

# RC4 Regulatory Framework

Regulatory Incentives and the  
Performance Assessment Framework  
for Uisce Éireann

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## Executive Summary

The Commission for the Regulation of Utilities (CRU) commissioned NERA to review and provide our views on Uisce Éireann's (UÉ) incentive arrangements for Revenue Control 4 (RC4), taking into account UÉ's proposal.

In this report we review incentive arrangements at RC3 and UÉ's RC4 incentive proposals. We also review incentive arrangements in England and Wales (E&W) and Northern Ireland. Based on our review, we provide two sets of recommendations: i) comments on UÉ's proposed incentive targets for RC4; and ii) potential additional incentive measures currently not within the Performance Assessment Framework (PAF).

Table 1 summarises UÉ's RC4 incentive proposals and our comments on these proposals.

**Table 1: Our View on UÉ's Proposed Incentives at RC4**

Service	Metric	RC3 Target (by 2024)	2020-2023 (Avg)	UÉ RC4 Proposal	NERA Recommendation
Extreme weather events	speed of telephone response, call abandonment rate, response to complaints, response to billing contacts and interruptions to supply	n.a.	n.a.	Exclusion of these events in calculation of performance	Do not remove extreme weather events, consistent with Ofwat - retaining the impact of extreme weather events incentivises companies to minimise the impact on customers of such event
Non-domestic billing	Bad Debt Efficient Billing Billing Correction	Bad debt: <5% of revenues for reward / >5% for penalty	Bad debt: c.12% of revenues (8% in 2023)	Roll-over from RC3 to RC4	Retain to maintain incentive for UÉ to actively pursue bad debt, ensure accuracy of bills and maximise number of properties billed  On bad debt, based on E&W retailer performance we consider that 5 per cent is a challenging yet achievable target, given UÉ's latest reported performance of c.8 per cent
Customer Service	% calls answered within 20 seconds	85%	76%-82% (80%)	80%	RC4 proposal in line with RC3 average, with limited improvement incentive Compares unfavourably with GNI (92%) and ESB (89%). Recommend 85% target as mid-point between RC3 average and peers
	% calls abandoned	<=4%	1.5%-4.4% (2.8%)	<=3%	RC4 proposal consistent with historical performance given clear downward trend in last 3 years (4.4%, 2.2% and 1.5% respectively). Recommend 2% consistent with more recent performance

<b>Service</b>	<b>Metric</b>	<b>RC3 Target (by 2024)</b>	<b>2020-2023 (Avg)</b>	<b>UÉ RC4 Proposal</b>	<b>NERA Recommendation</b>
	% billing line calls resolved on first call	90%	69%-86% (76%)	Remove	UÉ to change measure from “first call” to “first contact” to reflect wider platforms used
	% operation line calls resolved on first call	80%	70%-75% (72%)	Remove	UÉ to change measure from “first call” to “first contact” to reflect wider platforms used
	% of bills issued based on meter reading	70%	69%-78% (74%)	75% by 2029	Historical performance indicates higher target is achievable. Recommend 80% by end 2029
	% of metered accounts that receive at least one bill based on meter read	100%	81%-85% (83%)	95% by 2029	RC4 proposal seems reasonable in light of historical performance
	% of billing contacts closed out within 5 working days	95%	95%-97% (96%)	95%	Historical performance indicates higher target is achievable. Recommend 97%
	% complains responded within 5 working days (domestic)	100%	94%-100% (98%)	95%	Historical performance indicates higher target is achievable. Recommend 97%
	% complains responded within 5 working days (non-domestic)	100%	90%-100% (96%)	95%	Historical performance indicates higher target is achievable. Recommend 97%
	% complaints issued final decision within 2 months (domestic)	100%	96%-99% (97%)	95%	Historical performance indicates higher target is achievable. Recommend 97%
	% complaints issued final decision within 2 months (non-domestic)	100%	86%-98% (91%)	95%	RC4 proposal reasonable

Service	Metric	RC3 Target (by 2024)	2020-2023 (Avg)	UÉ RC4 Proposal	NERA Recommendation
	Unresolved complaints upheld by the CRU CTT	Better than average of utilities/suppliers	0.02-0.08 (0.05)	Align with average	RC4 proposal reasonable Maintain monitoring of number of charter payments and report the total monetary value alongside the number of payments
	Customer satisfaction survey	Establish baseline	77.0%-79.3% (78.2%)	80.3% by 2029	Slightly higher target of 81% by 2029, equivalent to 0.5p.p increase per annum set for ESB target (from 2023 level) Achievable in context of E&W SIM score avg. annual increase of 1.3 p.p.
	Leakage reduction (cumulative)	Public Side: 161 MLD Customer Supply: 15 MLD	Public Side: 90 MLD Customer Supply: 10 MLD	Public Side: 110 MLD Customer Supply: 10 MLD	RC4 proposal reasonable
	Leakage repairs	n.a.	n.a.	143,500 repairs across RC4	RC4 proposal reasonable
Security of Water Supply	Security of water supply	Report on: Security of Supply Index Number of WRZs in deficit	n.a.	Replace with alternative metrics: i) average operational Capacity over average demand; ii) Capacity for a 1 in 50 event compared to average demand; and iii) Operational headroom	Retain one or more aggregate metrics Cover all WRZs Accelerate reporting and present an ex-ante programme to achieve it

