

## The photovoltaic power plant of the Hôtel des Postes in Nantes

by [antony GUILBERT-CHOLET](#) / 2021-03-18 11:13:37 / France / 3591 / [FR](#)



**Year of commitment** : 2021

**CO2 Impact** : CO2 avoided / year: the equivalent of 174 Paris-Marseille round trips by car



**400 000 €**

### GENERAL INFORMATION

The Hôtel des Postes de Nantes is located in the heart of the city, Place de Bretagne. The building underwent an **energy renovation on an occupied site, an overhaul of the entire heating system, and above all the installation of a 1,400m<sup>2</sup> photovoltaic plant on its roof**, made up of 715 panels. The declared

power of the plant is 255 KWp and the average annual producible is 274,900 Kwh.

The building participated in the R2S label test as a pilot project, which attests to the capacity of buildings to accommodate digital services. The power plant project benefited from the SMart Ideas to Link Energies (SMILE) system, which was able to provide it with visibility and contacts on issues of self-consumption and digital transition.

## Energy efficiency and self-consumption

The renovation works and the power station are part of the La Poste group's energy policy. This mainly involves securing the energy supply to the group's buildings and reducing their vulnerability to rising electricity costs by increasing self-consumption. The power plant should make it possible to cover 13 to 15% of the building's energy needs. **95% of the energy produced is consumed on site**, as shown by the preliminary feasibility studies carried out upstream of the installation of the final plant.

In parallel with the installation of the power plant, Poste Immo is also working on **reducing the building's energy needs**. The various energy works carried out for several years aim to reduce these needs **by 24%** (insulation of a wing of the building, overhaul of the heating and lighting systems, installation of a BMS).

## Install a power plant on built heritage, in the city center

Originally, Poste Immo wanted to make a central visible, which could be identifiable in particular through overhangs. However, the ABF gave an unfavorable opinion to this first version of the project. The power plant finally adopted is positioned on flat roofs and therefore has fewer panels. These are black in color, so that they visually blend into the roof. There was no need to carry out major work on the building to install the power plant: the existing post-beam concrete structure could quite support the weight of the panels (around 16 to 20 kg / m²).

## Project replicability

The objective of installing this plant is also **to find an economic and legal model that can be replicated on other buildings in the group**. Poste Immo has chosen to make the power station available to the occupants of the building, against a fee. The latter can thus acquire the status of producer-consumer, necessary for the qualification of individual self-consumption (see governance tab).

The experience acquired during the Hôtel des Postes de Nantes project will be invaluable for future projects on other buildings.

In pictures: <https://www.poste-immo.fr/actualites/immobilier-durable-decouverte-en-video-la-centrale-photovoltaique-de-lhotel-des-postes-de>

### Progress Status

Delivered

### Data Reliability

Self-declared

### Funding Type

Private

### Website Enterprise / Infrastructure

<https://www.poste-immo.fr/>

### Sustainable Development

#### Attractiveness :

The power station makes it possible to partly consume local renewable energy. This initiative complements La Poste group's purchases of 100% renewable energy through certificates of guarantee of origin.

#### Resilience :

Self-consumption gives the possibility of gaining energy autonomy in the face of the risks of power cuts and also the evolution of the price of electricity, which may depend on geopolitical issues far from the local territory.

#### Responsible use of resources :

The overall renovation of the building and the installation of the power station aim to reduce the energy demand of the Hôtel des Postes. Part of the building having participated in the R2S label pilot project (without final labeling), its digital infrastructure could ultimately make it easily flexible and set up demand reduction initiatives. The latter is thus part of the energy and low carbon transition.

In particular, the building can count on:

- a building management system
- installation of a weather forecasting system coupled with a production forecast from the power plant

- user reporting via a specific web page providing the following information: Weather forecast / Instantaneous power produced by the solar plant / Plant production forecast / Self-consumption and self-production rate / Recall of historical information (energy produced last week , self-consumption / self-production rate) / Recommendation of best practices to be adopted to improve self-consumption

The management of its systems is being optimized through an experiment using the supervision of a BIM model.

## Governance

Immo station

**Holder Type :** Private Company

**Manager / Dealer Type :** Private

Speakers:

- Poste Immo : client
- Egis Conseil: prime contractor for the photovoltaic power plant and the repair of the waterproofing
- Soprema: complete repair of the waterproofing with insulation of the roof
- Solstyce: carrying out installation work for the power plant
- Combaluzier-Stoll Architecture: intervention on the power plant

**Business Model :**

Poste Immo makes the central available to the occupants of the building against a fee. This allows occupants to have the status of producer-consumer, necessary for the qualification of individual self-consumption.

At the economic level, the cost of the charge is offset by the reduction in the energy bill induced by the use of energy produced on site. This type of assembly makes it possible to rent the equipment both to occupants who are members of the La Poste group and to partner occupants.

