



# Évora Inov city: Smart Energy Living



Project cofinanced by



Lead Partner

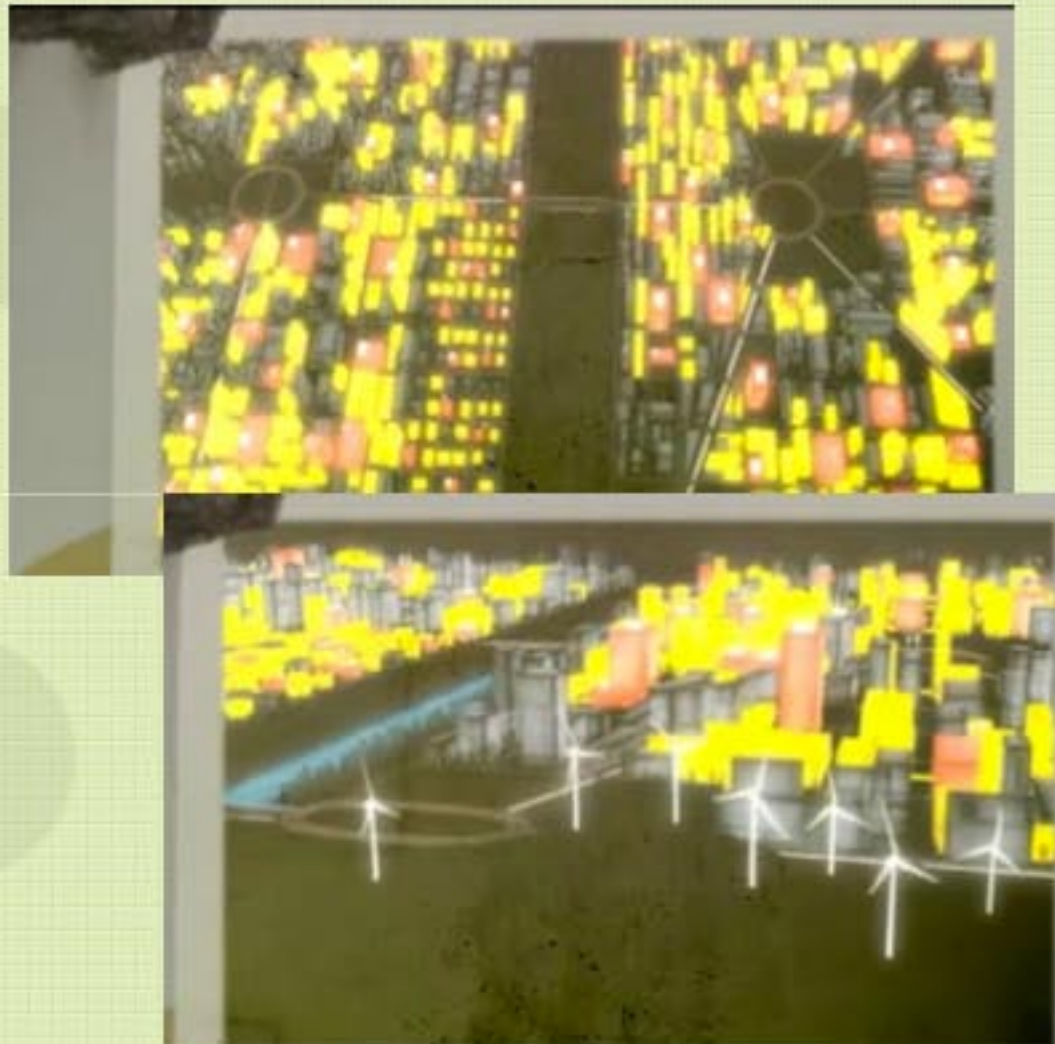




<b>Case Study</b>	<b>Évora Inov City</b>
<b>Company</b>	<b>EDP</b>
<b>Year</b>	2007 and totally implemented in 2010

●●● **Project figures**

- 31,000 domestic customers in Évora are part of Project InovCity
- Energy in a Box Inovcity home of each customer. One device allows among other features, make the readings and operations remotely
- Billing based on actual consumption accessible to all, allowing you to control consumption through a computer or Smartphone
- Over 1000 selected customers with access to new products and services, as well as the simulation of new tariffs;
- Increased capacity for integration of renewable energy and electric vehicle
- Improved ability to detect and resolve network faults electricity distribution” .