Service	Metric	RC3 Target (by 2024)	2020-2023 (Avg)	UÉ RC4 Proposal compared to average demand	NERA Recommendation
Quality of water supply	Minutes of lost supply	Establish baseline	553 minutes (2023)	<540 minutes by 2029	Lower target to incentivise improvement, given performance significantly worse than E&W. Recommend < 360 minutes by 2029 i.e. c. one-third improvement
	% of properties impacted >12h	<12%	9.1%-25.3% (17.8%)	<6.6%	RC4 proposal reasonable in light of improving trend in historical data
	% of properties impacted >24h	<3.6%	5.5%-8.9% (7.1%)	<4.5%	Maintain RC3 target given significant impact on customers from interruptions >24 hours
	Drinking water quality	Range of targets around 99%	2020-2022: UÉ reached its targets (except THM compliance in 2022) 2023: UÉ only reached E.coli target	No change to RC3 target	RC4 proposal reasonable. Recommend new water quality metric - water complaints relating to odor, colour or taste.
	Boil Water Notices and Drinking Water Restriction Notices	0	UÉ not able to meet target in any metric over 2020-2023	Maintain target of zero but to be applied to notices for operational reasons only	Maintain RC3 target of 0
Sewer Incidents	Internal sewer incidents (overload and other causes)	Establish baseline	n.a.	Establish baseline by 2029	Once reported, expect improving trend over medium term consistent with E&W evidence (c.5% annual reduction). Require UÉ to provide baseline data by 2027. CRU to consider setting targets later in the RC4 period

Service	Metric	RC3 Target (by 2024)	2020-2023 (Avg)	UÉ RC4 Proposal	NERA Recommendation
	Internal sewer incidents (properties at risk)	Establish baseline	n.a.	Establish baseline by 2029	Expect decrease in properties at risk as investment to address internal sewer incidents is made. Require UÉ to provide baseline data by 2027. CRU to consider setting targets later in the RC4 period
	External sewer incidents (overload and other causes)	Establish baseline	n.a.	Establish baseline by 2029	Once reported, expect improving trend over medium term consistent with E&W evidence (c.5% annual reduction). Require UÉ to provide baseline data by 2027. CRU to consider setting targets later in the RC4 period
	External sewer incidents (properties at risk)	Establish baseline	n.a.	Establish baseline by 2029	Expect decrease in properties at risk as investment to address external sewer incidents is made. Require UÉ to provide baseline data by 2027. CRU to consider setting targets later in the RC4 period
	One-off incidents	<345	1,067-1,141 (1,099)	989	Recommend higher target of reduction of 80 incidents p.a., consistent with RC3, relative to RC3 closing position
Environmental Performance	Recurring incidents	<98	230-249 (240)	216	Recommend higher target of reduction of 25 incidents p.a., consistent with RC3, relative to RC3 closing position
	Category 3-5 incidents	0	0-1 (0)	0	RC4 proposal reasonable
	Wastewater agglomerations with no wastewater treatment	0	19-34 (29)	4 by 2029	RC4 proposal reasonable and consistent with proposed capex plan

Service	Metric	RC3 Target (by 2024)	2020-2023 (Avg)	UÉ RC4 Proposal	NERA Recommendation
	Compliance with the treatment requirement of UWWTD	100%	91%-94% (93%)	97% by 2029	RC4 proposal reasonable in light of historical performance
	Compliance with ELVs – overall compliance	Establish baseline	41%-45% (43%)	87%	
	Compliance with ELVs – BOD limit	Establish baseline	77%-79% (78%)	90%	
	Compliance with ELVs – COD limit	Establish baseline	86%-90% (87%)	91%	RC4 proposal reasonable in light of historical performance
	Compliance with ELVs – suspended solids limit	Establish baseline	77%-82% (79%)	89%	
	Compliance with ELVs – ortho phosphate limit	Establish baseline	65%-70% (67%)	84%	
	Compliance with ELVs – ammonia limit	Establish baseline	56%-60% (58%)	82%	
	Drinking water sludge	100%	100%	100%	RC4 proposal reasonable
	Wastewater sludge	100%	100%	100%	RC4 proposal reasonable
Energy & Emissions	Energy Consumption (cumulative reduction)	40.71 GWh	31.80 GWh (2022)	25.4 GWh	Targets based on government requirements
	Greenhouse Gas Emissions	TBD	n.a.	51% reduction by 2029	Targets based on government requirements

Source: NERA analysis.

### **NERA recommendations for additional RC4 incentives:**

In addition to the incentives discussed in the table above, NERA considers there may also be value in the following:

- Consistent with other jurisdictions, phase out quantitative measures (e.g. complaint handling) and rely more on qualitative customer satisfaction surveys (e.g. C-MeX) – in essence, to ensure an holistic approach by the utility to customer service standards. However, we understand that there may still be a rationale to collect such data over RC4 as UÉ continues to improve performance.
- An incentive to improve customer experience for developer services customers, which we understand is an important issue at RC4. Such an incentive could be based, for example, on Ofwat’s D-MeX measure, which consists of a weighted average score based on a satisfaction survey and levels of service.
  - We describe the metric used in E&W in detail in Appendix A.1
- Introducing an incentive aimed at monitoring customer contacts relating to water quality issues, for example water discoloration. For example, Ofwat recently introduced an incentive on customer contacts about water quality, which measures the number of times the company is contacted by consumers due to the taste and odour of drinking water or because the drinking water is not clear.
- Adding incentives aimed at improving water conservation. These could include, for example, similar incentives to those Ofwat recently introduced: PCCs and business demand measures. These measures complement the leakage reduction incentive, working together to reduce abstraction to protect the environment, while also allowing sufficient water for customers. This would also have an impact on energy efficiency via the reduction in energy demand.
  - We describe the metrics used in E&W in detail in Appendix A.2 and A.3
- Placing more emphasis on asset health/serviceability metrics over RC4, e.g. require UÉ to report on set of data and comment on whether serviceability being maintained, improving, deteriorating. In other words, it would be a UÉ led initiative.

We also understand that CRU would like to consider introducing the following reporting arrangements:

- Requiring Uisce Éireann to produce an annual statement of compliance in relation to the Drinking Water Directive (DWD). The DWD falls under the legislative remit of the CRU and UÉ. Monitoring and reporting by the CRU could help ensure that there is sufficient regulation in place to ensure that UÉ and the CRU are fulfilling its respective obligations under the DWD.
- Requiring Uisce Éireann to produce an annual report on how it is managing its cybersecurity processes, systems and risks. This recognises the sensitive, personal and confidential consumer information which UÉ possesses. During RC3, there were no incentive or monitoring and reporting arrangements for cybersecurity in place. Similarly, during RC4, UÉ has not proposed any arrangements in this area. Monitoring and reporting on how UÉ is managing its cybersecurity processes could support the CRU in its mission of protecting the wider public interest.

