under evaluation. However, it no follows that non-successful applicants identified in the RES scheme will likely seek support in other support programmes, while the border between the programmes has been consulted between the relevant operators and, therefore, the presence of overlapping aids might not lead to biased comparison and, hence, to results that ultimately could be grounded on a solid evidence..

Eventually, there might be the non-negligible risk that the size of the group of both beneficiaries and unsuccessfully applicants is not large enough for conducting ex-post evaluations based on counterfactual methods, as already documented by similar schemes.

Given the characteristics of the aid scheme and the limitations described above, the most viable methodology to be applied for the purpose of the evaluation of the effectiveness of the Aid scheme appears to be Difference-in-differences. In particular, undertaking the staggered time of the aid intervention allows to exploit the different round of calls foreseen in the scheme. Along these lines, successful projects in a given call are compared, over the same period, to other projects that have not been granted the aid yet, but they will be successfully in the next call. More in details, projects that at time, say t, are not started yet could represent the "control" group of projects that, instead, have already started over the same time.

This approach would allow the identification of the causal effect of the aid. To this end, the analysis shall include the relevant statistical exercises that allow testing of the main assumptions underlying the applied model. These will encompass an event-study analysis to assess the absence of differential trends in performance across beneficiaries and non-beneficiaries before the intervention, at least in the context of the direct effects of the aid. If feasible, also a placebo test shall be implemented, either on a related-but-unaffected outcome or treatment group or based on a "fake" treatment date (in this latter case, the sample would be restricted to the pre-implementation period only). In case the validity of the applied method is not confirmed by these tests, the evaluation report should clearly specify and discuss to what extent the estimated relationships can be interpreted as simple correlations.

Finally, another factor that could be exploited is the difference in terms of aid intensity that might help identifying the "right dose" of the intervention that yield the optimal response in terms of outcome.

The above empirical approach, as well as all possible caveats and issues equipped in the context of this specific scheme, shall be described in a methodological report. Then, in agreement with the European Commission, it will be decided whether to confirm the use of the Difference-in-differences in the final version of the evaluation or to investigate and pursue different evaluation strategies.

In all cases, the counterfactual analysis shall be accompanied by descriptive statistics drawn from administrative and survey data (even if aggregated at sector/region level) in support of the evidence, especially when potentially relevant unobservable factors, such as the firms' propensity to invest in renewables, are not directly measurable.

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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?

See the point above; we expect significant interest from a wide range of stakeholders, which will vary over time. Another well-defined group of beneficiaries can satisfy their RES needs from parallel programmes. Under these programmes, entities with a significant market share can apply, as well as new producers who will implement smaller scale projects. A control group that would be truly representative and serve to compare the performance of enterprises in both groups cannot be defined for this programme

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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:

In this case, it is a standard scheme, with routine implementation, with an expected large number of beneficiaries of all sizes and types. The support instrument is a subsidy and transparency is reinforced by the method of selecting enterprises – by bidding.

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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.[17] Please provide a description of all the relevant information that relates 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:

Information for evaluation of indicators at enterprise (beneficiary) and project level will be available from two sources:

Result indicators and statistical indicators will be obtained by the programme administrator by reporting on applications for support;

Information on the total CO_2 emission reductions and reduction of the total number of coal combustion units will be available to the MoE from the annual reporting to the EU ETS under Directive 2003/87/EC.

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[17] 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.

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?

All indicator-related data will be available for evaluation on an annual basis. Impact indicators are likely to become more significant in the later stages of programme implementation, with more significant changes in these indicators expected after about three years (completion of the first larger scale projects).

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6.3. Please indicate whether the access to the necessary data for conducting the evaluation might be hindered by laws and regulations governing confidentiality of data and how those issues would be addressed. Please mention other possible challenges related to data collection and how they would be overcome:

The grant administrator – SEF – has all the necessary data to evaluate fulfilment of the programme indicators.

Data on GHG emissions and coal combustion units in the EU ETS are available to the Ministry of Environment (MoE), which reports these data in accordance with Article 21 of Directive 2003/87/EC. These data are published in aggregate and are thus not subject to confidentiality restrictions. The EU ETS GHG emissions data are publicly available from the allowance registry website: https://ec.europa.eu/clima/ets/.

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6.4. Please indicate whether surveys of aid beneficiaries or of other undertakings are foreseen and whether complementary sources of information are intended to be used:

We do not foresee the need for surveys or additional information. Given the parameters of the proposed assessment, all available data will be available internally from applications and from the MoE's records.

