

Water & Sewerage Services Price Control 2015-21

Final Determination – Annex B
Sources of Revenue
December 2014



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1.0 Sources of Revenue for PC15

1.1. Key customer base assumptions

- 1.1.1 The price limits that the Utility Regulator sets for NI Water must balance the revenue that NI Water requires, with the revenue it collects from charges and subsidy. This means that, as well as calculating the level of revenue to allow for; we need to forecast the number, mix and type of customers that NI Water will be providing services to throughout the PC15 period.

1.2. Analysis of NI Water customer base assumptions

- 1.2.1 Within its PC15 business plan submission NI Water stated that historically, it has been too optimistic in its customer data assumptions. For example in the PC10 period the number of new connections and measured volumes declined significantly from the PC10 business plan projections due to the economic downturn. In relation to PC13, NI Water resubmitted customer data projections to the Utility Regulator in September 2012 as measured consumption volumes continued to decline post the May 2012 Business Plan submission. Given this background, NI Water concluded that it would be prudent to make conservative forecasts for the PC15 period. For PC15 NI Water stated that it reviewed relevant evidence to ensure customer data projections for PC15 were realistic and took account of all relevant factors and economic indicators. This review had three strands i.e.
- Review of internal historic trend data;
 - Review of external source forecast material; and
 - Feedback of non-domestic customers' future intentions.
- 1.2.2 NI Water stated that its review found that while each indicator of historic data shows a downward trend and the general feedback from key non-domestic customers shows no plans for significant changes, external source materials are pointing to a slow, fragile economic recovery with only marginal population growth, but continuing constraints on disposable income and the probability of further cuts in public sector spending.
- 1.2.3 For the PC15 period NI Water has therefore assumed that in its view the slow and fragile growth in some sectors of the economy will arrest the downward trend in new water and sewerage connections. However, NI Water has stated that it does not consider that general economic growth and the limited projected population growth is sufficient to reverse downward trends in consumption. Consequently, NI Water had forecast 0% growth for both measured water and sewerage volumes in its original business plan submission. Subsequently in its re-submission of customer data of 21st November NI Water increased it's of non-domestic consumption to take account of the recurrent element of some retrospective billing.

The domestic customer base

- 1.2.4 We have utilised billed domestic (equivalents) for customer numbers since this information is required to calculate the subsidy (paid by the NI Executive) on behalf of domestic customers.

Growth

- 1.2.5 In proposing price limits, we make assumptions about the customer base we expect NI Water to serve. We make separate estimates for domestic and non-domestic customers. In making projections, we take account of historical trend changes in the customer base and NI Water's projections of growth in its investment plan. We also compare NI Water's forecasts with historical data and forecasts in Great Britain. When making comparisons with historical data in Great Britain we made comparisons over both a 10-year period i.e. 2003-04 to 2012-13 and 5-year period i.e. from 2008-09 to 2012-13 in order to ascertain the impact of the recent economic downturn. Information from Great Britain for the 2013-14 year was not available in time to inform the PC15 final determination.

Volumes of water consumed and wastewater discharged by customers

- 1.2.6 The volume attributable to each customer group generally takes account the impact of:
- Customer supply pipe leakage;
 - Meter under-registration (for all customer groups, including domestic unmeasured consumption which is based on per capita consumption meters); and
 - An apportionment of leakage, by way of industry standard Maximum Likelihood Estimation (MLE).
- 1.2.7 We have based the allocation of volumes and revenue between the customer groups on NI Water's PC15 re-submission of customer data of 21st November together with three modifications i.e.
- i. An increase in revenue attributable to sewerage customers which is mainly due to the inclusion in the final determination of the increase in rates that NI Water may have to pay for sewerage related assets in the PC15 period. This increase was not included in the draft determination and therefore not reflected in the allocation of revenue between customer groups at that time.
 - ii. A decrease in forecast Meter Under Registration (MUR) for measured non domestic water and sewerage customers. NI Water submission had a value of 8.33% for Meter Under Registration across the PC15 period. We have profiled an even reduction in this figure to 5.47% in 2020-21 as we consider that the NI Water non domestic metering replacement programme in the PC15 period will provide for more accurate meter reads. This has the impact of reducing Meter Under Registration (MUR) and therefore increasing chargeable volume.

