PC21 Draft Determination NI Water Response

Annex 4.1 - Labour Related SCF (Economic Insight)

Version 1.0

PC21 Labour-related SCFs

Report for Utility Regulator

CONTENTS

1. Summary

This report sets out our recommendations for the labour-related Special Cost Factors (SCFs) that should apply to Northern Ireland (NI) Water for the next regulatory period, PC21. In summary, **we find Capital Maintenance RPA adjustments of -£2.8m for water and -£4.1m for wastewater and Opex Regional Wage adjustments of -£1.6m for water and -£1.4m for wastewater.** This compares to the UR finding Capital Maintenance RPA SCFs of -£3.5m for water and -£5.0m for wastewater, and Opex Regional Wage SCFs of -£3.7m for water and -£3.2m for wastewater. Our SCFs support an efficiency gap to the UQ of -7.3% for capex and -5.2% for opex. Our analysis is based on estimates of a 0.93 labour RPA and 33% labour share of opex. We consider that the labour RPA should be calculated with respect to the UQ firms in the efficiency benchmarking and that there are not strong grounds for assuming a different input mix to NI Water's actual mix.

The table overleaf compares the results presented by the UR at Draft Determination and our findings. As can be seen, our SCFs support efficiency gaps of -7.3% for capex and -5.2% for opex, compared to CEPA's findings of -8.9% and -7.8% for capex and opex respectively.

Table 1: Summary of UR and EI results

		UR DD	EI
Underlying estimates	**Labour RPA**	0.88	0.93
	Labour share of opex	47%	33%
Labour-related SCFs	**Capital Maintenance RPA**	Water: -£3.5m Wastewater: -£5.0m	Water: -£2.8m Wastewater: -£4.1m
	Opex Regional Wage	Water: -£3.7m Wastewater: -£3.2m	Water: -£1.6m Wastewater: -£1.4m
Efficiency gap to the UQ	**Capex**	-8.9%	-7.3%
	Opex	-7.8%	-5.2%

Source: Economic Insight

Below, we discuss the SCFs presented in NI Water's Business Plan, before discussing the UR's results and our results in more detail.

1.1   NI Water Business Plan

The table below summarises the Opex Regional Wage SCF adjustments put forward in NI Water's Business Plan. As can be seen, the adjustments range between -£3.4m and -£1.9m.

Table 2: NI Water BP Opex Regional Wage SCFs (£m)

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Opex Regional Wage SCF	-2.1	-3.0	-3.4	-1.9	-2.3	-2.8

Source: 'PC21 Appendix – Operating Cost Efficiency.' Table 5.2.4; p.4

The key estimates underlying these figures are as follows.

- **Labour RPA – 0.92.**[1] This implies that wages for a typical water company operating in Northern Ireland are around 8% lower than those of a typical water company operating in England and Wales. This figure is based on full-time employee wages and an economy-wide occupational mix and excludes Scotland and London from the comparisons.

- **Labour share of opex – 34%.**[2] This figure was estimated based on the proportion of NI Water's opex costs accounted for by total labour costs.

---

[1]   *'PC21 Business Plan.' Table 6.5.4; p.132.*
[2]   *'Annex L – PC21 Efficiency Modelling.' P.36.*

1.2   UR Draft Determination

The table below summarises the labour-related SCF adjustments presented by the UR at Draft Determinations. They find Capital Maintenance RPA SCF adjustments of -£3.5m for water and -£5.0m for wastewater, and Opex Regional Wage adjustments of -£3.7m and -£3.2m for water and wastewater respectively.

Table 3: UR labour-related SCFs (£m), average 2014-2019

	Water	Wastewater
Capital Maintenance RPA SCF	-3.5	-5.0
Opex Regional Wage SCF	-3.7	-3.2

Source: 'Eff_Score_Summary_CEPASCFs_UQ_stc.' SCFs tab

The estimated efficiency gaps to the UQ resulting from these SCFs are -8.9% for capex and -7.8% for opex.

The key underlying estimates for these SCFs are described below.

- **Labour RPA – 0.88**.[3] This figure implies that wages for a typical water company operating in Northern Ireland are around 12% lower than those of a typical water company operating in the UK. This is estimated based on: (i) 'all employee' wage data; (ii) occupational mix based on a typical water company; and (iii) comparing Northern Ireland to the rest of the UK.

- **Labour share of opex – 47%**.[4] The UR assumed an input mix based on a representative Ofwat regulated company, with a downward adjustment to labour's share of opex to account for lower wages in Northern Ireland.

To estimate the Capital Maintenance RPA SCFs, the labour RPA is first combined with the plant and equipment and materials RPAs to estimate the aggregate RPA, before multiplying the latter by the modelled water and wastewater capital maintenance costs. To estimate the Opex Regional Wage SCFs, the labour RPA and the assumed labour share of opex are multiplied by the modelled water and wastewater opex costs.

1.3   EI analysis

1.3.1   Headline results

The table overleaf sets out our proposed labour-related SCF adjustments. Our analysis supports Capital Maintenance RPA SCFs of -£2.8m for water and -£4.1m for wastewater, and Opex Regional Wage SCFs of -£1.6m for water and -£1.4m for wastewater.   These are based on estimates of a **0.93 labour RPA** and **33% labour share of opex**.

---

[3]   *'Annex J – PC21 RPA.' P.13.*
[4]   *'Annex L – PC21 Efficiency Modelling.' P.36.*

Table 4: EI labour-related SCFs (£m), average 2014-2019

	Water	Wastewater
Capital Maintenance RPA SCF	-2.8	-4.1
Opex Regional Wage SCF	-1.6	-1.4

Source: Economic Insight analysis

These SCFs imply efficiency gaps of -7.3% for capex and -5.2% for opex. Our analysis is based on the following estimates: (i) 0.93 labour RPA; and (ii) 33% labour share of opex. We detail the reasons for these estimates in turn below.

