

JOINT CALL FOR PROPOSALS
FOR RESEARCH AND INNOVATION PROJECTS ON
POSITIVE ENERGY DISTRICTS AND NEIGHBOURHOODS

Call Text

Submission deadline:

24 September 2020, 12:00 a.m. CEST

*Please note: In this adapted version of the call text (as of May 11, 2020), the Agency Funding Guidelines for the Czech Republic in Annex A have been updated with regard to the maximum funding per awarded project (clarification that the stated amount is per **national** project).*





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1 Positive Energy Districts and Neighbourhoods

1.1 Background on Positive Energy Districts and Neighbourhoods

Europe aims to be a global role model in energy transition and reducing its carbon footprint. To decarbonise the European economy, ambitious energy and climate targets have been set (e.g. European long-term 2050 targets, see also SDGs 7, 11 and 13). In a globalised world, cities are the hubs of communication, commerce and culture. They consume more than two-thirds of the world's energy and account for more than 70% of global CO₂ emissions. **Urban areas are among the main originators of climate change**, as urban activities are major sources of greenhouse gas emissions.

What our cities do individually and in union can therefore set the agenda for a sustainable future. Being on the frontlines of global climate change in this way, cities are also well-positioned to play a leadership role in **driving global action** to address it.

The Implementation Working Group on Smart Cities¹ of the Strategic Energy Technology Plan for Europe (SET Plan)² was established in October 2018 with the mission to bring about 100 urban districts or neighbourhoods in Europe by 2025³ with a clear commitment to sustainability, liveability and going beyond carbon neutrality by becoming energy positive. About 20 European countries are currently participating in this initiative, which also involves problem owners, as well as key stakeholders from industry.

Positive Energy Districts/Neighbourhoods (PED/PEN) are a subsystem within cities that aim towards energy efficiency and generation of an energy surplus. As an **integral part of comprehensive sustainable urbanisation strategies**, establishing Positive Energy Districts and Neighbourhoods shifts the focus from the individual positive energy building towards neighbourhoods and thus a new level of impact on sustainable urban development and the energy transition process. They bring together energy efficient buildings, renewable energy technology, storage and district energy management systems and combine technological with architectural and social innovation. However, the framework conditions for (local) energy production are changing, by means of energy policies, technologies and markets.

Cities, as the main energy consumers, can only partially influence energy generation and distribution, which is directed by changes in the organisational structure of energy providers towards bigger co-operations due to an ongoing liberalisation of the energy market, as well as the development of new technologies such as “smart grid” solutions.

1.2 PED Framework

In honouring the economic, cultural and climate-related diversity of European countries and cities, a definition for such PED/PENs should not be just an algorithm for calculating the input and output of energy, but rather a framework, which outlines the three most important **functions of urban areas in the context of their urban and regional energy system**. The first obvious requirement is that PEDs should ultimately **rely on renewable energy only (energy production function)**, which is one of the main contributions towards climate neutrality. Secondly, they should make energy efficiency as one of their priorities in order to best **utilise the renewable energies available (energy efficiency function)**. Thirdly, the awareness that urban

¹ <https://jpi-urbaneurope.eu/ped/>

² <https://setis.ec.europa.eu/>

³ https://setis.ec.europa.eu/system/files/setplan_smartcities_implementationplan.pdf



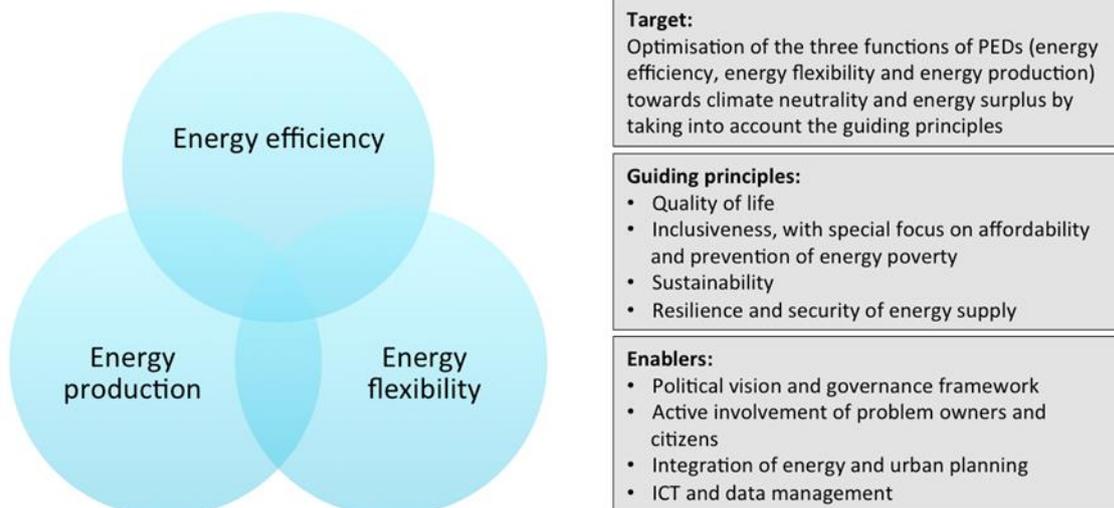
areas are bound to be among the largest consumers of energy, and therefore need to make sure that they act in a way which is **optimally beneficial for the energy system (energy flexibility function)** (see Figure 1).

Based on such a basic framework, cities should be able to **optimise the different functions and guiding principles against one another**, in order to find a balance, which can best represent the renewable energy resources available in their respective climate zone, together with their specific ambitions and needs.

When developing PEDs, the specific situation of the city should be taken into account (e.g. density, type of buildings, available local renewable energy resources, mobility and transport solutions).

Figure 1: Functions of PED/PENs in the regional energy system

PED Framework: Functions of PED/PENs in the regional energy system



Therefore, a framework for PED/PENs could be defined as follows:

“Positive Energy Districts are energy-efficient and energy-flexible urban areas or groups of connected buildings which produce net zero greenhouse gas emissions and actively manage an annual local or regional surplus production of renewable energy. They require integration of different systems and infrastructures and interaction between buildings, the users and the regional energy, mobility and ICT systems, while securing the energy supply and a good life for all in line with social, economic and environmental sustainability.”



The three **main functions, the target, guiding principles and enablers** are described more in detail below.

1. Energy Efficiency Function

The aim is an optimal reduction of energy consumption within the PED/PENs balancing out the needs of the different sectors, building infrastructure, the use of energy, settlement typology, as well as transport and mobility. Due to its relevance, not only new urban development areas but also the existing building stock needs to be addressed. As an example, mixed use settlements could be an effective instrument towards minimizing transportation needs. By adopting a life cycle approach and assessing the energetic and ecological footprint of goods and services, also "grey energy" will be considered. Furthermore, also resource efficiency is taken into account.

2. Energy Flexibility Function

The main roles and functions of PEDs regarding energy flexibility are

- to actively contribute to the resilience and balancing of the regional energy system by managing its interactions as one of the main consumers of energy with the optimal benefit for the regional energy system in mind. Demand side management, sector coupling and storage are among the main instruments to achieve this goal.
- to manage those interactions between the urban district/neighbourhood and the regional energy system in a way that enables carbon neutrality and 100% renewable energy in the local consumption and an additional surplus of renewable energy over the year.

3. Energy Production Function (locally and regionally)

Locally and regionally produced renewable energy will enable a substantial reduction of greenhouse gas emissions and ensure economic viability. Nevertheless, the local production of renewable energy is highly dependent on local and regional conditions and additionally on the transformation paths for the transition of the regional and European energy system. In particular, the use of waste heat is encouraged.

Each PED/PEN will have to find its own optimal balance between energy efficiency, energy flexibility and local/regional energy production on its way towards climate neutrality and energy surplus taking into account the guiding principles.

The development of PED/PENs should also follow four **guiding principles** to make them attractive for cities and citizens:

- Quality of life
- Inclusiveness (with special focus on affordability and prevention of energy poverty)
- Sustainability
- Resilience and security of energy supply

The development of PED/PENs should make use of the following **enablers**:

- Political vision and governance framework
- Active involvement of problem owners and citizens
- Integration of energy and urban planning
- ICT and data management