- iii. Removal of Maximum Likelihood Estimation (MLE) from consumption calculations as we consider that the extent that this figure is likely be above or below zero to diminish over the PC15 period.

1.2.8 The NI Water submission of 21st November included a lower domestic Per Capita Consumption (PCC) figure based on AIR 14 figure of 133.38 l/h/d and a re-profiling of average unmeasured non domestic consumption of 176.6 m³/pa in 2014-15 to 186.3 m³/pa in 2020-21. We have accepted these adjustments.

Projections of domestic premises

1.2.9 Since NI Water does not have direct billing records for domestic customers, information on customer numbers is derived from secondary data sources, which limits confidence in these data. Table 1.1 shows NI Water's PC15 business plan submission on domestic number equivalents that we have utilised for domestic water and domestic wastewater revenue purposes.

Table 1.1 - NI Water PC15 business plan data – projection of domestic equivalents

Year	Water		Wastewater	
	Number of billed domestic equivalents	Percentage change in billed domestic equivalents	Number of billed domestic equivalents	Percentage change in billed domestic equivalents
2012-13	681,095	-	586,128	-
2013-14	688,320	1.1%	591,337	0.9%
2014-15	693,336	0.7%	595,501	0.7%
2015-16	697,171	0.5%	598,683	0.5%
2016-17	701,004	0.5%	601,865	0.5%
2017-18	704,838	0.5%	605,047	0.5%
2018-19	708,673	0.5%	608,229	0.5%
2019-20	712,506	0.5%	611,411	0.5%
2020-21	716,340	0.5%	614,594	0.5%

1.2.10 NI Water's stated projections for PC15 at 0.5% p.a. growth is broadly consistent with the historic time series data for England and Wales companies which are at an average 0.6% p.a. over both a 10-year and 5-year period. In addition, NI Water's projections are consistent with the most recent statistics on Northern Ireland housing stock which show a growth of 0.5% for both 2012-13 and 2013-14.

1.2.11 We note that NI Water's choice of percentage used for the number of sewerage connections to be approx 86% of properties connected to water service for the PC15 period is consistent with the choice of percentage for the PC13 period. It is also consistent with the number of sewerage connections recorded in NI Water's AIR14 submission.

1.2.12 We note NI Water's key assumption for domestic revenue is that revenue will be based on capital values which will prevail for the period under analysis, with no significant revaluation of domestic property taking place. In the absence of domestic charging, the revenue will be subsidised by the NI Executive.

Projections of non-domestic premises

1.2.13 The non-domestic customer base is impacted by changes in the overall number of customers, as well as changes in the mix and type of services taken by these customers.

1.2.14 NI Water projected in its PC15 business plan submission that there would be the following main impacts on its non-domestic customer base after 2013-14. These are:

- Non-domestic customers are expected to reduce by 1.5% over the 2013-14 to 2020-21 period;
- New customers are in the main expected to be small businesses with very low water consumption;
- A 0% increase in base metered water consumption from existing customers in 2020-21 when compared to 2013-14 with a marginal increase in volume arising from the recurrent element of some retrospective billing; and
- Trade effluent discharge volumes are expected to increase only marginally in the PC15.

1.2.15 The Utility Regulator understands that NI Water has based its assumptions on forecasts of changes in the economy and how these impact on water consumption. We have adopted these assumptions in proposing price limits for the final determination.

1.2.16 These projections are summarised in Table 1.2. Our conclusions on these forecasts are shown below.

Water

1.2.17 NI Water's forecast of the number of connected premises in the PC15 period is based on the following assumptions:

- New connections of non-domestic properties with installed meters at a rate of 466 per year in the PC15 period, and;
- Installation of meters at existing properties previously without a meter, at a rate of 600 per year in 2015-16 and 2016-17, reducing to 500 in 2017-18 and reducing further to 400 per year in the period 2018-19 to 2020-21.