1.3.2   Labour RPA

There are two differences in our approach to estimating the labour RPA compared to that of the UR and CEPA. These are described below.

Full-time employees vs all employees

By selecting the 'all employee' ASHE dataset, CEPA implicitly assume that NI Water's share of full-time employees is 72%.[5] In doing so, CEPA place too much emphasis on part-time employees and assume that NI Water has the same mix of full-time and part-time staff as the population as a whole. In practice, however, almost all staff at NI Water are full-time employees, averaging 97% between 2017 and 2020.

The available data on part-time employee wages is incomplete, and so a weighted average approach to reflect NI Water's actual employee split would be less robust. Given this and the very high proportion of full-time staff at NI Water, we consider 100% full-time employees to be the best approximation of NI Water's employee mix. Therefore, our analysis is based on the full-time employee dataset only.

Comparison to the UQ firms vs the rest of the UK

CEPA estimate the labour RPA by comparing wages in Northern Ireland to wages in the rest of the UK. However, this is not consistent with the efficiency benchmarking process. Through the latter, NI Water is compared to the Upper Quartile (UQ) firm, which implies that the allowed labour cost level is also based on the labour costs of the benchmark firm.[6]

For this reason, wages in Northern Ireland should be compared to wages in the regions in which the UQ firms are based, rather than wages in the rest of the UK. Since the UQ firm varies across the efficiency benchmarking models[7], we estimate a weighted average labour RPA, based on the number of times firms operating in a

---

[5]   *This figure is based on 19,144 thousand 'full-time employee' jobs, 7,561 thousand 'part-time employee' jobs and 29,704 'all employee' jobs in the UK in the 2019 ASHE datasets.*
[6]   *NI Water's total allowed costs are based on those of the UQ firm:*
      'NIW allowed costs' = 'NIW allowed labour costs' + 'NIW allowed other costs'
      'UQ firm costs' = 'UQ firm labour costs' + 'UQ firm other costs'
      'NIW allowed costs' = 'UQ firm costs'
      As such, NI Water's allowed labour costs are also equal to those of the UQ firm:
      'NIW allowed labour costs' + 'NIW allowed other costs' = 'UQ firm labour costs' + 'UQ firm other costs'
      'NIW allowed labour costs' = 'UQ firm labour costs'
[7]   *The UQ firms are as follows: SVT; YKY; NES; SSC; and ANH.*

particular region achieve the UQ position.[8] As such, **our proposed labour RPA estimate is 0.93**, which is equal to the weighted average labour RPA of the UQ firm regions.

1.3.3   Labour share of opex

The UR's analysis uses an input mix based on a representative Ofwat regulated company, with a downward adjustment of 3% to take into account lower labour costs in Northern Ireland.[9] We disagree with this approach for the following reasons.

- **The UR's rationale for adjusting labour's proportion down by 3% is not clear**. It appears that that the UR has simply maintained this assumption from PC15, without updating it for more recent data.

- **There is a lack of evidence that NI Water's input mix is inefficient.** Regarding the use of a representative Ofwat regulated company, efficiency modelling indicates that NI Water is close to the efficiency frontier, achieving the UQ firm position in the water opex Model 1, for example. This does not suggest that NI Water's lower share of labour costs is inefficient.

As such, we consider that a more consistent approach is to take NI Water's share of labour costs as the starting point and adjust this for the RPA set out above. We find that NI Water's actual adjusted labour costs[10] account for an average of 31% of total opex costs, over the past five years. To estimate labour's share of opex, we divide this proportion by the 0.93 labour RPA, yielding an **estimate of 33%**.

In the remainder of this report, we first discuss the UR's methodology for estimating the labour-related SCFs, as well as set out our proposed approach. We then present the revised Capital Maintenance RPA and Opex Regional Wage SCF adjustments, based on our approach, and the resulting efficiency gaps to the UQ.

---

[8]   *The weights used for the weighted average RPA are as follows: (i) 40% East Midlands; (ii) 30% West Midlands; (iii) 10% Yorkshire; (iv) 10% North East; and (v) 10% East.*
[9]   *'Annex K – Opex and Capex Frontier Shift.' P.5.*
[10]   *We make adjustments to remove sludge- and retail-related labour costs, as well as atypical costs, such as voluntary early retirement and voluntary severance costs.*

2. Methodology

In this section, we discuss CEPA's approach to estimating the labour-related SCFs, as well as set out our proposed approach. In relation to the labour RPA, we disagree with CEPA's use of the all-employee ASHE dataset and comparison of NI to the rest of the UK. We consider that using full-time employees presents a more accurate labour RPA, and that this should be calculated with respect to the UQ firms in the efficiency benchmarking. We also disagree with the assumption that 47% represents an efficient labour share of opex for NI Water, given the lack of clear evidence that NI Water's current mix is inefficient.

2.1 Introduction

Econometric efficiency modelling uses information on water companies in England and Wales to benchmark NI Water's efficiency. Without adjustments, this could result in NI Water being over-funded if the benchmark companies in England and Wales face higher labour costs than NI Water. There are two labour-related Special Cost Factors (SCFs)[11] to adjust for this wage differential. These are as follows:

- **Capital Maintenance RPA SCF**. This adjustment accounts for the regional price differences in capital maintenance expenditure between NI Water and water companies operating in England and Wales. Capex costs are assumed to comprise of 40% labour, 20% plant and equipment, and 40% materials. Individual RPAs are estimated for each of these resources, as well as an aggregated RPA.

