

Supporting low-carbon transition of the Czech Republic by EU ETS Funding Mechanisms

Deliverable 2. Proposal of national implementation modalities for the Modernisation Fund

MODALITY 4: Support Community Energy Systems

Date	26 June 2020
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Overall scope

Sector:	Community power generation
Sub-sector:	Suggested primary focus: Energy community systems
Rationale for the Modality:	<p>The sector of community energy systems covers the community solutions based on RES. It brings the opportunity to diversify the energy supply and enables the wider implementation of SMART approaches. As such, this approach is promoted by both MoE and MIT as the modern option for urban areas to achieve sustainability in energy supply.</p> <p>Currently, cooperative ownership of renewable energy sources is not widely used in the Czech Republic. According to the Community Power Project's data approximately 45 Czech municipalities own decentralised renewable energy power plants, most of them being biomass heating plants, while a very limited number of municipalities own wind power, small hydro power and solar PV plants.¹</p> <p>As a first step to building a community energy system, those who are interested need to be brought together and co-ordinated in order to build and agree upon a legal, administrative and management structure. Many models are available, and a full awareness of regional resources is required. This task requires clear leadership coupled with financial and legal knowledge. Without political motivation and direction from a public authority, it can be challenging for individuals to step up to take on a leadership role.²</p>

¹ <https://www.communitypower.eu/en/czech-republic.html>

² https://www.interregeurope.eu/fileadmin/user_upload/plp_uploads/policy_briefs/2018-08-30_Policy_brief_Renewable_Energy_Communities_PB_TO4_final.pdf

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	<p>Community energy systems can be considered as an important variable in meeting the Czech Republic’s objectives in several areas, such as increase in renewables capacity and energy efficiency measures, reduction of GHG emissions and energy poverty, as well as citizen acceptance and participation in the low carbon energy transition at various localities such as densely populated areas (e.g. Prague Region) or coal regions in transition (e.g. a municipality participating in a Citizen Energy Community).</p> <p>The goal of this Modality is to support the deployment of energy community systems to support the objectives listed above and identified in the Czech NECP.</p>
Overview of the market and identified needs:	<p>Since this is a relatively new development in the Czech energy landscape, there are not a lot of existing energy community projects as envisaged by the “Clean Energy for All Europeans” Package.³</p> <p>However, according to the Czech NECP, and in accordance with Articles 21 and 22 of Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources⁴ (REDII), the country will introduce measures to reduce administrative burdens related to the framework for the self-consumption of electricity from RES and renewable energy communities (REC). The NECP further states that “<i>the Czech Republic will transpose Directive (EU) 2018/2001 into national legislation on 30 June 2021 and it is not possible to anticipate future legislation at this point</i>”.⁵</p> <p>According to REDII, “<i>renewable energy community’ means a legal entity: which, in accordance with the applicable national law, is based on open and voluntary participation, is autonomous, and is effectively controlled by shareholders or members that are located in the proximity of the renewable energy projects that are owned and developed by that legal entity; the shareholders or members of which are natural persons, SMEs or local authorities, including municipalities; the primary purpose of which is to provide environmental, economic or social community benefits for its shareholders or members or for the local areas where it operates, rather than financial profits;</i>”.⁶ Furthermore, when it comes to their operational capabilities, a REC can “<i>produce, consume, store and sell renewable energy, including through renewables power purchase agreements (PPA); share, within the REC, renewable energy that is produced by the production units owned by that REC; access all suitable energy markets both directly or through aggregation in a non-discriminatory manner.</i>”⁷</p> <p>In addition, according to Article 16 of Directive (EU) 2019/944 on common rules for the internal market for electricity⁸ (IEMD), Czech Republic (as well as all other Member States) will need to adopt enabling national regulatory framework for facilitating the establishment and development of citizen energy communities (CEC).</p>

³ https://ec.europa.eu/energy/topics/energy-strategy/clean-energy-all-europeans_en