- 1.2.18 We consider that NI Water's assumptions on new connections are broadly reasonable and that NI Water's assumptions on total non-domestic numbers may be marginally optimistic when compared to historic growth figures in non-domestic numbers in England and Wales which show an average 0.5% p.a. decline in the period 2008-09 to 2012-13 and with historic external data (e.g. Office of National Statistics Business Demography) on business numbers in Northern Ireland.
- 1.2.19 We consider that NI Water's assumptions on volumes are broadly reasonable, given the recent economic climate though note that NI Water forecast of total water consumption over the PC15 period is more optimistic than historic time series data available for England and Wales and historic decrease of water consumption for NI Water both of which show an average decrease of 1.9% p.a. over the 2008-09 to 2012-13 period.

Foul sewerage

- 1.2.20 NI Water's forecast of the number of connected premises in the PC15 period is based on the following assumptions:
- New connections of non-domestic properties with installed meters at a rate of 387 per year in the PC15 period (i.e. 83% of that for new water connections); and,
 - Installation of meters at existing properties previously without a meter, at a rate of 498 per year in 2015-16 and 2016-17, reducing to 415 in 2017-18 and reducing further to 332 per year in the period 2018-19 to 2020-21 period (i.e. 83% of that for new water connections)
- 1.2.21 Our conclusions on NI Water's assumptions for water non-domestic numbers and volumes are equally applicable to NI Water's assumptions for sewerage numbers and volumes as we consider that these provide useful proxies for growth in sewerage connections and volumes discharged.

Roads drainage

- 1.2.22 We consider that NI Water's assumptions on Roads Drainage, annual run off volume of 64.2 million m³ is broadly reasonable. The key factors that influence this assumption are:
- Total surface area of roads, footpaths and car parks; and
 - Total volume of rain falling on these surfaces and hence the run-off from roads, footpaths and car parks discharged to NI Water sewers and storm drains.
- 1.2.23 However, during the PC15 period, we shall be reviewing the methodology supporting NI Water's determination of foul sewerage, surface water and roads drainage volumes which are reported in its regulatory submissions.

Trade effluent volumes

- 1.2.24 NI Water has forecast a marginal increase in total trade effluent volume in the PC15 period though the forecast trade effluent volume in 2020-21 is lower than that forecast for 2014-15. NI Water has explained that the forecast trade effluent volume for 2014-15 includes retrospective billing of two large trade effluent customers. The forecast increase in trade effluent volume is due to the forecast increase in the number trade effluent consents which NI Water considers could be billable in the PC15 period.

Trade effluent consents

- 1.2.25 Within the business plan submission, NI Water has predicted that the net movement in the number of trade effluent customers will be an additional 136 customers at the end of the PC15 period versus the position in 2014-15.
- 1.2.26 It is not possible to undertake robust benchmarking of NI Water assumptions on trade effluent consents or volumes as information on trade effluent volumes for English and Welsh water and sewerage companies has not been readily available since 2012-13. We note that water and sewerage companies in England and Wales had on average been experiencing declining trade effluent volumes in the last 10 year period to 2011-12.

Table 1.2 - Projections of non-domestic customer base

Year	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Water							
Number of connected premises (metered)	69,275	69,541	69,907	70,173	70,439	70,705	71,071
Volume (MI)	31,613	30,278	30,504	30,717	30,928	31,145	31,383
Number of connected premises (unmeasured)	9,650	9,075	8,475	7,925	7,475	7,075	6,675
Foul sewerage							
Number of connected premises (metered)	23,160	23,380	23,683	23,903	24,123	24,343	24,646
Volume (MI)	12,544	12,259	12,370	12,469	12,567	12,667	12,783
Number of connected premises (unmeasured)	8,190	7,713	7,215	6,758	6,385	6,052	5,720
Roads drainage							
Roads drainage Volume (million cubic metres per annum)	64.20	64.20	64.20	64.20	64.20	64.20	64.20
Trade effluent (excluding large users)							
Number of connected premises	440	474	508	542	576	576	576
Volume (MI)	3,628	3,447	3,467	3,488	3,508	3,508	3,508