- **Opex Regional Wage SCF**. This factor adjusts for NI Water operating in a region with lower wages than water companies in England and Wales.

We note that water companies in England and Wales do not automatically receive any labour-related adjustments, even if they operate in a low wage region.

There are two key estimates underlying these adjustments: (i) the labour RPA; and (ii) the labour share of opex. To estimate the Capital Maintenance RPA SCFs, the labour

---

11   There is also an Opex Electricity Price SCF to account for higher power prices in Northern Ireland, which we do not consider in this note as it is not labour-related.

RPA is combined with the plant and equipment and materials RPAs to estimate the aggregate RPA, before multiplying the latter by the modelled water and wastewater capital maintenance costs. To estimate the Opex Regional Wage SCFs, the labour RPA and the assumed labour share of opex are multiplied by the modelled water and wastewater opex costs.

In the rest of this section, we discuss CEPA's methodology for assessing the labour RPA and labour share of opex assumptions in turn, as well as set out our proposed approach.

2.2   Labour RPA

2.2.1   CEPA's approach

CEPA's data source for assessing the labour RPA is the Annual Survey of Household Earning (ASHE), which is published annually by the Office for National Statistics (ONS) and the Northern Ireland Statistics and Research Agency (NISRA).[12] In conducting their estimation, they make a number of choices regarding this data. Below, we discuss two of their assumptions in turn.

All employee dataset

In estimating the labour RPA, CEPA opted for 'all employee' wages, as opposed to 'full-time' or 'part-time' wages. CEPA justify this choice on the basis that "*companies employ a mix of full-time and part-time staff*".[13] By selecting the 'all employee' ASHE dataset, CEPA implicitly assume that full-time employees account for 72% of labour.[14] In doing so, CEPA place too much emphasis on part-time employees and assume that NI Water has the same mix of full-time and part-time staff as the population as a whole.

In practice, however, almost all staff at NI Water are full-time employees. The figure overleaf presents the proportion of full-time and part-time employees at NI Water between 2017/18 and 2020/21.[15] As can be seen, the proportion of full-time employees is very high, averaging 97% over four years, and has remained relatively stable over time.
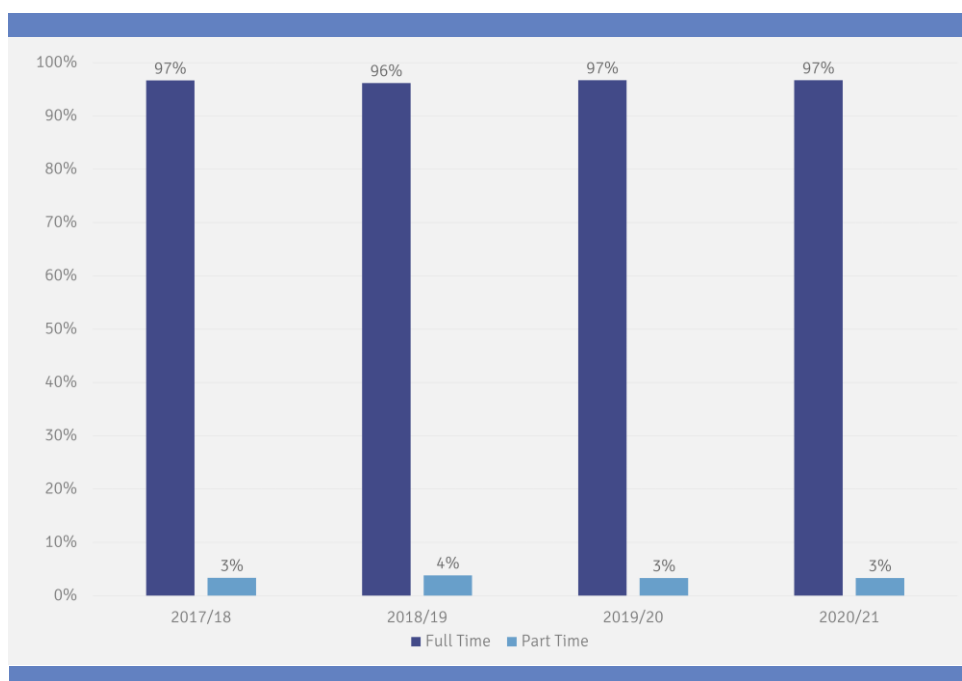
---

12   *'Annex J: Regional Price Adjustments PC21.'* P.11.
13   *'Annex J: Regional Price Adjustments PC21.'* P.12.
14   *This figure is based on 19,144 thousand 'full-time employee' jobs, 7,561 thousand 'part-time employee' jobs and 29,704 'all employee' jobs in the UK in the 2019 ASHE datasets.*
15   *Earlier data is not available.*

Figure 1: Full-time and part-time staff at NI Water – head equivalent

Source: Economic Insight analysis of data provided by NI Water

When selecting the 'all employee' data, CEPA argue in favour of more specific weights to reflect NI Water's actual full-time and part-time employee mix, but do not take the above proportions into consideration.   As such, **we disagree with CEPA's use of 'all employee' data**.