## 1. Summary of Incentive Framework at RC3

In terms of incentive arrangements, at RC3 the CRU decided to:<sup>1</sup>

- Continue with the three financial incentives relating to non-domestic billing introduced at IRC2. These incentives are subject to a cap of: i) €10 million on total revenue earned from the combined three incentives per annum; ii) €4 million on each individual incentive per annum; and iii) €50k on revenue that can be gained on individual customers to ensure that no single customer receives a bill for a very large amount (relating to efficient billing and billing correction incentives).<sup>2</sup>
  - Non-domestic bad debt – to incentivise reductions in the level of non-domestic debt. This is a symmetrical incentive whereby UÉ receives a reward (penalty) of €4 million if its bad debt is below (above) the level set by CRU. CRU set the level at 5 per cent for RC3. We note that UÉ may request for the shortfall of revenue that it was unable to collect from non-domestic customers, subject to a penalty maximum of €4 million;<sup>3</sup>
  - Efficient billing – to identify and correctly bill non-domestic customers that are connected to the UÉ system but not currently billed. Under this incentive, UÉ can retain 42 per cent of the additional revenue billed, i.e. the difference between expected billing minus actual billing times 42 per cent. This is an asymmetrical incentive, i.e. there is no downside/penalty;<sup>4</sup> and
  - Billing correction – to identify and correct instances where properties are charged less than they should be charged. Under this incentive, UÉ can retain 42 per cent of the additional revenue billed to customers as a result of errors being identified and corrected bills being issued. This is an asymmetrical incentive, i.e. there is no downside/penalty.<sup>5</sup>
- Introduce a new incentive relating to leakage reduction, with a financial reward/penalty. This incentive was capped at €4 million per annum during RC3.<sup>6</sup>
- Continue to rely on reputational incentives for the PAF and the Customer Handbook.<sup>7</sup>
- Continue to monitor UÉ's delivery of outcomes, outputs, timelines and budgets through the capital expenditure monitoring regime.<sup>8</sup>

<sup>1</sup> CRU (2019) Irish Water Revenue Control – Revenue Control 3 (2020-24), p.116. Link: <https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU19148-Irish-Water-Revenue-Control-3-Decision-Paper.pdf>.

<sup>2</sup> CRU (2019) Irish Water Revenue Control – Revenue Control 3 (2020-24), pp.108-112.

<sup>3</sup> CRU (2019) Irish Water Revenue Control – Revenue Control 3 (2020-24), pp.109-110.

<sup>4</sup> CRU (2019) Irish Water Revenue Control – Revenue Control 3 (2020-24), pp.110-111.

<sup>5</sup> CRU (2019) Irish Water Revenue Control – Revenue Control 3 (2020-24), pp.111-112.

<sup>6</sup> CRU (2019) Irish Water Revenue Control – Revenue Control 3 (2020-24), p.112.

<sup>7</sup> CRU (2019) Irish Water Revenue Control – Revenue Control 3 (2020-24), pp.114-115.

<sup>8</sup> CRU (2019) Irish Water Revenue Control – Revenue Control 3 (2020-24), p.115.

The non-domestic billing incentives were designed to address CRU’s specific concerns with UÉ’s performance and the potential adverse consequences of a revenue regime which does not incentivise UÉ to improve non-domestic billing. Ofwat has previously allowed for similar incentive mechanisms.

In terms of the monitoring and reporting requirements for outputs and outcomes, CRU requires UÉ to provide:

- Annual report on progress on R3 outputs and outcomes, as per Table 1.1.
- Submission of an investment and output (I&O) spreadsheet which lists all projects/programmes funded at RC3, funding, expenditure and the associated output/outcome. We note that the I&O spreadsheet is very similar to the detailed data that NIW and SW provides as part of their annual reporting arrangements.

**Table 1.1: UÉ Provides Annual Report on Outputs and Outcomes, and Likely Variation**

Uisce Éireann's Outputs & Outcomes - RC3							
Outputs	Unit	RC3 2024 Target	2021 Delivered	RC3 Delivered to date	RC3 2024 Forecast	% of RC3	Notes
Number of new Treatment Plants (water and wastewater)	No.	29	5	9	24	83%	
Number of Existing Treatment Plants Upgraded	No.	89	16	24	66	74%	
Water Treatment Plant Capacity (Total ML/day) (i.e. total capacity from new/existing plants which have added capacity during RC3)	ML/day	625	249	496	1672	268%	
Wastewater Treatment Plant Capacity (Total Population equivalent)	PE	3,070,158	528,506	553,526	2,782,278	91%	
Number of Reservoirs Upgraded	No.	132	44	77	158	120%	
New Watermains (km)	km	496	63	110	317	64%	
Rehabilitated or lined mains (km)	km	511	178	309	619	121%	<sup>1</sup>
Meters installed	No.	50,815	17,903	25,047	82,296	162%	
New Sewers (km)	km	241	8	40	181	75%	
Rehabilitated Sewer (km)	km	342	18	28	222	65%	<sup>2</sup>
<b>Outcomes</b>							
Number of Water Treatment Plants with Ortho-phosphate Dosing	No.	27	2	8	34	126%	
Number of Water Supplies removed from the EPA's RAL	No.	48	16	27	55	115%	<sup>3</sup>
Reduction in the number of properties with risk of Microbiological Non Compliance	No.	563,093	27,515	347,851	1,095,289	195%	
Reduction in the Number of properties with risk of THM Non Compliance	No.	133,465	1,939	33,689	171,065	128%	
Number of Lead Services replaced	No.	13,231	5,418	8,400	31,919	241%	
Leakage Reduction (ML/day)	ML/day	176	41	79	176	100%	
Additional Water Supply Capacity (ML/day) (i.e. additional capacity added during RC3)	ML/day	46	17	34	108	235%	
Number of agglomerations removed from EPA's Priority Urban Area Action List	No.	75	19	30	47	63%	<sup>4</sup>
Wastewater treatment works compliant with Urban Waste Water Treatment Directive (Population Equivalent)	PE	314,656	312,640	314,656	314,656	100%	
Number of Wastewater Treatment Plants overloaded serving >2000 population	No.	1	0	1	1	100%	
Number of Wastewater Treatment Plants overloaded serving <2000 population	No.	1	1	1	1	100%	
Number of Agglomerations in the ECJ Urban Waste Water Treatment Directives	No.	13	2	3	8	62%	
Additional Wastewater Treatment Capacity (Population Equivalent)	PE	770,751	87,268	103,808	621,898	81%	
Number of Wastewater Treatment Plants compliant - EPA discharge increase ELVs	No.	8	2	5	8	100%	

