

Call # 4 - Implementation of pilot projects for living laboratories of decarbonisation and climate change mitigation

I -General Framework

A- The Environment, Climate Change and Low Carbon Economy Program

The Environment, Climate Change and Low Carbon Economy Program aims to promote the development of innovative technological solutions, such as "living labs", as test hubs, with a view to mitigating carbon emissions, with the active involvement of citizens, companies, public authorities and local universities in the context of urban areas.

In fact, urban areas can thus serve as laboratories for the development and application of innovative technological solutions integrated in areas such as energy, environment and mobility. Living labs can be defined as testing spaces for innovative solutions, where multiple stakeholders collaborate in the development, prototyping, validation and testing of new technologies, services and respective applications in real context, in defined areas, with local identity and recognizable by citizens.

The Program's objectives are to support innovative pilot projects that, through sustainable integrated and transversal solutions, can be implemented in a long-term time horizon and that contribute to the following general objectives:

- Increase the resilience of cities to climate change through concrete local measures to mitigate climate change and low-carbon technological solutions in cities, in order to reduce greenhouse gas (GHG) emissions and the carbon intensity of activities and services carried out in the living laboratory space and its surrounding environment;
- Develop more sustainable cities centered on people, with higher quality of life for their *inhabitants*, inclusive, decarbonized and resilient to climate change;



- Sensitize the population to the benefits of adopting more sustainable / low carbon lifestyles, through the development of pedagogical actions in schools and communities;
- Induce the appropriation of new technologies by the population and the local community, through the design of interactive experiences to be lived by citizens in an urban space;
- Promote active citizenship, by encouraging citizen participation in the life of the communities where they live and work.
- Produce useful information and knowledge / experience for the development of new pilot projects, new tools and applications, in a logic of continuous improvement.
- Disseminate, at the international level, technologies, products and services developed in Portugal, with a view to fostering the internationalization capacity of companies;
- Foster the decarbonisation of cities, through the implementation of technological solutions that increase efficiency and reduce the consumption of energy and resources in general;
- Promote the demonstration of integrated technological solutions, in a real context, that have proven potential to be scaled for the city as a whole;
- Enable the testing of technological solutions by companies and entrepreneurs in a defined territorial space, promoting innovation and attracting foreign investment through partnerships with international technology companies;
- Promote the creation of new business models.

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Specific objectives

The projects to be presented under this Call, must contribute to the following specific objectives:

- a) Reduce greenhouse gas emissions and the carbon intensity of the activities and services carried out in the Living Laboratory space and its surroundings;
- b) Reduce energy consumption in the Living Laboratory space;
- c) Promote sustainable mobility in the Living Laboratory environment and facilitate the mobility of people and goods within the Living Laboratory and between the Living Laboratory and the surrounding territory;
- d) Improve the urban logistics system of Living Laboratory and between the Living Laboratory and its surroundings;
- e) Promote micro-production of energy from renewables and self-consumption, including storage;
- f) To increase the energy efficiency of the urban building and public space of Living Laboratory, namely through the use of smart grids;
- g) Increase connectivity in terms of information and communication technologies between all agents involved in the Living Laboratory;
- h) Promote a sustainable urban environment.

Priority areas

The implementation areas of the Living Laboratories, to be sustained through this Call shall:

- Constitute themselves as geographically delimited urban spaces (for example, a square, a neighborhood or an avenue), where it is possible to demonstrate a set of integrated technological solutions;

- Have distinctive physical, economic and social characteristics, which make it possible to consider space as a system;
- Have a local identity (social, cultural) that is visible to the community and external agents;
- Set up (public) spaces for meeting residents, visitors and tourists that enhance the exposure of technological solutions and their experience by citizens.

It is mentioned in the Call that the candidate projects must include solutions / operations in the following priority areas:

- 1) Circular Economy and Environment.
- 2) Sustainable urban mobility.
- 3) Energy.
- 4) Buildings.

