



Remunicipalisation of Water Utilities

A desk review of selected
case studies

The Labour party in the UK has set out a vision to move the water and wastewater sector, alongside a number of other utilities, into public ownership. This policy position references some international examples where the re-municipalisation of water utilities has occurred, notably Paris and Berlin.

This report is the output from a desk review of evidence in relation to those and other selected examples where water and wastewater services have moved from a model where those services were provided to some extent by a private operator to one where they are provided by a publicly owned operator. Specifically it looks for evidence on the factors that drove the change and evidence of the impact of these 'remunicipalisations' on the cost and prices, service levels and other aspects of performance experienced by customers.

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Executive summary

There has been significant recent debate of the optimal extent of private sector involvement in the delivery of water and wastewater services.¹ Part of the debate has considered international examples, where the extent of private sector participation has significantly changed, and the impact this has had on service levels.

This paper considers four such examples: Eau de Paris (Paris Water), Berliner Wasserbetriebe (Berlin Water Works), the Atlanta Department of Watershed Management, and Budapest Waterworks.

These case studies can broadly be described as examples of 're-municipalisation'. That is, in each case there was a significant increase in the role of the local municipalities. The level and quality of data varies in each example.

Differences between the case studies and England and Wales need to be recognised

It should be noted that each of these case studies have important differences to the water sector in England and Wales. None of the private companies owned the assets outright in these examples. Instead, each case was a variant on the concession model where the entity in question is given specific responsibilities in relation to the provision of services and is required to deliver a range of outputs for a given approach to remuneration as stated by the agreed contract (see section 1 for further detail on these different 'public' and 'private' models).

With Berlin Water Works, the City of Berlin retained a 50.1% ownership share during the 'privatised' period. With Budapest Waterworks, the Budapest City Council retained around a 75% ownership share.

The contracting models used vary significantly from the UK framework. For example, with Berlin, the private company was guaranteed a fixed level of return, as opposed to the UK model of incentive-based regulation. In France, the 'Loi Sapin' was introduced specifically to limit the time periods of those concessions and increase the value and benefit from market competition whilst the model in England and Wales already allows for a reopening of the core price and service terms every five years under a periodic review or 'price review'.

Furthermore, in England and Wales, there is a specialised sectoral regulator that benchmarks companies' costs, and performance levels, and sets an allowed level of return, as opposed to contracts being negotiated with the municipalities in question and often set according to very long-term frameworks.

Thus, to the extent that there are valid criticisms of the 'private' delivery model these differences need to be recognised.

It should be noted that the case studies considered may not be typical examples of private sector participation in water services. In terms of public-private partnerships, of the 489 partnerships that came up for renewal between 1998 and 2001, 91% elected to continue with a partnership arrangement.² This suggests that in the majority of instances of significant private sector involvement, there is not the same severity of issues as those observed when the services are brought back under greater state control.

In summary, a key finding from this paper is that examples of 're-municipalisation' rarely involve a simple change of ownership from private to public management/ownership. Nor are they easily comparable to the



¹ For example, see Labour Party (2018) 'Clean Water: Labour's Vision for a Modern and Transparent Publicly-Owned Water System', [link](#).

² Water Partnership Council (2003) 'Establishing Public-Private Partnerships for Water and Wastewater Systems', [link](#).



English and Welsh water companies, as they have their own idiosyncratic commercial frameworks, and particular operational contexts.

Transparency and price are the key criticisms of the 'private' model but evidence supporting them is mixed

A common criticism of the 'privatised' models in the case studies and a reason cited for the move back to 'public' delivery is a lack of transparency of the arrangements in place. The evidence here appears to us to be mixed, whilst there are some clear examples of criticisms of the 'private' models for a lack of transparency, for example for the absence of a published contract in Berlin, which is very common for private concessions, there is also some evidence that the 'private' models may in some instances have been more transparent, for example from independent reports on the 'private' Berlin Water model.

Again, the frameworks are significantly different to the model in England and Wales where water companies are required to publish sizeable annual reports on their costs, revenues, profits, and performance levels. One of the major sources we have reviewed comments on the level of transparency of the English and Welsh model versus some of these other sectors and that evidence would suggest that the model in England and Wales is one of the most transparent, particularly given the role of the independent regulator and the volume of performance data that companies are required to publish.

"As the regulator of the English water industry, Ofwat has built up an impressive array of information on the industry, in order to compare the performance of the private companies and to monitor their service quality. In no other country can such comprehensive, publicly available, nationwide data on the performance of the water industry be found"³.

At the same time, the Paris water model and the Paris Observatory of Water (OPE) is often cited as an example of a positive participatory model for citizens and wider society in terms of increasing transparency and improving the voice of the customer. However, many similar aspects of the OPE framework appear to already be present under the private model in England and Wales. Companies already do substantial direct engagement with customers, have Customer Challenge groups with a similar composition to the OPE, and have direct representation on their boards of independent Non-Executives that must promote the customer interest.

Performance of 'private' operators has been strong in most of the case studies examined

Most of the case studies that were reviewed involved price rises by the 'private' operators – although the context of these rises often appears to be very critical. In most of the examples identified, these large rises have occurred in the context of significant improvements in service and in some instances there are specific issues with the contracts in place that appear to have driven the price rises.

There is evidence in the case of Paris and Berlin that under the 'private' model companies' performance improved across the board across a number of specific metrics and that for several metrics the rate of improvement increased under the 'private' models. Less data is available on Atlanta but for Budapest there was also evidence of improvements in efficiency and some other service levels.

Furthermore, in the context of a sector with very long asset lives, often the price rises occur over a long-period of investment driven by other factors, for example, in the case of Berlin the reunification of the city and the fall of the Berlin wall which required substantial investment over a long period.

Price levels post-re-municipalisation vary according to the local context

Performance post-re-municipalisation varies across the studies considered and is likely to be case specific. In the cases of Paris, Berlin, and Budapest prices have slightly decreased – although in the case of Berlin, this appears to be completely unrelated to the re-municipalisation process and in the case of Paris this appears to have been politically motivated and there are some differences around aspects such as the payment of tax and cost allocation that may make comparisons difficult and which could imply an

³ Schiffler, M, 2015, Water, Politics and Money, A reality check on privatisation, pp.68.

automatic reduction in bills after the re-municipalisation without any relationship with performance of the operator. In Paris, the price falls have also been lower than those seen by local comparators under a private delegated delivery model. In Berlin, water prices have remained below the German average despite the rises. In Atlanta, prices have significantly increased following the re-municipalisation in the context of a need for substantial investment.

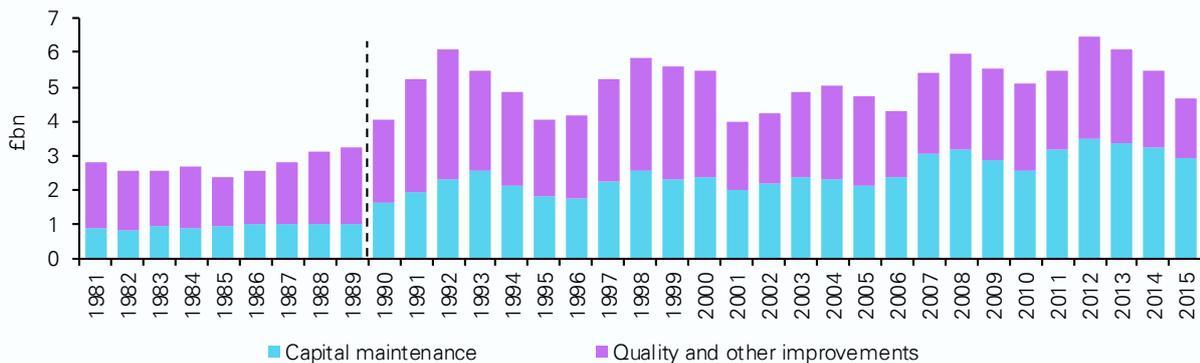
Service levels post re-municipalisation also vary according to the context but none have improved significantly

Service levels have stayed broadly stable in Paris and Berlin and, to the extent that information is available, Budapest. In all three of these cases service levels had been generally improving during the previous 'private' models. Leakage levels after the re-municipalisation appear to have experienced some deterioration in Atlanta.

There is limited data to suggest that the water companies' efficiency has meaningfully changed since re-municipalisation. In all of the cases, one of the drivers for privatising the companies in the first place was to increase efficiency, and there is evidence that suggests that the private companies broadly delivered on this objective.

There is some evidence to suggest that in Atlanta, and potentially in Berlin and Paris, investment has been limited post-re-municipalisation or replacement rates are lower than comparative benchmarks. The water sector is an asset-intensive sector. Indeed, historical under-investment was one of the drivers for privatisation of the water sector in England and Wales.⁴ On average, capital maintenance has increased by more than 150% per annum, while quality and other improvements increased by around 50%. In the majority of the case studies considered, one of the key drivers for increasing private sector participation in the first place was to enable large scale investment.

Figure 1 – capital investment in the English and Welsh water companies (2016-17 prices)⁵



In each case, the private sector continues to participate in the provision of water services to varying extents (for example, through the use of private sector contractors). In Berlin the management team for the utility was retained after the re-municipalisation.

Conclusions

The evidence on whether re-municipalisation has driven benefits in each of the four case studies we reviews is at best mixed. In three instances, there is evidence of price improvements, in the case of Paris, Berlin and Budapest prices fell or remained flat for a period after the re-municipalisation but in some cases these reductions do not appear to have been driven by the change in governance, and there is also some

⁴ Ofwat and Defra (2006) 'The Development of the Water Industry in England and Wales', [link](#).

⁵ Ofwat and Defra (2006) 'The Development of the Water Industry in England and Wales', [link](#), Ofwat (2009) 'Future water and sewerage charges 2010-15: final determinations', [link](#), and Ofwat (2018) 'Cost Assessment for PR19 – a consultation on econometric cost modelling', [link](#).



evidence that at best service improvement has slowed following the re-municipalisation. In Atlanta, both performance and prices appear worse post-re-municipalisation.

Furthermore, given the particular circumstances of the cases considered, it cannot be determined with any certainty that significantly reducing the level of private sector participation in the English and Welsh water sector would result in benefits to water customers.

1. Introduction and approach



Background and context

Water and wastewater utilities in the UK currently operate under a range of different ownership structures. Whilst in England and Wales a mixture of ten larger state-owned regional water boards and a number of smaller private water only companies were all placed into a private ownership model in 1989, following the other privatisations of the Thatcher government, in Scotland and Northern Ireland water utilities remained in public ownership. Subsequently, following the financial failure of its predecessor, Welsh Water was created under a mutual ownership structure in 2000.

The Labour party proposals

Over the course of the past three years the Labour party has set out a vision to move the water sector, alongside a number of other utilities, back into a public ownership model. It has published three key policy documents on this matter, two relating specifically to the re-nationalisation of water utilities⁶ and one more broadly on the benefits of public ownership of utilities and essential services⁷.

In its water specific policy documents, the Labour party is specifically critical of:

- ◆ the 40% rise in water and wastewater bills that it considers customers have experienced in the 30 years since privatisation;
- ◆ companies performance to reduce leakage since privatisation;
- ◆ the level of dividend payments and executive remuneration made under the privatised model;
- ◆ the levels of debt and company gearing in the sector;
- ◆ the lack of tax spending; and
- ◆ 'Asset stripping' by privatised companies.

However, the rationale for the re-nationalisation of water companies is part of a broader reform agenda that is focussed upon a range of benefits that Labour believes can be achieved through bringing a selection of utilities and essential services back under public ownership. The specific benefits cited include⁸:

- 1 Involving workers, the public, and other stakeholders in economic decision-making is considered to provide both societal and economic benefits.
- 2 Democratic participation is considered to enhance the effectiveness of publicly owned enterprises by tapping into grassroots forms of knowledge from the direct experience of employees and users of public goods and services.
- 3 Economic democracy – and specifically the active exercise of individual worker and community member ownership rights – is a critical cornerstone (and pre-requisite) of genuine political democracy.
- 4 Economic democracy can empower groups and individuals that are otherwise excluded.

⁶ See: 'Clear Water': [Link](#).

⁷ See: [Link](#).

⁸ See: [Link](#).



In order to address the specific criticisms of the privatised water model and deliver the proposed benefits, the Labour policy proposals envisage a move back to a series of 'Regional Water Authorities', (RWAs).

These new RWAs would be regulated by a new national agency that would oversee economic and performance regulation of the companies. In a significant departure from the current model, it would not be independent but would report directly to elected ministers. The same policy document emphasises the benefits of a transparent model of 'sunshine regulation' that has been adopted in some other jurisdictions.⁹

The governance of the new RWAs would be reconstituted as part of the re-nationalisation process, with boards to be established including:

- ◆ Three members drawn from locally elected government;
- ◆ Three members nominated by the main sector trade unions; and
- ◆ Three representatives from the Environment Agency, Citizens Advice and a member from a 'public participatory observatory' – an arrangement which may be similar to the public water observatory model which emerged after the removal of private franchising of Paris Water.

The new model would also be established with a statutory commitment to transparency.