*Table 1: Projected RC3 Outputs and Outcomes*

Table 1.2 below sets out the PAF incentives for UÉ at RC3, including leakage.

**Table 1.2: Performance Incentives for UÉ at RC3**

<b>Service</b>	<b>Incentive</b>
Customer Service	Speed of telephone response
	Call abandonment rate
	First call resolution
	Billing of metered customers
	Response to billing contacts
	Response to complaints
	Unresolved complaints submitted to CRU
Security of supply	Leakage
	Security of water supply
Water quality	Interruptions to supply
	Drinking water quality
	Boil Water Notices and Drinking Water Restriction Notices
Sewer Flooding	Internal sewer incidents
	External sewer incidents
Environmental Performance	Incidents relating to wastewater
	Wastewater agglomerations meeting treatment requirements
	Compliance with the treatment requirements of Urban Wastewater Treatment Directive
	Compliance with the Emission Limit Values for Urban Wastewater Licences
Energy and Emissions	Sludge reuse and disposal
	Energy consumption
	Greenhouse Gas Emissions

Source: NERA analysis.

The set of outputs and outcomes that UÉ is required to deliver are set out in the Arcadis report on capex investment over RC4.<sup>9</sup>

<sup>9</sup> Arcadis (2025), RC4 look-forward capex investment 2025, Section 2.2.

## 2. UÉ Proposed Incentives at RC4

For RC4, UÉ proposes to retain all RC3 financial incentives categories, i.e. non-domestic billing incentives and leakage reduction.

- On non-domestic billing, UÉ suggests the same incentives set at RC3 should be rolled over for RC4.<sup>10</sup>
- On leakage, UÉ proposes the same metric but an amended target, as we discuss in Table 2.1.<sup>11</sup>

For reputational incentives, UÉ proposes relying on the same categories and broadly the same metrics, albeit with different targets on some cases. Table 2.1 sets out UÉ's proposals for RC4.

UÉ also proposes excluding extreme weather events from the calculation of the following metrics: speed of telephone response, call abandonment rate, response to complaints, response to billing contacts and interruptions to supply.<sup>12</sup> According to UÉ, utilities in other jurisdictions are allowed to exclude major events (such as severe storms) from their reliability performance calculations as these are circumstances over which they have limited control.<sup>13</sup> Specifically, UÉ proposes to qualify extreme weather events as:<sup>14</sup>

- Events where a Met Éireann Orange or Red weather warning for wind/rain/snow is issued. The period would last from when the warning begins until the event no longer impacts UÉ's operations.
- Drought events. According to UÉ, *"As Met Éireann do not impose weather warnings for drought conditions, the price trigger for what should be considered an extreme weather event can be agreed if the principle of excluding periods of drought from metrics calculations is established"*.<sup>15</sup>

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<sup>10</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.10.

<sup>11</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.10.

<sup>12</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.12, 14 and 26.

<sup>13</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.12.

<sup>14</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.12.

<sup>15</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.12.

**Table 2.1: UÉ's Proposed Performance Incentives at RC4**

Service	Incentive	UÉ's RC4 Proposal
Customer Service	Speed of telephone response	Change from the RC3 target of 85% to 80% to align with peers
	Call abandonment rate	Change from the RC3 target of <=4% to <=3%
	First call resolution	Remove as no longer effective measure (ignores other user interfaces)
	Billing of metered customers	<u>% bills issued based on meter reading</u> : Change from the RC3 target of 70% to 75% by 2029 for RC4 <u>% of metered accounts that receive at least one bill based on meter read</u> : Change from the RC3 target of 100% to 95% by 2029 for RC4 as 100% is unachievable
	Response to billing contacts	No change
	Response to complaints	Change from the RC3 target of 100% to 95% for RC4 as 100% is unachievable
	Unresolved complaints submitted to CRU	Change from the RC3 target of "better" to "align" with average of networks/suppliers for RC4
	Customer satisfaction survey	Target of 80.3% by 2029
Security of supply	Leakage	Change leakage target from a reduction of 176 megalitres/day (MLD) for RC3 to a reduction of 120 MLD for RC4
	Leak repair	New proposed metric with a target of 143,500 repairs across RC4
	Security of water supply	Remove and replace RC3 metrics with alternative metrics: i) average operational Capacity over average demand; ii) Capacity for a 1 in 50 event compared to average demand; and iii) Operational headroom compared to average demand
Water quality	Interruptions to supply	<u>% properties impacted &gt;4 hours</u> : Remove as replaced by minutes of lost supply <u>Minutes of lost supply</u> : Target at <540 minutes by 2029