Conclusions on key customer base assumptions

- 1.2.27 We expect some movement in customer numbers and volumes to continue into the future (including the PC15 period), as NI Water continues to test and cleanse its data and receives more direct feedback from customers and operational activities.
- 1.2.28 NI Water has advised the Utility Regulator that it is reviewing its methodology for allocating costs and that this will include a review of the allocation of costs and flows for the calculation of trade effluent. It is possible that this review may mean that costs have to be reallocated between customer groups. The Utility Regulator intends to review NI Water's conclusions on its allocation of costs in the PC15 period.
- 1.2.29 The Utility Regulator has accepted NI Water's forecasts of customer numbers and volumes for the PC15 period for the purposes of this final determination with the

exception of NI Water's assumption of Meter Under Registration (MUR) for measured non-domestic customers and Maximum Likelihood Estimation (MLE) for all customer groups. These assumptions on changes to NI Water's customer base are included in the proposed price limits. The assumptions on changes to NI Water non domestic customer base excludes revenue which NI Water may obtain from either assessed charges or meters currently categorised as test meters but which may later be clarified by NI Water as being billable. Currently revenue from these sources is trivial but we may take revenue from these sources into account at any mid-term review.

- 1.2.30 We considered that the most accurate customer data should be employed in calculating K-factors for 2015-2021, to ensure that the impact was as fair as possible to all customer groups.

1.3. Level of subsidy in PC15

Introduction

- 1.3.1 Our financial model allows us to forecast the required revenue from each customer group. We have assumed for the basis of this final determination that the current structure of charges will continue for the PC15 period. Based on the current structure of charges, and, where relevant the associated subsidy allocation, we have derived indicative forecast subsidy levels for the PC15 period.

The structure of charges in Northern Ireland

- 1.3.2 Charges (where applicable) to individual customers will vary according to the type of customer and the service they are receiving.
- 1.3.3 Customers are classified as:
- Water or wastewater;
 - Domestic (household) or non-domestic (non-household businesses, charities or public sector organisations);
 - Measured (metered), un-measured (un-metered); and
 - Trade effluent.

Domestic unmeasured water (notional)

- 1.3.4 The unmeasured domestic (household) notional charge is based on the Capital Value of each household property. This notional charge does not depend on consumption. Currently the unmeasured domestic (household) charge is paid via subsidy from DRD.

Domestic unmeasured wastewater (notional)

- 1.3.5 The unmeasured domestic (household) notional charge for wastewater is also based on the Capital Value of each household property. This notional charge includes the cost of treating surface water run-off from properties, but excludes drainage from public roads and footways etc. Currently, the unmeasured domestic (household) charge is paid via subsidy from DRD.

Domestic measured water (notional)

- 1.3.6 Currently no domestic customers pay for water services charges based on usage.

Domestic measured wastewater (notional)

- 1.3.7 Currently no domestic customers pay for wastewater services charges based on usage.

Non-domestic unmeasured water

- 1.3.8 Unmetered non-domestic customers are currently charged relative to the rateable value of their property. These customers pay separate charges, neither of which reflects their consumption of water: a minimum charge for access to the network and an additional charge that is a proportion of their rateable value. Currently, there is a 50% subsidy in place for non-domestic unmeasured water charges.

Non-domestic unmeasured wastewater

- 1.3.9 Charges for unmeasured non-domestic wastewater are also a function of the connected property's rateable value. Customers pay two separate charges: a minimum charge for accessing the network and a charge that is in proportion to their rateable value. Currently, there is a 50% subsidy in place for non-domestic unmeasured wastewater charges.

Non-domestic measured water

- 1.3.10 Measured non-domestic customers pay a standing charge, which depends on the size of their meter connection, and a volumetric charge based on how much water they consume. Currently, there is a domestic allowance subsidy in place for non-domestic measured water charges. The domestic allowance is 200m³ for those non-domestic measured water customers who pay full business rates. There are discounts on the volumetric rate for customers who use large volumes of water i.e. annual consumption of over 100,000m³. However, eligibility for the large user tariff depends on the consumption and on the commitment of the customer to water efficiency. This may include, but is not restricted to, the installation of water saving devices, recycling plants and a review of water efficiency by independent water experts.