Comparison to the rest of the UK

CEPA estimate the labour RPA by comparing wages in Northern Ireland to the rest of the UK. However, this is not consistent with the efficiency benchmarking process. Through this process, NI Water is compared to the Upper Quartile (UQ) firm, which implies that the allowed labour cost level is also based on the labour costs of the benchmark firm.[16] The UQ firm varies across the efficiency models, resulting in a total of five UQ companies, excluding NI Water.[17]

Given the above, wages in Northern Ireland should be compared to wages in the regions in which the five UQ firms are based, rather than wages in the rest of the UK. The figure overleaf compares wages in Northern Ireland to wages in the regions of the UQ firms, in 2019.[18] The wages presented are based on an employee mix of a typical water company, with 20% skilled labour and 80% general labour. The figure shows that wages in Northern Ireland are closest to those in the East Midlands and have the biggest difference with wages in the East of England.

---

[16]   *NI Water's total allowed costs are based on those of the UQ firm: 'NIW allowed costs' = 'NIW allowed labour costs' + 'NIW allowed other costs' 'UQ firm costs' = 'UQ firm labour costs' + 'UQ firm other costs' 'NIW allowed costs' = 'UQ firm costs' As such, NI Water's allowed labour costs are also equal to those of the UQ firm: 'NIW allowed labour costs' + 'NIW allowed other costs' = 'UQ firm labour costs' + 'UQ firm other costs' 'NIW allowed labour costs' = 'UQ firm labour costs'*

[17]   *The UQ firms are as follows: SVT; YKY; NES; SSC; and ANH.*

[18]   *Where a firm is based in more than one region, we take the top two regions in which the firm operates.*

Figure 2: Wages compared to the UQ regions - full-time employees, 2019
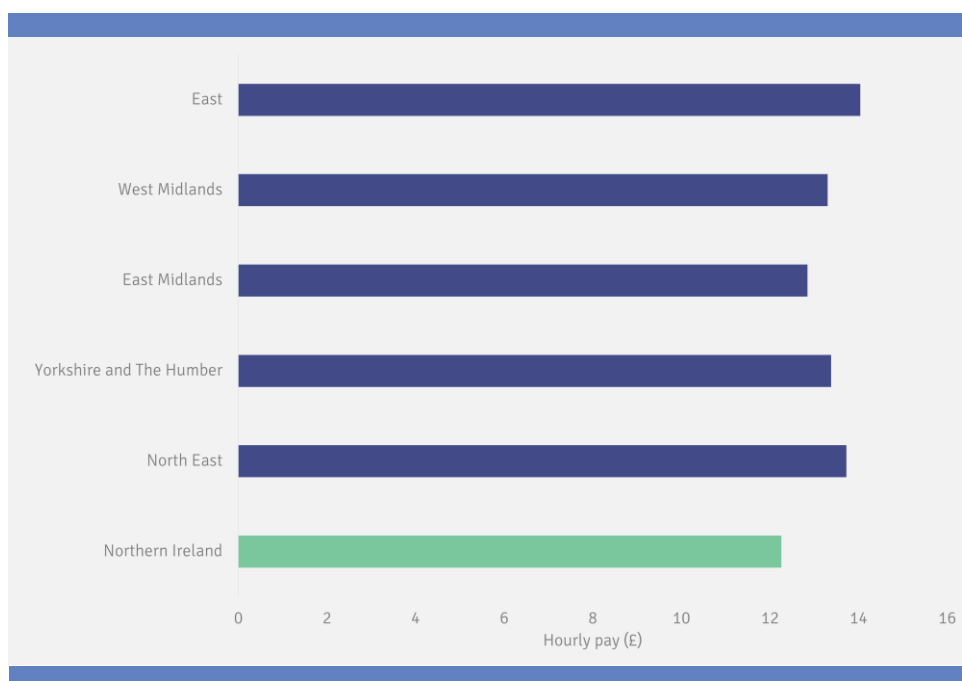
Source: Economic Insight analysis of ASHE data

The figure overleaf presents the labour RPA of NI Water compared to the regions of the UQ firms.[19] Since the UQ firm varies across the efficiency benchmarking models, we estimate a weighted average labour RPA, based on the number of times firms operating in a particular region achieve the UQ position.[20] As shown, the labour RPA ranges between 0.87 and 0.95, with a weighted average RPA of 0.93.

---

[19]   *These have been calculated by dividing wages in Northern Ireland by wages in the UQ region.*
[20]   *The weights used for the weighted average RPA are as follows: (i) 40% East Midlands; (ii) 30% West Midlands; (iii) 10% Yorkshire; (iv) 10% North East; and (v) 10% East.*

Figure 3: Labour RPA compared to the UQ regions - 2019
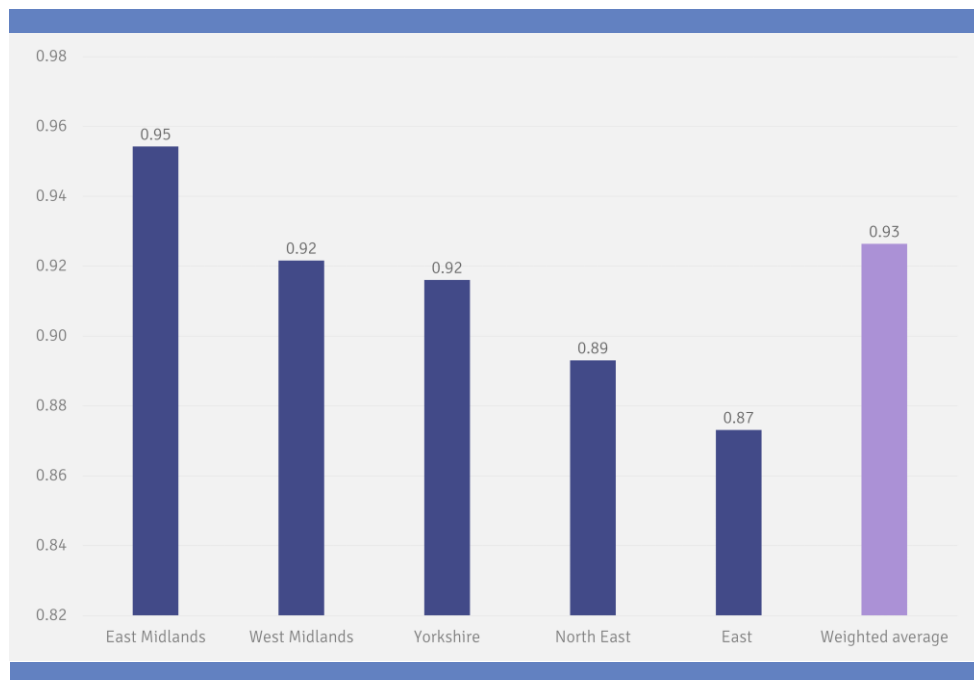
Source: Economic Insight analysis of ASHE data