	Drinking water quality	<p><u>% properties impacted &gt;12 hours</u>: Change from the RC3 target of &lt;12% to &lt;6.6% by 2029 for RC4</p> <p><u>% properties impacted &gt;24 hours</u>: Change from the RC3 target of &lt;3.6% to &lt;4.5% by 2029 for RC4, which is more achievable</p> <p>No change</p>
	Boil Water Notices and Drinking Water Restriction Notices	Maintain target of 0 but to be applied to notices for operational reasons only (i.e. where capital investment is not required to solving issue)
Sewer Flooding	Internal sewer incidents (overload, other causes and properties at risk metrics)	UÉ to have reporting capability by 2029
	External sewer incidents (overload, other causes and properties at risk metrics)	UÉ to have reporting capability by 2029
Environmental Performance	Incidents relating to wastewater	Change targets for number of one-off and recurring incidents (989 and 216 by end 2029 respectively) as RC3 targets were inappropriate because based on different UK reporting protocol No change to category 3-5 incident targets (0)
	Wastewater agglomerations with no wastewater treatment	Change from the RC3 target of 0 to 4 by end of RC4 (2023 level was 19), which aligns with funding allocation
	Compliance with the treatment requirements of Urban Waste-Water Treatment Directive (UWWTD)	Change from the RC3 target of 100% of population served to 97% by 2029, in line with European peers
	Compliance with the Emission Limit Values (ELVs) for Urban Wastewater Licences	Proposes targets based on 2020-2023 average (ranges from 82% to 91% depending on specific metrics)
	Sludge reuse and disposal	No change
Energy and Emissions	Energy consumption	Target of 25.4 GWh reduction by 2029 in line with government target
	Greenhouse Gas Emissions	Target of 51% reduction from baseline year by 2029 in line with government target

Source: NERA analysis of Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework.

### 3. Incentives in Comparable Regimes (E&W and Northern Ireland)

In this section we set out the incentive arrangements in E&W and Northern Ireland, which we draw on in the subsequent section to provide our views on UÉ's RC4 incentives.

#### 3.1. E&W

##### 3.1.1. Performance commitments and outcome delivery incentives at PR19

In England and Wales, Ofwat adopted outcomes-based regulation. Within this framework, companies propose a set of measures to demonstrate how well each outcome is delivered and, for each measure, identify the level of performance (i.e. performance commitments or "PCs") they expect to deliver over PR19. To incentivise delivery of the outcomes, the performance commitments are backed by Outcome Delivery Incentives (ODIs), which can be either reputational or involve financial rewards or penalties dependent on the company's performance against the PCs.<sup>16</sup>

At PR19, Ofwat defined 15 common PCs (see Table 3.1).<sup>17</sup> Of the 15 measures, 12 have financial penalties and/or rewards and there are three reputational only incentives, as highlighted in Table 3.1. Ofwat has also permitted a range of company bespoke PCs.<sup>18</sup>

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<sup>16</sup> Ofwat (December 2019), PR19 Final Determinations – Delivering outcomes for customers policy Appendix, p.4.

<sup>17</sup> At PR14, Ofwat identified six common performance measures: supply interruptions; water quality contacts; water quality compliance; pollution incidents; sewer flooding and leakage. Source: Ofwat (August 2014), Draft price control determination notice: technical appendix A2 – outcomes, p.46.

<sup>18</sup> Ofwat (December 2019), "PR19 Final Determinations – Delivering outcomes for customers policy appendix", p.4.

**Table 3.1: Ofwat Introduced 15 Common Performance Commitments in PR19, 12 of which are Subject to Financial Rewards/penalties (All Bar 3 Highlighted)**

Service	Name	Measurement Unit	Definition
<b>Water</b>	Water supply interruptions	Hours: minutes: seconds (HH:MM:SS)	The average number of minutes lost per customer for the whole customer base for interruptions that lasted three hours or more
	Per capita consumption	Percentage decrease (%)	The percentage reduction of three year average in PCC litres per person per day (l/p/d) from the 2019-20 baseline*.
	Water quality compliance (CRI)	Numerical Score	Calculated for every individual compliance failure at water supply zones, supply points and treatment works, and service reservoirs
	Mains repairs	Number	The number of mains repairs per thousand kilometres of the entire water main network (excluding communication and supply pipes).
	Unplanned outage	Percentage of peak week production capacity (%)	The temporary loss of peak week production capacity (PWPC) in the reporting year weighted by the duration of the loss (in days)
	Leakage	Percentage decrease (%)	The percentage reduction of three year average in leakage megalitres per day (Ml/d) from the 2019-20 baseline*.
	Risk of severe restrictions in a drought (Reputational)	Percentage (%)	The percentage of the customer population at risk of severe restrictions in a 1-in-200 year drought, on average, over 25 years
<b>Waste water</b>	Internal sewer flooding	Number	The number of internal sewer flooding incidents normalised per 10,000 sewer connections
	Pollution incidents	Number	The total number of pollution incidents (categories 1 to 3) per 10,000km of sewer length
	Sewer collapses	Number	The number of sewer collapses per 1,000 km of all sewers
	Treatment Work Compliance	Percentage (%)	Measured by Discharge Permit Compliance: One minus the ratio of sites with failing discharges to the total number of discharges on EA register during calendar year.
	Risk of sewer flooding in a storm (Reputational)	Number	The Number of incidents per 10,000 sewer connections
<b>Retail</b>	C-Mex	Numerical Score	See below
	D-Mex	Numerical Score	See below
	Priority services register (Reputational)	Percentage (%)	The percentage of applicable households under PSR reach, Actual contacts and Attempted contacts

Note: \*2019-20 baseline is set as the company performance average of 2017-18, 2018-19 and 2019-20; All PCs have associated financial ODIs expect for "Risk of severe restrictions in a drought", "Risk of sewer flooding in a storm" and "Priority services register".

Source: Ofwat (2019) PR19 final determinations: Outcomes performance commitment appendix.

