

Paris public lighting

November 2014



Specific goals :

- A reduction of 30% in public lighting consumption by 2020, expected savings of 3,900 teqCO₂
- 107 GWh: expected maximum energy consumption in 2020
- 100% green electricity as of 2016

30%
à 2020



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- 345,000 public Parisian lighting sources : luminous signage, street and park lighting, illuminations
- 4,100 hours of lighting per year
- 139 GWh of energy consumed in 2012, a financial cost of €15.6 M
- 14 817 teqCO₂ produced in 2011 (-10% compared to 2004)
- 310 operations in 2012/2013 and more than 8,000 lamps changed: 8 GWh saved

Paris public lighting (345,000 light sources, including signage, street and park lighting, illuminations) **consumes nearly 150 GWh of electricity each year. For the City of Paris lighting is the second highest energy consumer.** Renovating these installations is therefore an important factor in order to achieve the Paris Climate Plan goal of a 30% reduction in energy consumption.

Lighting is iconic for the appeal of the capital, both for Parisians and for visitors. It is therefore essential to maintain the current standard of service while simultaneously reducing energy consumption, a major source of expenditure in the city's budget. Replacing poor energy-efficient lighting, reducing the duration of public lighting in relation to the ambient brightness, stopping illuminations at midnight... all these actions have been implemented since 2011 in the **Ten-year Energy Performance Contract**. Each year until the end of the contract in 2021, an energy performance report will be produced. Penalties will be applicable in the event of non-attainment of targets and a bonus will be awarded if observed savings are 32% higher.

The initial results are encouraging.

At the end of 2013, more than 8,000 lights had been changed and 55 intersections refitted with LEDs, thus saving more than 8 GWh. Among these operations:

- Two large-scale iconic sites: Pont d'Arcole and the Place de la Concorde
- Renovation of lighting on the Boulevard Périphérique
- LED lighting in the Alma tunnel
- Replacement of building numbering system with reflective strips
- Tests of lighting photometric levels and colours on the scale of neighbourhoods

Focus

Electricity consumption in 2012

In 2012 the energy consumption of the 345,000 light sources for public lighting and signage was 139 GWh, a **reduction of 1.5% compared to 2011. The global energy bill for 2012 amounted to €15.6 M.** The works engaged as part of the energy performance contract led in the same year to a 9% reduction in energy consumption compared to 2004. In 2013 the energy consumption reduction will be amplified due to the increased speed of operations conducted as part of the Climate Plan.

The energy performance contract (MPC)

To achieve a 30% reduction in energy consumption (-42 GWh) in 2020 while maintaining the current scope of public lighting,* in 2011 the City of Paris engaged an energy performance contract for public lighting and luminous signage installations.

This **10-year** contract provides a legal guarantee that goals are achieved in terms of operation, heritage management, enhancing spaces and monuments and, above all, energy performance, which is the core of the contract. **Achievements are assessed each year and penalties are applicable in the case of non-compliance.** A bonus will be applied at the end of the contract if observed savings exceed targets by 32%.

[Read the press release of June 2011](#)

**NB: The average annual increase in public lighting will not be taken into account in calculating the savings target. This increase is currently at 0.57%/year and 1.2%/year for luminous signage.*

Paris is currently renovating the illumination of its bridges and is **targeting up to 90% reduction in the corresponding electricity consumption.** The installation of diodes and high-pressure sodium projectors is one of the major projects.

- Pont d'Arcole

In 2012, the first symbolic and significant operation concerned the renovation of the lighting system for the Pont d'Arcole, which links the Hôtel de Ville to the Île de la Cité. All in all, **energy savings amounted to 88% thanks to the combination of LED lighting and high-pressure sodium.**

- Place de la Concorde

After works lasting one year, the modernisation of the lighting and illuminations at the Place de la Concorde was completed in April 2013. Replacing obsolete and low energy-efficient lamps with latest-generation metal halide lamps produced a **77% reduction in energy consumption** while the renewed and harmonized lighting (lights on/lights off) generated energy savings of 89%. Today the Place de la Concorde consumes 115,500 kWh/year as opposed to 507.000 kWh/year before the works. The global investment of **€362,000 tax included** will have paid for itself in 3 years.

[Read the news at paris.fr](#)

Renewal of electricity supply contracts in 2016: 100% green

On 1 January 2016 Paris will renew its electricity supply contracts for municipal buildings and public lighting. For the first time, electricity suppliers will be required to provide electricity from 100% renewable sources, with official certificates to this effect.

[Read the news at paris.fr](#)

"Paris lights up Paris" operation.

Conducted during the end of the year festivities, this operation encourages businesses to use low-consumption installations for their festive lighting.