⁴ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.328.01.0082.01.ENG&toc=OJ:L:2018:328:TOC

⁵ https://ec.europa.eu/energy/sites/ener/files/documents/cs_final_necp_main_en.pdf

⁶ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.328.01.0082.01.ENG&toc=OJ:L:2018:328:TOC

⁷ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.328.01.0082.01.ENG&toc=OJ:L:2018:328:TOC

⁸ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2019.158.01.0125.01.ENG&toc=OJ:L:2019:158:TOC

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In contrast to RECs, the understanding for a CEC is wider – “*citizen energy community’ means a legal entity that: is based on voluntary and open participation and is effectively controlled by members or shareholders that are natural persons, local authorities, including municipalities, or small enterprises; has for its primary purpose to provide environmental, economic or social community benefits to its members or shareholders or to the local areas where it operates rather than to generate financial profits; and may engage in generation, including from renewable sources, distribution, supply, consumption, aggregation, energy storage, energy efficiency services or charging services for electric vehicles or provide other energy services to its members or shareholders;*”.⁹ Furthermore, when it comes to their operational capabilities, CECs “*are able to access all electricity markets, either directly or through aggregation, in a non-discriminatory manner; are treated in a non-discriminatory and proportionate manner with regard to their activities, rights and obligations as final customers, producers, suppliers, distribution system operators or market participants engaged in aggregation; are financially responsible for the imbalances they cause in the electricity system; to that extent they shall be balance responsible parties or shall delegate their balancing responsibility; with regard to consumption of self-generated electricity, CECs are treated like active customers; are entitled to arrange within the CEC the sharing of electricity that is produced by the production units owned by the community*”.¹⁰

There is a need for such legal amendments and plans to establish energy services companies, which would offer such solutions on a unified and non-commercial basis. The services offered would include installation and operation of such community plants, balancing the electricity supply and demand, and purchasing the excess electricity supplied to grid at favourable conditions and selling it to other energy communities.

Local and regional authorities can promote energy communities by offering financing, technical expertise and advice, as well as ensuring that regulatory issues can be easily navigated and do not impose unnecessary burdens.

The NECP concludes that a “*particular emphasis will be given to the Renewable Energy Community (‘community energy’), which is behind the economic, environmental and social benefits on a local and national scale. The participation of citizens and local authorities (e.g. municipalities) in community energy projects creates significant added value in terms of local acceptance of renewable energy sources and access to private capital. Its development is accompanied by local investment, greater choice for consumers and increased citizen participation in energy transformation. Above all, the participation of citizens and local authorities in community energy is linked to the desirable increase in renewable energy production and the emphasis on energy savings*”.¹¹

When it comes to the identified needs, usually, municipal participation in developing community energy projects is low, due to limited possibilities and the difficulties for municipal authorities in taking on long-term loans. However, with the introduction of new legislative measures these obstacles could be reduced.

One of the challenges identified with the potential development of energy communities is the need for pre-feasibility and feasibility studies. More

⁹ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2019.158.01.0125.01.ENG&toc=OJ:L:2019:158:TOC

¹⁰ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2019.158.01.0125.01.ENG&toc=OJ:L:2019:158:TOC

¹¹ https://ec.europa.eu/energy/sites/ener/files/documents/cs_final_necp_main_en.pdf

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	<p>specifically, the financial, administrative and legal burden for the regular consumer in the preparatory stages of the establishment of a community.</p> <p>This could be an opportunity for the MF funding to support such studies on a larger scale (given that the characteristics of the buildings and localities are similar – e.g. communal buildings in the City of Prague), through grants and/or, at a later stage, to support the development of communal energy projects through a revolving loan.</p>
Gap in support scheme:	There is a clear investment gap since the review of the existing schemes shows that currently energy communities do not have a supporting tool for their development.