## Évora InovCity :Intelligent network


The intelligent network has numerous sensors along its length.

This lets you control the moment the state of the entire network, load balance and prevent breakdowns before they happen.

The network immediately reacts to the actions of consumers and producers when they, for example, inject energy into the network or request a power increase.

Thanks to this intelligent self-control is possible in case of failure, configure the network in an expeditious manner, redirecting energy flows and ensuring the provision of electricity without interruption.

The smart energy network has advantages for all, the consumer, which will now also be the producer, the country as a whole, through the retailer, the distributor and the market


**Évora InovCity : Intelligent house**



In smart homes, the consumer can know and control their consumption throughout the day. He knows exactly when, how and where to spend your energy. What is more, know the hours of day and those consuming more than they can use electricity at a price more favorable, starting to be able to program their appliances to operate during this period.

The estimate for billing gives rise to a management consumption in real time, minimizing costs. They are available new services and pricing plans adjusted their consumption patterns is born and the possibility to opt for home automation solutions. Based on remote management, fault detection is automatic and can be activated remotely, services and tariff changes and power.

Anyone can produce energy in your home, for their own use or to sell the network. The consumer becomes producer and seller of energy and will be able to install solar panels or small wind turbines in your home. In case of failure in a residential area, the production of a house or a set of neighbors can ensure the electricity supply to several other houses or even the entire neighborhood.

And if your garage is an electric vehicle, can calculate the exact proportion of consumption allocated to supplies in your home, it will have the ability to measure energy consumption from 15 to 15 minutes.

In addition, your retailer or energy service company can offer you services and pricing plans tailored to their profile constantly and consumer needs, as well as access to integrated home automation devices to interact with various domestic consumption.

Évora InovCity : Energy Box



The Energy Box will replace the current meter, with numerous advantages, as it will allow access to detailed information on consumption, enabling the consumer to know the times of day that consumes the most and those that can use electricity at a price favorable.

This information will allow the electricity bill to be based on actual consumption, and collected automatically on a monthly basis.

For your comfort, the consumer may make changes to contractual power, cycle, or tariff, without the need for relocation of staff.

The customer can also see the analysis of their consumption patterns or cycles of time to do simulations, and even possible to program automatic notices according to parameters you define.



Évora InovCity : Electrical micro production

Speaking of talk about micro is an energy revolution. The smart energy network will enhance the amount of energy that any user can produce this intelligent network in your home.

The consumer becomes producer and seller of energy, and will more easily be able to install solar panels or small wind turbines in your home as well as sell power to the grid if you wish. In case of failure in a residential area, the production of a house or a set of neighbors can ensure the electricity supply to several other houses or even the entire neighborhood.

Guests are a set of new services and pricing plans tailored for your consumption profile. The energy management becomes more efficient, since the energy balance between consuming and producing will be consulted online via the Web, is seeing exactly what time of day and what time the consumer is a producer.

In the integration with the electrical micro production, the Energy Box will query the energy balance of housing, with possible customer / micro identify, simply, the periods in which those who are a consumer and a producer

Évora InovCity : Electrical mobility



Electric vehicles are not a recent issue, for it took place over 100 years since the first electric car was invented. Today, the "electrification of transport" has gained a new prominence, being presented by some as one of the measures that can give more input so we can reduce emissions of greenhouse gases and environmental pollution, bringing at the same time, the benefit greater economic development.

EDP, guided by its principles of sustainability, energy efficiency and innovation, is supporting the creation of a network of supply points, which will be able to develop faster and more effectively by creating a smart grid power.