"The framework would be shaped by the following principles:

- ◆ *Operation will favour financial equilibrium and not profit;*
- ◆ *Any surplus will be systematically reinvested in water infrastructure and staff, or used to reduce bills;*
- ◆ *Investment and operational decisions will be guided by a long-term perspective with key functions brought back in-house wherever possible;*
- ◆ *Pricing will be fully transparent and reflect only the cost of providing water – not dividends, executive salaries, or excessive interest payments;*
- ◆ *Purchasing and works will be carried out through entirely transparent processes, with bidding procedures that guarantee ethics and best value for money, widely defined.*"¹⁰

Examples cited

The Labour party proposals make specific reference to Paris Water as an example of a move back from 'private' and into 'public' ownership or 're-municipalisation' that has been undertaken in a way that promotes public participation. No other case study examples are cited directly in the Labour party literature but other examples have been cited in press articles, including Berlin Water¹¹. And more broadly in the literature citing the benefits of public ownership¹² and, in some instances, suggesting price and service improvements as a result of the change.

Models of 'public' and 'private'

Water companies play a unique role in providing a vital public service. A wide variety of models exist for how these services are provided in different jurisdictions, where the extent of private sector involvement varies depending on the model in question (as illustrated below).

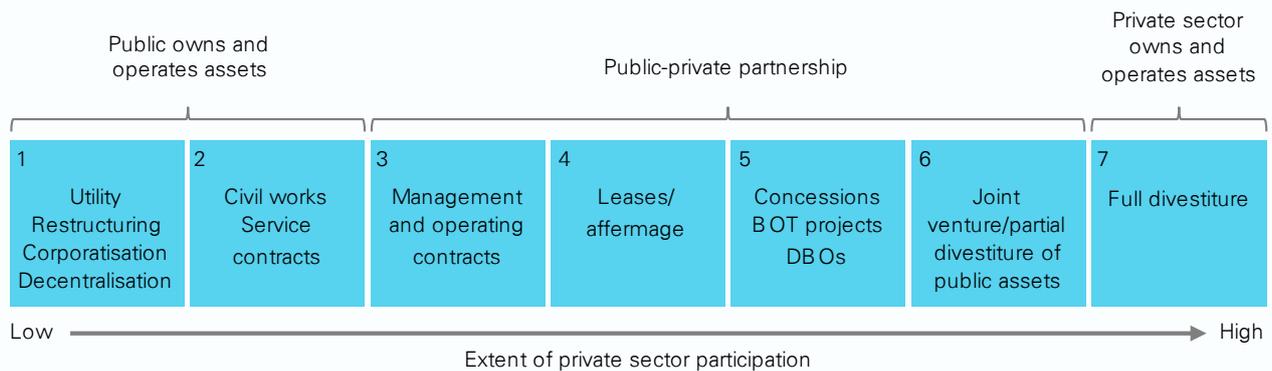
⁹ Ibid

¹⁰ Ibid

¹¹ See: For example FT Article from 2017 [link](#)

¹² See for example Kishimoto, S, Lobina, E and Petitjean, O, 2015, Our public water future: The global experience with remunicipalisation, [link](#)

Figure 2 – spectrum of public-private partnerships (PPPs) ¹³



In the English and Welsh water sector, the model for private sector involvement is predominantly full divestiture. That is, private sector companies own and operate the assets. Water companies are issued a licence of appointment that runs into perpetuity. ¹⁴

The English and Welsh water sector is not in isolation from the public sector, it is regulated and influenced by it. The water companies are required to comply with legislation set by parliament, as well as regulations set by Ofwat, the Drinking Water Inspectorate, the Environment Agency, Natural Resources Wales, and other NGOs. These government bodies/NGOs themselves sit within a broader political context. For example, the government issues guidance regarding its strategic priorities and objectives for Ofwat to reflect in the way it regulates water services in England.

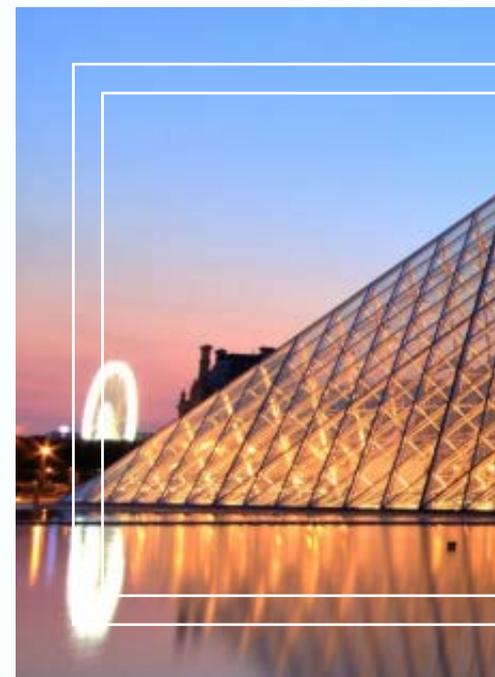
This model of full divestiture is unusual internationally and there are very few examples of it, indeed none of the case study examples cited in this paper represent direct comparisons to this model and most involve a concession to a private operator or a public/private joint-venture model. Any comparison between these experiences and the English model need to recognise these differences and their implications in drawing any lessons from them.

Process used in developing the case studies

This paper considers four case studies: Eau de Paris (Paris Water), Berliner Wasserbetriebe (Berlin Water Works), the Atlanta Department of Watershed Management, and Budapest Waterworks.

These four cases were selected through a filtering process:

- First, all examples of re-municipalisation's from 'The Water Remunicipalisation Tracker' ¹⁵ were collated from Europe and North America (examples from other continents were excluded due to comparability concerns).
- Second, examples where the population served was less than 200,000 were excluded to aid comparability to the English and Welsh water companies (all of the English and Welsh companies serve customer bases much larger than this).
- Third, examples were filtered by date. Very recent examples (within the last five years) were excluded as it was considered that it would be unlikely that there would be sufficient data available yet to conduct a



¹³ World Bank (2013) 'PPP Arrangements/Types of Public-Private Partnership Agreements', [link](#) Note: BOT stands for build, operate, transfer. DBO stands for design, build, operate.

¹⁴ This is on the basis that the licence conditions are sufficiently met. There is also a more general process for the licences to be terminated, this is subject to a minimum of a 25-year notice period.

¹⁵ Corporate Europe Observatory and Transnational Institute (2019) 'The Water Remunicipalisation Tracker', [link](#).



meaningful review, in particular of performance post-re-municipalisation. Similarly, examples from over 16 years ago were excluded.

The filtering process left eight candidate examples; the above listed cases as well as examples from Hamilton (Canada), Nice (France), Naples (Italy), and Seville (Spain).

Each of the eight candidate examples were researched for two weeks. This involved seeking the companies' annual accounts, academic articles on the change in private sector participation, and any other relevant sources (such as newspaper articles, trade press, etc.).

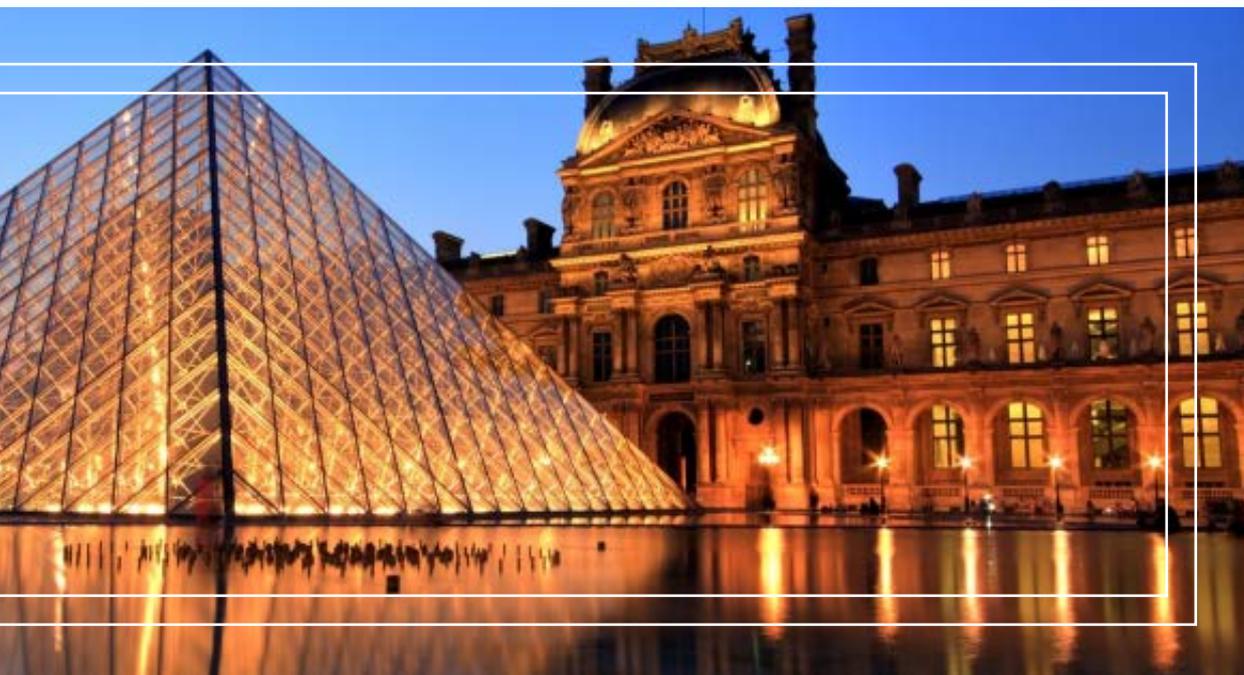
A small number of interviews were held with local experts from France and Germany, principally to identify sources of evidence and data on performance as well as to confirm the case studies and the conclusions referenced.

The initial review focused on finding information on cost, price, and service trends. After the two-week initial review, it was deemed that for half of the candidate examples, there was insufficient evidence available to produce a full case study at this time. The remainder of the review therefore focused on the four cases where there was a reasonable amount of publicly available information.

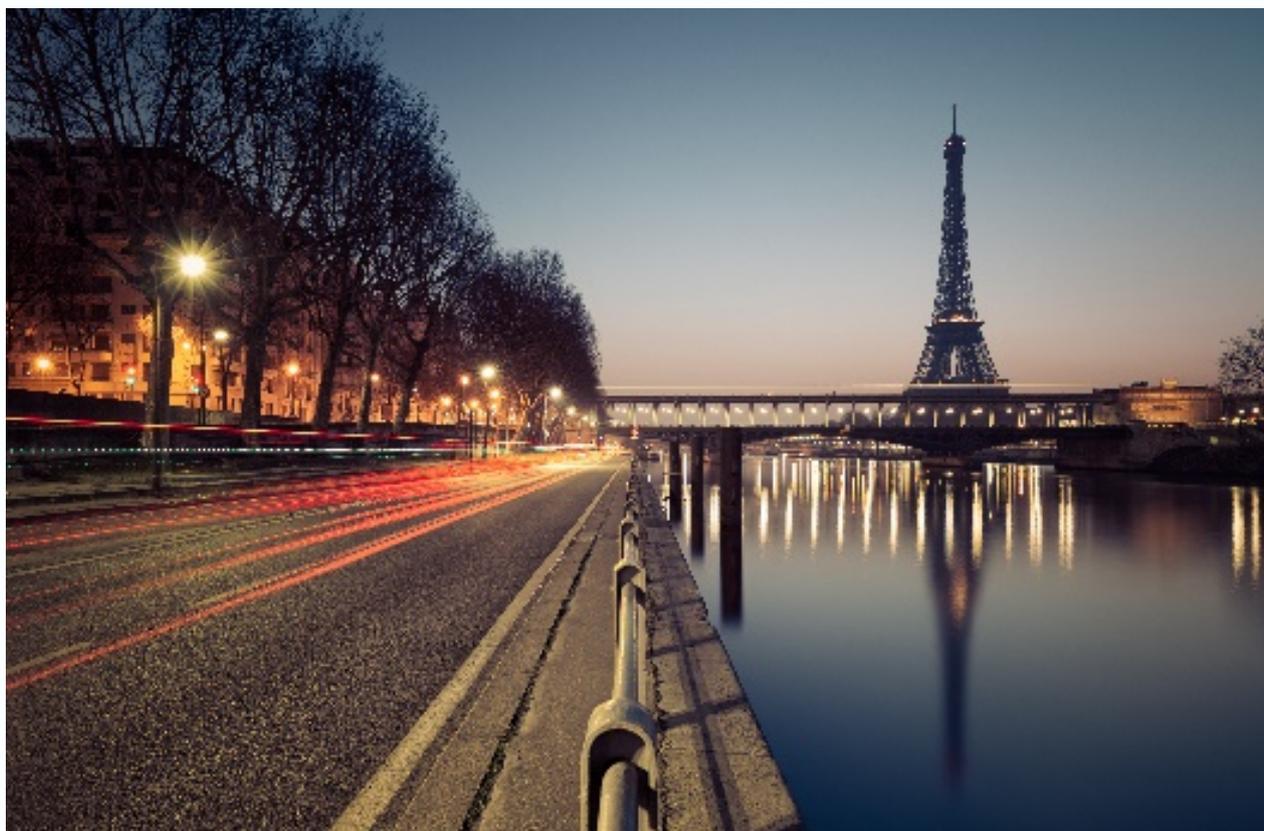
The case studies below have been structured in terms of:

- ◆ What drove the change in private sector participation?
- ◆ How had the 'private' operators performed?
- ◆ What was the impact on costs and prices?
- ◆ What was the impact on service levels?
- ◆ Other observations
- ◆ Conclusions

For the conclusions, the key features of the re-municipalisation are compared back to the English and Welsh context.