For the above reasons, **we also disagree with CEPA's comparison of NI Water's labour costs to those in the rest of the UK as a whole**.

2.2.2 Our proposed approach

Our approach to estimating the labour RPA differs to that of CEPA as follows:

- **Full-time employees only.** The part-time employee dataset is incomplete, and so a weighted average approach to reflect NI Water's actual mix of staff would be less robust. Given this and the very high proportion of full-time staff at NI Water, we think 100% full-time employees is a better approximation of NI Water's employee mix than the 72% implicitly assumed by CEPA. Therefore, our analysis is based on the full-time employee dataset only.

- **Comparison to the UQ firms.** For the reasons set out above, we compare NI Water to the UQ firms when calculating the labour RPA. In particular, our proposed labour RPA is equal to the weighted average labour RPA of the UQ firm regions.

2.3 Labour share of opex

2.3.1 CEPA's approach

To estimate the regional wage SCF, CEPA combined the wage differential with an assessment of the proportion of opex costs attributable to labour costs. In doing so, CEPA assume that labour costs account for 47% of opex.

CEPA state that this assumption "*has been provided […] by the UR to ensure consistency with the notional input mix used within their frontier shift analysis*".[21] The UR's frontier analysis uses an input mix based on a representative Ofwat regulated company, with a downward adjustment of 3% to take into account lower labour costs in NI.[22] We disagree with this approach for the following reasons.

- **The UR's rationale for adjusting labour's proportion down by 3% is not clear**. It appears that the UR has simply maintained this assumption from PC15, without updating it for more recent data.

- **There is a lack of evidence that NI Water's input mix is inefficient**. Regarding the use of a representative Ofwat regulated company, efficiency modelling indicates that NI Water is close to the efficiency frontier, achieving the UQ firm position in the water opex Model 1, for example. This does not suggest that NI Water's lower share of labour costs is inefficient.

CEPA also estimate that NI Water's labour costs account for 53% of water and wastewater opex costs.[23] This figure was obtained by making assumptions about labour's share of different operating cost categories. However, in doing so, CEPA overestimate labour's share of expenditure in a number of categories. For example, they assume that 100% of 'hired and contracted services' relate to labour costs, whereas NI Water estimate that only 70% of these costs are labour-related. Correcting for CEPA's overestimations yields estimates that 39% of water opex costs and 42% of wastewater opex costs are labour-related.

As such, **we disagree with CEPA's assumption that 47% of opex is attributable to labour costs, as well as their approach to estimating NI Water's share of labour costs**.

2.3.2   Our proposed approach

Our approach to estimating the labour share of opex differs to that of CEPA as follows:

- **NI Water's input mix.** Given that there is no evidence NI Water's share of labour costs is inefficient, we consider the best approach is to take NI Water's share of labour costs as the starting point and adjust this to account for cheaper labour costs in Northern Ireland. As such, our approach departs from NI Water's input mix, and adjusts upwards using the labour RPA.

- **Actual labour costs**. We consider that actual labour costs provide a more accurate representation of NI Water's share of labour costs, rather than making assumptions about their share of different opex categories. Therefore, our analysis is based on NI Water's actual labour costs.

[21]   '*Annex L – PC21 Efficiency Modelling.*' P.36.
[22]   '*Annex K – Opex and Capex Frontier Shift.*' P.5.
[23]   '*UR_PC21_SCF*'; RWA_water and RWA_sewerage tabs.

3. Results

In this section, we present the revised SCF adjustments and efficiency gaps to the UQ, based on our proposed approach. We find Capital Maintenance RPA SCFs of -£2.8m for water and -£4.1m for wastewater and Opex Regional Wage SCFs of -£1.6 for water and -£1.8m for wastewater, which yield an estimated efficiency gap to the UQ of -7.3% for capex and -5.2% for opex. These are based on underlying estimates of a 0.93 labour RPA and 33% labour share of opex.

3.1   Underlying estimates

In this section, we outline our proposed labour RPA and labour share of opex estimates.

3.1.1   Labour RPA

Our proposed labour RPA estimate is 0.93, which is equal to the weighted average labour RPA of the UQ firm regions. This is compared to 0.88 put forward by CEPA and 0.92 put forward by NI Water.

In line with CEPA, our analysis is based on the most recent ASHE data (2019). To ensure that the labour RPA has not varied materially over time, we compare the 2019 labour RPA to that in previous years in the table below. As shown, the wage differential has remained stable over the past 5 years. In particular, the five-year average is equal to our proposed RPA of 0.93, and so we are confident that using the 2019 figure does not affect the results.