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II- Legal Framework

Aid for research and development projects, pursuant to **Article 25 of Commission Regulation (EU) No. 651/2014, of 16 June, declaring certain categories of aid compatible with the internal market, in application of Articles 107 and 108 of the Treaty**, as amended by Commission Regulation (EU) 2017/1084, of 14 June, as regards aid to port and airport infrastructure, the notification limits for aid in favor of culture and heritage conservation and for aid to multifunctional sports and recreational infrastructures, as well as regional aid schemes for operation in the outermost regions and amending Regulation (EU) No 702/2014 as regards the calculation eligible costs.

To verify the existence of State Aid, it is necessary to verify the following conditions:

- Support is provided by the State or comes from state resources;
- The intervention is liable to affect trade between MS (affects tradable goods or services);

- The intervention confers an advantage on the beneficiary (the support to be granted represents an economic advantage for those who receive state aid compared to other competitors, that is, it could not be obtained on the market);
- It was awarded on a selective basis (that is, it is a discretionary act unlike general measures);
- Competition was or is likely to be distorted, which presupposes that there is a competitive market.

In the case under analysis, it appears that the support comes from state resources; the intervention focuses on tradable goods or services; the support to be granted represents an economic advantage for those who receive state aid compared to other competitors, that is, it could not be obtained on the market; was allocated on a selective basis; competition is liable to be distorted in the context of a competitive market.

Further, the aspects of the Call that receive aid fall into the categories "**Industrial research**" and "**Experimental development**" categories, these, provided for in article 25 of the Regulation.

In fact, the priority areas that guide the projects covered by this Call involve **industrial research** work, as they involve planned research aimed at acquiring new knowledge for the development of new products, processes or services, or to introduce a significant improvement in products, existing processes or services, integrating the construction of prototypes.

The following general objectives, to be pursued in the projects, are examples of "industrial research":

- To promote low-carbon technological solutions in cities, in order to reduce greenhouse gas (GHG) emissions and the carbon intensity of the activities and services carried out in the laboratory-living space and its surroundings;
- To produce useful information and knowledge / experience for the development of new pilot projects, new tools and applications, in a logic of continuous improvement.

- Encourage the decarbonisation of cities, through the implementation of technological solutions that increase efficiency and reduce energy and resource consumption in general;
- Energy generation from kinetic energy applied to floors, energy storage;

As for the category "**Experimental development**", this Call also includes it, since it implies the acquisition, combination, configuration and use of relevant scientific and technological knowledge and capabilities, already existing, with the objective of developing new or improved products, processes or services.

In the case under analysis, it should be noted that it includes the creation of prototypes, the demonstration, and the elaboration of pilot projects. This prototype will tend to be commercially usable, being, preferably, the final marketable product.

Examples, listed in the Priority Areas:

- Operations aimed at promoting energy self-sufficiency in buildings;
- Promotion of energy efficiency to reduce consumption and install ICT-based energy management systems;
- Smart parking;
- Innovative charging systems (eg charging station with solar panels, or induction charging);
- Promotion of microproduction of energy from renewables and self-consumption, including the respective storage;

III - Conclusion

Thus, and as it is a subsumable aid in **paragraphs b) and c) of paragraph 2 of article 25 of Regulation (EU) No. 651/2014 of 16 June, (RGIC)**, applies the paragraph 1, which determines that aid for research and development projects is compatible with the internal market, within the meaning of Article 107 (3) of the Treaty, and should be exempted from the notification obligation imposed by the Article 108 (3) of the Treaty.

Compliance monitoring

However, and despite the fact that this aid constitutes an exception to the principle of incompatibility of State aid, and is exempt from the obligation of prior notification to the European Commission under the terms already explained above, falling within the scope of the GBER, it is subject to the reporting obligation to the European Commission.

Thus, and in accordance with Article 11 and Annex II of the GBER, the Member State must provide the Commission with information on the measures within 20 working days after the application of the measure together with a link to access the full text of the measure, which is communicated through the SANI 2 electronic notification system.