2. Eau de Paris (Paris Water)



Historically, drinking water management in Paris was divided into two elements:

- ◆ Production and transport; and
- ◆ Distribution and customer services.

In the 1980s, responsibility for these services were delegated to private companies for a 25-year period. Water production and transport was delegated to a semi-public company (SAGEP) in 1987. The City of Paris (Ville de Paris) had a 70% shareholding with private partners having a 30% holding.

In 1985, water distribution and customer services were split into two private operators. Suez for the left bank of the River Seine, and Veolia for the right bank.¹⁶

In 2009, water production, transport, distribution, and customer services were transferred in full to Eau de Paris.

What drove the change in private sector participation?

In 2000, the contracts were criticised by the regional audit body for lack of financial transparency. In 2002, an audit commissioned by the city of Paris found that the prices charged by the lease operators were between 25% and 30% higher than the economically justified costs.¹⁷

¹⁶ Eau de Paris (2012) 'The remunicipalisation of Paris' water supply service', page 11, [link](#)

¹⁷ PSIRU (2015) 'Here to Stay: Water Re-municipalisation as a Global Trend, page 7, [link](#)



However, some of the literature studied also suggests that political factors were also important in driving the remunicipalisation and that there was no strong public campaign that brought about the change¹⁸.

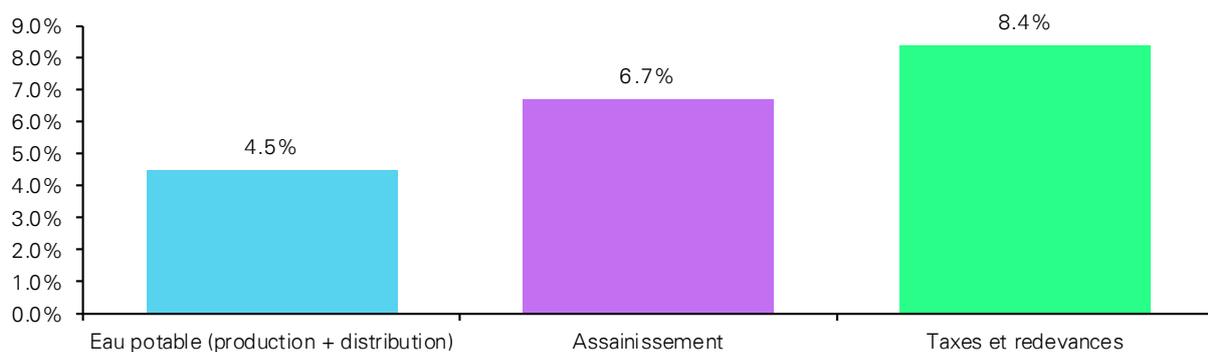
*“When the city of Paris remunicipalized its water and sewer services, some saw the balance tipping against the private sector in France. However, the remunicipalization in Paris was more the result of political manoeuvring highly specific to one place at one time. ... When the Socialist Bertrand Delanoë was elected Mayor of Paris in 2001, he talked about remunicipalization, but did not end the lease contracts prematurely, thus avoiding the fines associated with such a move. Only when preparing for his re-election campaign did he promise to remunicipalize the water supply, a demand that had been pressed upon him by his political allies, the Greens and the Communists. Keen to become a national political figure, Delanoë wanted to be re-elected in the first round with no run-off, and to achieve this, he needed the full support of the coalition partners. One of the few issues over which a mayor has real control is, indeed, the water supply, and the lease contracts were to expire in 2010, so that the remunicipalization could have been achieved at little cost. The election turned out as Delanoë expected, and after his re-election in 2008, Anne Le Strat from the Greens became deputy mayor. She immediately announced that the two concession contracts would not be renewed after they were due to expire in 2010. The public entity Eau de Paris, which had been reduced to bulk water supply, took over the entire system again, and water tariffs were reduced by 8% ”.*¹⁹

How had the private operators performed?

Water tariffs in Paris increased by more than 90% between 1991 and 1997 whereas they only increased by 52% in other French cities of more than 100,000 inhabitants over the same period.²⁰

Over the period 1985-2008 the average annual price rises for water were 4.5% per annum and 6.7% for wastewater. During the same period water taxes increased by 8.4%.

Figure 3: Average annual evolution of prices 1985-2008 for water (eau potable) and wastewater (assainissement) and water taxes (taxes et redevances)²¹



Over the same period in Paris, there was also large scale investment. The network's leaks were reduced from 22% of the water in 1985 to 17% in 2003, and was reduced dramatically to 3.5% by 2009.²² The operators also replaced all the remaining lead communication pipes still in the Parisian distribution network.²³

A document produced on behalf of the private operators notes that:

- Paris has one of the densest networks in Europe creating operational and cost challenges that are not present in other regional network water utilities;

¹⁸ Schiffler, M, 2015, Water, Politics and Money, A reality check on privatisation, pp.93.

¹⁹ Ibid.

²⁰ Pigeon, M., et al. (2012), 'Remunicipalisation: putting water back into public hands', page 27, [link](#).

²¹ Suez Environment, Water Stories, Paris, Contrat d'Affermage distribution d'eau potable (2012).

²² Corporate Europe Observatory and Transnational Institute (2019) 'Paris', [link](#).

²³ AquaFed (2016) 'City of Paris, France', [link](#).

- The city had very high levels of consumption; and
- The private entity was designated to modernise the network and improve the management of the assets.

The document cites a range of benefits from the delegated privately managed network, including reductions in leakage and per capita consumption as well as levels of bad debt. The document also suggests that during the delegated private service provision period replacement rates for the network were 2.5x faster than the national average²⁴.

Figure 4: Performance of distribution network % (Rendement du reseau de distribution) and water losses m³ (volumes perdus) for Paris Water area

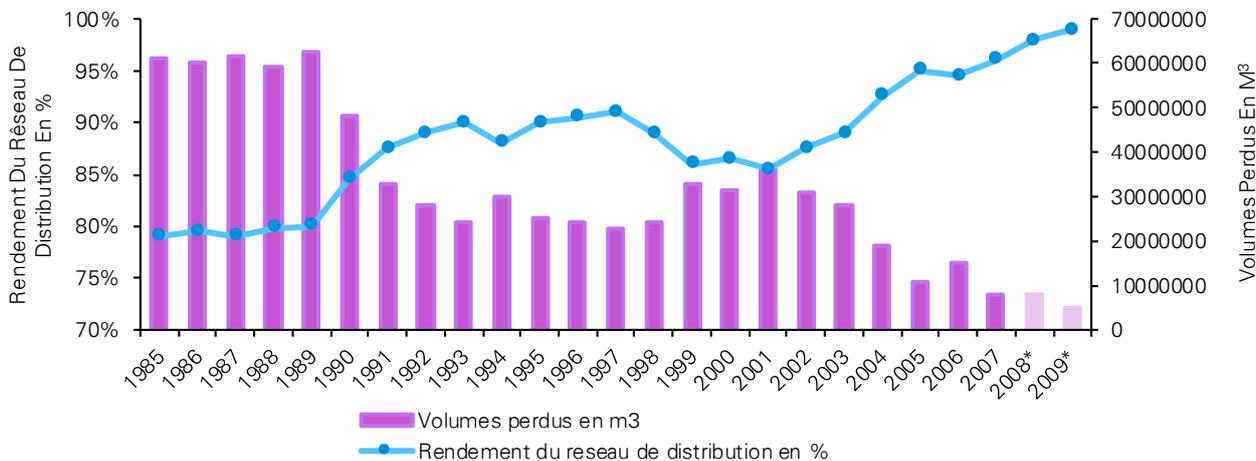
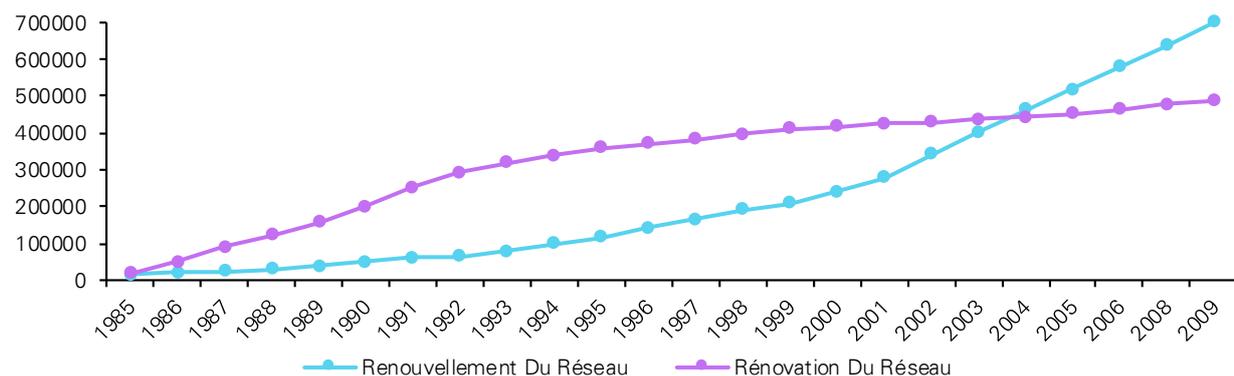


Figure 5: Network renewal (renovation) and replacement (renouvellement), cumulative meters²⁵ for Paris Water area

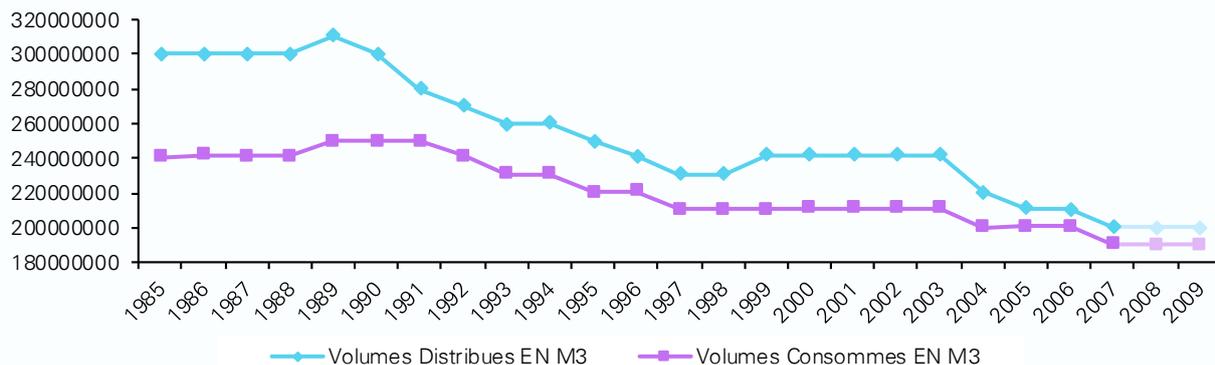


²⁴ Suez Environment, Water Stories, Paris, Contrat d’Affermage distribution d’eau potable (2012).

²⁵ Quoted in Suez Environment, Water Stories, Paris, Contrat d’Affermage distribution d’eau potable (2012).