Poste Immo

## Sustainable Solutions

Longi LR4-60HPB 360 Wc

**Description :**

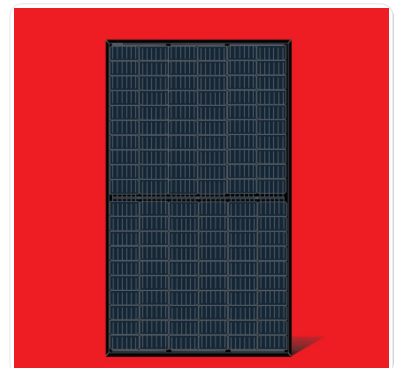
High efficiency 360 Wp monocrystalline photovoltaic panel.

- Renewable energies

**Company (es) Website :**

## Photo credit

Valéry Joncheray



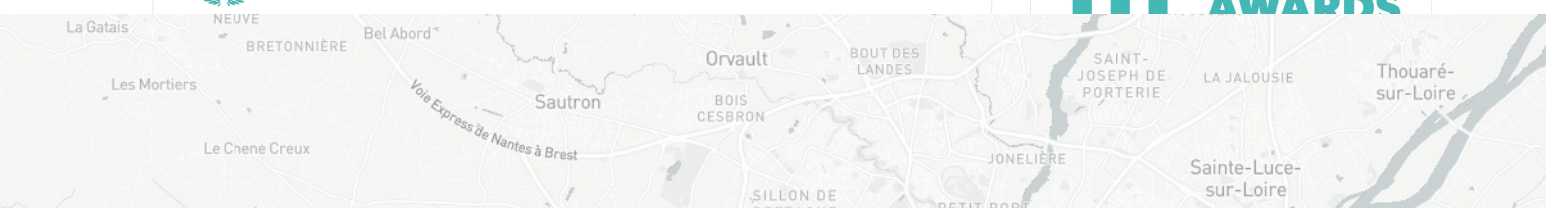
## Contest

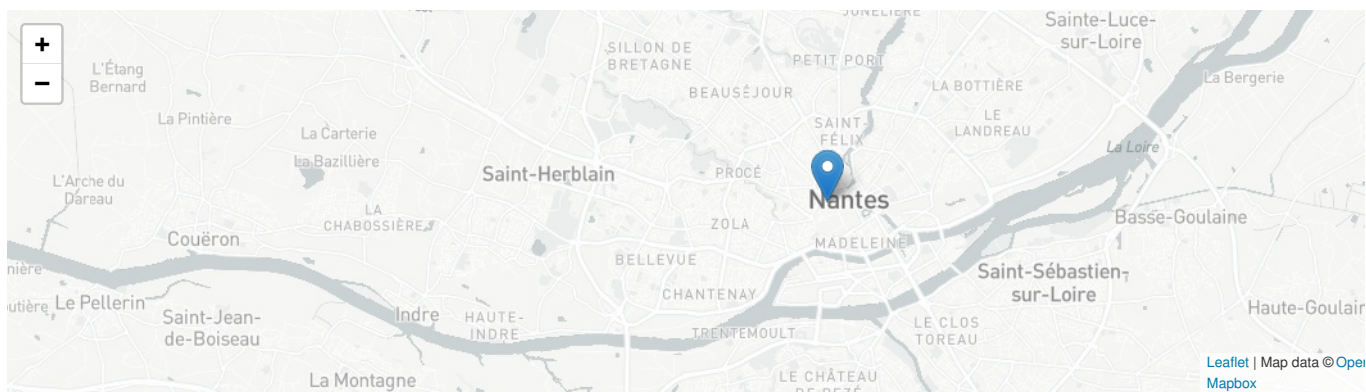
## Reasons for participating in the competition(s)

Le projet de la centrale photovoltaïque de l'Hôtel des Postes de Nantes présente de multiples atouts majeurs dans le concours :

- Il montre qu'il est possible d'installer une centrale avec un nombre important de panneaux photovoltaïques en centre ville, s'inscrivant dans le paysage urbain.
- Le projet se base sur l'autoconsommation. Ce faisant, il favorise la résilience énergétique du bâtiment et limite sa vulnérabilité face à l'évolutions des prix de l'électricité.
- Le projet intègre les enjeux de la transition numérique dans les bâtiments (participation aux tests du label R2S et au dispositif SMART Ideas to Link Energies)
- Le modèle économique et juridique développé par Poste Immo autour de la centrale pour obtenir la qualification d'autoconsommation individuelle est un modèle inspirant et répliquable pour d'autres projets du même type.
- L'installation de la centrale s'inscrit dans une réflexion plus globale de baisse des consommations énergétiques du bâtiment : des travaux de rénovation ont également été menés par Poste Immo sur l'Hôtel des Postes.

## Building candidate in the category





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