Stakeholder feedback based on the survey

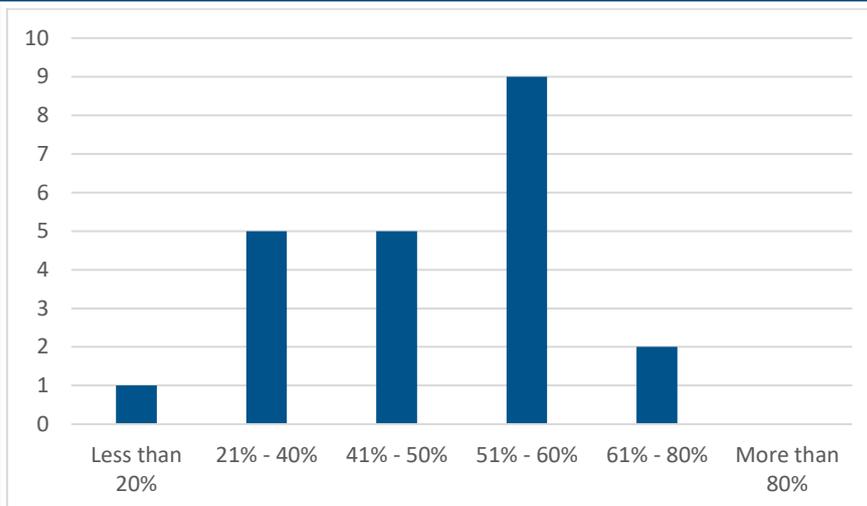
	<p>According to the survey carried out as part of this study, the majority of the 33 respondents (55%) agree that Modality 4¹² fulfils a clear investment gap in the Czech Republic. Only four respondents (12%) disagreed with this view, although 11 respondents (33%) abstained.</p> <p>In addition, according the majority of survey respondents (61%), Modality 4's proposal for providing support through the use of a grant mechanism was deemed an appropriate funding instrument to help projects reach financial close and leverage private financing. There were two respondents (6%) that disagreed and 11 (33%) that abstained.</p>
Level of appropriateness to the CZ context:	<p>Furthermore, the option of using a soft loan as an appropriate funding instrument instead of a grant mechanism was considered less favourable with 13 (40%) of the respondents in favour, eight (24%) against and 12 (36%) abstained.</p> <p>When it comes to alternative mechanisms, three of the respondents suggested that a guarantee scheme is used instead, one suggested that “blended financing (i.e. grants and loans) is a better alternative, while one respondent elaborated that “all of above instruments in combination with a grant mechanism up to 100%” would be better.</p> <p>Finally, survey respondents were asked to identify three options that need to be prioritised. Based on the total votes each option received, Modality 4 was ranked as fourth out of all proposed options with 12 votes. Following the restructuring of some of the options and merging them into new more comprehensive modalities, Modality 4 would be ranked as third behind Modality 1B¹³ and Modality 1A¹⁴.</p>
Ideal intervention rate of the scheme:	<p>According to those that voted on the optimal intervention rates of the MF for Modality 4 (67% with 33% abstaining), most votes were in favour of a support that ranges between 51% and 60%, as presented in Figure 1 below. Compared to the other modalities, this is a pretty high rate, and hence a good indication that stakeholders expect higher level of support for Community Energy Systems compared to the other areas of support being considered.</p> <p><i>Figure 1 - Intervention rates of the MF for Modality 4 by votes</i></p>

¹² Previously Option 3 at the stakeholder survey phase

¹³ Previous Options 1 and 2 at the stakeholder survey phase were combined into Modality 1B.

¹⁴ Previous Options 4 and 5 at the stakeholder survey phase were combined into Modality 1A.

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Source: ICF, 2020

Project pipeline

Exemplar projects identified:

During the stakeholder consultation different types of energy community systems and projects were identified, including: Community PV plants on rooftops of apartment buildings and smart grid infrastructure. However, no financial or technical details were communicated for these projects. Given the absence of clear legal framework and definition for energy community systems in Czech Republic, as well as real life examples of planned projects of this type in the country, it is difficult to establish a clear picture of the project pipeline at this stage.