Figure 6: Volumes of consumption (consommes) and distribution (distributes)²⁶ for Paris Water area



Source: * Estimation

Figure 7: Deployment of telemetry on meters (compteurs équipés du système de telerelève) versus number of connections (Nombre de branchements)²⁷ for Paris Water area

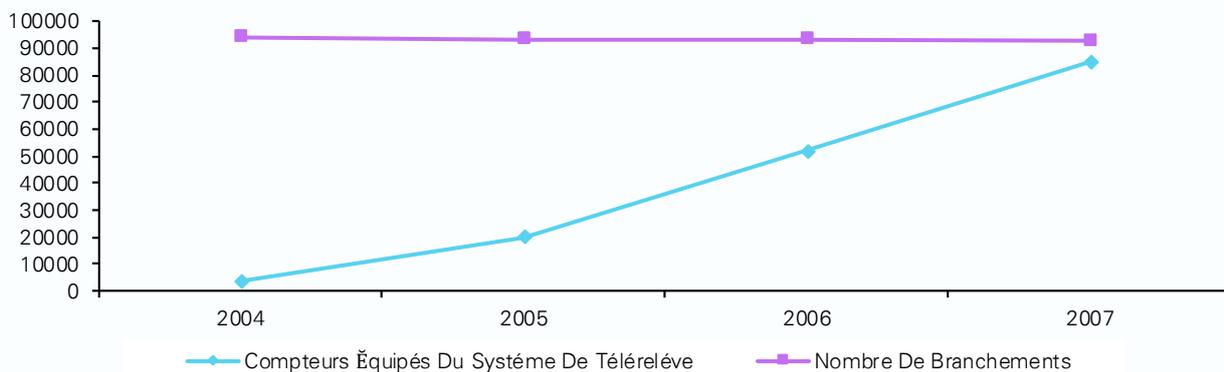
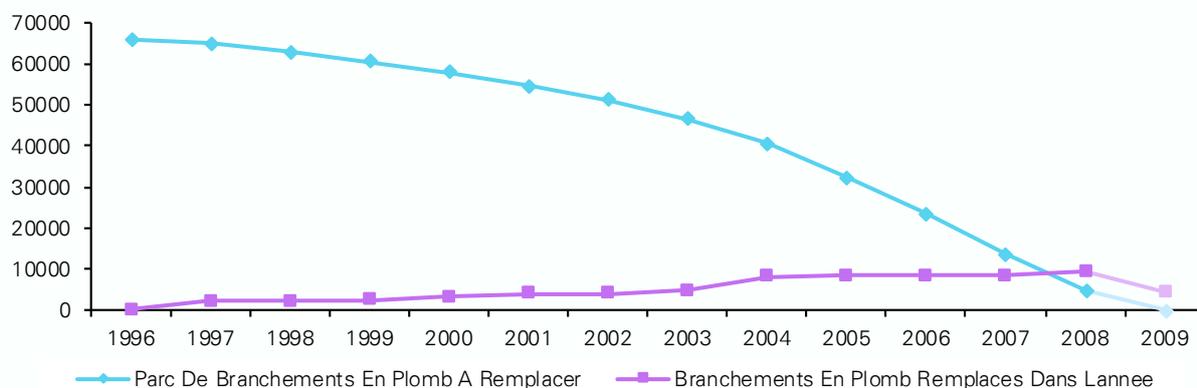


Figure 8: Lead connections replaced per annum (branchements en plomb remplacés dans l'anne) from total lead connections (parc de branchements en plomb a remplacer)²⁸



"The water of Paris is of an excellent quality, its supply is secured by several sources, its networks are well maintained and its price remains lower than the national average" Bertrand Delanoë, Mayor of Paris – 05/11/2007²⁹.

²⁶ Quoted in Suez Environment, Water Stories, Paris, Contrat d’Affermage distribution d’eau potable (2012).

²⁷ Ibid

²⁸ Ibid

²⁹ Ibid

Leakage in Paris under the Public-Private Partnership

A range of measures were introduced by the private companies in order to reduce leakage.

They introduced District Metering Areas, equipped with GSM sensors to help to detect leaks, and ran leak detection campaigns on a rolling basis.

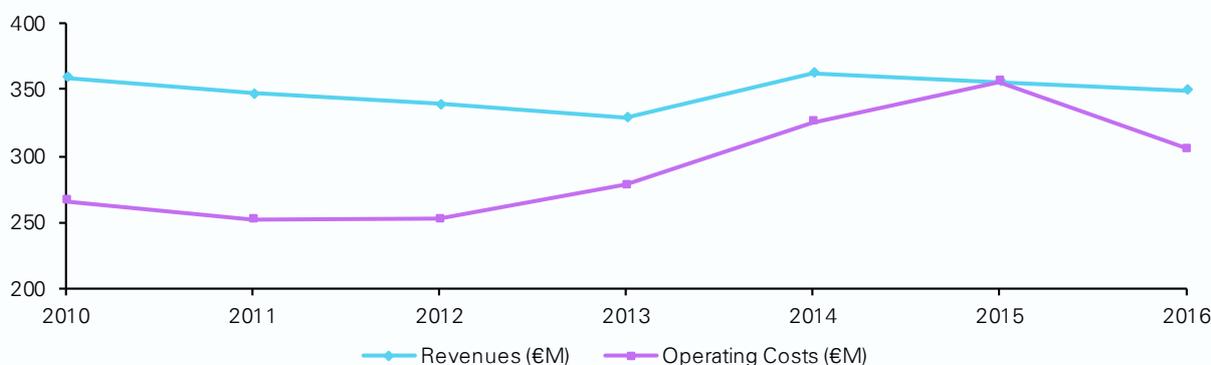
Between 1985 and 2009, the operators carried out a massive investment program on the network comprising both structural rehabilitation and renewal of distribution pipes. Overall 1,100 kilometres of distribution pipes have either been renewed or rehabilitated, representing more than half the overall length of the network.

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.³⁰

What was the impact on costs and prices?

Since re-municipalisation, revenues have stayed broadly flat, while operating costs have increased.³¹ By 2015, they had increased by around a third from 2010 levels, although the 2016 data showed some cost reduction.

Figure 9 – Eau de Paris – Revenue and Operating Costs (€m)



In the two years following re-municipalisation, headcount increased significantly, although there have been some reductions since.³²

Year	Headcount	Year-on-year change	Cumulative change
2010	870	n/a	n/a
2011	920	+5.7%	+5.7%
2012	943	+2.5%	+8.4%
2013	938	-0.5%	+7.8%
2014	925	-1.4%	+6.3%
2015	914	-1.2%	+5.1%
2016	897	-1.9%	+3.1%

³⁰ AquaFed (2016) 'City of Paris, France', [link](#).

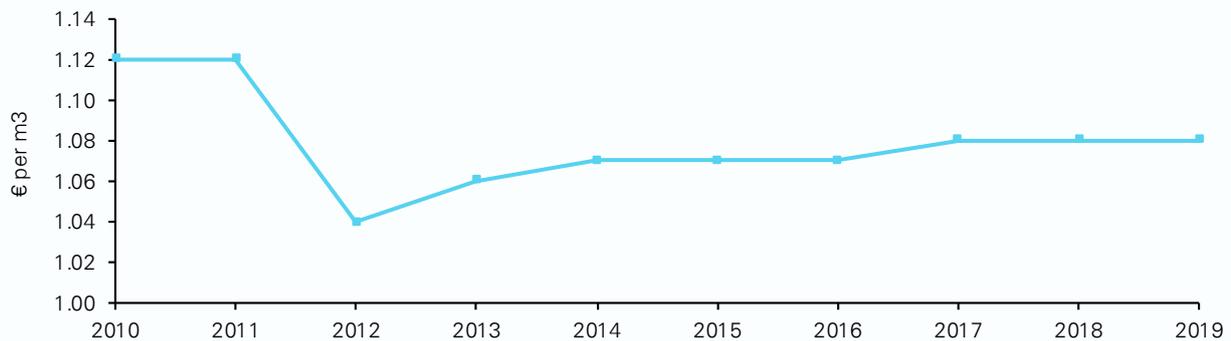
³¹ Eau de Paris (2012) 'The remunicipalisation of Paris' water supply service', slide 26, [link](#).

³² Eau de Paris (2016) 'Eau de Paris Rapport Social', page 9, [link](#).



Prices fell shortly after re-municipalisation (c.8%), and have stayed broadly flat since.

Figure 10 – Eau de Paris water prices³³



A 2017 report by the Regional Audit Chamber examined the three largest water companies in Greater Paris: d'Île-de-France (SEDIF), Ville de Paris (Eau de Paris) and Gennevilliers (SEPG). These companies serve 90% of the metropolitan customers in 101 municipalities out of 131 municipalities in Paris. Eau de Paris enjoyed the lowest potable water charges amongst the group but the price reductions in the period 2010-17 were a 2.6% reduction (compared to an 18.7-21% reduction in neighbouring regions). During this period, the gap in potable water charges has been reduced from 33% to 12% with the water union of the peninsula of Gennevilliers and 41% to 15% with the Sedif³⁴. The same study also identified that cost allocation issues made the tracking of financial data challenging and highlighted that this may make it difficult for consumers to understand the financial data from the Eau de Paris utility, impacting on levels of transparency.

Figure 11: Evolution of prices for a m3 of potable water in three French regions 2010-17

Year (1 st Jan)	Sedif	Paris	SEPG
2010	1,734 €	1,225 €	1,628 €
2014	1,426 €	1,175 €	1,735 €
2017	1,370 €	1,193 €	1,324 €
% change	-21.0%	-2.6%	-18.7%

The report also highlighted some key differences between the Eau de Paris region and the other regions in Greater Paris. Which it considered responsible for lowering operating and maintenance costs:

- It has plenty of groundwater sources which covers 50% of its supply, these sources are of a higher level of water quality; and
- The distribution network is by far the shortest with the highest density.

Other sources also emphasise the differences in costs experienced by the delegated private operators and the public operators, noting that public companies do not have to pay for the acquisition of land and are not subject to corporate income tax or property tax³⁵.

³³ Eau de Paris (2019) 'Water at the right price', [link](#).

³⁴ Regional Audit Chamber, 2017, RAPPORT D'OBSERVATIONS DÉFINITIVES ET SA RÉPONSE LA RÉGIE EAU DE PARIS (75) ENQUÊTE RÉGIONALE SUR L'ALIMENTATION EN EAU POTABLE DE LA MÉTROPOLE DU GRAND PARIS.

[link](#)

³⁵ Schiffler, M, 2015, Water, Politics and Money, A reality check on privatisation, pp.96.

Several of the sources suggested that the combination of falling demand and rising environmental standards mean that prices will need to rise in the future³⁶ otherwise fixed costs of the utility could not be met.

What was the impact on service levels?

The 2017 report compared the performance of Eau de Paris against a series of service performance measures that were established to track and improve performance of the water utility. Some of the data from this report for the three regions is provided below.

Figure 12: Selected service performance metrics for Eau de Paris and neighbouring regions

Area	Company	2011	2012	2013	2014
P102.1 Water quality – physical and chemical compliance (%)	Sedif	99.83	99.89	99.87	99.91
	Paris	100	99.7	99.93	99.97
	SEPG	99.7	99.92	100	99.7
P151.1 Supply interruptions – Frequency of unplanned interruptions	Sedif	3.67	4.57	3.43	2.51
	Paris	0.22	0.37	0.25	0.3
	SEPG	1.05	1.36	1.8	1.17
P155.1 Level of written complaints	Sedif	3.69	3.84	5.25	5.66
	Paris	1.33	0.64	0.95	0.7
	SEPG	40	16.7	19.5	21.3
P107.2 – Network replacement rates	Sedif	0.39	0.47	0.52	0.57
	Paris	0.24	0.48	0.43	0.39
	SEPG	0.88	0.8	0.84	0.79
P154.0 – Levels of unpaid debt	Sedif		0.55	0.84	0.85
	Paris	0.33	0.25	0.56	0.47
	SEPG	0.26	0.15	0.23	0.42
P104.3 – Performance of distribution network (%)	Sedif	89.65	88.92	88.49	88.33
	Paris	91.7	92.3	91.7	91.5
	SEPG	86.6	87.88	88	89.6
P106.3 – Water losses normalised per length of network	Sedif	9.48	9.95	10.2	10.5
	Paris	19.5	19.5	23.4	22.6
	SEPG	15.5	13.5	13.5	11

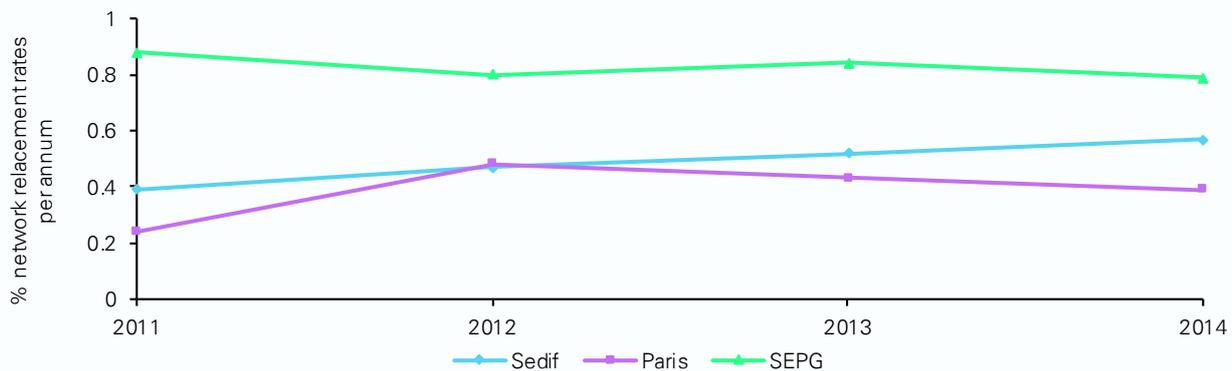
This data suggests that the performance of Eau de Paris was strong relative to these regional comparators over this period, it remains the best performer across the group on many of the metrics and there is no significant deterioration in these service metrics across the period. At the same time network replacement

³⁶ See for example: Our Public Water Future: The Global experience with remunicipalisation, Satoko Kishimoto, Emanuele Lobina and Olivier Petitjean, Chapter 5, [link](#).



rates remained lower than these comparators and are on average 59% of the level of these comparators per annum at around 0.4% per annum or a replacement rate of c.250 years.

Figure 13: Network replacement rates for comparative regions (2011-2014)



However, the assessment also showed that out of a total of 38 performance indicators for drinking water quality 15, approximately 39%, did not reach the target objective levels. Of these, 5 had a value within less than 10% of the target and 10 showed a difference between the achievement and the value of the target greater than 10%. In addition, out of four indicators for information provision with a numerical target, two are not reached³⁷.