Ofwat applied a cap/collar to individual ODIs and proposes that companies “could consider an expected ODI risk range for out / underperformance of +/-1% to 3% [of return on regulated equity].”<sup>19</sup>

In considering performance commitment levels for the common PCs, Ofwat considered a range of factors, which differed by PC.<sup>20</sup> Ofwat considered industry upper-quartile (UQ) performance as the PC for 3 of the 12 measures that have financial incentives: supply interruptions, pollution incidents, and internal sewer flooding. Ofwat explains that the reason for doing so is that these measures are important to customers and there is good quality comparative information.<sup>21</sup> For other measures (e.g. leakage), Ofwat considers industry performance as well as company-specific circumstances, and sets PCs with reference to historical performance where companies could provide a reasonable justification.<sup>22,23</sup> For statutory measures (Treatment work compliance and water quality compliance), Ofwat also provides for neutral bands or dead-bands to protect companies from penalties.<sup>24</sup>

At PR19 Ofwat also introduced two new measures: a customer measure of experience (C-MeX) and developer services measure of experience (D-MeX) that replace the previous Service Incentive Mechanism (SIM).<sup>25</sup> The SIM score focused on quality of service and was formed by both a quantitative and a qualitative component: the quantitative component included six different measures of customer service, and the qualitative component was based on a customer survey.<sup>26</sup> At PR19, Ofwat set out the following concerns with SIM:<sup>27</sup>

- SIM was limited to comparisons within the water sector and so did not incentivise companies to reach the higher levels of customer service achieved in other sectors;
- SIM’s approach discouraged companies from contacting their customers, which might have constrained innovation, service improvement and customer engagement by water companies;
- SIM did not reflect changing communications technology and how customers interact with companies; and

<sup>19</sup> Ofwat (December 2019), PR19 Final Determinations – Aligning risk and return technical Appendix, p.27.

<sup>20</sup> For a detailed description, see: Ofwat (December 2019), PR19 Final Determinations – Delivering outcomes for customers policy Appendix, pp.16-18.

<sup>21</sup> Ofwat (December 2019) PR19 final determinations: Delivering outcomes for customers policy appendix, p.18

<sup>22</sup> For example, for internal sewer flooding and pollution incidents Ofwat set the PC based on industry upper-quartile (UQ) performance for each year of the 2020-2025 period, although also considered company specific factors. Ofwat (December 2019), PR19 Final Determinations – Delivering outcomes for customers policy Appendix, p.16.

<sup>23</sup> For example, for water supply interruptions, Ofwat considered company-specific circumstances and moderated requirements relative to UQ target where companies could provide a reasonable justification. Ofwat (December 2019), PR19 Final Determinations – Delivering outcomes for customers policy Appendix, p.16.

<sup>24</sup> For example, for water quality compliance (CRI) and treatment works compliance, Ofwat introduced neutral zones or deadbands where incentives do not apply, to protect companies from potential penalties at PR19. Ofwat (December 2019), PR19 Final Determinations – Delivering outcomes for customers policy Appendix, p.16.

<sup>25</sup> Ofwat (2009) Future water and sewerage charges 2010-15: final determinations, p.41.

<sup>26</sup> Ofwat (October 2013), Service incentive mechanism (SIM) for 2015 onwards – a consultation, p.5.

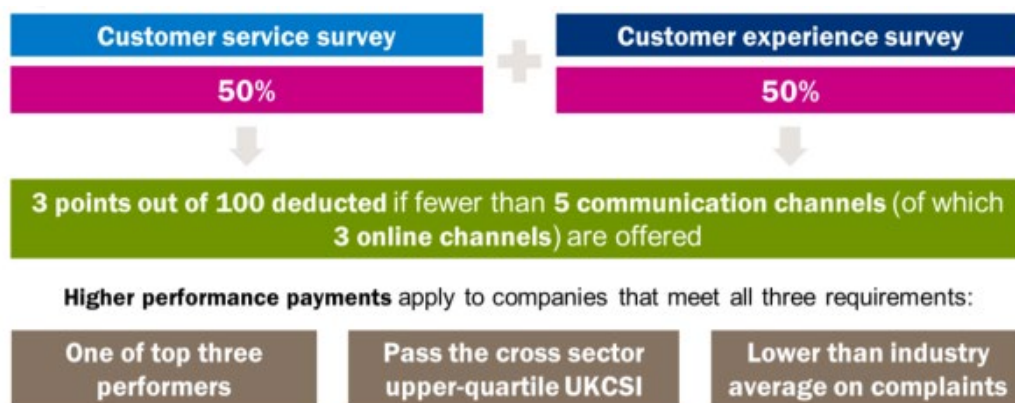
<sup>27</sup> Ofwat (December 2019), PR19 final determinations - Customer measure of experience (C-Mex) and developer services measure of experience (D-Mex) policy appendix, p.4.

- SIM did not address the customer service experience of developer services customers.

C-MeX and D-MeX are performance commitments to incentivise water companies to provide an excellent customer experience for their residential and developer services customers. Both performance commitments are largely survey-based, meaning that companies’ performance is principally assessed based on direct customer feedback and therefore addresses the concerns set out by Ofwat above.<sup>28</sup>

- C-MeX is an in-period financial ODI designed to award companies with outperformance in customer services. The C-MeX score, whose calculation is detailed in Figure 3.1, is formed by the average of two qualitative customer surveys: i) a customer service survey asks customers, who have contacted their company, how satisfied they are with how the company has handled their issue (Billing and operations each contribute to 50% of the overall rating); and ii) the customer experience survey randomly selected sample of a company’s overall residential customer base and asks them how satisfied they are with their company. The financial incentives for C-MeX vary across companies based on its relative performance to the peers.<sup>29</sup> Rewards and penalties ranged from +6 per cent to -12 per cent of that year’s annual allowed residential retail revenue.<sup>30</sup>

**Figure 3.1: C-MeX Score Calculation**



Source: Ofwat (December 2019) PR19 final determinations - Customer measure of experience (C-Mex) and developer services measure of experience (D-Mex) policy appendix, p.8, Figure 2.1.

- D-MeX is a financial ODI designed to incentivise water companies to provide an excellent customer experience to developer services customers, including small and large property developers, self-lay providers and those with new appointments and variations (which Ofwat refers to as ‘new appointees’). The D-MeX score is formed by both a qualitative and a quantitative component (See Figure 3.2). The qualitative component is a score summarising

<sup>28</sup> Ofwat (December 2019) PR19 final determinations - Customer measure of experience (C-Mex) and developer services measure of experience (D-Mex) policy appendix, p.6.

<sup>29</sup> Ofwat (December 2019) PR19 final determinations - Customer measure of experience (C-Mex) and developer services measure of experience (D-Mex) policy appendix, p.10.