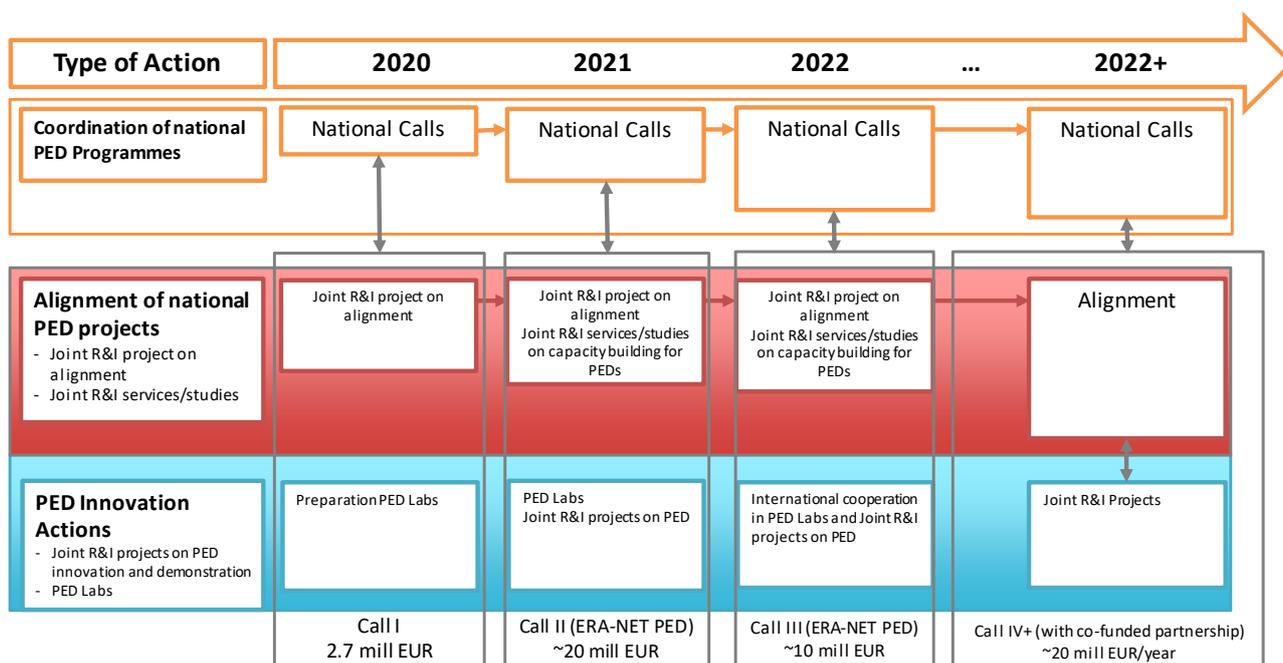


2 Scope and Topics

2.1 Aim and Content of the Programme and the Call

This call on Positive Energy Districts and Neighbourhoods (PEDs) is the first in a series of calls on the topic. The PED Programme Management has developed a draft Call Agenda for the upcoming years, including ERA-NET calls (see Figure), **aiming at supporting the large-scale implementation of at least 100 PEDs by 2025**. This first Pilot Call is funded solely by the participating countries/regions.

Figure 2: Draft Call Agenda of the PED Programme



As Figure 2 shows, activities on the national level with regard to PED/PEN, especially national calls, form the basis for the transnational activities. This first call focuses on **transnational alignment**, including smaller-scale R&I projects and joint R&I services. Call topics have been developed together with the involved funding agencies. Key fields have been identified through mapping activities, PED Programme events (PED Cities Workshop April, PED Stakeholder group involvement) and various consultation processes. The call focuses on **smaller-scale joint R&I projects (duration 1-2 years) on PED/PEN implementation**, providing alignment, comparison and exchange of experiences between ongoing (European) projects in different PED implementation phases, their integration in general urban strategies, stakeholder involvement strategies and the role of geographical/climatic conditions. Call topics include the following three themes:

- *Contributing to the climate-neutral city: Holistic approaches for PED implementation*
- *Embeddedness in local contexts: Applied approaches for integrating PEDs in different urban contexts and the legal framework*
- *Engagement and governance: Urban Governance, stakeholder involvement concepts and business models*

In the future, also PED labs will be financed via joint calls of this programme.

With regard to the **type of research**, the PED programme is aiming at the following types from applied research to demonstration (TRL 3-7):



- Applied research (TRL 3-4 – proof of concept, research to proof feasibility, small scale prototypes),
- Piloting/testing/labs (TRL 5-6 – prototype testing in real environment),
- Demonstration (TRL 7 – demonstration in real environment, system integration).

2.2 Call Topics

The call focuses on **smaller-scale joint R&I projects (duration 1-2 years) on PED/PEN implementation⁴**, providing alignment, comparison and exchange of experiences between (European) cities having PED projects in different phases (including pre-feasibility studies, planning, implementation, operation), their integration in general urban strategies, innovative stakeholder involvement strategies and the role of geographical/climatic conditions.

Guiding questions for projects across all topics may be:

- Which projects and initiatives have been successful? Which not?
- What have been critical success factors? What are the main barriers?
- Which projects or project elements are particularly useful for replication?
- Which approaches are suitable for new urban development? Which for existing neighbourhoods?
- Which methodologies for the calculation of CO2 emissions are used?
- What are the multiple benefits that the PED implementation may provide to the urban ecosystem?

a. Contributing to the climate-neutral city: Holistic approaches for PED implementation

In order to be successful on a large scale, the implementation of **PEDs must meet general goals of sustainable urban development and urban qualities**. Therefore, PED implementation needs to be integrated in holistic approaches, which imposes challenges on strategy development, planning, monitoring and evaluation. From an urbanistic view, it is an imperative to not view energy goals separately or as a matter of priority, but to involve them in systemic strategies aiming at creating sustainable, liveable, inclusive neighbourhoods fit to meet the challenges of our generations. In the end, PED implementation must contribute to creating high quality urban environments in line with climate, energy and sustainability goals.

The **focus on the urban neighbourhood** as the “nucleus” for urban sustainability creates opportunities and requires systemic approaches regarding technological, social and economic innovation. Neighbourhoods offer a manageable size in terms of integrating urban planning and energy planning, including technological, spatial, regulatory, financial, legal, environmental, social and economic perspectives. Resulting in a network of sustainable urban neighbourhoods, PEDs will substantially contribute to a sustainable urban future in general.

Technological solutions are integrated elements to a holistic approach; the availability of relevant technologies and components is crucial as well as sector integration. The focus lies on the integration and interoperability of innovative technologies and systems for energy generation, distribution,

⁴ Project creation shall be supported by means of a brokerage event.



transformation and storage as well as in the optimisation of energy consumption in buildings or urban neighbourhoods and efficiency and buildings technologies in new developments and refurbishments.

Key questions may include but are not limited to:

- Dealing with and resolving conflicting goals and dilemmas;
- Integration of PED projects into general urban strategies regarding climate action and the energy transition: Smart City strategies, Greening strategies, Sustainability strategies;
- Integration of urban planning and energy planning;
- Neighbourhood-oriented approaches;
- Advanced concepts for the optimisation of the key functions of energy production, energy efficiency and energy flexibility;
- Advanced concepts for sector integration (including mobility), for storage & batteries (including thermal storage) and efficiency effects of sector integration;
- Advanced concepts of the functional structure of a neighbourhood that not only provides a high quality for its inhabitants but also supports PED goals by providing optimal conditions for energy production, energy efficiency and energy flexibility;
- Cross-cutting consideration of affordability and inclusiveness (with a special focus on the prevention of energy poverty);
- Consideration of the design of buildings, public and semi-public spaces in order to promote interaction between inhabitants and behavioural aspects regarding energy consumption (energy use, mobility etc.);
- Consideration of life cycle analyses.

b. Embeddedness in local contexts: Applied approaches for integrating PEDs in different urban contexts and the legal framework

The PED Programme aims at developing a framework suitable for different urban contexts. **Different pre-conditions require applied approaches** both regarding strategies and technological solutions and might lead to considering wider urban/regional/national contexts in order to achieve a positive energy balance. PEDs need to be adapted to different urban contexts and the redevelopment of existing urban structures towards sustainability.

While many European cities face challenges of growth and urban expansion, all of them are confronted with the challenges of refurbishment and retrofitting. To provide feasible economic implementation, **strategies need to build on and further develop existing urban structures and infrastructures**. An applied PED implementation process therefore needs to consider:

- Geographical location, climatic conditions and availability of energy sources;
- Existing infrastructures for the key functions energy production, energy efficiency and energy flexibility (energy system, supply and disposal, esp. waste management, mobility system);
- Projects specifics regarding the built environment: greenfield developments, brownfield developments, retrofitting and refurbishment, different levels of density and settlement structure;
- Specifics of buildings: local “building culture”, existing construction methods, protection of buildings/cityscape;



- Functional urban structure (mix of uses in/around the neighbourhood, connectivity).

Technological solutions need to be applied to the geographical pre-conditions and the urban context. In this regard, strong focus needs to be on the interplay of all three sectors – electricity, heating & cooling, transport and mobility – , as well as efficiency effects of sector integration.

Legislation and regulations also rank high among key fields of action for PED implementation, as they can be barriers or enablers for PED implementation. This legal framework is being defined on EU, national and local levels and might therefore differ between countries and cities. Focus areas of projects dealing with the legal framework of PED implementation may include but are not limited to:

- Most influential legislative levels for PED development (EU/national/municipal);
- Most common legal barriers for PED development;
- Actions to be taken in order to make legislation supportive for PED development (also by highlighting best practice);
- Need for regulation-free sandboxes;
- Necessary alignment of different regulations in different European countries.

c. Engagement and governance: Urban governance, stakeholder involvement concepts and business models

Holistic approaches for PED implementation require **cross-sectoral approaches and innovative stakeholder involvement concepts in planning, implementation and operation** respectively. This poses challenges for governance structures on regional, city and local (neighbourhood) levels and a re-consideration of the integration of top-down and bottom-up approaches. Identification and adequate involvement of relevant stakeholders and therefore the development of applied strategies in the PED implementation process from the beginning can be seen as a key factor for implementation success.

