

## IssyGrid

by Guillaume de la Broise / 2016-11-07 17:35:06 / France / 10687 / FR



**Year of commitment** : 2011

**Green energies** : Photovoltaic solar

**Digital services** : Cloud data solutions, Smart grid



2 500 000 €

**Manager / Dealer**

Bouygues Immobilier

### GENERAL INFORMATION

**Research & Development project carried out jointly by ten industrial partners from the french energy and digital sectors, IssyGrid is a smart grid implemented at a district level.**

The goal is to enable people, enterprises and businesses to optimize the energy consumption inside the district.

- A better energy consumption, less amount at the right time, while including new uses of energy consumption.
- Seamlessly integrate a local production of renewable energy in public distribution network by using storage means.
- Reduce emissions of greenhouse gas, including contributing to the smoothing of consumption peaks.
- Write the specifications for new neighborhoods.

"Now local authorities, owners, managers and tenants of buildings seeks a services offer for environmental and economic optimization of energy efficiency. The central issue: the intelligent energy management across the eco-district" says the Issy-les-Moulineaux city

**IssyGrid is at the crossroads of three issues:**

**Economic and environmental issues for**

- Facing the evolution of energy prices,
- Participate in the energy transition
- Develop renewable energy
- Reduce CO2 emissions.

#### Challenges of the digital revolution

- Deploy smart devices,
- Develop the use of energy data (big data and cloud)
- Secure confidential data
- Share public data (open data).

#### City of tomorrow issues

- Optimize the use of urban space,
- Increasing territorial attractiveness,
- Reduce the cost of public infrastructure.

At the moment, IssyGrid oversees consumption and energy production of about 2000 people and 5000 employees on a 100,000 Sqm area. It provides a real-time information with the ability to optimize their consumption with renewable energy (solar panels) and storage batteries. This network also includes public lighting, public facilities and public establishment.

IssyGrid is a living laboratory with all components of the **urban smart grid** gathered on the same territory.

#### Key data to 09/01/2016

- More than 900 homes connected (including 861 communicating Enedis counters)
- 120,000 m<sup>2</sup> of office buildings (10000employés)
- Public lighting for three streets
- 3 photovoltaic installations
- A system of photovoltaic energy forecasting
- 14 interconnected information systems
- 2 storage systems

## Progress Status

Delivered

## Data Reliability

Self-declared

## Funding Type

Private

## Website Enterprise / Infrastructure

<https://www.bouygues-immobilier-corporate.com/content/issygrid-premier-smart-grid-de-quartier-operationnel-en-france>

<http://issygrid.com/fr/sample-page/>

## Sustainable Development

### Attractiveness :

IssyGrid now offers a tool enabling the feedback of urban developers in the experience of past operations to size so always best fit the energy networks of the future eco-neighborhoods.

The smart grid area of Issy-les-Moulineaux becomes contributory:

It can accommodate contributions from individuals, offices, operators, charging stations for electric vehicles, energy network operators, businesses, etc., which may, if they wish, make these data accessible in open data.

The platform give access for free to the energy datas of the area when they are collected.

### Responsible use of resources :

The battery integration coupled to photovoltaic production has demonstrated the feasibility of a virtuous and optimized integration of renewable energy in urban areas, both in the heart of consumer buildings and in the public electricity distribution stations.

The network consists of three photovoltaic production facilities connected to IssyGrid via the LoRa network. A smart public distribution post was set up by ENEDIS, it optimizes the exchanges between consumption, production and storage.

The implementation of two energy storage systems: the second life of batteries from electric vehicles Renault Kangoo ZE to store 33 kWh of electricity installed in the dispensing station and storage batteries capable of storing 60 kWh, located in the basement of the EFB.

The facility has a system of photovoltaic production forecasting and fourteen interconnected informations systems for optimized management of network energy flows.

This device helps to smooth demand peaks and ensure the overall balance of the network while reducing the carbon footprint of the neighborhood.