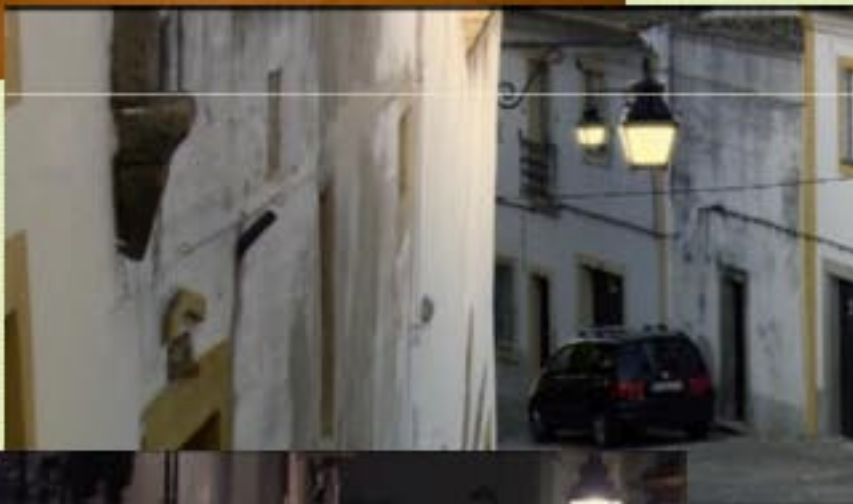
This intelligent network will support the operations of loading and unloading of electric vehicles, operations that will serve, respectively, to receive electrical power network when it is available and is priced lower and to restore electricity to the grid when it is most needed and at a price that translates into increased profitability for the user.

The intelligent network allows a near real-time control of the energy consumed in these stations, which allow consumers to calculate the share of consumption allocated to the electric vehicle stocked in their homes.

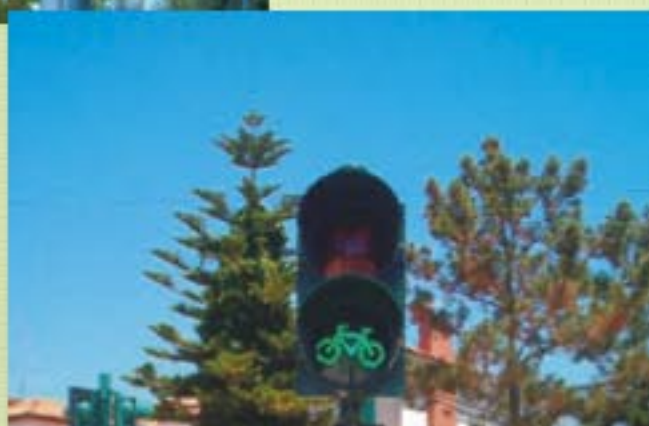
Évora InovCity : Public lightning

For this item, the project has intervention in 4 steps:

1. Replacement of traditional lamps by LED lamps - and this is not a small step, a mean reduction of 40% to 50% in electricity consumption
2. Regulation of lighting needs and conditions of natural light with the sunset, the lighting is activated and its intensity increases gradually with decreasing sunlight, thus avoiding unnecessary consumption
3. Decrease in light intensity, off-peak (between 2:00 and 5:00) but maintaining the minimum security
4. . Adoption of dynamic control systems, that manage the flow of light due to the presence or human traffic, state of ambient light and environmental conditions







Évora InovCity Traffic lighting

LED technology is also used in traffic lights for city traffic management, a more efficient solution because it allows an energy saving of about 80% compared with incandescent bulbs.

In addition to energy efficiency and reducing CO2 emissions, the advantages of LEDs extend to issues of security and maintenance costs. First, because the range of the beam is higher, so it can be seen in the worst weather conditions.

Since maintenance costs decrease significantly, if we think that the life of an LED can reach 100,000 hours or about 11 years of continuous use.

Additionally, contrary to what currently happens with the traffic lights that use incandescent bulbs, the LED is a fact that ruin does not mean that the traffic will be damaged

Project cofinanced by



European Regional Development Fund



Lead Partner

- Province of Savona (ITALY)



Project Partner

- Region of South Aegean (GREECE)
- Riad S.A. (GREECE)
- Local Energy Agency Pomurje (SLOVENE)
- Agência Regional de Energia do Centro e Baixo - Alentejo (PORTUGAL)
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