Table 5: Historical labour RPA

	2015	2016	2017	2018	2019	5-year average
Labour RPA	0.93	0.93	0.92	0.93	0.93	0.93

Source: Economic Insight analysis of ASHE data

Our analysis considers full-time employees only. To ensure that this has not impacted the resulting wage differential, we conducted a sensitivity test by weighting the full-time employee data and available part-time employee data according to the proportions provided by NI Water. The resulting RPA estimate is equal to 0.93, based on: (i) 0.93 full-time labour RPA, with a weighting of 97%; and (ii) 1.06 part-time labour RPA[24], with a weighting of 3%. The sensitivity test estimate is equal to our proposed labour RPA, and so we are confident that the results are not skewed by using full-time employees only.

Finally, we also estimated model-specific weighted average labour RPAs. This was based on the number of times firms operating in a particular region achieve the UQ position within each of the efficiency model types, rather than across all model types. For example, if a different firm achieves the UQ position in the two wastewater opex models, the region(s) they respectively operate in will get a weighting of 50% for this efficiency model type. This is presented in the table below. As can be seen, the weighted average labour RPA ranges between 0.92 and 0.94, in line with our proposed labour RPA.

Table 6: Weighted average labour RPA by efficiency model type - 2019

	Water Models		Wastewater Models	
	Opex	Capital maintenance	Opex	Capital maintenance
Labour RPA	0.92	0.93	0.94	0.93

Source: Economic Insight analysis of ASHE data
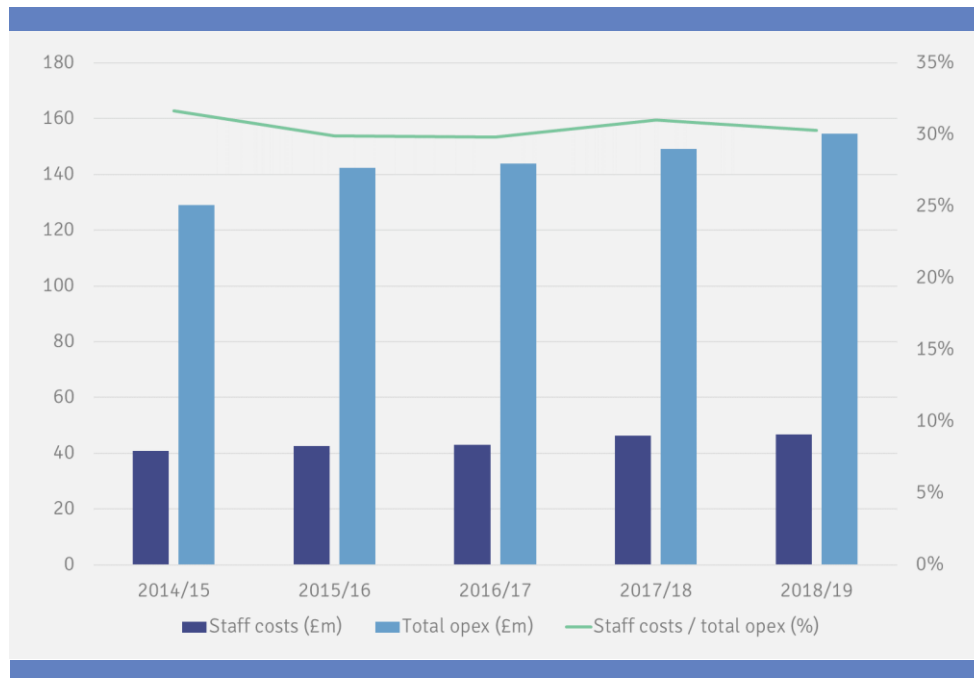
3.1.2   Labour share of opex

Our proposed labour share of opex estimate is 33%. This is compared to CEPA's estimate of 47% and NI Water's estimate of 34%.

The figure overleaf presents NI Water's actual adjusted labour costs[25] and total opex costs over the past five years, as well as the proportion of opex costs accounted for by these costs. The figure shows that labour costs account for an average of 31% of total opex costs.

Figure 4: NI Water's adjusted labour and total opex costs

Source: Economic Insight analysis of data provided by NI Water

Our labour share of opex assumption departs from this input mix, and adjusts upwards to account for cheaper labour costs in Northern Ireland. Therefore, dividing the 31% labour share by the 0.93 labour RPA yields an estimate of 33%.

3.2 Capital maintenance

In this section, we present the revised Capital Maintenance RPA SCF adjustments and resulting efficiency gap to the UQ.

3.2.1 Capital Maintenance RPA SCFs

Combining our labour RPA estimate with the plant and materials RPAs estimated by CEPA, we find an aggregate RPA of 0.93 for water and 0.92 for wastewater. These are then multiplied by the modelled water and wastewater capital maintenance costs to estimate the SCF adjustments. The table below presents the resulting Capital Maintenance RPA SCF adjustments. In particular, we find that:

» **The water Capital Maintenance RPA adjustment ranges from -£3.0m to -£2.5m.**
» **The wastewater Capital Maintenance RPA adjustment ranges from -£4.6m to -£3.1m.**

Table 7: Capital Maintenance RPA SCF adjustment (£m)

SCF	2014	2015	2016	2017	2018	2019
Water	-2.9	-3.0	-2.5	-3.0	-2.6	-2.6
Wastewater	-4.6	-3.1	-4.1	-4.4	-4.0	-4.2

Source: Economic Insight analysis

The figure below compares the average Capital Maintenance RPA SCFs proposed by CEPA with our estimates. As can be seen, our estimates suggest a -£4.1m adjustment for wastewater and a –£2.8m adjustment for water, whereas the CEPA estimates suggest adjustments of –£5.0m and –£3.5m for wastewater and water respectively.