Non-domestic measured wastewater

- 1.3.11 Non-domestic wastewater customers pay a standing charge based on the size of their water meter connection and a volumetric rate based on an assumption that 95% of their water consumption is returned to sewer. If a customer can demonstrate that less than 95% of water returns to sewer (for example, a company that uses water in its production processes) then they can apply to have the assumption of 95% reduced. Currently, there is a domestic allowance subsidy in place for non-domestic measured wastewater charges. The domestic allowance is 190m³ for those non-domestic measured wastewater customers which pay full business rates.
- 1.3.12 There are no discounts for customers who discharge large volumes of wastewater.
- 1.3.13 The cost of receiving and treating property surface water drainage for non-domestic measured wastewater is included in the tariff for measured wastewater.

Trade effluent

- 1.3.14 Charges for trade effluent are based on the Mogden formula. This formula assesses a charge for the treatment of a particular strength and volume of effluent, based on the costs of treating this wastewater.
- 1.3.15 Trade effluent customers pay a variable rate based on the actual volume and strength of the effluent discharged.
- 1.3.16 The Mogden formula is: $C = R + V + (O_t/O_s)B + (S_t/S_s)S$

Where:

C	is the unit charge in pence per cubic metre for the trade effluent discharge.
R	is the unit cost in pence per cubic metre of reception and conveyance of sewage.
V	is the unit cost in pence per cubic metre of the volumetric and primary treatment of sewage treated and disposed of in sewage treatment works.
O_t	is the chemical oxygen demand in mg/l of the trade effluent after 1 hour quiescent settlement.
O_s	is the chemical oxygen demand in mg/l of the settled sewage standard strength.
B	is the unit cost in pence per cubic metre of the biological oxidation treatment of settled sewage.
S_t	is the total suspended solids in mg/l of the trade effluent at pH 7.
S_s	is the total suspended solids in mg/l of crude sewage – standard strength.
S	is the unit cost in pence per cubic metre of treatment and disposal of primary sludge.

- 1.3.17 Price Limits for trade effluent set by the PC15 final determination set limits on the R, V, B and S elements of the Mogden formula. A Trade Effluent customer's actual bill will in addition to R, V, B and S be determined by other factors such the traders'

volume of trade effluent emitted as well as their actual Ot and St values and the standard strengths for Os and Ss. The Utility Regulator has agreed revised Os and Ss values for the PC15 period from that used in the draft determination with NI Water. This has the impact of reducing a trader's trade effluent bill versus the position in the draft determination.

Roads drainage

- 1.3.18 In Great Britain customers pay a proportion of their sewerage charges for the collection and treatment of surface water drainage (rainwater that falls onto properties, driveways and is channelled to the sewerage network) and highway drainage (run-off from roads and pavements). The cost of dealing with rainwater is complicated by the fact that some surface water in rural areas would be collected by separate drainage network and would be discharged directly to water-courses, whilst a proportion of urban drainage (within cities and towns) would normally be collected by the sewerage network and discharged to a sewage treatment works.
- 1.3.19 The cost of providing these facilities in Great Britain is paid for by sewerage customers. This is due to the fact that legislation in Great Britain does not permit any alternative method of cost recovery. In Northern Ireland, however, such legislation does not exist and, following the accepted recommendation of the Independent Water Review Panel, the costs of collecting and treating drainage from roads is to be recharged to DRD Roads Service and is financed through general taxation. This reduces the amount of revenue to be raised directly from NI Water's customers.
- 1.3.20 The cost of dealing with surface water is allocated across the sewerage customer groups (with the exception of trade effluent customers), in the same proportion as the relative volumes of wastewater produced. We have provided below in table 1.3 an 'indicative' forecast amount for Roads Drainage that may be recharged to DRD Roads Service in the PC15 period. The Utility Regulator intends to review NI Water's underlying assumptions used in the calculation of sewerage surface water drainage, roads drainage and trade effluent volumes during the PC15 period.