A feasible process set-up includes relevant stakeholders like policy makers, city administration departments, energy providers, the real estate sector including developers, housing associations etc., the building industry, research and innovation institutions, and financing organisations from early planning stages and sets up an applied governance structure ensuring the consideration of different stakeholder perspectives and the development of feasible business models. Therefore, knowledge of the relevant **national/regional/local stakeholder ecosystems** is needed as a basis for developing innovative engagement strategies. Those ecosystems are mostly linked to national contexts, their respective legal and regulative frameworks and their building traditions. One of the most important stakeholder group involved in the implementation of the PED concept is the real estate industry. However, most real estate (sub)markets are nationally orientated and highly fragmented, especially with regard to the housing industry (e. g. co-operatives and other non-profit (sub)sectors). Comparisons of good practice regarding the role and engagement of the real estate sector are of particular interest. Generally, identifying the particularities of national/regional networks to be involved in PED development is a highly valuable contribution for setting up innovative strategies.

A specific challenge is the development of feasible **citizen engagement strategies**. The analysis of the PED Booklet (see fig. 7 & 8 in Annex C) shows that stakeholder involvement and citizen support rank high in the success factors of a project and are also seen as one of the biggest challenges. Facing public/citizen opposition to a project may well be considered as one of the primary barriers to



projects. Citizen participation becomes all the more important, since a lot of projects are taking place (and will have to take place) in existing neighbourhoods and thus are integral part of comprehensive refurbishment strategies.

Approaches in this field may include but are not limited to:

- Adapting administrative and planning procedures (within city administration);
- Achieving a high level of process design and cross-sectoral cooperation;
- Involvement strategies and co-creation processes for local urban stakeholders and citizens from the beginning;
- PuP and PPP strategies;
- Developing local governance structures (sharing, clustering of buildings, etc.);
- Development of investment incentives and business models.



2.3 Aims, Approaches and Recommendations for the Proposals

Transnational benefit

Projects should support collaboration and transnational alignment that goes beyond individual national efforts and demonstrates sharing, operationalising and transferring existing knowledge, resources, and research facilities to mutual benefit.

Clear added value of the transnational consortium should be demonstrated and, if relevant, the added value for national investments.

Interdisciplinarity

The complexity of the research and innovation topics in question requires interdisciplinary approaches to analyse the challenges and find solutions.

Relevant disciplines include, but are not limited to for example social sciences (economics, geography, political science, psychology, sociology...), technical sciences (engineering, computer sciences) and application fields such as architecture, energy planning, traffic engineering, spatial planning, and policy development.

Transdisciplinarity, involvement of “stakeholders”, practitioners, citizens, community groups, NGOs

The complex societal challenge of bringing around positive energy districts and neighbourhoods for sustainable urbanisation also asks for knowledge on and insight in transition, innovation and implementation processes, acceptance of new systems and services and insight in short- and long term behaviour of stakeholders.

Therefore collaboration and co-production of knowledge with research users and such as with professionals in companies, cities and communities, citizens, citizen groups and NGOs (grouped under the generic name of “stakeholders” below) is highly relevant.

All projects must clearly engage stakeholders and demonstrate cities’ and user needs relevant to the project goals (see the evaluation criteria below in section 4.2).

Stakeholders might, for example, be involved in the choice of the topic of the proposal, in the design and advising on the project or/and in carrying out parts of the work programme. Therefore, consortia submitting proposals to this call are asked to describe how stakeholders and cities are actively involved in the project (such as throughout the various stages of project design, conduct, analysis and dissemination). The extent of involvement may vary according to the context of the study proposed and national/regional regulations of participating funding organisations.

Stakeholders may be associated to the project as full partners (this is particularly expected for applied research and innovation proposals, see below the definitions), or as associated, co-operation partners that do not receive directly funding but can contribute to the project through various forms (steering committee, advisor, provider of data...). See Annex A for individual funders’ rules.

Projects are expected to take a transdisciplinary and preferably co-creative approach already from the early project formulation stages.



Outputs and outcomes of the projects, broader impacts of the proposed activity

Establishment of potential long-term partnerships, leveraging of existing knowledge networks and project co-design between researchers and stakeholders are essential components of the proposed projects.

Outputs should be targeted towards decision-making (including public and private spheres as well as communities) and innovations (technological, organisational and institutional as well as social).

The proposals are expected to clearly present:

- how cities and stakeholders will be involved into the knowledge creation, dissemination and use of the results;
- their plan for broadly disseminating their outputs and outcomes, to enhance scientific and technological understanding and transfer their results to end users; and describe their strategy for longer-term sustainability of project outcomes.



3 Eligibility Criteria and Guidelines for Applicants

Some requirements are common for all applicants and funding agencies.

In addition to these general requirements, there are specific funding agency rules which apply to applicants that claim funds from a specific funding agency (see Annex A for guidance and agency web links with further information). Applicants have to pay careful attention to the relevant national funding rules and contact the relevant national contact person with any queries to avoid any issues related to national eligibility.

3.1 Consortium: Who Can Participate and Apply

Each project proposal must be submitted by a project consortium consisting of at least two eligible applicants from at least two participating countries (see Annex A – Table 1).

Applicants

Applicants are defined as organisations/institutions.

The Principal Investigator (PI) is defined as the person who is the lead investigator for an Applicant.

The Main Applicant coordinates the whole project.

In addition, a proposal must have at least one Co-applicant.

The proposal may also include Co-operation Partners, whose role is described below.

Each PI must only participate in a maximum of two proposals, and only once as Main Applicant.

Only applicants eligible to the funding of the participating organisations⁵ from the following countries are eligible to apply as Main Applicant or Co-applicant: Austria, Belgium, Czech Republic, Sweden. Non-eligible applicants (e.g. from other countries or non-eligible to receive funding from a participating country) may participate as a Co-operation Partner.

Applicants can come from organisations such as:⁶

- Companies (from industry/large companies to SMEs), especially public utility companies (e.g. in the field of energy supply, other communal supply and disposal systems, ...); energy service providers; real estate developers, investors, facility management providers; actors from the fields of energy, spatial and transport planning
- Cities, municipalities, regions
- Consumers (e.g. business enterprises, test households, etc.)
- Citizens' representatives, NGOs
- Research organisations (universities, university colleges, research institutes or other authorities with research undertakings)

Consortia may consist of partners active across several positions within the research and development system (i.e. applied research, innovation/implementation) and across disciplines (natural sciences, economic and social sciences, humanities, and engineering).

⁵ see Annex A – Table 1

⁶ Please note that a specific funding agency may not fund each type of organisation. If a partner is not eligible for funding, the partner can still participate as cooperation partner. For further information see Annex A.



Consortia may include partners representing stakeholder/user groups.

Please pay careful attention to the specific Funding Agencies' rules regarding eligible applicants in Annex A.

Definitions

Main Applicant's role

The Main Applicant will be responsible for running and managing the project. S/he will be the contact point with the programme on behalf of the whole consortium and is responsible for the administrative management of the complete project, should it be awarded funding.

In addition, the Main Applicant is responsible for leading the project activities.

The specific eligibility rules of the respective funding agency apply.

Co-applicants' role

There may be more than one Co-applicant from any one country. If there is more than one Co-applicant from a country, one of them needs to be identified as the national consortium leader. Each Co-applicant should be located in a participating country.

The specific eligibility rules of the respective funding agency apply.

Co-operation Partners

Partners that are not eligible for funding from participating agencies, e.g. partners from countries not participating in this call, may be included in the projects as Co-operation Partners.

Co-operation Partners can be included in the consortium if (a) they finance their activity from other sources and (b) the consortium in general fulfils the requirements on the number of applicants from participating countries.

It should be noted that Co-operation partners do not count toward the minimum of *two eligible applicants from at least two participating countries outlined at the beginning of this paragraph*.

Project consortium

The added value resulting from transnational cooperation must be addressed in the proposal. There is no limit to the total number of partners who may be involved in each project. However, proposals for medium-sized projects submitted by consortia comprising applicants from approximately 3-4 funding agencies are expected. Consortia need to be balanced between countries both in terms of number of partners and distribution of budget. No partner may represent more than 50% of the total budget of the project (some countries may also impose lower participation levels for their funding, so please check regional/national eligibility guidelines in Annex A).

3.2 What Can Be Applied For

Project duration

Smaller-scale joint R&I projects (see also section 2.2) may be funded for a **maximum of 2 years** (starting between December 2020 and February 2021. The starting date may depend on the budget allocation (rules) of the specific funding agencies). The end date of a project should be harmonised for all applicants in the same consortium.



Funding

There are no fixed minimum or maximum limits for a project size. Smaller-sized projects with total budgets requested from the funding organisations in the range of 500.000 to 800.000 € are typically expected, which allows approximately four to six projects to be awarded funding though total project costs can be higher.

There are, however, (national) funding limits for the respective partners. Table 1 in Annex A indicates the bandwidth of funds available from each of the respective national funding agencies. For more information on the specific funding agencies' rules, please see Annex A.

In the proposal, a justification of the requested budget is required. The estimated budget must be given in Euros only and be tabulated according to the proposal template provided. All costs must be eligible according to the funding agencies' rules available (see Annex A). In case of doubt, applicants should consult their respective funding agencies.