“When the city of Paris remunicipalized its water and sewer services, some saw the balance tipping against the private sector in France... In fact, the private companies had done a good job in terms of service quality in Paris. Old lead pipes had been replaced to improve drinking water quality, water losses had been reduced substantially from 24% to 4% and the internal systems had been modernized, for example, by installing remotely read water meters. This had come at a price, with water tariffs more than doubling during the 25 years of the lease contracts. But given skyrocketing rents in Paris, the weight of the water bill in household expenditures still remained acceptable... and water tariffs were not an issue that upset the public”³⁸

Other observations

Transitional outsourcing contracts were signed for managing information systems over the first two years of re-municipalisation.³⁹ This gave Eau de Paris enough time to set up its own information system. However, to at least 2015, Eau de Paris still relied on Suez and Veolia for some of their proprietary software to process billing, water meter data collection and management, and monitoring maintenance works.⁴⁰

As of 2015, Eau de Paris still holds an outsourcing contract for water meter installation and maintenance with Veolia.

Part of the Paris’s water resources are situated far from the city, therefore Paris has close relationships with some other local communities and supports water source protection. Most of the municipalities surrounding Paris have renewed the water service delegation contract with Veolia in 2011, post re-municipalisation.⁴¹

³⁷ Regional Audit Chamber, 2017, RAPPORT D'OBSERVATIONS DÉFINITIVES ET SA RÉPONSE LA RÉGIE EAU DE PARIS (75) ENQUÊTE RÉGIONALE SUR L'ALIMENTATION EN EAU POTABLE DE LA MÉTROPOLE DU GRAND PARIS.

[link](#)

³⁸ Schiffler, M, 2015, Water, Politics and Money, A reality check on privatisation, pp.93.

³⁹ PSIRU (2015) 'Our public water future: the global experience with remunicipalisation', page 9, [link](#).

⁴⁰ Eau de Paris (2017) 'Eau de Paris Rapport Annuel', page 9, [link](#).

⁴¹ CIREC (2018) 'Water remunicipalisation in Berlin and Paris: Specific processes and common challenges', page 20, [link](#).

Some concerns have also been highlighted in the literature about levels of ongoing investment:

“Investments are low, at 20 euros per inhabitant per year, standing at only a third of the French average. Only 0.2% of the network is renewed every year, which is equivalent to a renewal of the entire network after 500 years if the same slow rhythm is maintained – a problem that affects many French water and sanitation utilities, but appears to be particularly acute in Paris. Sooner or later, Eau de Paris may be forced to incur commercial debt to maintain its assets”⁴²

The Paris Observatory of Water and customer participation in England and Wales

The Paris Observatory of Water (OPE)

The OPE is an extra-municipal commission created in 2006 by the Mayor of Paris following a wish from the Paris Council of July 2005. Designed as a tool for consultation and citizen control over the municipal water policy, the OPE is informed of all the important issues concerning the water management, on which it gives an opinion before their passage before the Council of Paris. This concerns, for example, the annual activity reports, that of Eau de Paris and that on the price and quality of public drinking water and sanitation services.

The decrees specify that the Observatory is composed of four minimum groups of experts but this does not exclude any other applications. The four groups of experts include:

- ◆ Elected Parisians: one representative per borough hall and one representative per political group of the Paris Council is included.
- ◆ Representatives of Paris water users: one representative per consumer, tenant or environmental protection association, property owners and administrators, each social lessor, associations, major water users, organizations professionals, departmental trade unions, etc.
- ◆ Parisian institutional actors, related to water and sanitation, particularly in the areas of health, town planning, spatial planning, and housing.
- ◆ Universities, research organizations, independent researchers.

The expenses necessary for the operation of the Observatory are provided for in the annexed water and sanitation budgets of the City of Paris.

All activities and meetings of the OPE are public. The frequency of meetings is defined during the development of the program of activities. While the 2013 decree specifies that the Observatory meets at least twice a year, the frequency of plenary meetings has been higher since 2008 (four meetings a year). Each meeting gives rise to a report which can also be consulted on the OPE website.

More information on the [website of the Paris Water Observatory](#).

Customer participation in England and Wales

Water companies in England and Wales undertake significant public consultation with their customers, both directly and through the establishment of customer challenge groups. This information is used to directly inform the development of forward plans. As part of the preparation of their business plans for the 2020-25 period water companies engaged with over 5 million customers⁴³ and all companies have customer challenge groups that have been operating for more than five years.

⁴² Schiffler, M, 2015, Water, Politics and Money, A reality check on privatisation, pp.94

⁴³Water UK, 2018, A Manifesto for Water [link](#)



Customer challenge groups are composed of local customer representatives (business and domestic), universities and institutional actors similar to the four groups that make up the OPE. However, elected officials are not automatically included in the governance of these groups. The terms of reference for these groups, details of members, minutes of meetings, etc. are all published on water company websites and transparently available⁴⁴.

Water company boards in England and Wales explicitly must include three independent non-executive board members who must ensure that the interests of customers are 'respected and protected'⁴⁵ similarly ensuring that customer and stakeholder views are reflected at those board level discussions. Further changes are being undertaken by the regulator, Ofwat, to ensure that water company boards have a majority of independents and that the Chair is also independent⁴⁶.

The activities of the CCGs are funded through water charges.

The CCGs generally meet monthly but often have sub-groups or working groups that meet more regularly. Minutes from the meetings are published on water company websites. In addition to these meetings water companies in England and Wales have also undertaken significant direct consultation with customers through a number of innovative forums and channels to engage on a range of complex topics as part of their PR19 business plans. In its initial assessment of those plans the regulator commented:

"Great customer service starts with an in-depth understanding of customers' preferences and priorities. We assess how well the business plans show this understanding...Performance in this area is good...Companies made more use of research and used a range of techniques to identify customer preferences to inform their business plans...We welcome the contribution that customer challenge groups (CCGs) have made to providing independent assurance of the quality of engagement between companies and customers. We see that the quality of customer engagement is improved as a result of the CCG's independent challenges to their water company."⁴⁷

Conclusions

The key drivers of re-municipalisation may have been rising prices between 1985 and 2008 and a lack of transparency but some of the sources also suggest that there were political motives.

There is evidence that the rising costs and prices occurred within the context of significant improvement in the network and operating performance with leakage, for example, being reduced from 22% to 3.5% and a range of other service improvements such as lead removal, reductions in per capita consumption, increasing replacement rates and modernising service activities and asset management.

Supporters of the re-municipalisation often highlight the benefits of the OPE in terms of increasing transparency and improving the voice of the customer, but many similar aspects of the OPE framework appear to already be present under the private model in England and Wales.

Following re-municipalisation, there were some initial decreases in prices but not by as much as some neighbouring regions where private operators remain in place under the delegated model. There is also some evidence that the Eau de Paris region has characteristics that may make it easier to serve at a lower cost or provide some benefits to service. Several parties, including the former Deputy Mayor and head of water supply, have suggested that prices will need to rise again in the future to meet rising environmental standards and other factors.

⁴⁴ See for example the information on Thames Water's Customer Challenge Group: [link](#).

⁴⁵ See for example Anglian Water's appointed licence, condition P Part 1 (2), p169: [link](#).

⁴⁶ See Ofwat's recent governance documents: [link](#).

⁴⁷ Ofwat, 2019, PR19 Initial assessment of plans: Summary of test area assessment, p.5, [link](#).

Service performance has remained stable and strong up to 2014 but the rates of improvement experienced under the private model have not continued. Some service metrics around water quality were not met between 2011 and 2014 according to a 2017 report and concerns have also been raised about the levels of investment and replacement rates under the Eau de Paris model. Indeed replacement rates appear to be lower than local comparators.

Eau de Paris still uses private sector contractors to fulfil a number of functions.



3. Berliner Wasserbetriebe (Berlin water works)



Following the fall of the Berlin Wall, water and sewerage utilities from the Eastern and Western halves of the city were merged, forming the largest water and sewerage utility in Germany. During the 1990s there was a significant programme of investment in the city to modernise the network assets in the East of the city where water had been virtually free. Tariffs were adjusted to the levels in the West, and were subsequently further increased to fund more investments. Between 1992 and 1999, tariffs increased by c.150%⁴⁸.

The scale of the investment requirement created a strong fiscal motive for the privatisation. The city-state was loaded with heavy debt and had to deal with the reduction of subsidies that the federal government had provided to West Berlin as long as the wall had been up⁴⁹.

At the same time, one source suggests that there was some civil service 'overstaffing' in Berlin at the time. In 1991, it is suggested that the city-state had 3.4 million inhabitants and almost 344,500 direct employees. It thus has more than 100 public employees per 1,000 inhabitants, two thirds more than the German average of 61. This number is reported to have fallen to about 189,000 in 2009, bringing it to a level similar to the average. At public enterprises such as the gas company Gasag, employees were offered generous severance payments⁵⁰.

⁴⁸ Schiffler, M, 2015, Water, Politics and Money, A reality check on privatisation, pp.105.

⁴⁹ Ibid

⁵⁰ Ibid p.106

In 1999 the city of Berlin entered into a public-private partnership with a consortium consisting of Vivendi (now Véolia), the German multi-utility company RWE, and the insurance company Allianz. The Vivendi/RWE/Allianz consortium paid the city €1,679 billion to acquire a 49.9% stake and full operational control of Berliner Wasserbetriebe (BWB).⁵¹ The remaining 50.1% of shares were owned by the City of Berlin.^{52 53}

BWB manages both Water and Wastewater.⁵⁴

In addition, the consortium also accepted other obligations, e.g. creation of new jobs and a water research centre and guaranteed employment until 2014 for core employees and investments amounting to 5 billion Euro until 2009. The period of validity was 30 years.⁵⁵

In 2012, the City of Berlin bought back the shares from RWE for €654 million, and in 2013, the shares from Veolia for €590 million. To do so the city of Berlin took a loan that must now be repaid through water bills over a period of 30 years.^{56 57}

What drove the change in private sector participation?

As agreed in the privatization contract, water and wastewater prices remained stable from 1999 to the end of 2003. However for April 2004, they were raised by 15%.⁵⁸ According to the available research, prices increased between 2003 and 2006 by between 21%⁵⁹ and 23%.⁶⁰ On four occasions wastewater service prices were increased with a combined total increase of 30%.⁶¹

In May 2006 the Berliner Wassertisch (Berlin Water Table) was founded and launched a popular referendum campaign for the population of Berlin. The two key drivers of the call for a referendum were lack of transparency of the contract, and tariff increases between 2004 and 2006.⁶²

The referendum also sought re-municipalisation.⁶³ In February 2011, 666,235 Berliners voted in favour of the proposition “Berliners want their water back”.⁶⁴ This was a majority of 98.2% of those who voted.⁶⁵

⁵¹ Lanz K, Eitner K (2005) ‘WaterTime Case Study – Berlin, Germany, WaterTime Deliverable D12’, page 5 [link](#)

⁵² Beveridge, R., Hüesker, F., Naumann, M. (2014) ‘From post-politics to a politics of possibility? Unravelling the privatization of the Berlin Water Company’. *Geo-forum* 51, 66-74, page 71

⁵³ Kishimoto, S. Lobina, E. Petitjean, O. (2015) ‘Our Public Water Future: The Global Experience with Remunicipalisation’, page 53 [link](#)

⁵⁴ Berliner Wasserbetriebe (2019) ‘Key Figures’, [link](#)

⁵⁵ CIREC (2018) ‘Water remunicipalisation in Berlin and Paris: Specific processes and common challenges’, page 12, [link](#)

⁵⁶ Kishimoto, S. Lobina, E. Petitjean, O. (2015) ‘Our Public Water Future: The Global Experience with Remunicipalisation’, page 54 [link](#)

⁵⁷ Terhorst, P. (2014). Remunicipalisation in Berlin after the buy-back. “De-privatisation: buy-back” [link](#)

⁵⁸ Lanz K. and Eitner K. (2005) ‘WaterTime Case Study – Berlin, Germany, WaterTime Deliverable D12’, page 15, [link](#)

⁵⁹ Beveridge, R., Hüesker, F., Naumann, M. (2014) ‘From post-politics to a politics of possibility? Unravelling the privatization of the Berlin Water Company’. *Geo-forum* 51, 66-74, page 71

⁶⁰ Powell, J. Yurchenko, Y. (2019) ‘The Evolution of Private Provision in Urban Drinking Water: New Geographies, Institutional Ambiguity and the Need for Political Economy’. *New Political Economy*. 10 (1080), page 8

⁶¹ Beveridge, R., Hüesker, F., and Naumann, M. (2014) ‘From post-politics to a politics of possibility? Unravelling the privatization of the Berlin Water Company’. *Geo-forum* 51, 66-74, page 71

⁶² Beveridge, R., Hüesker, F., Naumann, M., 2014. From post-politics to a politics of possibility? Unravelling the privatization of the Berlin Water Company. *Geo-forum* 51, 66-74. Page 72

⁶³ Lobina, E. (2017) ‘Water Remunicipalisation: Between Pendulum Swings and Paradigm Advocacy’. In: Bel, S., Allen, A., Hofmann, P. and the, T.-H., (eds.) *Urban Water Trajectories. Future City*, 6. Springer International Publishing, London, UK, pp. 149-161

⁶⁴ Terhorst, P. (2014) ‘Remunicipalisation in Berlin after the buy-back. “The campaign for remunicipalisation”’, [link](#)

⁶⁵ Beveridge, R. Naumann, M. (2014) ‘Global Norms, Local Contestation: Privatization and de/politicization in Berlin’, page 15



How had the private operators performed?

