



An European urban transition project towards more sustainable cities through innovative solutions, in the fields of mobility, energy and digital.

## Smart City

### Global project

Coordination: Cartif  
European grant: 18 M€  
30 partners, 6 countries  
Period: Dec.2016 - Nov.2021  
Demonstrators: Nantes, Hamburg, Helsinki

@mysmartlife\_EU  
<https://mysmartlife.eu/>

### Nantes demonstrator site

Coordination: Nantes Métropole  
European grant: 4,5 M€  
10 partners

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[metropole.nantes.fr/mysmartlife](https://metropole.nantes.fr/mysmartlife)

## Energy



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## ACTION OVERVIEW

## Solar plants on public buildings

This action has been implemented by Nantes Metropole and the City of Nantes, in 2020. A deliverable (D2.7) has been written and described in detail this actions. It is available at:

<https://mysmartlife.eu/publications-media/public-deliverables/>

### ► OBJECTIVES

- › To develop RES on Nantes Metropole area
- › To increase the share of renewables energies in the public buildings consumption, with a target of 40% of energy from a renewable source by 2030
- › To contribute to the achievement of the commitment "100% of useful roofs" of Nantes roadmap for energy transition

### ► IMPLEMENTATION



#### CHALLENGE

In light of the climate challenges, energy management and the development of RES are becoming two important levers for reducing greenhouse gas emissions. With its roadmap for energy transition, Nantes Metropole has shown its willingness to act, in particular with several commitments focused on renewables and on the use of the roofs of the city.

Nantes Metropole and the City of Nantes own more than 3,000 buildings, with some of their roofs that could be used to produce energy.

#### SOLUTIONS

Photovoltaics is one of the answers to the current energy issues, especially in urban areas. Indeed, the building roofs constitute surfaces that are little or not used at all, and thus they can be easily mobilizable to implement solar power plants.

With this in mind, the City of Nantes and Nantes Metropole has defined a specific budget (1M€) for the deployment of around 15 solar plants on public buildings.

The first solar plants were operating in late 2019 and in 2020. They are located on a community center, schools, tertiary public buildings, a swimming pool, or on parking shelters of a technical center.

The power of the solar plants ranges between 3,2 kWp and 65 kWp for the first phase of implementation. Most of the energy produced by these solar plants will be totally self-consumed; some of the solar plants will also be in self-consumption with sale and grid injection of the remaining energy. Another solar plant whose monitoring is integrated into mySMARTLife is the MIN's rooftop citizen solar plant, whose energy produced is consumed directly on site.

## MONITORING

As part of the mySMARTLife project, these solar power plants are monitored regularly.

The main performance indicators (KPIs) are the electrical production of the photovoltaic power plant, the total consumption of the building, the rate of self-consumption, and the avoided greenhouse gas emissions.

These indicators will be aggregated with those of all the actions of the Nantes-based mySMARTLife demonstrator to give a consolidated result of the overall impact of the project.

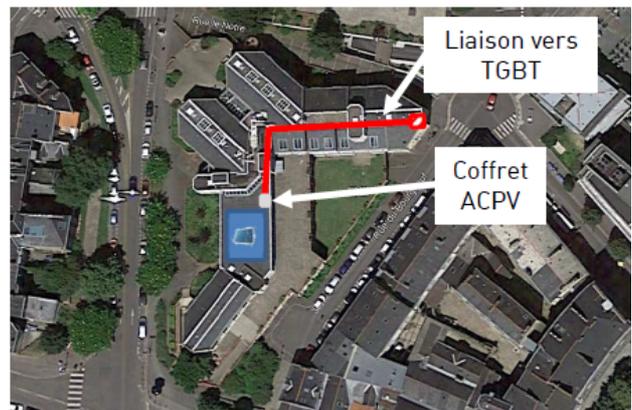
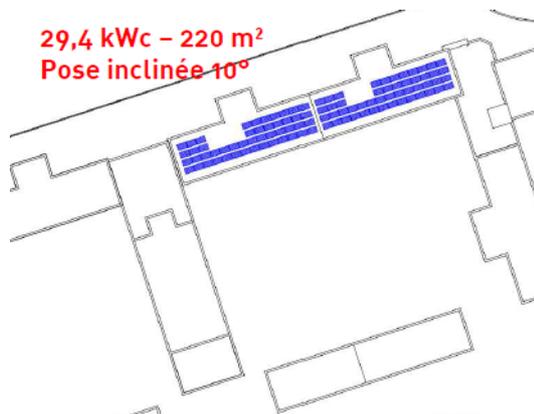
## ► BENEFITS

### Environmental

- › Increase in the share of RES in local production and local consumption (mainly self-consumption)
- › Reduction of greenhouse gas emissions due to the energy consumption of the city's public buildings
- › Involvement in achieving the commitments of the Energy Transition Road Map
- › Raising awareness and teaching about renewable energies, particularly for sites open to the public (schools, swimming pools, etc.)

### Economic

- › Reduction of costs related to the purchase of energy
- › Valuation of existing buildings



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