Funding agencies' rules and eligibility criteria

In addition to the general rules and procedures laid out in this document, there may be specific funding agencies' rules (e.g. funding agencies' eligibility criteria for certain organisations, co-funding requirements, national evaluation rules, etc.). Please note there are limitations regarding the types of activities that different funding agencies are able to support.

It is strongly recommended that these are checked with the contact person at the respective funding agency (see Annex A) before submitting a proposal.

3.3 When Can Applications Be Submitted

The call for proposals is open until **24 September 2020, 12:00 a.m. CEST.**

3.4 Preparing and Submitting An Application

Language and form

Proposals must be prepared **in English using the designated proposal form**. Proposals written in other languages will be ineligible. The proposal form should be completely filled in. Incomplete proposal forms will be ineligible.

Submission

Submission of a proposal must be done by means of the FFG electronic submission system (<https://ecall.ffg.at>). An online help document for submission is provided via <https://ecall.ffg.at/Cockpit/Tutorial.aspx?target=6079134>. The proposal may only be submitted if all co-applicants/co-operation partners have previously completed and submitted their partner proposals in eCall. Therefore it is within the main applicant's duties to ensure timely submission of all partner proposals and of the proposal as a whole. The process of the invitation and application of project partners (co-applicants or co-operation partners) is described in detail in the section "Project Partners" of the above mentioned online help document. The terms "partner proposal" and "partner application" are used interchangeably. The "partner application" or "partner proposal" only includes the master data of the project partner and does not mean that the proposal must be submitted several times. However, both the "Organisation / Master data" section and the "Projects / Project data" section have to be completed by all project partners. It is not needed to enter a staff pool, and also a master account (in the "Organisation" / "User Management" section



in eCall) is not needed for the submission. Please note that the FFG electronic submission system generally does not allow a further change of any content once you have submitted your proposal. Therefore we kindly ask you to finalise your submission only when you are sure all content is ready for submission. It is not possible to resubmit or revise the proposal after the submission deadline.

If you still have technical questions about the use of the system, please contact the Call Secretariat at FFG (see section 6).

Data Protection

The provisions of the General Data Protection Regulation (GDPR) shall be complied by the Call Secretariat and the funding agencies participating in the organisation of this call with respect to the processing of personal data.

Depending on the country and the participating funding agency, different national laws might apply and different electronic systems will be used regarding the processing of personal data.

Please note that by transmitting your proposal, the proposal will be forwarded to your responsible funding agency as well as to all other participating funding agencies involved in this call on Positive Energy Districts and Neighbourhoods and the Evaluation Panel members.

3.5 Summary of the Transnational Eligibility Criteria

- Only transnational projects will be funded.
- Each consortium submitting a proposal must involve at least two applicants eligible for funding coming from two different countries whose funders participate in the call. All two legal entities must be independent from each other.
- The project coordinator must be eligible to be funded by his/her national/regional participating funding organisation.
- The duration of a project must not exceed 2 years.
- Proposals must be written in English and respect the template form (in terms of overall size, limit of pages and characters in the different sections). The template form must be completely filled in.
- Proposals have to be submitted via the FFG electronic submission system.
- Proposals have to be submitted before the corresponding deadlines indicated in this document.

3.6 Eligibility Check

The Call Secretariat will verify the eligibility of the proposals according to the transnational eligibility criteria described in the previous section.

The participating funding agencies will perform a check for compliance according to their funding rules. Both transnational and funding agencies' eligibility criteria must be met.

If either the Main Applicant or the proposal does not meet the eligibility requirements, the proposal will not be admitted to the evaluation procedure.

In case (a) Co-applicant(s) is (are) not eligible, the proposal may still be eligible if and when the eligibility criteria are met by the proposal without this (these) partner(s).

In both cases, this will be communicated to the Main Applicant.



If a proposal is “eligible”, this does not mean that it will be awarded funding, but only that the proposal will be admitted to the evaluation procedure.



4 Assessment Procedure

4.1 Procedure

Within the framework of this Joint Call on Positive Energy Districts and Neighbourhoods, a **one-stage evaluation procedure** is adopted. Applicants will be invited to submit full project proposals. Eligible proposals will be evaluated in an open competition in which an independent international Expert Panel will rank proposals according to the call's evaluation criteria stated below. The Panel will consist of recognised experts in relevant fields, practitioners and innovators as well as academics, who can assess the innovative and practical values of the submitted Positive Energy Districts and Neighbourhoods projects. The Panel will be appointed by the participating funding agencies. Each proposal will be evaluated by at least three independent experts. The Expert Panel will meet to discuss all proposals, to produce an assessment report for each proposal and a list of proposals recommended to be considered for funding in a ranking list. Applicants will have no possibility for rebuttal to the committee's evaluation.

Based on the ranking by the Expert Panel, and taking into account the available (national) budgets, the national and regional funding agencies participating in this call will take funding decisions. Funding decisions are final and cannot be appealed at the transnational level.

A written statement on the evaluation of each proposal will be sent by the Call Secretariat to the Main Applicants. The Call Secretariat will inform the Main Applicants of projects that have been recommended for funding, on the subsequent contracting procedure.

Note: Each project recommended for funding is required to have a signed consortium agreement between all partners prior to the start of the project, at least addressing the following topics:

- Internal organisation and management of the consortium
- Sharing of risks and results
- Dissemination of results
- Intellectual Property arrangements
- Settlement of internal disputes

Please note that national and regional funding agencies regulations concerning the requirement for a CA may apply.

Time Schedule

24 September 2020, 12:00 a.m. CEST	Deadline Submission of proposals
September – October 2020	Eligibility check
November 2020	Meeting of Expert Panel to assess proposals
November 2020	Funding recommendation by the Steering Committee
November – December 2020	National funding decisions and announcement of results to Main Applicants



December 2020 – February 2021	Start of the projects
2021	Kick-off meeting
2022	Final Projects Event

4.2 Evaluation Criteria

Proposals will be assessed according to specific evaluation criteria by using a common evaluation form. A scoring system from 0 to 5 will be used to evaluate the proposal's performance with respect to the different evaluation criteria.

<i>Excellence – Intellectual Merit</i>	5 points
<ul style="list-style-type: none"> ▪ Clarity and pertinence of the objectives (the project's objectives are clearly stated, coherent, and relevant) ▪ Appropriateness of conceptual approach (the project's concept and approach must be in line with the project's aims and objectives) ▪ Innovativeness of the approach compared to existing solutions (the project must have a novel approach, application and/or methodology, must significantly contribute to knowledge development and/or to the application and implementation of scientific and technological breakthroughs) ▪ Added value of transnational co-operation (the proposal must demonstrate how the dimension of transnational co-operation contributes to achieve more than otherwise possible: taking up, combining and integrating existing knowledge from different countries, cross-border exchange of knowledge and experiences, and cross-border application of [aptly modified] solutions) ▪ Feasibility of aims and objectives of project (the project's aims and objectives must be correlated with the planned outcome and impact of the project; the envisaged results must be realistically achievable within the project's budget and time allocation) ▪ Feasibility and suitability of project design and methods (the project's design and methods, including tools and technologies [where applicable], must be correlated with the planned outcome and impact of the project; the envisaged design and methods must be convincingly conceivable and executable within the project's budget and time allocation) ▪ Handling of development risks (the project's development risks must be clearly identified and appropriate preventive/remedial actions must be foreseen) 	
<i>Impact and User Engagement (societal and broader impacts of project results)</i>	5 points
<ul style="list-style-type: none"> ▪ Fit to aims and topics of the call text (see pp. 6-10; the project's expected outcomes and impacts, set out in the project description, contribute to the scope of the call and one or more of the call topics) ▪ Integration of gender and diversity perspectives in the project plan and goals when applicable (gender- and diversity-specific topics are analysed adequately [where applicable] and integrated in the methodological approach of the project) ▪ Engagement of research users worldwide (e.g. communities, cities, policy makers, regulators, NGOs, or industry) and the extent to which the project is likely to be of value to end users (the project brings specified added value to a variety of specifically identified target groups in a transdisciplinary and transnational setting) 	



- **Suitability of proposed arrangements for disseminating and communicating outcomes of the project** (the project’s communication and dissemination structure is in line with a transdisciplinary and transnational approach tackling the academic and non-academic target groups such as cities, civil society, NGOs and companies)
- **Scalability and replicability of the solution** (the planned project outputs and outcomes are likely to be scalable and replicable in other environments than the project’s own one)
- **Market potential of the project, capacity to respond to a demand or a need** (the project enhances innovation capacity and integration of new knowledge meeting the needs of communities, cities, policy makers, regulators, NGOs, and the international market by a challenge-driven approach)

Quality (Inter-disciplinarity and Personnel) and Efficiency of project implementation	5 points
<ul style="list-style-type: none"> ▪ Value for money (the project planning is plausible and efficient in relation to the requested budget) ▪ Appropriateness of costing (the expenditures allocated to the various stages of the implementation of the project are adequate to the effective achievement of its goals and ambitions) ▪ Feasibility and appropriateness of timescale (the timescale is adequate to effectively achieve the project’s goals and ambitions) ▪ Suitability of expertise, balance of substantial contributions of members to project consortium (the composition of the contributions and expertise of the consortium members is appropriate to the project’s goals and ambitions) ▪ Composition of consortium compared to the topic’s needs, transnational relevance and complementarities (the project partners encompass the diversity in skills, experience, knowledge and transnational relevance needed to achieving the project’s goals and ambitions) ▪ Interdisciplinary, cross-sectorial collaboration, and co-creation (the project’s implementation approach fosters interdisciplinary and cross-sectorial collaboration and co-creation) ▪ Adequateness of the work package structure and work plan (the structure and description of work packages is transparent and adequate according to the scope of work) ▪ Appropriateness of governance/management arrangements for project (the project’s management system and procedures, including quality management, are adequate to the project’s goals) ▪ Risk assessment, regulatory and ethics issues properly addressed (when necessary; the project’s procedures regarding risk management and the management of regulatory and ethics issues are adequate to the project’s goals) ▪ Other key expertise of consortium members (the key personnel shows the necessary experience and formal/informal qualifications to implement the project) 	

Evaluation scores will be awarded for each main criterion and not for the various sub-criteria. For all proposals, each criterion will be scored by the Expert Panel, using the following scale:

0: Failure. The proposal fails to address the criterion in question, or cannot be judged because of missing or incomplete information.