## Testimony / Feedback



### Governance

IssyGrid

**Holder Type :** Consortium of companies

**Builder Type :** Télécommunications / IT

Bouygues Immobilier

**Manager / Dealer Type :** Private

IssyGrid is the first pilot site in France for energy optimization at the district level, this smart grid was established at the initiative of Issy Les Moulineaux and Bouygues Immobilier, in common with actors gathering all strategical and technical expertise on such a project: Bouygues Energies and services, Bouygues Telecom, EDF, ENEDIS, GE GridSolutions, Microsoft, Schneider Electric, Sopra Steria and Total.

This realization was coordinated by Bouygues Immobilier, it is an unprecedented experimental platform to better understand the energy challenges of the future eco-neighborhoods.

It allows to prepare the arrival of new smart grid districts, for example in Nanterre (Cœur-University neighborhood) and Marseille (XXL area in the ZAC Euroméditerranée).

**Business Model :**

**Industrial replicability at the heart of budget choices:**

10 industrial partners supported each equally an R & D project carried out without public subsidy. The aim is to ensure the economic viability of the offer to the community.

A proven business model:

Several smart grids neighborhood will soon be deployed such as Nanterre and Marseille, other projects are also likely to emerge in the entire territory.

### Sustainable Solutions

Soleka By Reuniwatt

**Description :**

Reuniwatt develops solutions to promote massive and secure integration of photovoltaic energy in electricity grids. Its main product, Soleka is a forecasting solution for the production of photovoltaic energy. Soleka predicts the production of photovoltaic energy at several time horizons:

- In sub-schedule (thanks to its patented Imager deployed IssyGrid)
- Intraday
- Overnight and up to several days in advance.
  
- Energy/climate :
- Digital services
- Renewable energies
- SmartGrids

<http://issygrid.com/fr/une-nouvelle-methode-de-prevision-infra-horaire-pour-issygrid/>

**Company (es) Website :**



Communicating Counters

**Description :**

These counters, which communicate continuously with the distribution station of the district, allows Enedis IssyGrid to get accurate informations on the power consumption of each client.

This information must allow to control the balance between supply and demand on the network at the neighborhood scale, incorporating all new settings in IssyGrid: Electricity from solar panels, electricity consumed by recharging electric vehicles, electricity saved in homes and commercial buildings with new control systems remotely consumption, etc.

The Enedis mission is to ensure round the clock, the balance between supply and demand on the network, whose balance depends on the continuity of electricity supply.

- Energy/climate :
- Digital services
- Renewable energies



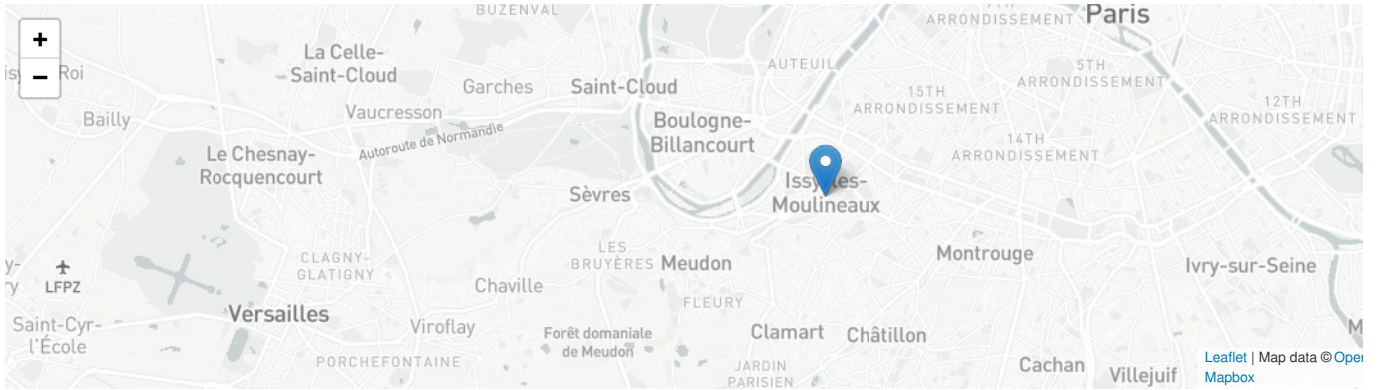
- SmartGrids

<http://seineouestdigital.fr/erdf-issygrid/>

Company (es) Website :

Company (es) Website :

Contest



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