The design of the modality and the assumptions made are therefore based on the adopted EU legislation, the two cases of transposition at Member State level in the Region of Wallonia and Portugal, the most recent report on the development of energy communities in Europe by the European federation of citizen energy cooperatives¹⁵, as well as expert input on the subject.

State Aid

Key state aid considerations:

From the State Aid's perspective, the crucial question would be whether a particular citizen energy community or renewable energy community constitutes an undertaking. According to the relevant directives [Directive 2018/2001, Art. 2 (16); Directive 2019/944, Art. 2 (11)], their primary purpose is to provide environmental, economic or social community benefits for their members, rather than financial profits. At the same time, the communities are empowered to carry on activities which can be described as typical economic activities, including sale of energy. Similarly, they may be composed not only of citizens – consumers, which would rather indicate their non-commercial character, but also of SMEs.

It is also important to add that the revised EEAG are expected to cover the rules on energy communities in more detail.

As already mentioned above, the implementing legislation concerning energy community has not yet been adopted in Czech Republic. It is therefore not possible to make a final assessment of their character from the point of view of

¹⁵ <https://uploads.strikinglycdn.com/files/839d3b98-f87f-4162-8d5a-4672504984e2/Energy%20Communities%20Transposition%20Guidance.pdf>

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State Aid at this stage. It can however be expected that non-profit energy communities composed of consumers and not involved in economic activities will arguably not be covered by the State Aid rules. Regarding other communities, the future legislation might either exclude a much wider category of communities from the State Aid regime based on their prescribed activities or classify all the energy communities as undertakings.

Should the State Aid rules apply, the same assessment will be done as with regard to other modalities. For RES instalments and energy infrastructure, please refer to Modality 1B.

Details of the proposed scheme

Targeted activities:	Establishing community energy projects, which can produce, consume, store and sell energy, as well as own, establish, maintain, purchase or lease distribution networks.
Targeted project categories:	<ul style="list-style-type: none"> ■ Citizen Energy Communities; and ■ Renewable Energy Communities. <p>The precise characteristics of these entities will depend on the future CZ legislation in transposing Directive (EU) 2019/944 and Directive (EU) 2018/2001.</p>
Out of scope:	<ul style="list-style-type: none"> ■ Projects that might interfere with existing efficient district heating networks. ■ RES generation projects, energy storage and energy infrastructure (covered by Modality 1B and OPTAK).
Suggested coverage:	Country-wide with special focus on coal-dependent regions.
Targeted beneficiaries:	<ul style="list-style-type: none"> ■ Community developers; ■ Citizens; ■ Municipalities; ■ SMEs; and ■ Larger companies (in the case of Citizen Energy Communities given that the CZ legislation keeps its membership as open as the EU legislation suggests).
Complementarity with OPs & other financial support mechanisms:	<p>Modality 4 covers community energy system projects, because they are not covered under the existing operational programmes (i.e. OPE, New Greenlight for Savings, and OPTAK).</p> <p>However, it is recommended that a scheme for supporting project studies and/or preliminary works to be either integrated in this modality or is established separately in the future.</p>
Suggested support instrument:	Grant
Eligible cost:	<ul style="list-style-type: none"> ■ For the purposes of the capital investment cost (CAPEX) calculations the following areas are deemed eligible: <ul style="list-style-type: none"> ○ Capital Equipment (covering the main items of plant/equipment)

