

# City of Paris, France

Population: 2,200,000 – Water Distribution

100% of the lead communication pipes have been replaced to comply with tightened safety standards.

More than 50% of the distribution networks have been renewed. The average age of the distribution networks is now 21 years younger than it was at the beginning of the PPP contracts 25 years before.

**Organising authority:** The City of Paris.

**Water distribution operators:** Two private water operators:

- Compagnie des Eaux de Paris, a subsidiary of Veolia Water, for the Northern Bank of the Seine River),
- Société Parisienne des Eaux, a subsidiary of Lyonnaise des Eaux, for the Southern Bank of the Seine River.

**Location:** Central Paris (inside the first ring road) corresponding to a resident population of 2.2 million inhabitants.

## PPP description (1985-2009)

Between 1985 and 2009, the water service in Paris was split into two parts:

- The production of drinking water was under the responsibility of a publicly-controlled company, named SAGEP, that sold the drinking water it produced in bulk to the two private operators in charge of the distribution of drinking water to the city.
- The distribution of the water, bought in bulk from SAGEP, to end-users was undertaken by the 2 private operators. This “supply” part of the service represented only 15% of the water and wastewater rates charged to end-users.

The two PPP contracts came to their natural end at end of 2009. From January 2010 onwards the service was restructured into a single public entity “Eau de Paris” to comply with the political will of the new mayor of Paris, who had decided to take the whole management of the water service back in-house.

Reviewing the period 1985-2009, the outcome of the PPP contracts for water supply can be deemed to be excellent.

## Context and PPP objectives

The scope of the two contracts included, management of the distribution network, maintenance of the fittings, maintenance and cleaning of the water towers and reservoirs, monitoring water quality, 24/7 supply of water to premises through the 2,000 km long distribution network, billing and customer relationship management.

## Securing water safety

In 1998 the European Directive 98/83/EC on drinking water imposed more stringent standards on the presence of lead in the water supplied.

To ensure the potability and the safety of the water for the water consumers in compliance with this directive, it was found necessary to remove all lead communication pipes before the 2013 mandatory deadline. These represented 70% of the total stock of connecting pipes in the network, about 66,000 in all.



Between 1999 and 2009 the operators were able to replace all the remaining lead communication pipes still in the Parisian distribution network. The cost of this important and unexpected investment has been fully repaid by water rates by the end of the PPP contracts. This permitted the City of Paris to make rate reductions or additional investment after 2010.

## Managing infrastructure assets sustainably

In parallel with the very intensive and comprehensive leak detection work, the operators have carried out a massive investment program on the network comprising both structural rehabilitation and renewal of distribution pipes. Overall 1,100 kilometres of distribution pipes have been dealt with (either renewed or rehabilitated), representing more than half the overall length of the network. The cost of this important investment was funded by the operators.

Between 1985 and 2009, the “functional” age of the network, despite a natural age increase of the 25 years of the contracts, has been reduced by 21 years.

- Securing water safety
- Reducing leakage and water losses
- Managing infrastructure assets sustainably

Water losses in the distribution networks have been reduced from 22% to 4%, i.e. a factor of 5.

### Reducing leakage and water losses

At the start of the PPP contracts 22% of the water purchased in bulk from the production operator was lost in the distribution network.

Improvement of the network performance was achieved by zoning it into District Metering Areas, equipping it with GSM sensors to help to detect leaks in sensitive sectors, permanent leak detection campaigns on a rolling basis, and routine operational monitoring.

This extensive approach undertaken by the operators has enabled an increase in the efficiency of the network to a level as high as 96%, when it was lagging at a mere 78% in 1985. The leakage from the network has therefore decreased from 22% to only 4%, which means a reduction by a factor of 5 in the volume of water lost through leakage.

The leakage effort as well as the renewal investment has allowed the city of Paris to save the equivalent of three years of annual drinking water consumption (617 million m<sup>3</sup>).

### Other significant improvements

The operators also equipped all the customers and connections with an innovative system of remote Automatic Meter Reading. This scheme provides gains in the accuracy of the metering as well as in the quality of service through online (internet) monitoring of the clients' water consumption.

As an ultimate recognition of the good work undertaken by the operators, regular customer surveys have shown that 80% of customers were satisfied or very satisfied by the quality of the water service provided in Paris.

See ref. 9

### The Suburbs of Paris and the City of Paris not to be confused

The Greater Paris Region's population exceeds 10 million inhabitants. The population served by the City of Paris is therefore less than ¼ of the Greater Paris population. In the suburbs, the water supply is organised by different public authorities. They mostly use private operators through PPP contracts.

The largest responsible authority is the Syndicat des Eaux d'Île de France (SEDIF) that federates 142 municipalities. The SEDIF has chosen private operation to manage the water service for its population of more than 4 million.

In 2010, the SEDIF has renewed its trust in private management and decided to enter into a new public-private partnership contract for 12 years. The new contract started on 01/01/2011. The private operator is incentivised to further improve the performance of the service through a set of 190 performance indicators. Meeting the target values directly affects the operator's remuneration.

The stiff competition for the contract and the efficiency gains brought in by the previous contract have led to a significant 18% price cut in the average price of the water service for the 4 million people served by SEDIF.