1: Poor. The proposal shows serious weaknesses in relation to the criterion in question.

2: Fair. The proposal generally addresses the criterion, but there are significant weaknesses that need corrections.

3: Good. The proposal addresses the criterion in question well, but certain improvements are necessary.

4: Very good. The proposal addresses the criterion very well, but small improvements are possible.

5: Excellent. The proposal successfully addresses all aspects of the criterion in question.



Half marks can be used. The threshold for individual criteria will be 3. The overall threshold, applying to the sum of the three individual scores, will be 10.

4.3 Conflicts of Interest (Expert Panel)

All necessary steps will be taken by the Call Secretariat to ensure no conflict of interest by Expert Panel members for those proposals which have been assigned to them for review.

The Expert Panel members will be required to formally declare that no conflict of interest exists at any time of their evaluation duty and will sign a confidentiality agreement concerning all documents and the entire process. In case of breaching the rule of no conflict of interest, the member will be discharged from participation in the Expert Panel. Projects that were assigned to the respective reviewer will be assigned to another reviewer.

The Call Secretariat will perform a first review of potential conflicts of interest before sending the proposals to the reviewers. Reviewers are bound to indicate after receiving the proposals whether there is a conflict of interest with any of the researchers or research groups in the proposals for review. Reviewers will sign a formal declaration that they will not participate in the call nor have any conflicting interests regarding the researchers or research groups participating in the projects that are reviewed.



5 Project Implementation

This call is part of the Joint Programming Initiative Urban Europe that includes various joint programme activities (e.g. knowledge sharing, networking) described in this section.

Projects funded via this call will become part of the programme of the JPI Urban Europe. Participants of projects funded via this call are expected to actively participate in the programme activities and to consider this in the planning of their project proposal by including budget to participate in the programme activities.

Data management

The JPI Urban Europe wishes to promote open, transparent and robust urban and global change research by encouraging more open sharing of research data, leading to wider data analysis, more data re-use, and the combination of datasets from multiple sources. The JPI Urban Europe believes that an increased emphasis on the open sharing of research data has the potential to stimulate new approaches to the collection, analysis, validation and management of data, and to the transparency of the research process. However, the JPI Urban Europe also recognizes that not all research data can be shared openly, and that there will be legitimate reasons to constrain access, for example the risks to the privacy of individuals must always be considered where data arise from, or are derived from, personally identifiable data. For detailed information on the requirements regarding data management within this call, please see Annex D.

Project monitoring and reporting

Project monitoring and reporting will be in accordance with the respective funding agency's rules.

In addition to the funding agency's requirements, the consortia are expected to deliver progress reports to the Call Secretariat, in English, on an annual basis, including a description of their transnational cooperation and a publishable summary of the project status. A reporting template will be provided on the programme website.

A detailed survey must be completed by the main applicant at project start and together with the annual joint reports. This survey includes key performance indicators for project progress and their contribution to the overall aim of the call. For project monitoring and reporting purposes, the JPI Urban Europe Online Project Monitoring System will be used.

Furthermore, one project observer from one of the participating funding organisations will be assigned to each of the funded projects to monitor the progress in transnational cooperation on behalf of the participating funding organisations and to provide a communication link between the project, the Call Secretariat, and the JPI Urban Europe.

Programme activities

The coordination of the programme is seen as very important for creating added value to the researchers and other actors involved in the programme. Two project events are foreseen. A project kick-off will be organised in 2021 and a final event in 2022. Active participation of the funded projects is obligatory, e.g. by preparing short project presentations and/or posters.

All consortia of funded projects are expected to prepare popular science summaries of the project contents for programme activities and JPI Urban Europe publications (e.g. for brochures, (digital) newsletters, the website etc.). Projects must ensure that all outcomes (publications, etc.) of transnational projects include a proper acknowledgement of JPI Urban Europe, the PED programme, and the respective funding agencies.

Therefore, time and budget should be reserved by the consortium as a whole for monitoring and programme activities.



6 Contact Details and Other Information

General information on the joint call

Updated information on this joint call and all relevant documents/templates are published on www.jpi-urbaneurope.eu.

If you have questions on the general call process and proposal submission, please contact the Call Secretariat:

Johannes Bockstefl

(also contact for questions related to the electronic submission system)

Austrian Research Promotion Agency (FFG)

Telephone: +43 5 7755 5042

E-mail: johannes.bockstefl@ffg.at

Patrik Rydén

Viable Cities Programme Sweden

Telephone: +46 733 99 86 19

E-mail: patrik.ryden@viablecities.se

Contact points of participating funding agencies

For questions regarding specific funding agencies' rules and additional forms please check "Annex A: Specific Funding Agencies' Budgets and Rules of Eligibility" first. Additional information can be obtained by contacting the indicated national contact persons at the participating funding agencies.



Annex A: Specific Funding Agencies' Budgets and Rules of Eligibility

Table 1: Participating Funding Agencies: Budgets, research foci, and organisations eligible for funding

Country	Funding Agency	Available funding	What can be funded?	Maximum funding per awarded project	Organisations eligible for funding			
					Universities/ Research organisations	Municipalities	Businesses	Citizens' representatives, NGOs (organisations and not single persons)
Austria	FFG	€ 1.000.000	- Applied research - Innovation and implementation	€ 300.000	YES	YES	YES	YES
Belgium	Innoviris	€ 600.000	- Applied research - Innovation and implementation	N/A	YES	YES	YES	YES
Czech Republic	TA ČR	€ 500.000	- Applied research	N/A	YES ¹⁾	YES ¹⁾	YES ¹⁾	YES ¹⁾
Sweden	SWEA	€ 600.000	- Applied research - Innovation and implementation	N/A	YES	YES	YES	YES

¹⁾ Due to the focus of the transnational call on cooperation, coordination and knowledge exchange within Europe, **only applicants of running national projects from the National Theta Programme are eligible applicants.**

Please check the national eligibility criteria in Table 2 for more information about the specific rules and funding opportunities of respective funding agency.

Partners from other countries than the countries mentioned here and/or partners not eligible for funding may join proposals as self-funded partner; see pp. 13 ff. for more information.



Table 2: Agency Funding Guidelines

Country/Region	Austria
Funding organisation	FFG – Austrian Research Promotion Agency
National contact person	Johannes Bockstefl E-mail: johannes.bockstefl@ffg.at Tel.: +43 (0)5 7755-5042 Website: www.ffg.at
Funding commitment	1.0 M€
Anticipated number of projects with Austrian partners	---
Maximum funding per awarded project	300.000 €
Eligibility of a partner as a beneficiary institution	The organisations which are eligible for funding as well as the eligibility criteria for cooperation are listed in the national guidelines available via https://www.ffg.at/ausschreibungen/ped-pilot-call
Eligibility of costs	<u>Eligible costs</u> <ul style="list-style-type: none"> • Personnel costs • Overhead costs (as surcharge on all cost categories besides third-party costs) • Use of R&D infrastructure • Costs of materials • Third-party costs • Travel costs <p>For detailed information visit: https://www.ffg.at/sites/default/files/downloads/Kostenleitfaden_V21_BF.pdf</p>
Submission of the proposal at the national level	Yes, national application via eCall necessary before the call deadline.
Submission of financial and progress reports at the national level	Yes, scientific and financial reporting carried out on an annual basis.
Information available at	https://www.ffg.at/ausschreibungen/ped-pilot-call
Other	We highly recommend to contact the NCP during the preparation of the project.