<sup>30</sup> The company with the highest score that passes the three gates will receive an additional 6 per cent of that year’s annual allowed residential retail revenue, potentially taking its total outperformance payments to 12 per cent. If a second company qualifies, it will receive an additional 4 per cent and if a third company qualifies it will receive an additional 2 per cent. Ofwat (December 2019) PR19 final determinations - Customer measure of experience (C-Mex) and developer services measure of experience (D-Mex) policy appendix, p.11.

the performance of the company in a satisfaction survey of developer services customers; the quantitative component is a score summarising the performance of the company across selected Water UK Developer Services performance data metrics. The financial incentives structure of D-MeX is similar to C-MeX.<sup>31</sup> Rewards and penalties ranged from +6 per cent to -12 per cent of that year's annual allowed residential retail revenue.

**Figure 3.2: D-MeX Score Calculation**



Source: Ofwat (December 2019) PR19 final determinations - Customer measure of experience (C-Mex) and developer services measure of experience (D-Mex) policy appendix, p.11, Figure 2.3.

### 3.1.2. Ofwat's PR24 Determinations

As at PR19, at PR24 Ofwat has a continued focus on common performance commitments for companies and only a small number of bespoke commitments. While some of the ODIs were reputational only at PR19, Ofwat set financial ODIs for all but one PC at PR24 (river water quality).<sup>32</sup>

Figure 3.3 sets out Ofwat's common PCs set at PR24, which amount to 24, an increase from the 15 at PR19. This increase reflects both new common PCs (discussed further below), as well as the removal of three PR19 reputational incentives (risk of severe restrictions in a drought, risk of sewed flooding in a storm and priority services register).

<sup>31</sup> Ofwat (December 2019) PR19 final determinations - Customer measure of experience (C-Mex) and developer services measure of experience (D-Mex) policy appendix, p.13.

<sup>32</sup> Ofwat (February 2025), PR24 final determinations: Delivering outcomes for customers and the environment, pp.5 and 14.

**Figure 3.3: Common Performance Commitments at PR24**

	Water and wastewater	Water only	Wastewater only
<b>Customers receiving excellent service everyday</b>	C-MeX D-MeX BR-MeX (England) Business customer experience (Wales)	Customer contacts about water quality Water supply interruptions Compliance risk index	External sewer flooding Internal sewer flooding
<b>Environmental outcomes</b>	Biodiversity Serious pollution incidents Discharge permit compliance	Business demand Leakage Per capita consumption Operational greenhouse gas emissions - water	River water quality [reputational] Storm overflows Total pollution incidents Operational greenhouse gas emissions - wastewater Bathing water quality
<b>Asset health</b>		Repairs to burst mains Unplanned outage	Sewer collapses

Source: Ofwat (February 2025), PR24 final determinations: Delivering outcomes for customers and the environment, p. 14.

In terms of new incentives at PR24:

- **Customer service:** Ofwat introduced two new business customer-related measures, BR-MeX (England) and Business customer experience (Wales), both measuring business customer and retail experience to incentivise incumbent wholesalers to improve frictions in the business retail market.<sup>33</sup> Ofwat also introduced incentives on customer contacts about water quality (relating to number of contacts relating to taste, odour and appearance issues) and external sewer flooding (similar to previously existing internal sewer flooding but now relating to external incidents).<sup>34</sup>
- **Environmental outcomes:** Ofwat introduced eight new common PCs: biodiversity, serious pollution incident, business demand, storm overflows, bathing and river water quality, storm overflows, and operational greenhouse gases to improve environmental performance, whereby the latter will build on a measure already reported in companies’ annual performance reports (APR).<sup>35</sup> We highlight below two of Ofwat’s new PR24 incentives:
  - **Biodiversity:** Ofwat’s motivation behind creating a biodiversity measure is to recognise its own and companies’ statutory duties regarding biodiversity. Ofwat considers that water companies can play a critical role in maintaining and enhancing biodiversity. At PR24, it wants to go further than at PR19 and incentivise all companies to embed biodiversity and ecosystem resilience considerations in delivering their core business. In practice, Ofwat asks companies and stakeholders to select together some sites to be surveyed every 4

<sup>33</sup> Ofwat (July 2022), Creating tomorrow, together: consulting on our methodology for PR24, p.56 and Ofwat (February 2025), PR24 final determinations: Delivering outcomes for customers and the environment, Sections 14.3 and 14.4.

<sup>34</sup> Ofwat (February 2025), PR24 final determinations: Delivering outcomes for customers and the environment, Sections 9.1 and 9.5.

<sup>35</sup> Ofwat (December 2022), Creating tomorrow, together: Our final methodology for PR24, Appendix 7, p.36 and Ofwat (February 2025), PR24 final determinations: Delivering outcomes for customers and the environment, Section 11.

years to assess improvements in habitats. The size of the site will have an impact on the size of rewards/penalties. Ofwat also requires companies to provide assurance that biodiversity elsewhere on land that is not included in the performance commitment is not deteriorating overall.<sup>36</sup>

- Per capita consumption and business demand:<sup>37</sup> At PR24 and given the pressures of climate change, Ofwat is asking all water companies to reduce the demand for water where possible. The aim is to reduce abstraction to protect the environment, while also allowing sufficient water for customers. Reducing water demand should also reduce the need to develop new water resource options that could increase GHG emissions or otherwise cause significant impacts on the environment. Ofwat set three separate performance commitments to reduce demand: leakage, per capita consumption (PCC) and business demand. Setting a PCC performance commitment reflects Ofwat's view that water companies have a significant role to play in water efficiency including:
  - providing the right metering;
  - communicating with customers or providing the right information for others to communicate;
  - setting water charges; and
  - providing more direct support to help water customers reduce their demand.

Similar to PCC, companies are also incentivised to promote efficiency of business customers, by reporting the percentage reduction of three-year average business demand relative to a baseline year (2019-20).