Figure 5: Average Capital Maintenance RPA SCF – 2014 to 2019 (£m)
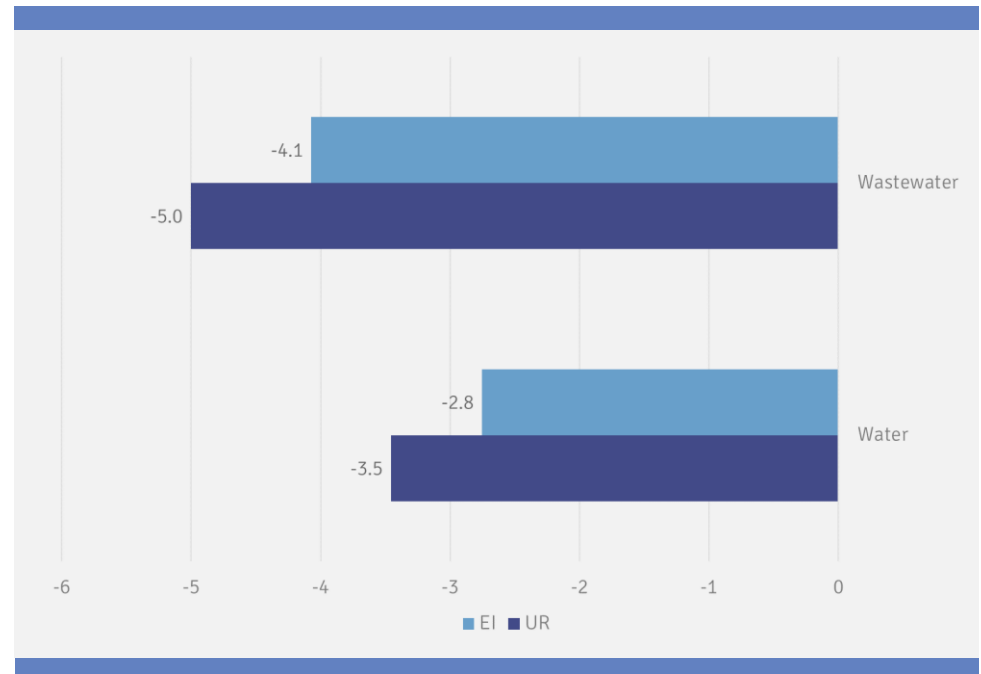
Source: Economic Insight analysis

3.2.2   Capex efficiency gap

Based on the above Capital Maintenance RPA SCFs of -£2.8m for water and -£4.1m for wastewater, we find an estimated efficiency gap to the upper quartile of -7.3%. The figure overleaf compares this estimate to the -8.9% put forward by CEPA.

Figure 6: Efficiency gap to the UQ – capex
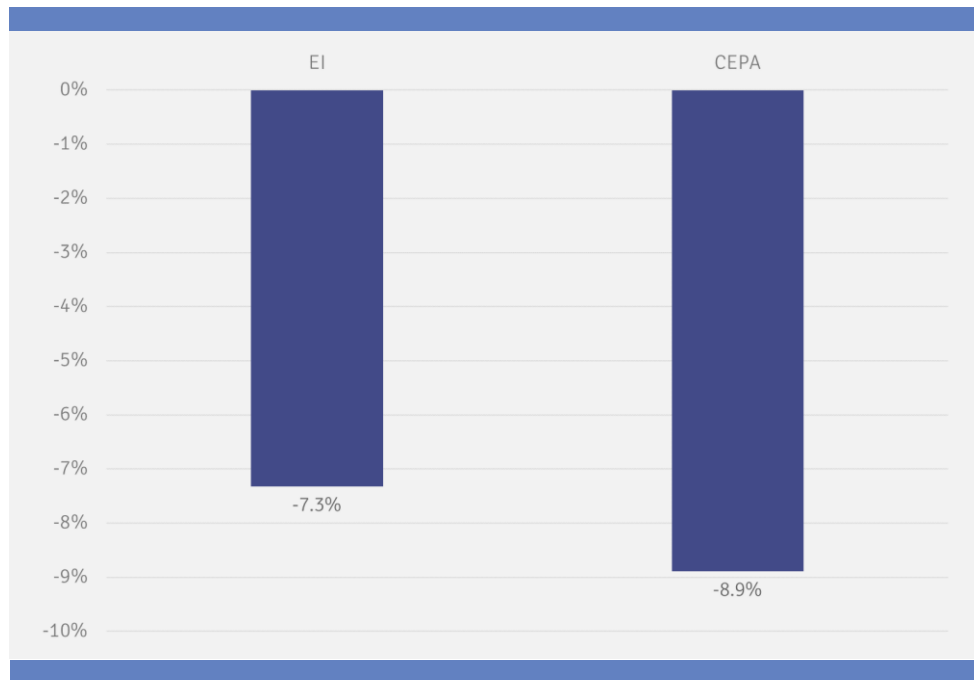
Source: Economic Insight analysis

3.3   Opex

In this section, we present the resulting Opex Regional Wage SCF adjustments, and the revised opex efficiency gap.

3.3.1   Opex Regional Wage SCFs

To estimate the Opex Regional Wage SCF adjustments, we multiply the 0.93 labour RPA and the 33% labour share of opex estimates by the modelled water and wastewater opex costs. The table below presents our proposed Opex Regional Wage SCF adjustments. We find that:

» **The water Opex Regional Wage adjustment ranges from -£1.7m to -£1.5m.**
» **The wastewater Opex Regional Wage adjustment ranges from -£1.5m to -£1.3m.**

Table 8: Opex Regional Wage SCF adjustment (£m)

SCF	2014	2015	2016	2017	2018	2019
Water	-1.6	-1.6	-1.5	-1.6	-1.7	-1.7
Wastewater	-1.5	-1.4	-1.4	-1.4	-1.3	-1.3

Source: Economic Insight analysis

The figure overleaf compares the average our Opex Regional Wage SCFs to those put forward by CEPA. As can be seen, our estimates suggest adjustments of -£1.4m for wastewater and –£1.6m for water, whereas the CEPA estimates suggests adjustments of –£3.2m and –£3.7m for wastewater and water respectively.