Country/Region	Belgium, Brussels Capital Region
Funding organisation	Innoviris – The Brussels Institute for Research and Innovation
National contact person	Beata Bibrowska Manager EU programs Unit- Strategic Research E-mail: bbibrowska@innoviris.brussels Tel: +32 (0) 2 600 50 22 Website: www.innoviris.be
Funding commitment	0.6 M€
Anticipated number of fundable research groups	Not applicable
Maximum funding per awarded project	Not applicable
Eligibility of a partner as a beneficiary institution	<p>Eligible actors:</p> <ul style="list-style-type: none"> • Private companies established in the Brussels Capital Region with a sustainable activity in this region based upon a sound business model. • Brussels Capital Region universities, research organisations • Public administrations • Associations and municipalities from Brussels Region <ul style="list-style-type: none"> •Associations and municipalities, public administrations will be financed after analysis of their activities and role in the project. •Some of these actors can be qualified as non-economic (100% of funding), or as economic entities (they will be funded as private entities) <p>Regional criteria to get the funding:</p> <p>Innoviris funded projects shall fulfil some general regional criteria:</p> <ul style="list-style-type: none"> ○ Regional beneficiary develops entirely or partially its activities in Brussels Capital Region ○ Regional beneficiary will perform a research or demonstration activity in the project ○ The project will be innovative and will present the positive impact on regional economy and employment by valorisation of results in the region ○ Regional Beneficiary has not received public funding for the same activities ○ Regional Beneficiary has fulfilled the obligations in the context of previous grants allocated by the Region <p>All applicants should demonstrate their viability and financial soundness regarding their own contribution to the project and the implementation of the results.</p> <p>Very important – the involvement of stakeholders as end users of knowledge, technological or non-technological innovative solutions is mandatory in each type of projects.</p>



	Maximum funding rates				
	Large enterprises	Medium size enterprises	Small enterprises	Research organisations, universities and associations without economic activity	
Eligibility of costs	Applied research	65%	75%	80%	100%
	Experimental research-innovation	40%	50%	60%	100%
<p>Associations with economic activities, public authorities will be funded after the analysis of their activities and the role in the project.</p> <p>The level of funding is majored by 15% of top up for international cooperation.</p> <p>Eligible costs:</p> <ul style="list-style-type: none"> ○ Personnel costs ○ Operational costs ○ Investments costs ○ Indirect costs (10% of personnel operational costs) ○ Subcontracting 					
Submission of the proposal at the national level	<p>Yes, the Brussels participants will submit the regional template in the full proposal stage. A special web page and regional application template will be developed at www.innoviris.be</p>				
Submission of financial and progress reports at the national level	<p>Yes, scientific and financial reporting will be submitted at annual basis</p>				
Information available at	<p>https://www.innoviris.be</p>				
Other	<p>We invite all to contact the regional NCP for preparation of the projects.</p>				



Country/Region	Czech Republic
Funding organisation	TA ČR – Technology Agency of the Czech Republic
National contact person	Kristina Nehilčová E-mail: kristina.nehilcova@tacr.cz Tel.: +42 (0) 234 611 629 Website: www.tacr.cz/
Funding commitment	0.5 M€
Anticipated number of projects with Czech partners	---
Maximum funding per awarded project	max. 80 000 € per national project and in accordance with the TA ČR Terms & Conditions. The increase in costs shall not exceed 50% of the approved national project budget and will not increase the project's aid intensity. To indicate the equivalent of 80 000 € in CZK, TA ČR will use the official exchange rate from EUR to CZK given by the Czech National Bank on the day of Call announcement.
Eligibility of a partner as a beneficiary institution	<p><u>Due to the focus of the international call on cooperation, coordination and knowledge exchange within Europe, only applicants of running national projects from the National Theta Program are eligible applicants.</u> The activities of the Czech applicant in the international project must be synergetic with the scope of his / her national project.</p> <p><u>The list of eligible Czech partners who are allowed to participate in this international call is available here.</u></p> <p>The national project of these applicants will be extended to include activities within the international project, thus activities and necessary costs for these activities.</p> <p>Czech parties of international projects are limited by the maximum length of the realisation phase indicated in their respective national call. If the Czech party chooses to take part in an international project that will run longer than the maximum length of the national project, the cooperation will only be funded by TA ČR up to the national limit. Therefore, in such a case the Czech party must indicate in the "TA ČR application form" that he / she is applying for funding only up to this date and TA ČR will see this date as the official end date of participation of the Czech party. Consequently, the Czech party will be obligated to draw conclusions of the international cooperation up to this date and report them according to the national rules requirements. When describing the financial contribution of the Czech party (total and requested costs), the international proposal would regard only contribution provided during the TA ČR funding timeline. However, the Czech party will be encouraged to continue further cooperation in the still running international project until its end beyond the timeline of TA ČR funding and maintain his / her role in the activities for as long as possible using other sources of funding.</p>



	In such a case, the Czech party will be asked to report about this further cooperation in the implementation report.
Eligibility of costs	<p>Eligible costs:</p> <ul style="list-style-type: none"> • Personnel costs • Overhead costs (indirect costs) • Travel costs <p>Funding rate will remain the same as a funding rate of a national project financed from Theta programme. Self-financing from non-public resources will be required.</p>
Submission of the proposal at the national level	<p>Yes, Czech applicants must submit “TA ČR Application Form” Excel file. Please contact NCP for TA ČR Application Form.</p> <p>This form will be accepted via the TA ČR data box (ID of TA ČR data box: afth9xp) within the same deadline as the international application submission date is (the deadline for proposals).</p> <p>Please fill in the subject line as: „PED - Call 2020 - prokázání způsobilosti - akronym projektu“.</p> <p>A successful Czech applicant from this international Call will proceed a request for change of the national project where international activities will be added. Funding (in CZK) will be received in 2021.</p>
Submission of financial and progress reports at the national level	Yes, scientific and financial reporting carried out on an annual basis within national project.
Information available at	https://www.tacr.cz/program/positive-energy-districts-(ped)/ https://www.tacr.cz/en/positive-energy-districts-(ped)/
Other	We recommend to contact the NCP during the preparation of the project.



Country/Region	Sweden																				
Funding organisation	Swedish Energy Agency (SWEA) / Viable Cities																				
National contact person	<p>Emina Pasic E-mail: emina.pasic@swedishenergyagency.se Tel: +46 16 544 2189 Website: www.energimyndigheten.se</p> <p>Patrik Rydén E-mail: patrik.ryden@viablecities.se Tel.: +46 733 99 86 19 Website: www.viablecities.se</p>																				
Funding commitment	0.6 M€																				
Anticipated number of projects with Swedish partners	Approx. 2-3 projects																				
Maximum funding per awarded project	---																				
Eligibility of a partner as a beneficiary institution	All Swedish organisations (legal entity) are eligible for funding. (For example, public research organisations/institutions, cities/municipalities and civil sector can receive grants as well as large, medium sized and small enterprises).																				
Eligibility of costs	<p>The Swedish Energy Agency / Viable Cities welcomes projects related to all of the topics described in the call text. For information regarding eligible costs and the Swedish Energy Agency legislation see the Swedish national call text for <i>Viable Cities: Positive Energy Districts</i> via the link: http://www.energimyndigheten.se/utlysningar/</p> <p>The proportion of a company's level of support is determined partly based on which research category the various activities in the project are deemed to correspond to and partly based on the size of the company in receipt of the support.</p> <p>Table. 1. Overview of maximum level of support - the actual rate of funding will be decided case by case.</p> <table border="1"> <thead> <tr> <th>Type of research and development</th> <th>Non-economic actors*</th> <th>Small enterprise [1]</th> <th>Medium enterprise</th> <th>Large enterprise</th> </tr> </thead> <tbody> <tr> <td>Fundamental research</td> <td>100 %</td> <td>100 %</td> <td>100 %</td> <td>100 %</td> </tr> <tr> <td>Industrial research</td> <td>100 %</td> <td>70 %</td> <td>60 %</td> <td>50 %</td> </tr> <tr> <td>Experimental development</td> <td>100 %</td> <td>45 %</td> <td>35 %</td> <td>25 %</td> </tr> </tbody> </table>	Type of research and development	Non-economic actors*	Small enterprise [1]	Medium enterprise	Large enterprise	Fundamental research	100 %	100 %	100 %	100 %	Industrial research	100 %	70 %	60 %	50 %	Experimental development	100 %	45 %	35 %	25 %
Type of research and development	Non-economic actors*	Small enterprise [1]	Medium enterprise	Large enterprise																	
Fundamental research	100 %	100 %	100 %	100 %																	
Industrial research	100 %	70 %	60 %	50 %																	
Experimental development	100 %	45 %	35 %	25 %																	

[1] The commissions directive (EU) nr 651/2014, appendix 1, article 2.