Table 1.3 – Indicative roads drainage recharge over PC15 (nominal prices)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Forecast roads drainage recharge (£m)	20.30	21.35	22.42	23.54	24.72	25.95

Domestic allowance for non-domestic customers (measured)

- 1.3.21 We have assumed for the purposes of the PC15 final determination that the domestic allowance for non-domestic (measured water and sewerage) will continue into PC15. The domestic allowance compensates non-domestic customers for domestic consumption, given that subsidy is being paid on behalf of domestic customers by the NI Executive.

Disposal of tankered waste

1.3.22 NI Water currently provides a discretionary service for the disposal of tankered waste. Each domestic customer is entitled to one free tank empty in a 12 month period. Subsequent requests for collection and treatment of sewage of a domestic nature (e.g. septic tanks, domestic treatment plants and cesspools), were subject to a charge. We understand that the current regime covering disposal of tankered waste will continue in the PC15 period.

Level of subsidy over PC15 (per revenue group)

1.3.23 Table 1.4 shows the indicative level of revenue from each revenue group together with the subsidy allocation for each group based on the current structure of charges.

Table 1.4 – Revenue groups for PC15 inclusive of subsidy allocation (nominal) (£m)

Revenue group	Forecast revenue over PC15 (£m)	Subsidy allocation
Domestic unmeasured water	766	Subsidy and contribution through rates
Domestic unmeasured sewerage	914	Subsidy and contribution through rates
Non-domestic measured water	247	domestic allowance subsidy
Non-domestic measured sewerage	162	domestic allowance subsidy
Non-domestic unmeasured water	12	50% subsidy
Non-domestic unmeasured sewerage	14	50% subsidy
Trade effluent (includes roads drainage costs of approximately £138m)	163	0% subsidy
Non-tariff basket revenue (includes large users)	63	0% subsidy
Total required revenue	2,342	
<i>Note: Figures may not add up due to rounding.</i>		

1.3.24 On average approximately 76% of the Revenue requirement over PC15, i.e. £1,774m is forecast to be paid through subsidy. The NI Water business plan forecast a subsidy level of £1,852m over the PC15 period. This final determination therefore provides a saving of £78m on the level of subsidy over the PC15 period.

1.3.25 Table 1.5 shows the sources of revenue over the PC15 period including revenue from subsidy, Roads Drainage re-charge to DRD Roads Service and revenue from charges (non-domestic).

Table 1.5 – Annual subsidy requirement in PC15 (nominal) (£m)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Overall total
Subsidy requirement	282	288	293	298	304	309	1,774
Roads drainage recharge	20	21	22	24	25	26	138
Revenue from charges	66	68	70	73	75	77	430
Total revenue	369	377	386	394	403	413	2,342

Conclusions on level of subsidy in PC15

1.3.26 We have used our financial model to provide an indicative forecast of the level of subsidy required over the PC15 period, based on the current structure of charges. This final determination provides a saving of £78m on the level of subsidy over the PC15 period.

1.4. Charge limits for PC15

Introduction

1.4.1 We have a legal duty to set the ‘adjustment factor’ for each year, generally referred to as the price limit or the K factor, to be applied over the Price Control period. The K factor is the percentage increase or decrease above or below inflation by which tariff basket price limits are allowed to rise or fall on an annual basis during the Price Control period.

1.4.2 We utilise price limits within the various tariff baskets to ensure that the correct revenue is raised from each customer group and also to assure ourselves that there is no cross-subsidy between the customer groups. In setting the price limits, we have sought to balance affordability with compliance and customer priorities.

‘K’ factors for PC15

1.4.3 We are committed to improving the transparency of the regulatory regime. As part of this commitment, we believe that it is vital that non-domestic customers can more readily understand the likely impact of the Price Control on their bills (or level of subsidy).