Figure 7: Average Opex Regional Wage SCF – 2014 to 2019 (£m)
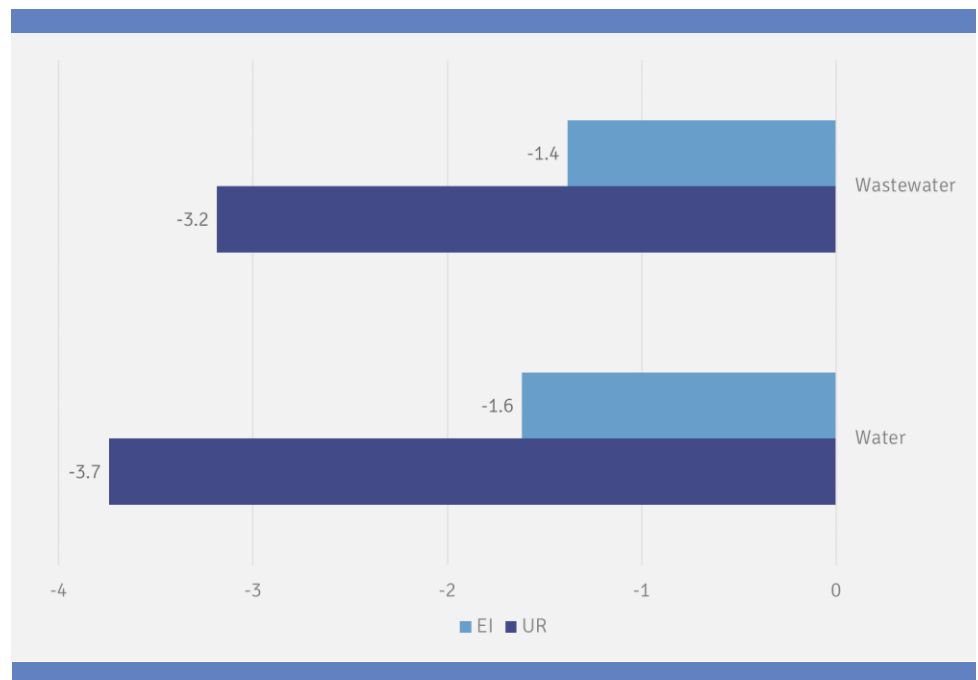
Source: Economic Insight analysis

3.3.2   Opex efficiency gap

Based on Opex Regional Wage SCFs of -£1.6m for water and -£1.4m for wastewater, as well as CEPA's Opex Electricity Price SCFs, we estimate the efficiency gap to the UQ to be -5.2% for opex. The figure below presents our estimate alongside that of CEPA.

Figure 8: Efficiency gap to the UQ – opex
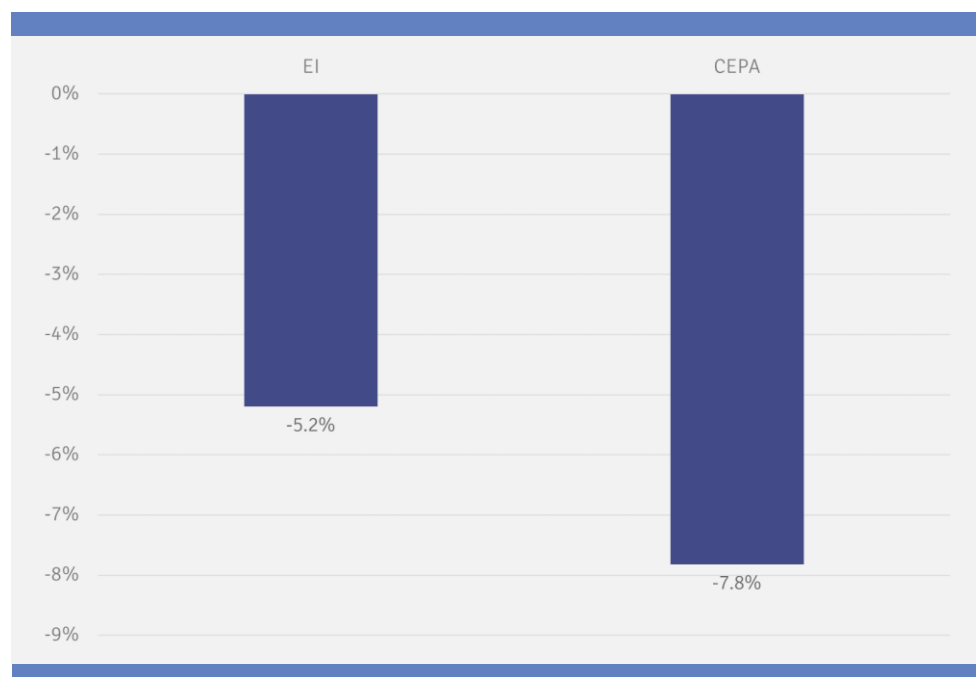
Source: Economic Insight analysis

WE MAKE ECONOMICS RELEVANT

Economic Insight Limited

125 Old Broad Street
London
EC2N 1AR
0207 100 3746
www.economic-insight.com