Whilst tariff increases were experienced under the private model, a key reason for those increases was due to the contractual agreement on annual profit entitled to the private investors. If the 8% required return to RWE and Veolia was not met, the City of Berlin would be obliged to make up the difference by drawing from its budget or by raising water tariffs.^{66 67}

As BWB's financial results were not sufficient to pay both the contractually fixed return on investment to the investors and an operating profit to the City of Berlin, the municipality had to waive much of its income to allow RWE/Véolia's profits to remain unaffected.

However, one study found that the private partners were required to gradually eliminate the item "Facilities under construction" from their accounting, which in practice meant they had to take over a financial burden from the period before they joined the company. Arguably, if this was excluded from the calculations, prices would have increased even more before 1999 and less after 1999.⁶⁸

Whilst the rise in tariffs was significant under the private operator model, it was significantly less than the city had experienced in the 1990s before privatisation, where we have found little evidence of public concern. Initially water tariffs had been below the German average when the wall came down, then they more than doubled between 1991 and 1997, exceeding the German average in that year. From then on tariffs were frozen until 2003, including the first five years of the privatisation arrangement as specified in the contract, they then increased by 23% up to 2006. Beginning in 2007 tariffs were gradually reduced by 6% until 2013 when the municipalisation process was completed⁶⁹. Overall tariffs increased by c.89% between 1992 and 2013 compared to 65% tariff increases on average for other German water utilities that were members of the industry association BDEW over the same time period.

A 2009 study⁷⁰ also highlighted that the relatively high rates in Berlin can be primarily explained by the following circumstances:

- ◆ High investment costs, particularly during the 1990s, following the merging of East and West Berlin and the alignment of quality standards which are highlighted as quadrupling the level of annual investment in water supply between 1992 and 1997.
- ◆ Falling demand, given a situation where a water supply company must cover its fixed costs with revenues dependent on volume, a fall in demand directly leads to a rise in rates. Figure 15 illustrates this fall for Berlin compared to the German national average.
- ◆ Water abstraction charges, which are very high for Berlin versus national averages. Across Germany, abstraction charges varied from a low of 0 ct/m³ to a high of 31 ct/m³ in Berlin. For each cubic meter of drinking water Berliner Wasserbetriebe pays a charge to the state of Berlin three times higher than that paid in the next most expensive federal state, Brandenburg.

⁶⁶ Beveridge, R., Hüesker, F., Naumann, M. (2014) 'From post-politics to a politics of possibility? Unravelling the privatization of the Berlin Water Company'. *Geo-forum* 51, 66-74, page 71.

⁶⁷ Powell, J. Yurchenko, Y. (2019) 'The Evolution of Private Provision in Urban Drinking Water: New Geographies, Institutional Ambiguity and the Need for Political Economy'. *New Political Economy*. 10 (1080), page 8.

⁶⁸ Wik Consult (2009) '10 Years of Water Services Partnership in Berlin', [link](#).

⁶⁹ Schiffler, M, 2015, Water, Politics and Money, A reality check on privatisation, pp.111.

⁷⁰ Wik Consult (2009) '10 Years of Water Services Partnership in Berlin', [link](#).

Figure 14: Comparison of changes in water and wastewater charges in Berlin and Germany⁷¹

Region	Change in water prices between 1999 and 2007 in %	Change in water prices between 1992 and 1999 in %
Berlin	21.59%	64.49%
German national average	11.18%	41.43%

Region	Change in wastewater prices between 1999 and 2005 in %	Change in wastewater prices between 1992 and 1999 in %
Berlin	24.21%	64.24%
German national average	13.20%	N/A

Figure 15: Comparison of changes in water demand in Berlin and Germany⁷²

Region	Change in water demand between 1999 and 2005 in %	Change in water demand between 1992 and 1999 in %
Berlin	-8.07%	-21.80%
German national average	-4.98%	-12.44%

The same study⁷³ highlighted that for household's comparative studies amongst the 100 largest cities in Germany, Berlin residents pay less for water supply services than the average, but costs for wastewater services are at the top end of the scale.

Figure 16: Comparison of water utility costs in Berlin and average costs nationally in 2008

Region	Drinking water (1 – person home); usage: 45.6m ³ per year; smallest meter	Drinking water (2 – person home); usage: 90.25m ³ per year; smallest meter	Drinking water (3 – person home); usage: 136.88m ³ per year; smallest meter	Wastewater (4 – person home); usage: 184m ³ fresh water usage; 100m ² sealed; proportional sewer construction cost contributions
Berlin [€ per year]	107	208	311	673
German national average [€ per year]	164	245	327	483
Divergence in %	-34.7%	-15.1%	-4.9%	+39.3%

Furthermore, whilst the tariff increases were significant, they were accompanied by a significant reduction in consumption, which helped to ensure that overall bills to customers were stable and at their peak in 2006 accounted for 0.7% of median household income⁷⁴.

On other aspects of quality, the 2009 study⁷⁵ found that since 1999:

- The efficiency of the company had significantly improved, including reducing personnel costs by 10% between 1999 and 2008 due to automation and increases in efficiency.

⁷¹ Ibid p.17

⁷² Ibid p.17

⁷³ Ibid

⁷⁴ Schiffler, M, 2015, Water, Politics and Money, A reality check on privatisation, pp.111.

⁷⁵ Wik Consult (2009) '10 Years of Water Services Partnership in Berlin', [link](#).



- ◆ Investment levels had exceeded contractual requirements and were above the national average when considered on the basis of the volume of water abstracted.
- ◆ The company's performance also exceeded the German national averages for water supply and sanitation safety, quality and sustainability with significant falls in pollution levels from ammonium nitrogen and phosphorus between 1998 and 2003.
- ◆ The performance on pollution events also improved after the partial-privatisation.
- ◆ Pipe breakage rates also improved and following the privatisation.
- ◆ Customer service levels and transparency had also improved, with customer satisfaction improving from 61% to 71.2% over the period, comparable to the national German average.
- ◆ Levels of employee engagement and job satisfaction also improved over this period.
- ◆ Returns made by private operators were not excessive when compared to suitable benchmarks.
- ◆ Proceeds to the City state of Berlin from their ownership share were higher under the partnership than they were under public ownership, in 1999 the state of Berlin received 65 million euros whilst in 2008 it received 208 million.⁷⁶

*"Berliner Wasserbetriebe has also dramatically improved customer service in recent years. The company does an excellent job communicating information to customers. The depth of company data provided in its annual reports and the detailed explanations of rate calculation are unique across Germany. This transparency had made Berliner Wasserbetriebe's a popular focus for attacks in the local and national media. In essence, Berliner Wasserbetriebe's open disclosure of company information has ignited debates that other German water companies have simply not yet had to face"*⁷⁷

"In key respects, the public-private partnership has been a success of the last ten years. The efficiency of the company has significantly improved during this time. Moreover, the company's partners have not only maintained the quality of water services – they've significantly improved upon them. The company has established itself as an important innovator and forerunner in German water management. The customers of Berlin Wasserbetriebe have profited from these developments, developments that have been largely possible thanks to knowledge transfer from the private partners. Yet not only customers have gained. Other beneficiaries include: the owners (in particular, the state of Berlin); the company's employees; social, cultural and scientific institutions; as well as Berlin's economy.

*The explicit goals agreed upon by the state of Berlin and the private partners provide the primary frame of reference for this assessment. These goals were established on 14 June 1999 in the course of negotiations over the private partners' investment, and were set forth in an appendix of the consortium arrangement. The goals are wide-ranging, and address various areas such as company development, economic development, the safeguarding of jobs, environmental protection, as well as cultural and social commitments. For the purposes of this study, these goals were studied in detail. According to our findings, nearly every goal that could be achieved actually was achieved."*⁷⁸

What was the impact on costs and prices?

In 2012, the German Federal Cartel Office ("FCO") ordered BWB to lower its drinking water prices, which, according to the FCO, were excessive compared to water providers in Hamburg, Munich and Cologne. The order included a cut in the utility's revenue by 18% for 2012 and by 17% on average for the period of 2013-2015 compared to 2011, which equals a reduction in sales revenue totalling approximately €254 million.⁷⁹

⁷⁶ Wik Consult (2009) '10 Years of Water Services Partnership in Berlin', [link](#).

⁷⁷ Ibid, p27

⁷⁸ Wik Consult (2009) '10 Years of Water Services Partnership in Berlin', p.1 [link](#).

⁷⁹ Bundeskartellamt (Germany's Federal Cartel Authority) (2012) 'Bundeskartellamt orders Berliner Wasserbetriebe to cut drinking water prices by a total of 254 million euros for the period 2012-2015', [link](#).

In order to avoid legal action, BWB sought to reduce water tariffs by 6% in 2015. But because of the economic constraints created by the expensive buy-back, the Senate would finance this with job reductions of up to 10% and further reduction of infrastructure investment.⁸⁰

What was the impact on service levels?

By combining separate datasets, it appears that there has been a significant decrease in investment levels post re-municipalisation. The average investment in the 2012-16 period was c.14% lower (in nominal terms) than the average investment over the 1999-2008 period.^{81 82} However, this analysis combines two different datasets from alternative sources.

As of 2018, quality and service remained high.⁸³ Leakage remains low at 3%, which is below the national average.⁸⁴

Other observations

Following re-municipalisation, despite the ownership change, in 2014 several academics commented that a coherent and genuinely alternative model for BWB was yet to emerge at that time in terms of how the company is to be run and what its objectives are besides providing safe water supply and sanitation. Specifically this includes its aims for water long term infrastructure investment and whether it will continue to be profit focused.⁸⁵ These sources argued that since re-municipalisation, under-investment had continued at levels experienced while BWB was privatised and that this has faced criticism in public debate.⁸⁶

The CEO who had been brought in by the private owners originally was retained even after the re-municipalisation alongside the entire management team.⁸⁷

Conclusions

The creation of the Berliner Wassertisch (Berlin Water Table) and its launch of a popular referendum campaign for the population of Berlin appears to be a key driver of the re-municipalisation. The two key drivers of the call for a referendum were lack of transparency of the contract, and tariff increases between 2004 and 2006.

The rising prices were driven by the substantial investment requirements that emerged after the reunification of the city and other factors including the contractual model of guaranteeing a fixed level of return, as opposed to the UK model of incentive-based regulation. The price rises were also less than the city experienced in the preceding period before privatisation and, as a result of falling demand, tariffs remained affordable. Water tariffs in Berlin in 2008 were lower than the national average whilst wastewater tariffs were higher.

There are conflicting sources around the transparency of the private framework. Concerns were raised by Berlin Water Table as to the availability of the concession arrangement, which appears to be less transparent than the regulatory framework for England and Wales, with the contract not being publicly available. However, other sources of evidence highlight the comparative transparency of the public-private partnership model.

⁸⁰ Terhorst, P. (2014) 'Remunicipalisation in Berlin after the buy-back. "De-privatisation: buy-back"', [link](#).

⁸¹ Wik Consult (2009) '10 Years of Water Services Partnership in Berlin', [link](#).

⁸² Berliner Wasserbetriebe (2019) 'Overview of Key Performance Indicators', [link](#).

⁸³ CIRIEC International (2018) 'Water remunicipalisation in Berlin and Paris: Specific processes and common challenges', page 20, [link](#).

⁸⁴ Berliner Wasserbetriebe (2019) 'Stadt Land Fluss Zukunft', page 13, [link](#).

⁸⁵ Terhorst, P. (2014). Remunicipalisation in Berlin after the buy-back. "De-privatisation: buy-back" [link](#).

⁸⁶ Beveridge, R., Hüesker, F., Naumann, M. (2014) 'From post-politics to a politics of possibility? Unravelling the privatization of the Berlin Water Company'. *Geo-forum* 51:66-74, page 72.

⁸⁷ Schiffler, M, 2015, Water, Politics and Money, A reality check on privatisation, pp.114.



There is evidence that under the public-private partnership a range of benefits occurred, including that:

- ◆ The efficiency of the company had significantly improved;
- ◆ Investment levels exceeded contractual requirements and were above the national average when considered on the basis of the volume of water abstracted;
- ◆ The company's performance also exceeded the German national averages for water supply and sanitation safety, quality and sustainability;
- ◆ Pipe breakage rates also improved;
- ◆ Customer service levels and transparency had also improved;
- ◆ Levels of employee engagement and job satisfaction also improved;
- ◆ Returns made by private operators were not excessive when compared to suitable benchmarks; and
- ◆ Proceeds to the City state of Berlin from their ownership share were higher under the partnership than they were under public ownership.

Since re-municipalisation there has been some decrease in prices. However, this has largely been driven by the cartel office's reprimand and not as a result of the re-municipalisation.⁸⁸ There is some evidence that the price decreases have been partially enabled through reducing infrastructure investment.

The management team originally introduced by the private operator was retained under the public model following the remunicipalisation.

