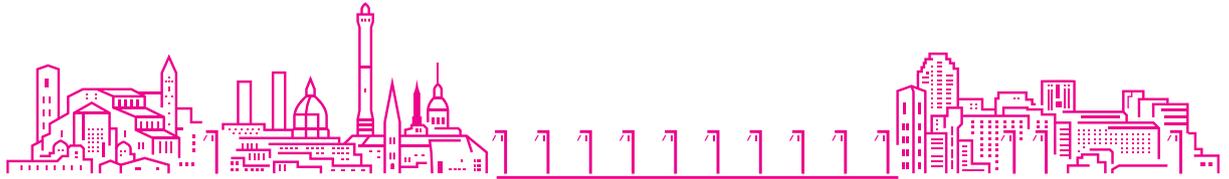


## BOLOGNA

SMARTER AND MORE EFFICIENT  
PUBLIC LIGHTING

## Case

The **city of Bologna**, in Italy, has a public lighting system mostly made up of low-efficiency mercury vapour lamps, powered by medium voltage.

With the goal of **upgrading the entire system** and improving public lighting, making it **smarter and more efficient**, the city government joined the agreement “Convenzione Consip Luce 2,” which Enel Sole, an Enel X company, was awarded in a tender in the Emilia-Romagna region.



## Objectives

- **Modernise** public lighting systems
- **Reduce** electricity consumption
- **Guarantee** better lighting and reliable service for citizens
- **Reduce** the impact of public lighting on the environment



## Solution

Enel Sole proposed a **complete management and requalification plan** for the public lighting system for the Municipality of Bologna.

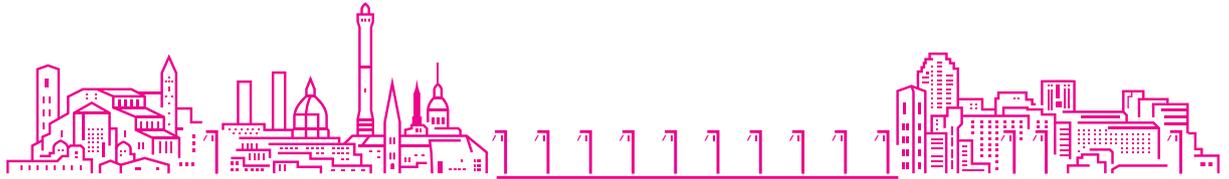
The proposal included:

- complete management and maintenance of 45,555 lights and 5,100 traffic lights
- electrical energy supply
- replacement of 32,600 old street lights with:

- ▶ 21,500 LED Archilede HP and Archilede E devices for street lighting
- ▶ 7,500 urban decor devices
- ▶ 3,600 span-wire LED devices



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- modernization of 5,100 traffic lights
- installation of a telecontrol system of 33,000 lighting centres, to manage and control lighting fixtures and electrical switchboards, able to provide a platform for services like Wi-Fi Hot Spots, video surveillance systems, detection stations and traffic control sensors
- dismantling of the old medium voltage boxes and installation of about 300 low voltage switchboards and 1,000 kilometres of cable in order to increase electrical safety and reduce system failures, guaranteeing greater service continuity



## Proof of Concept

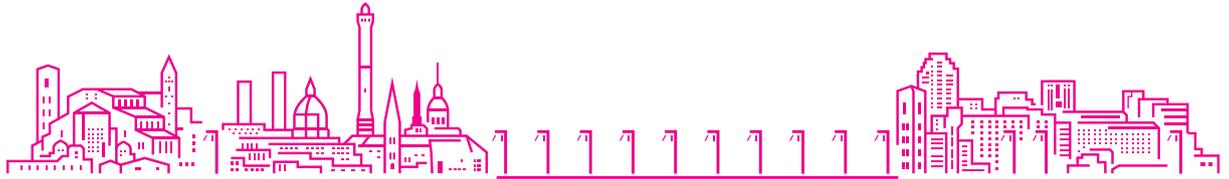
The city of Bologna is also a test site for a Proof of Concept (PoC) of an **adaptive lighting system**. The project calls for an advanced camera system that, according to the intensity of traffic, can adjust the Archilede light **automatically**.

## Gamma Archilede



Designed and patented by Enel Sole, the Archilede range of products is marked by strong **lighting performance**, low energy consumption and lighting uniformity. LED technology guarantees energy savings of up to 80%. The devices' service life can reach and even exceed **100,000 hours** without any planned maintenance, thanks to the use of high-quality LED and internal temperature control systems.

## BOLOGNA

SMARTER AND MORE EFFICIENT  
PUBLIC LIGHTING

## Benefits

- Reduction of electricity consumption: **-10 million kWh a year**
- Reduction of CO<sub>2</sub> emissions: **-8 million tonnes a year**
- Improvement of light quality
- Improvement of public spaces, like parks, gardens and pedestrian areas
- Fewer failures and improved service
- Increased safety for streets and people



## Economic Advantages

Enel Sole and the City of Bologna are investing **25 and 6 million euro** respectively, to upgrade the systems. The interventions will allow the City Government to **save** both on their energy bill, thanks to a significant reduction in electricity consumption, and on **maintenance** costs, thanks to the higher reliability and longevity of the Archilede range of products.



## Highlights

- 8 mln CO<sub>2</sub>

- 10 mln di kWh/year

- Failures

+ Safety



## Do you want to know more?

Write to: [EnelX\\_Editorial\\_Staff@enel.com](mailto:EnelX_Editorial_Staff@enel.com)

Enel X is Enel's new Global Business Line, focused on electric mobility, vehicle to grid projects, recharging infrastructure, energy efficiency management, batteries and energy optimization platforms, public lighting and distributed generation systems. Enel X aims to capitalize on the transformation of the energy industry, understanding and servicing the needs of Enel's global customer base by exploring opportunities, developing customer-centric, innovative products using digital solutions.