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7. Proposed timeline of the evaluation

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:

1. Final report for the period 2021-2023 delivered by 28.02.2023. This report will be a methodological report expanding on the approved evaluation plan and describing in detail the evaluation methodology to be used based on the available early evidence of the implementation of the scheme.

2. Additional report 1: delivered by 31.12.2026. It will be an evaluation report with the early assessment of the effectiveness of the scheme covering the projects completed by 31.12.2024.

3. Additional report 2: delivered by 31.03.2030. Evaluation report with the early assessment of the effectiveness of the scheme covering the projects completed by 31.12.2028.

4. Additional report 3: delivered by 31.12.2035. Evaluation report with the overall assessment of the evaluation of the scheme.

5. With annual frequency, the Czech Republic will send to the European Commission informal updates (email) on the progress on the implementation of the scheme and of the data collection.

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

We propose to submit a final report five years after the end of the programme. This time gap is necessary due to the completion of the implementation of projects submitted in the last year of the programme.

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

We do not foresee such factors, however, in case of delays in calls or uneven distribution of calls over time, a situation could arise where the data in two consecutive calls might not differ significantly. This will be partly corrected by the different timetables of the individual project implementations. Another factor may be higher than expected interest resulting in budget being exhausted before the end of the programme period.

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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:

For the purposes of the evaluation, a steering committee will be formed, to which representatives of the following institutions will be invited:

Energy Regulatory Office (ERO), the Office for the Protection of Competition (OPC), the Czech Technical University in Prague (CTU), an independent consultant in the RES sector, a total of 5 members, other experts in the field of energy and RES can be contacted as needed.

Energy Regulatory Office: https://www.eru.cz/en/

The Office for the Protection of Competition: https://www.uohs.cz/en/homepage.html, a representative from the Public Aid Section will be invited

The Czech Technical University, a representative of the Faculty of Electrical Engineering will be invited: https://www.cvut.cz/en/faculty-of-electrical-engineering

The Green Circle is an association of 86 important ecological NGOs in the Czech Republic. Besides other environmental topics, the association focuses also on the issues of climate protection, just transition and support of RES: http://zelenykruh.cz/en/

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8.2. Please provide information on the independence of the body conducting the evaluation and on how possible conflict of interest will be excluded during the selection process:

Neither the programme guarantor – MoE, nor the programme administrator – SEF will sit on the steering committee. ERO is an independent state administration body, OPC is a consultative body for public aid, CTU is a R&D institution that is active, among others, in the field of RES. An independent consultant will be procured according to the desired specialization. Committee members will sign an affidavit demonstrating their non-bias in relation to the evaluated projects and to the applicants submitting projects.

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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:

See above. Background data for the evaluation will be provided by the MoE and SEF within a predetermined timeframe.

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

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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:

The renumeration of the work of the steering committee members will be considered.

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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:

All reports will be published on the Modernization Fund website.

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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:

The results will be presented at the meetings of the Modernization Fund Platform, which consists of representatives of stakeholders from state administration bodies, professional associations, the professional public and other partners - entities whose competence includes areas supported by the Modernization Fund.

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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 interim evaluation results can be used to modify the next calls in line. The results of the final report can be used as input for the formulation of future RES investment support programmes.

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9.4. Please indicate whether and under which conditions data collected for the purpose or used for the evaluation will be made accessible for further studies and analysis:

In particular for the purpose of preparing similar instruments supported by relevant aid programmes.

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

The submitted evaluation plan does not contain any confidential information.

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10. Other information

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

As already mentioned above, this is a standard support scheme which, given the priorities of the Modernisation Fund and the current price of emission allowances, has an above-the-limit budget. It is our view that this will be a transparent vehicle to provide support for projects of a similar type, available to a wide range of beneficiaries and over a long time period of time – ten years. The subsidies will be minimised through bidding, where the beneficiary is incentivised to request the smallest possible subsidy per installed capacity in order to have a chance to succeed in competition with other projects. At the same time, the projects must meet mandatory technical criteria.

In practical terms, it is therefore not feasible for the grant provider to define a control group of enterprises that will not benefit from the aid. The support under

this programme is not primarily directed towards production of other products or competitiveness, the objective being the gradual elimination of fossil fuels. Therefore, it is practically impossible to define criteria and compare the results for enterprises with and without subsidies, as a permanent control group cannot, in our opinion, be defined.

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10.2. Please list all documents attached to the notification and provide paper copies or direct internet links to the documents concerned:

Annex 1: The scheme submitted to the European investment bank

Annex 2: Calculation methodology

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