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	<ul style="list-style-type: none"> ○ Site infrastructure ○ Development Costs ○ Installation ○ Commissioning ○ Design ○ Intangible assets <ul style="list-style-type: none"> ▪ Investment costs are deemed to occur in Year 0, i.e. the year before operation begins.
Suggested award criteria:	<p>Primary criteria:</p> <ul style="list-style-type: none"> ▪ Cost-efficiency (value for money): EUR/tCO₂e reduction. ▪ GHG abatement potential: Absolute GHG emission avoided over lifetime of the project. ▪ Quality and soundness of the proposed projects based on proposed technical, delivery and cost evidence base including ability to leverage private finance. <p>Secondary criteria:</p> <ul style="list-style-type: none"> ▪ Level of innovation. ▪ Social benefits. ▪ Reduction of energy poverty. ▪ Benefits to carbon dependent regions.
Suggested call frequency and specifics:	Annual calls, starting after the adoption of the legal framework for the operation of energy communities in Czech Republic and once a number of these communities is established.
Suggested application stage:	Since the MF cannot support the initial studies and works carried out, it is proposed that the point in the project cycle where project applicants should be applying is after feasibility activities are completed and capital expenditure support is required to help achieve financial close (i.e. before a Final Investment Decision and the ensuing construction and development stages).
Disbursement & funding rules:	<ul style="list-style-type: none"> ▪ No retroactive funding; ▪ Payments will be made based on key project milestones, including on construction and operational performance monitoring/verification of the works and forecast energy savings, based on a post-completion energy audit for final payment.
Suggested project verification	The payments may proceed after issuing the Final Investment Decision. Once selected and in the “investment grant payment phase” the projects need to demonstrate compliance and sufficient progress at the award milestones. Each payment must be supported by corresponding invoices.
Proposed intervention rate:	The initially proposed intervention rate is 60%. This would comply with state aid for renewable projects for small and medium size enterprises, which the majority of the communities will be, as well as stakeholders’ expectations.

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	<p>However, the upper limit of the intervention rate would depend on the legal status of the energy communities set by the Czech authorities. In the case that non-profit energy communities composed of consumers will not be covered by the State Aid rules, it is possible to adopt a higher intervention rate up to 100%.</p> <p>Additionally, if in the future such high intervention rate is adopted, it is advisable that for larger Citizen Energy Community projects with stakeholders comprising of larger businesses a lower intervention rate is applied – similar to RES projects under OPEIC developed by large enterprises.</p>
Proposed funding scenario:	<p>The proposal is to start deploying Modality 4 after 2025 and on the condition that (1) a clear legal framework for the operation of community energy systems has been established in Czech Republic, and (2) a sufficient number of energy communities has been established to compete for the MF support.</p>

Conclusions and further considerations

Conclusions:	<ul style="list-style-type: none"> ■ Type of eligible projects & beneficiaries: Small to medium scale renewable and/or citizen energy communities. ■ Type of support: There is a good level of support for the use of a grant mechanism to deploy this Modality, which is expected to stimulate the development of community energy projects in the Czech Republic. ■ Excluded projects: Modality 4 should be open only for projects, which do not interfere with existing efficient district heating networks in order not to distort efficient district heating systems and avoid subsidy overlapping and other detrimental effects. ■ Mechanism to select project: Our recommendation is to favour the selection of the best performing projects that deliver the largest social value, cost-efficiency, and emission reduction benefits. Secondary policy objectives such as a social dimension could be included in the design of the schemes (e.g. to favour localities with higher levels of energy poverty or carbon dependent regions). ■ Intervention rate: The stakeholders supported a higher intervention rate of 51-60%, however, the initial proposal is to limit it to 60% and depending on the future legal status of Czech energy communities could be increased. Additionally, if a high intervention rate of up to 100% is adopted a slightly lower rate for larger projects can be applied.
Questions to be considered by the MF Steering Committee:	<ul style="list-style-type: none"> ■ What is the desirable project capacity under this modality (which has clear implications for modelling)? The EEAG defines for example small renewables generation installations as installations with installed capacity under 500 kilowatt (kW), or 3 megawatt (MW) or 3 generation units for wind installations. ■ What is the preferred intervention rate? Is 50% desirable, as reflected in the consultation responses and (potentially) limited by the state aid rules? ■ Could the MF support large-scale studies (as a project) for development of RECs/CECs for a locality with similar characteristics (e.g. buildings and infrastructure for communal energy in the City of Prague), through grants and/or loans?