

CALL FOR INNOVATIVE PROJECTS “ENERGY AUTONOMOUS CITY PROGRAM”

OBJECTIVES OF THE CALL

The call will reward innovative projects, start-ups, or SME companies that have carried out a remarkable operation in the fields of:

1. Renewable energy production

To become energy independent, producing one's own energy is essential, ideally from renewable or recoverable resources to reduce fossil fuels dependency. Renewable Energy (RE) production types are multiple and all have their specificities, advantages and disadvantages. Optimal energy hybridization requires the use of sources adapted to geographic, meteorological, social or economic contexts. The new modes of production of renewable or recoverable energies, or the optimization of existing products will be particularly studied within the framework of this call, as well as innovative processes involving positive interactions between existing production systems.

2. Energy storage

The evolution of the modes and conditions of use of renewable energies, which are essentially intermittent, to allow them to respond at all times to the needs of users, themselves fluctuating, must lead to the integration of energy storage into the networks. Thus, the rise of storage systems associated with RE production is one of the essential elements of the Energy Transition; it allows greater flexibility of networks through a more rational and optimized use of the energy produced. Technological or usage innovations of energy storage will be studied. These can relate to electrochemical, but also thermal or mechanical storage systems. New mobile or dematerialized storage applications are of interest as well.

3. Energy optimization

A more rational and adapted use of energy is essential to move towards energy autonomy. Here we are looking for new systems (hardware or software) able to manage in real time the balance between energy supply and demand, possibly offering intelligent and predictive management between energy production and consumption. Systems involving artificial intelligence, blockchain, virtual storage seem particularly innovative ... Any system for data management or analysis for better energy efficiency, of industrial processes in particular, will also be studied.

4. Sustainable buildings

Building heating is, along with industry, the largest consumer of energy in most global cities; this is also the case in the metropolitan area of Amiens. Strong action is therefore needed to reduce this consumption. This will occur primarily through the renovation of buildings, and the use of more efficient building materials or heating systems.

5. Low-carbon mobility

The rise of electric vehicles thanks to storage systems, as well as new modes of travel and drivetrain (Biogas, Hydrogen), can bring about the disruptions necessary to lower the consumption of fossil fuels for travel. The technologies of the new charging infrastructures enabling network support (vehicle-to-grid V2G) are of particular interest to us.

6. Awareness, information, involvement of all

Whether the first impulse to set a course for 100% renewable energy comes from the administration, elected officials, private sector actors, associations, farmers or citizens, the important thing is in all cases to involve all stakeholders in this dynamic. This is an essential condition for obtaining the most significant and long-lasting results. Each family of actors will bring its complexity, but also will strengthen the process by bringing its own interests, as well as its own skills. Everybody needs to be involved as many aspects of the daily life of each person will be impacted by a vision of energy autonomy (housing, lighting, mobility, new technologies and consumption in general).