	<p>*) For example universities, university colleges, research institutes and cities/municipalities (excluding their economic entities).</p> <p><u>Viable Cities criteria:</u></p> <ul style="list-style-type: none"> ○ Co-financing rate for innovation projects should be at least 50% of the total project costs. ○ Co-financing rate for demonstration projects should be at least 75% of the total project costs. ○ The project consortium shall consist of at least three independent organisations from at least two of the following stakeholder groups: <ul style="list-style-type: none"> (a) universities or research institutes; (b) companies (c) public sector (d) civil society organisations ○ Projects should address the focus areas and thematic areas of Viable Cities. The projects must include at least two focus areas. The focus areas and thematic areas can be found at the following link: https://en.viablecities.se/fokusomraden-och-teman
<p>Submission of the proposal at the national level</p>	<p>Following the results of the international expert panel evaluation, the Swedish Principal investigators in the projects recommended for funding will be invited to submit a national application to SWEA (via E-kanalen). Information about the submission will be provided in the invitation and by the contact person.</p>
<p>Submission of financial and progress reports at the national level</p>	<p>Following the national project decision: one financial and one progress report annually will the funded projects submit to SWEA (E-kanalen)</p>
<p>Information available at</p>	<p>For full information see the Swedish national call information for this call at the webpages: http://www.energimyndigheten.se/utlysningar/ www.swedishenergyagency.se www.viablecities.com</p>
<p>Other</p>	<p>The Swedish Energy Agency is leading the energy transition into a modern and sustainable, fossil-free welfare society – applying our credibility, a comprehensive approach and courage.</p> <p>The Swedish Energy Agency funds research and innovation on new and renewable energy technologies, smart grids, vehicles and transport fuels of the future as well as smart, sustainable cities receives funding from us. We also support business development that allows commercialisation of energy-related innovations, and ensure that promising cleantech solutions can be exported.</p> <p>Viable Cities is a Swedish Strategic Innovation Programme with a focus on smart sustainable cities. The programme's mission is to speed up the transition to climate-neutral cities by 2030 with a good life for everyone within the planet's boundaries. The programme is supported by Vinnova, the Swedish Energy Agency and Formas, where the Swedish Energy</p>



	<p>Agency is the principal authority. The Viable Cities programme brings together about 70 members in business, academia, civil society and public organisations.</p>
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Annex B: Research, Development and Innovation Activities

This call gathers a wide range of funding agencies, each with its own history, ministerial instructions, and strategic focus. This diversity offers ample opportunities for sharing experiences and learning from each other, but it also comes with some administrative and conceptual challenges when planning a joint call. One simple but important component in managing our differences is to establish a common terminology for the various stages in the Research and Development system.

The key characteristics of the **two stages of RDI activities offered within this call** are defined as follows:

- While fundamental and applied urban research are both focused on producing knowledge, “urban innovation and implementation” take things one step further, and promotes the actual creation or advancement towards new policies, practices, services, products or processes – such as integrated systems, tools, services and data – in such a manner that the first impact takes place during the project. Policies, practices, processes, services or products being developed could be of commercial value, but equally welcome is innovation directed at public governance, management, and operation. Urban innovation is always carried out in close collaboration with practitioners or other target audience.
- Understanding of how cities function is required to influence policy and intervention. Achieving this influence through knowledge creation is often referred to as “applied urban research”. Applied urban research in this context is about how city officials, citizens, practitioners, and others can influence and interact with a city, with a purpose of improving it or adapting it in some respect. In applied urban research there is good opportunity to involve representatives from non-academic institutions in the projects, to bring the practitioners’ perspective in order to co-produce knowledge relevant for user stakeholders. Applied urban research is designed to be tangible and applicable to such a degree that the results are likely to have an impact on actual decisions and policy. Apart from publication in peer-reviewed journals, knowledge exchange activities such as policy briefings, policy seminars and other events targeted at stakeholders are important, as well as dissemination in popular media.

Table 3 provides examples of key characteristics of the two positions in the Research and Development system.



Table 3: Definitions of applied research and innovation

	Applied research	Innovation
Desired impact	Advance towards answering the question “ <i>What works, when attempting to improve cities?</i> ” in a way that can be generalised enough to serve as useful knowledge for decision-makers and practitioners.	Advance towards the implementation, demonstration, testing and uptake of approaches for new products, services, policies, practices, and processes, with potential for improving economic, social, or environmental sustainability in cities.
Importance of generating results fitting for publication in reputable academic journals	Very important	Encouraged
Methodological approach	Scientific method including methodological advancement	Systematic approach
Foundation of work on evaluation and analysis of empirical observations	Encouraged	Required
Involvement of practitioners and/or target audience	Encouraged	Required
Role for applying <i>Urban Living Labs</i>	Welcome	Encouraged
Role for policy research	Fits well	May fit
Role of inter-disciplinarity	Encouraged	
Academic disciplines expected in project	All welcome	
Preference for qualitative or quantitative methods	Both welcome	
Background of evaluators for project assessment	Well-respected university researchers, well-respected researchers with strong experience on utilization of research results, representatives of companies, cities and other relevant stakeholders.	



Annex C: Analysis From PED Programme Activities

The PED Programme has been intensively involving cities and urban stakeholders in the development of a PED framework and identifying the key topics for the implementation of projects aiming towards energy transition or PEDs.⁷

The Booklet of Positive Energy Districts in Europe (preview version)⁸ is a compilation of ongoing projects across Europe based on self-reporting. Analysis of the data helps identifying the important topics – these are the key findings:

1. The majority of projects takes place in existing neighbourhoods or as a mix of existing and newly built structures (see fig. 1). It comes as no surprise that developing comprehensive refurbishment strategies will be a most crucial exercise for the PED development in Europe.

Building structure in % of total projects (28)

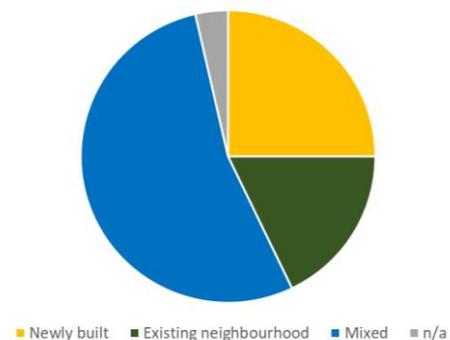


Fig. 3: Building structure of project areas (source: PED Programme Booklet of Positive Energy Districts in Europe)

⁷ Main activities (status: 19.11.2019):

- Kick-Off PED City Panel: 6 Nov 2019 (Berlin, DE)
- PED Programme Cities Workshop: 3 April 2019 (Vienna, AT)
- Workshop on the PED Framework, 9 Oct 2019 (Namur, BE)
- Smart Energy Systems Conference 2019: 9/10 Oct 2019 (Namur, BE)
- PED Stakeholder Engagement Workshop: 19 Sep 2019 (Vienna, AT)
- FAWG-PED Meetings
 - 8 Nov 2019 (Berlin, DE)
 - 28 Jun 2019 (Copenhagen, DK)
 - 4 April 2019 (Vienna, AT)
- PED Programme stakeholder group meetings
 - 13 Feb 2019 (Brussels, BE)
 - 19 Jun 2019 (Brussels, BE)
 - 7 Nov 2019 (Berlin, DE)
- PED Programme stakeholder webinars: 17 Dec 2018, 29 Jan 2019, 12 Mar 2019, 09 Apr 2019, 28 May 2019, 2 Jul 2019, 17 Sep 2019, 15 Oct 2019
- SET Plan Action 3.2 Implementation Plan
- PED Programme Booklet of Positive Energy Districts in Europe
- EERA JPSC meetings: 24/25 Jan 2019 (Freiburg, DE), 24/25 Jun 2019 (Copenhagen, DK)
- EERA JPSC PEDshop (PED definition): 06 May 2019 (Brussels, BE)
- Presentations Stadt der Zukunft (AT)
- Presentations Zukunftsquartier (AT)

Other conferences and workshops, informal consultations

⁸ https://jpi-urbaneurope.eu/app/uploads/2019/04/Booklet-of-PEDs_JPI-UE_v6_NO-ADD.pdf



2. Ambitions of the different projects are diverse (and are likely linked to respective funding programmes; see fig. 2) – but even if a PED is not the primary goal of a project, ambitions towards energy transition and climate goals are highly valuable approaches and can be seen as potential steps towards positive energy developments. Projects towards positive energy may include a variety of factors and have different foci (see fig. 3)

Fig. 4: Goals/ambition of projects (source: PED Programme Booklet of Positive Energy Districts in Europe)

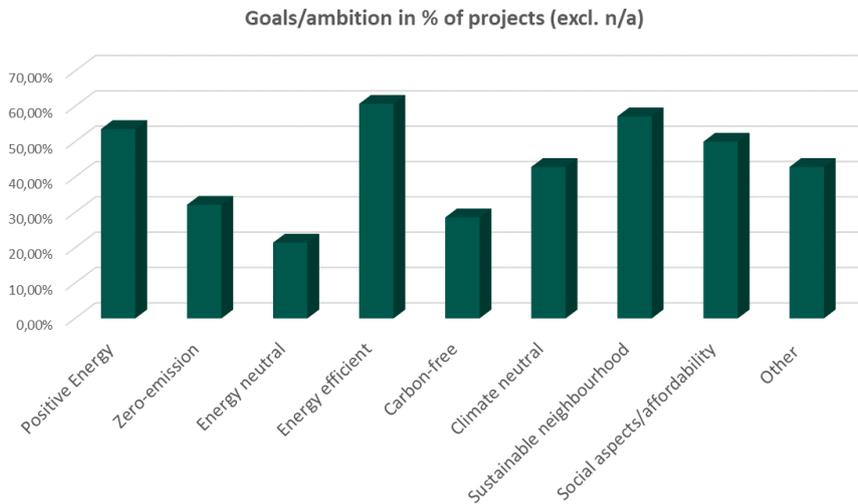
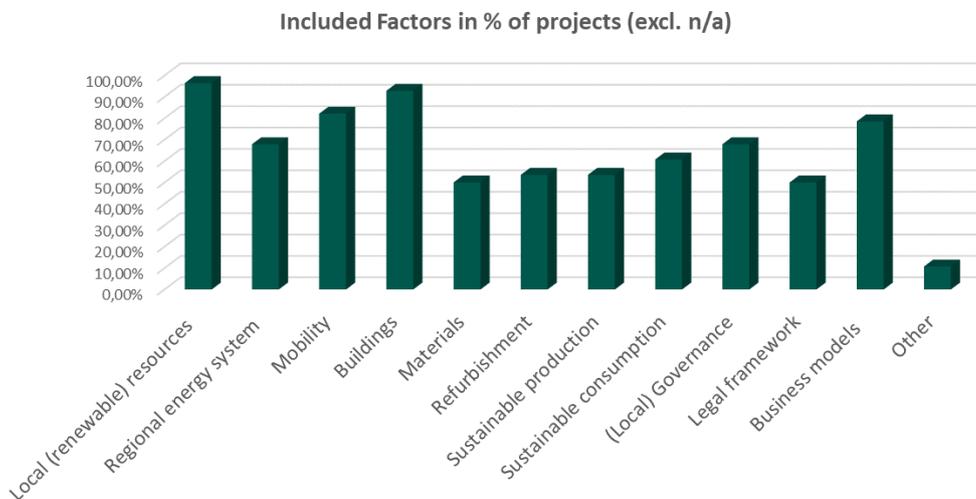