⁸⁸ CIREC (2018) 'Water remunicipalisation in Berlin and Paris: Specific processes and common challenges', page 7, [link](#).

4. Atlanta department of Watershed management



In 1999, the city of Atlanta awarded a 20-year municipal water system operation contract to United Water, a U.S subsidiary of Suez Lyonnaise.

The backdrop for the decision to privatize was in 1998 and 1999 when federal consent decrees were signed due to degradation of the Chattahoochee River and the frequent discharges of untreated sewage into the river resulting in fines under the Clean Water Act.⁸⁹

Since 2003, the operations of drinking and wastewater services have been managed by the Municipal Department of Watershed Management.⁹⁰

What drove the change in private sector participation?

Criticisms of United Water included the company issuing boil notices.⁹¹ However, a 2002 letter from the Georgia Department of Natural Resources to the mayor of Atlanta confirmed that the alerts were caused by events completely beyond United's control.⁹²

⁸⁹ Valdovinos, J. (2015) 'Transnational corporations in Water Governance. Veolia and Suez in Mexico and the United States (1993-2014)', [link](#).

⁹⁰ The Water Justice Project (2019) 'Atlanta', [link](#).

⁹¹ New York Times (2003) 'As Cities Move to Privatize Water, Atlanta Steps Back', [link](#).

⁹² Truth from the Tap (2015) 'The truth about private water in Atlanta, GA', [link](#).



United Water initially projected it could make operating savings of \$52.9 million in the first three years of operation, though the actual savings turned out to be \$29.4 million.

The principal factor contributing to the disparity between the projected and actual savings was, the fact that the city had begun to lower its operating costs for water services during the two years preceding the start of the contract, yet these lower operating costs had not been factored into the calculation of projected savings from private management of the water system.⁹³

Other performance issues included United Water's failure to collect unpaid bills. There were also numerous disagreements around which party was responsible for what. United Water's regional president stated that "The contract had a tremendous amount of grey. It was very subject to interpretation".⁹⁴

In 2003, the contract was subject to an "amicable dissolution". Neither the city nor the firm found the agreement to be realistic or workable.⁹⁵

What was the impact on costs and prices?

The average monthly bill has increased significantly since re-municipalisation.

Figure 17 – average monthly Atlanta residential water bill⁹⁶



As of 2011, Atlanta had the highest water rates of any major U.S. city. Furthermore, inconsistent and incorrect billings have even led to a class-action lawsuit against the city.^{97 98}

What was the impact on service levels?

A city audit found that the city loses as much as 30% of the water produced. Water losses had increased 17% from 6.9 billion gallons in 2013 to 8.1 billion gallons in 2015. The Department of Watershed Management's consultant recommended an active leak detection strategy in 2014. However, as of 2017, the department had yet to implement the recommendation.⁹⁹

The audit suggested that the high water loss in the city may be attributed to nearly \$2 billion being spent on repairs to the city's dysfunctional sewer system since 2003, possibly at the expense of maintaining the water supply system.¹⁰⁰

⁹³ Bloomfield, P., and Ahern, F.D. (2010) 'Long-term Infrastructure Partnerships: Contracting Risks and Recommendations', [link](#).

⁹⁴ Solomon, L.D. (2017) 'America's Water and Wastewater Crisis: The Role of Private Enterprise'.

⁹⁵ Solomon, L.D. (2017) 'America's Water and Wastewater Crisis: The Role of Private Enterprise'.

⁹⁶ KPMG (2009) 'City of Atlanta – Department of Watershed Management: Performance review', [link](#).

⁹⁷ Truth from the Tap (2015) 'The truth about private water in Atlanta, GA', [link](#).

⁹⁸ AJC (2014) 'Suit alleges city illegally charged water customers', [link](#).

⁹⁹ City of Atlanta: City Auditor's Office (2017) 'Performance Audit: Department of Watershed Management: Efforts to Reduce Water Loss', [link](#).

¹⁰⁰ AJC (2018) 'Atlanta water outage linked to systemwide leaks', [link](#).

Boil notices have continued to be used. For example, in December 2018, the City of Atlanta issued a large boil notice, there were also water outages in parts of the city, and low pressure for many other customers.¹⁰¹ A smaller scale boil notice was issued in March 2019.¹⁰²

Other observations

As per the National Association of Water Company's report, the water system United Water inherited in 1999 was in much greater disrepair than the city had disclosed. In the contract with United Water, the city estimated that 1,171 water meters per year would require repairs. By contrast, in the first year of the contract, 11,108 meters broke. United repaired more than 36,000 meters between 1999 and 2002, 889 percent more meters than the city included in the contract.¹⁰³

Conclusions

The private contract was short-lived, only lasting for four years. In this time the private operator reduced costs (although not as much as forecast), and significantly stepped up the number of repairs due to assets being in a worse condition than the city had disclosed.

It was taken back into state control largely in response to the company issuing boil notices, which appear to have been outside the company's control, and have continued post-re-municipalisation.

Since re-municipalisation, monthly bills have significantly increased leading to Atlanta having the highest water rates of any major U.S. city. Boil notices have continued to be used. Inconsistent and incorrect billings have even led to a class-action lawsuit against the city. Leakage levels have also significantly increased, potentially as a result of under investment.

¹⁰¹ AJC (2018) 'Atlanta lifts boil water advisory; schools to resume normal operations', [link](#)

¹⁰² City of Atlanta Department of Watershed Management (2019) 'News Release: Boil Water Advisory Still in Effect for South Fulton County Residents and Businesses', [link](#)

¹⁰³ Truth from the Tap (2015) 'The truth about private water in Atlanta, GA', [link](#)



5. Budapest waterworks



In 1996 the Municipality of Budapest published an international tendering process as a result of which in 1997 they concluded a public private partnership contract with two professional investors, the French SUEZ Lyonnaise des Eaux and the German RWE to operate the water utility of the City. ¹⁰⁴ ¹⁰⁵

Suez and RWE had a combined stake of 25%.¹⁰⁶ The management rights were purchased for 25 years for \$91 million.¹⁰⁷

At the end of May 2012, the Budapest City Assembly approved the purchase of the minority stake of the Waterworks of Budapest, as well as the termination of the Syndicate and Management Agreement concluded in 1997, ending the contract before its legal termination date in 2022.¹⁰⁸

What drove the change in private sector participation?

According to a paper published by Budapest Waterworks' International Business Development Director, the mechanism of the contract did not regulate well the continuous revision of the provisions of the agreement. The lack of proper contract management was one of the underlying reasons for the change.

¹⁰⁴ Bencze, T., and Mindak, E. (2016) 'Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Budapest Waterworks', *Water Practice and Technology*, 11 (1): 58-65.

¹⁰⁵ The Water Justice Project (2019) 'Budapest', [link](#)

¹⁰⁶ Budapest Waterworks (2012) 'Annual report', [link](#)

¹⁰⁷ Bencze, T., and Mindak, E. (2016) 'Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Budapest Waterworks', *Water Practice and Technology*, 11 (1): 58-65.

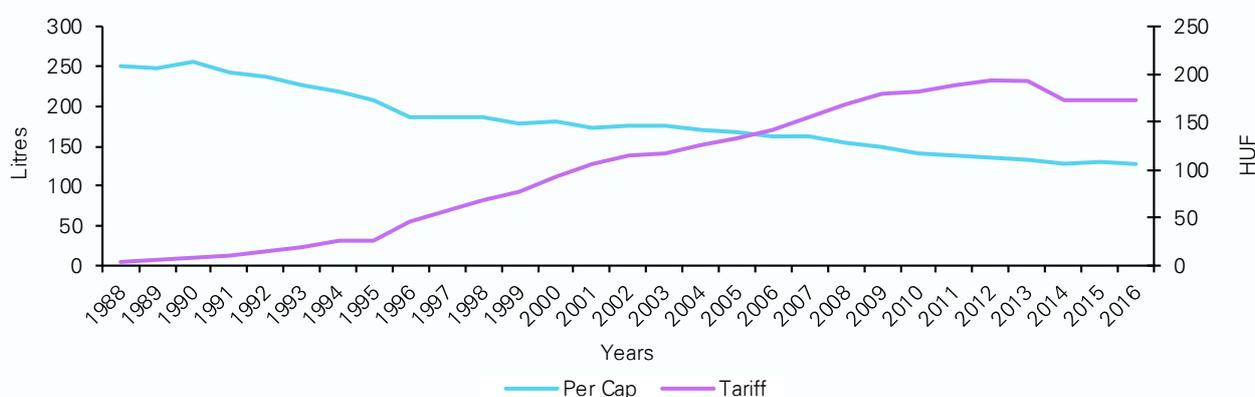
¹⁰⁸ The Water Justice Project (2019) 'Budapest', [link](#)

Another one of the main reasons of the early termination of the contract was that the duration of the contract proved to be too long. The added value of the investors drastically decreased after 15 years. However, the return on investment on the investors' side was calculated for the complete duration of the contract, which caused continuous tension between the city management and the operators.¹⁰⁹

What was the impact on costs and prices?

Tariffs significantly increased in the 1990s, and then saw more modest increases in the 2000s and 2010s. Following re-municipalisation, there was an initial decrease in tariffs, with prices being fixed for three years afterwards.

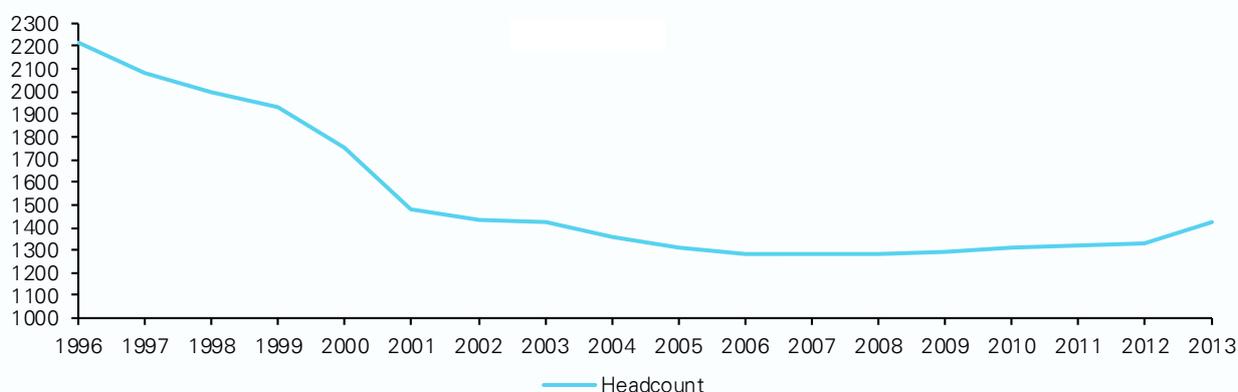
Figure 18 – water consumption and average tariffs – Budapest¹¹⁰



According to one study, the Municipality of Budapest over-valued the assets to maximise revenues, with the new PPP to recover the investment through the higher water tariffs.¹¹¹ Overall, between 1993 and 2010, municipalities in Hungary significantly reduced the level of subsidy (63% to 45%) to services, instead relying more on chargeable revenues (24% to 41%).¹¹²

Headcount significantly decreased (c.40%) under the PPP, and started to increase following re-municipalisation (although the increase in costs may be due to an increase in the company's operating area).

Figure 19 – Headcount figures for Budapest waterworks¹¹³



¹⁰⁹ Bencze, T., and Mindak, E. (2016) 'Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Budapest Waterworks', *Water Practice and Technology*, 11 (1): 58-65.

¹¹⁰ Budapest Waterworks (2017) 'Is water affordable? ...in Budapest', [link](#).

¹¹¹ Hegedüs, J., and Papp, M. (2007) 'Impact of decentralization on public service provision', [link](#).

¹¹² József, H., and Gábor, P. (2015) 'Közszolgáltatási reformok és a helyi önkormányzatiság', *Szociológiai Szemle* 25(2): 90-119.

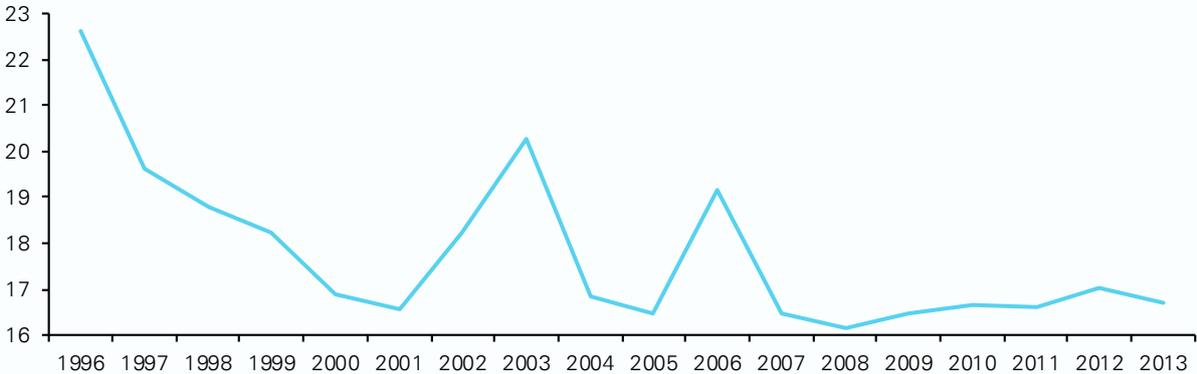
¹¹³ Bencze, T., and Mindak, E. (2016) 'Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Budapest Waterworks', *Water Practice and Technology*, 11 (1): 58-65.