1.4.4 Tariff baskets are defined in Condition B of the licence to cover the regulated (core) services provided by NI Water. The use of tariff baskets helps to ensure that the process of unwinding any cross subsidies is as transparent as possible. In addition, we consider that tariff baskets allow (directly – paying) customers to see more clearly the likely impact of the Price Control 2015 on their bills. The use of ‘tariff baskets’ mirrors the price – setting process of other utility regulators in the UK, such as Ofgem, Ofwat and WICS.

- 1.4.5 A Price Limit regime establishes a clearer link between the Price Control and any direct bills that customers pay (currently non-domestic customers). We believe that setting price limits will allow non-domestic customers to understand the likely impact of any tariff changes on their bill for the relevant period.
- 1.4.6 The K factor is the percentage increase above inflation by which Tariff Basket price limits are allowed to rise on an annual basis during the Price Control period. For the purposes of this final determination we have assumed an inflation figure of 3.40% for each year of PC15. The final determination K factors are shown in table 1.6.

Table 1.6 – K factors for each tariff basket

Tariff Basket	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Unmeasured water supply	-3.5%	-3.5%	-3.5%	-3.6%	-3.6%	-3.6%
Unmeasured sewerage service	0.0%	-0.5%	-1.0%	-1.2%	-0.8%	-0.9%
Measured water supply	-1.1%	-1.1%	-1.1%	-1.1%	-1.1%	-1.1%
Measured sewerage service	-0.3%	-0.3%	-0.3%	-0.2%	-0.2%	-0.3%
Trade effluent	2.6%	1.8%	1.6%	1.6%	1.6%	1.6%
Overall Weighted Average K-Factor	-1.2%	-1.5%	-1.7%	-1.8%	-1.6%	-1.6%

PC15 Weighted Average Charge Increase (WACI)

- 1.4.7 NI Water is allowed to increase the weighted average charge for each of its tariff baskets by up to the K-factor plus inflation. This is the weighted average charge increase, or WACI. The WACI is therefore equal to the K-factor plus the reported Retail Price Index (RPI). The RPI figure is published by the Office for National Statistics on a monthly basis. The figure for the 12 months to November in the year prior to the year in question is used as the RPI figure for the WACI.
- 1.4.8 Individual tariffs may increase by more than K, but the WACI for each tariff basket must be equal to or below the figure determined for that tariff basket. If NI Water intends to increase one or more tariffs by greater than the relevant K-factor, we may ask for justification for such an increase.

WACI (Weighted Average Charge Increase) = K factor plus inflation (RPI)

- 1.4.9 For the purpose of this final determination we have assumed an inflation figure of 3.40% for each year of PC15.
- 1.4.10 Taking account of this inflation figure the weighted average charge increase for each year of PC15 is shown in Table 1.7.

Table 1.7 – PC15 Weighted Average Charge Increase (WACI)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Weighted Average Charge Increase (WACI)	2.2%	1.9%	1.7%	1.6%	1.8%	1.8%

Condition C: infrastructure charges

- 1.4.11 Under Licence Condition C we set infrastructure charge limits for connecting household premises to water and sewerage services for the first time. The infrastructure charge provides a contribution towards the cost of developing local networks to serve new consumers. NI Water can levy an infrastructure charge, as well as the direct costs of making new connections. We have determined a final infrastructure charge limit of £305 for 2015-16 (2014-15 prices).

1.5. Conclusion

- 1.5.1 In setting K factors for the PC15 period we have accepted NI Water's revised forecasts of customer numbers and volumes for the final determination. We did however amend two aspects of NI Water revised forecasts i.e. Meter Under Registration (MUR) for non-domestic measure customers and Maximum Likelihood Estimation (MLE) for all customer groups. The Utility Regulator acknowledges that forecast customer related data, in particular volumes is subject to a significant degree of uncertainty. We consider that NI Water forecasts of customer numbers and volumes for the PC15 period are prudent given the uncertain economic outlook at the time of writing of the PC15 final determination.
- 1.5.2 We are mindful of the current economic situation for business customers and have based our assessment of charges for all non-domestic consumers on a smoothed profile in the PC15 period to provide stability for these consumers.