Fig. 5: Factors included in projects (source: PED Programme Booklet of Positive Energy Districts in Europe)

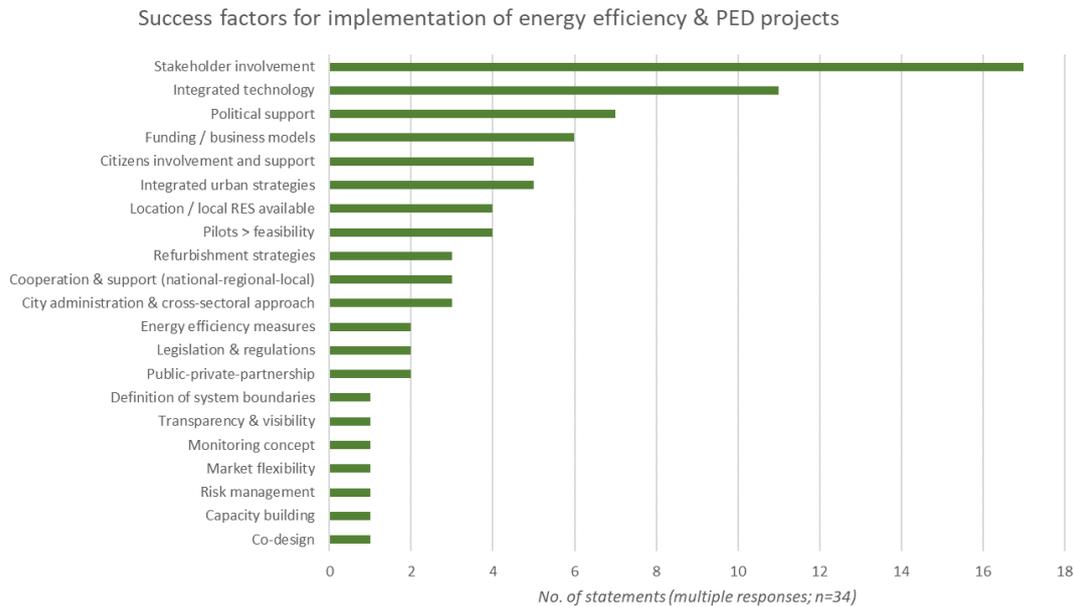


3. Analysis of the statements regarding success factors and challenges / barriers of projects (see fig. 4 & 5) show the perceived importance of stakeholder involvement. In fact, involvement processes (urban stakeholders, citizens) can be seen as defining elements for success or failure of a project. Political support (or lack of it), most likely connected with funding, is seen as another key aspect. Awareness-building among decision-makers can thus be seen as a highly important task. Not only funding, but the elaboration of feasible business models also ranks very high among key aspects of PED development.

A big challenge for successful implementation processes are legislation and regulations – an in-depth analysis of the particular legal barriers (on local /national/European levels) therefore seems to be highly relevant.

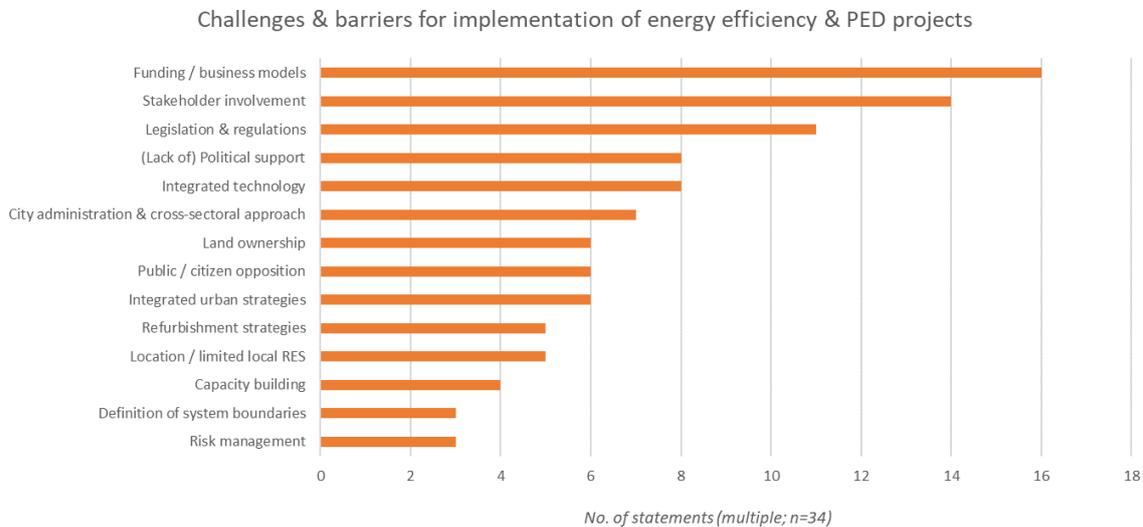


Fig. 6: Success factors for implementation of energy efficiency and PED projects (source: PED Programme Booklet of Positive Energy Districts in Europe)



source: PED Programme Booklet of Positive Energy Districts in Europe; Aug. 2019

Fig. 7: Challenges & barriers for implementation of energy efficiency and PED projects (source: PED Programme Booklet of Positive Energy Districts in Europe)



Source: PED Programme Booklet of Positive Energy Districts in Europe; Aug. 2019

- In accordance with the aforementioned topic of financing, stakeholder involvement and political and legal framework, participants of the PED Cities Workshop (3 April 2019, Vienna) have ranked the development of (integrated) urban strategies, governance issues, policy and legal frameworks and financing highest among the key fields of action regarding PED implementation (see fig. 6). It can therefore be said that the development of holistic urban strategies is an imperative for cities.



Fig. 8: Key fields of action for PED implementation (source: PED Programme Cities Workshop, 3 April 2019)





Annex D: Data Management

Why the JPI Urban Europe requires Data Management Plans

The JPI Urban Europe wishes to promote open, transparent and robust urban and global change research by encouraging more open sharing of research data, leading to wider data analysis, more data re-use, and the combination of datasets from multiple sources. The JPI Urban Europe believes that an increased emphasis on the open sharing of research data has the potential to stimulate new approaches to the collection, analysis, validation and management of data, and to the transparency of the research process. However, the JPI Urban Europe also recognizes that not all research data can be shared openly, and that there will be legitimate reasons to constrain access, for example the risks to the privacy of individuals must always be considered where data arise from, or are derived from, personally identifiable data.

The JPI Urban Europe considers that the production and implementation of a project-specific data management plan is an essential requirement to enable the sharing of research data. Research data includes:

- digital information created directly from research activities such as experiments, analysis, surveys, measurements, instrumentation and observations;
- data resulting from automated or manual data reduction and analysis including the inputs and outputs of simulations and models.

Project-specific data management plans should be in accordance with relevant standards and community best practice, and which may vary by subject and disciplinary area. Research data should normally be open by default, unless there are legitimate reasons to constrain access, and the data must be made available with minimum time delay, including being discoverable through catalogues and search engines. Data with acknowledged long-term value should be preserved, protected from loss and remain accessible and usable for future research in sustainable and trustworthy repositories.

To enable research data to be discoverable and effectively re-used by others, including those outside the discipline of origin, sufficient metadata should be recorded and made openly available to enable other researchers to understand the research and re-use potential of the data. Published results should always include information on how to access the supporting data and other research materials. Researchers should ensure that metadata created to support research datasets retained for the long-term is sufficient to allow other researchers a reasonable understanding of those datasets and thereby minimise unintentional misuse, misinterpretation or confusion.

Data Management Plan Requirements

A Data Management Plan (DMP) describes the data management life cycle for the data to be collected, processed and/or generated by a research project funded within this call. As part of making research data findable, accessible, interoperable and re-usable (FAIR), a DMP should include information on:

- the handling of research data during and after the end of the project;
- the types of data, samples, physical collections, software, curriculum materials, and other materials to be collected, processed and/or generated in the course of the project;
- the standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with proposed solutions or remedies);
- policies for broad access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements;



- policies and provisions for re-use, re-distribution, and the production of derivatives;
- plans for archiving data, samples, and other research products, and for preservation of access to them via an institutionally-supported repository.