What was the impact on service levels?

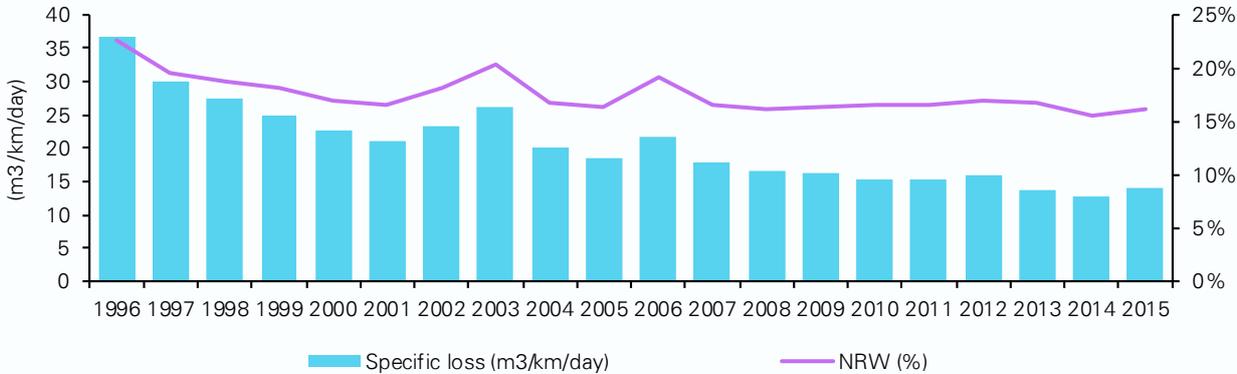
With some significant fluctuations, non-revenue water (including water losses) reduced from 22.5% to less than 17% under the PPP.

Figure 20 – Budapest Waterworks non-revenue water (% water losses) ¹¹⁴



Leakage has stayed broadly constant since re-municipalisation. ¹¹⁵

Figure 21 – Budapest Waterworks non-revenue water (water losses), longer trend ¹¹⁶



Other observations

Unlike some of the other case studies, the Budapest Waterworks contract had an incentive-based performance remuneration scheme. ¹¹⁷ This may, to some extent explain the significant reductions in leakage and headcount.

Conclusions

The PPP arrangement was successful at driving down leakage, and reducing overall headcount. However, bills rose significantly, in part due to the municipality intentionally structuring the contract in a manner that would increase revenues.

Since re-municipalisation, service levels have stayed broadly constant, and there was an initial decrease in price.

¹¹⁴ Bencze, T., and Mindak, E. (2016) 'Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Budapest Waterworks', *Water Practice and Technology*, 11 (1): 58-65.

¹¹⁵ Budapest Waterworks (2016) 'Evolution of loss management in Budapest', [link](#).

¹¹⁶ Budapest Waterworks (2016) 'Evolution of loss management in Budapest', [link](#).

¹¹⁷ Bencze, T., and Mindak, E. (2016) 'Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Budapest Waterworks', *Water Practice and Technology*, 11 (1): 58-65.

Annex 1 Summary of other water sector case studies

The below examples were not expanded into full case studies due to the limited amount of publicly available information. A summary of each example is provided below.

Hamilton, Canada

In December 1994, the Regional Municipality of Hamilton-Wentworth signed a 10-year, \$180 million contract with Philip Utilities Management Corporation (PUMC). The contract transferred responsibility for the operation, management and maintenance of the Region's water and sewage system to PUMC.¹¹⁸

The contract covered operation of the main water-treatment plant, three communal well systems, three sewage-treatment plants, six sewage-storage tanks and a number of reservoirs and pumping stations. In 1999, Azurix purchased PUMC. Two years later PUMC was bought by American Water Services and later by German multinational RWE/Thames.¹¹⁹

The contract included a provision that capped the company's responsibility for facility maintenance at \$10,000 per year. Many felt that this allowed the company to delay maintenance work at water and wastewater facilities until the costs exceeded the \$10,000 limit.

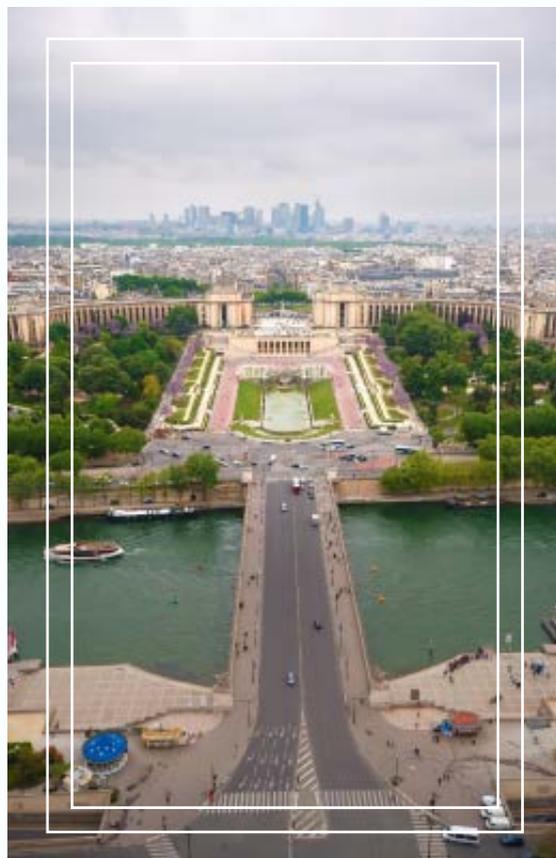
In April 1996 the workforce significantly reduced. Over the following years, staff downsizing became such a major issue the local International Union of Operating Engineers went on strike in 1999, to protest further layoffs.

There were a number of pollution incidents. Due to the structuring of the contract, PUMC avoided liability with the city bearing the costs. Technically, PUMC was in charge of the plants, reservoirs and pumping stations, but not of the pipes network. It therefore optimised its costs by pumping faster in non-peak hours, when electricity was cheaper, to fill the reservoirs. The problem is that by doing so PUMC increased pressure in the pipes, causing bursts.

In 2004, the city sought to re-tender the contract. The request for proposals included a stringent set of requirements that ultimately led to none of the bidders having a qualifying bid.

In September 2004, the city council voted to take back the operation and maintenance of the city's water and wastewater treatment plants.¹²⁰

Since re-municipalisation, headcount at Hamilton Water significantly increased from 182 in 2004 to 302 in 2017 – an increase of around two thirds.



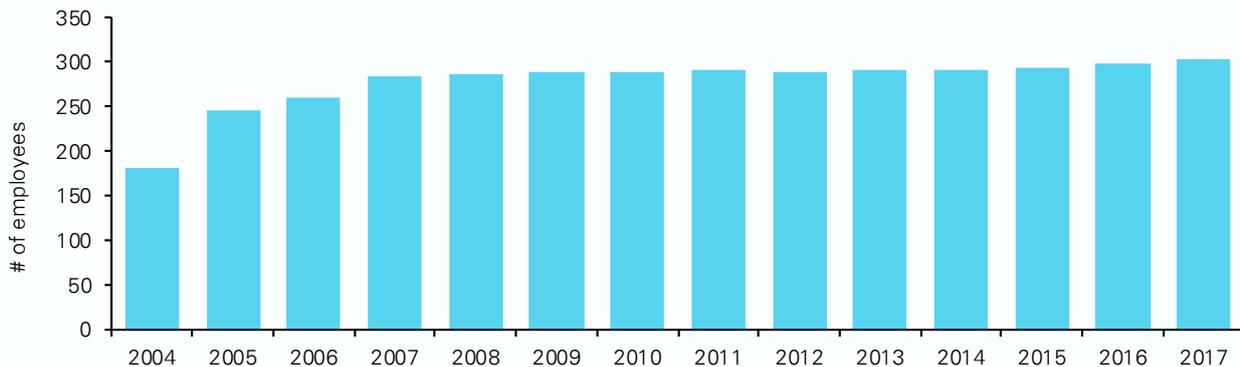
¹¹⁸ Transnational Institute (2019) 'The Water Remunicipalisation Tracker', [link](#).

¹¹⁹ Ohemeng, F.L.K. (2009) 'Has the Bubble Finally Burst? An Examination of the Failure of Privatization of Water Services Delivery in Atlanta (U.S.A) and Hamilton (Canada)', [link](#).

¹²⁰ Pigeon, M., et al. (2012), 'Remunicipalisation: putting water back into public hands', page 27, [link](#).



Figure 22 – number of employees¹²¹



Between 2008 and 2017, Hamilton saw above inflation water rate increases, an average of 2.7% p.a. real (4.8% nominal).¹²²

Features similar to main case studies:

The issues arising under the private concession primarily arose from specific contractual terms.

The private sector involvement was not entirely unsuccessful, indeed, the city sought to re-tender the contract once the initial contract had expired.

Seville, Spain

In 1994, municipalities in the province of Seville realised that the water supply situation was unsustainable. There was a lack of sustainable and safe drinking water sources; irrigation channels and wells were contaminated. They decided to pool their resources to undertake a large scale profile, with nearly 155 miles of supply network. They invited bids for a 25-year build-operate contract.^{123 124}

During the period 1994 to 2001, there were large overruns on costs (c.25%), as well as increase in tariffs. This led to a joint venture being formed in 2001 between the private companies and the consortium of municipalities, with the consortium directly participating in the management of the company. Disputes arose between the consortium and the private companies. In 2007, the private companies sold their shares to the consortium.¹²⁵

Features similar to main case studies:

While there were specific issues with delivery, and tariff rises, this was in the context of the companies undertaking a major investment programme that fundamentally changed water services in the region.

Prior to private sector involvement, the municipalities had not addressed major issues related to having sustainable and safe drinking water sources.

Naples, Italy

In 1991, the municipal enterprise society called AMAN (Azienda Municipalizzata Acquedotto di Napoli), was substituted by ARIN (Azienda Risorse Idriche di Napoli, enterprise of hydric resources of Naples). The underlying idea was to pave the way for a privatisation of water's management. This idea was progressively implemented via a series of modifications in the end of 1990s.¹²⁶ In 2001, ARIN becomes a

¹²¹ Hamilton Water (2018) '2018 Recommended Water, Wastewater & Stormwater Rate Supported Budget', [link](#).

¹²² City of Hamilton Corporate Services Department (2016) '2017 Recommended Water, Wastewater and Stormwater Budget', [link](#).

¹²³ Transnational Institute (2019) 'Remunicipalisation in the water sector: an unstoppable wave', [link](#).

¹²⁴ Aguas del Huesna (2019) 'History of the company', [link](#).

¹²⁵ Transnational Institute (2019) 'The Water Remunicipalisation Tracker', [link](#).

¹²⁶ Hannachi, M. et al. (2017) '(Re) – creating the commons: the social construction of new commons', [link](#).

joint-stock company, with the Municipality of Naples as the only shareholder. Stocks are for sale and enterprises such as Veolia become shareholders.

Political activists lobbied against privatised water companies. In 2011, there was a nation-wide referendum on profit of water services. Specifically, whether the law should include a provision for water tariffs to provide adequate remuneration for invested capital.¹²⁷ The public vote was conclusively against the legislation having such a provision.

Following the referendum, the municipal corporation of Naples, by majority, approved the transformation of the joint-stock company ARIN spa, a limited corporation completely owned by the municipality of Naples to a special enterprise called ABC Napoli (Acqua Bene Comune, water as a common good). The public entity has a not-for-profit orientation and its legal status does not allow for private ownership.¹²⁸

Nice, France

In 2013, the city of Nice decided to re-municipalise the water supply system which had been under fully private control since 1864.

The publicly-owned company “Eau d’Azur” was established in 2013, and was providing for Nice’s neighbouring communities a year later. The coastal towns of Beaulieu, Cap d’Ail, Eze and Villefranche joined the company in September 2014. The existing public companies were incorporated in 2015, which meant that approximately 80% of the metropolitan population (33 of Nice’s 49 municipalities) is now provided for publicly.¹²⁹

As of 2016, there were 16 towns in Nice’s metropolitan area whose private management contracts had not expired.¹³⁰

Since re-municipalisation, investment levels have significantly increased. In order to cover investment costs, it was decided to leave overall revenue at its current level while introducing a progressive pricing system. The price of water in Nice dropped for primary and secondary consumption bands but increased for large water consumers.¹³¹

¹²⁷ Department for Internal and Territorial Affairs (2011) ‘Elections and Referendum’, [link](#).

¹²⁸ Landriani, L., et al. (2019) ‘Decorporatization of a municipal water utility: A case study from Italy’, *Utilities Policy*, (57): 43-47.

¹²⁹ Getzner, M., et al. (2018) ‘Comparison of European Water Supply and Sanitation Systems’, [link](#).

¹³⁰ Transnational Institute (2015) ‘Nice: building a public water company after 150 years of private management’, [link](#).

¹³¹ Transnational Institute (2019) ‘Nice’, [link](#).