- Asset health: Ofwat proposes the same asset health measures as per PR19.<sup>38</sup>

Ofwat states it set "*achievable yet stretching performance commitment levels*" for PR24.<sup>39</sup> Specifically, Ofwat:<sup>40</sup>

- Sets PR24 targets by putting greater emphasis on recent performance levels and moving away from the default position of adopting PR19 targets. According to Ofwat, it is "*not realistic to set a forward-looking performance challenge based solely upon PR19 ambition that is not being delivered*".<sup>41</sup>

<sup>36</sup> Ofwat (December 2022), *Creating tomorrow, together: Our final methodology for PR24*, Appendix 7, pp. 62-65 and Ofwat (February 2025), *PR24 final determinations: Delivering outcomes for customers and the environment*, Section 11.2.

<sup>37</sup> Ofwat (December 2022), *Creating tomorrow, together: Our final methodology for PR24*, Appendix 7, pp. 68-79 and 109- 115 and Ofwat (February 2025), *PR24 final determinations: Delivering outcomes for customers and the environment*, Section 10.1.

<sup>38</sup> Ofwat (December 2022), *Creating tomorrow, together: Our final methodology for PR24*, Appendix 7, p.73 and Ofwat (February 2025), *PR24 final determinations: Delivering outcomes for customers and the environment*, p.14.

<sup>39</sup> Ofwat (February 2025), *PR24 final determinations: Delivering outcomes for customers and the environment*, p.25.

<sup>40</sup> Ofwat (February 2025), *PR24 final determinations: Delivering outcomes for customers and the environment*, Section 3 and p.25.

<sup>41</sup> Ofwat (February 2025), *PR24 final determinations: Delivering outcomes for customers and the environment*, p.21.

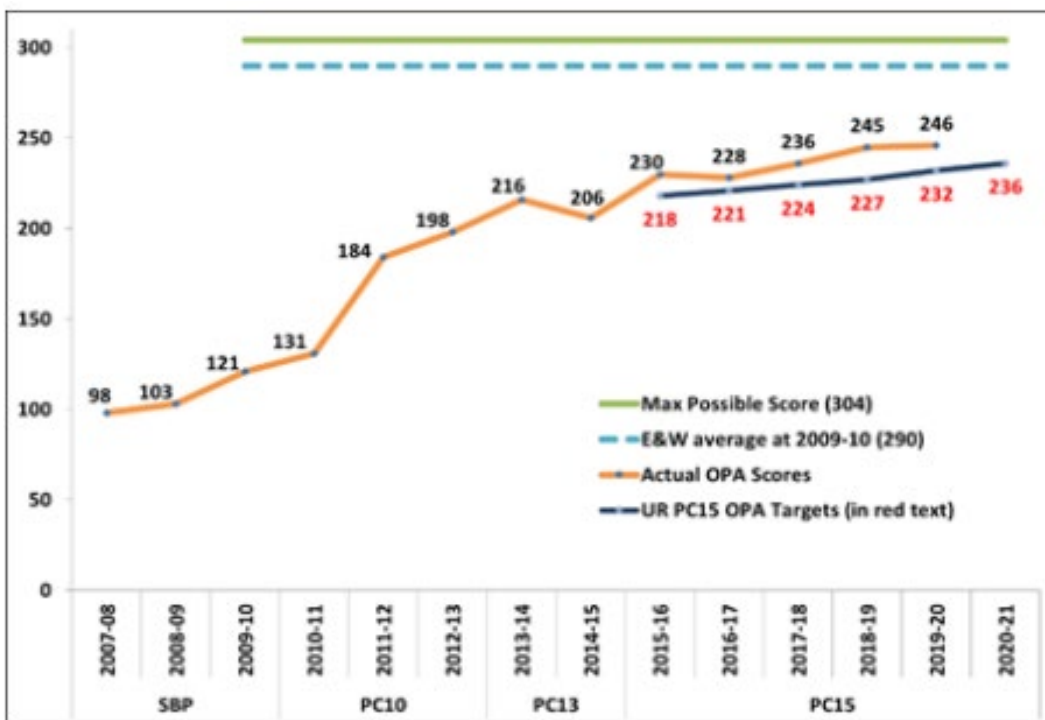
- Typically sets performance stretch expectations at industry median forecast for PR24 as a minimum to challenge the poorer-performing companies.

### 3.2. Northern Ireland

#### 3.2.1. Overall Performance Assessment (OPA)

In PC10, the UR introduced the OPA metric as its primary measure of service delivery by NIW. At PC21, The OPA will be retired and replaced by the consumer services metrics described in section 3.2.2; however, key service measures which underpin the OPA (such as water and wastewater quality compliance, pressure, interruption to supply and property flooding) will continue to be reported.

**Figure 3.4: NIW OPA performance**



Source: Utility Regulator (May 2021) PC21 Final Determination, Main report, p. 44, Figure 3.2.

#### 3.2.2. Development of consumer metrics over PC21

PC21 provides further detail on the consumer service metrics.<sup>42</sup> UR notes that it will undertake a mid-term review of consumer measures and targets. The new targets will include:

- Voice of the customer (VoC) Net Promoter Score (NPS)
- Omnibus Survey (annual questions included within representative sample survey of NIW customer base)

<sup>42</sup> See pp. 34-43.

- Consumer surveys post incident
- Consumer measures/ satisfaction (CM/SAT) working group.
  - NIW will seek CM/SAT views on at least following:
    - Review and update how NIW supports Customer Care Register consumers
    - Increase numbers of consumers on the Customer Care Register
  - New metrics
    - Unwanted contacts
    - First point of contact resolved (FPOCR)
    - Net Promoter Score (NPS)

At PC21, the following metrics will be “semi-retired” including:<sup>43</sup>

- Overall Performance Assessment (OPA)
- DG6 (percentage of billing contacts dealt with within 10 working days)
- DG7 (percentage of written complaints dealt with within 10 working days), and
- DG9 (percentage of calls not abandoned)

We understand that NIW will semi-retire these latter three metrics to focus on customer satisfaction with complaints handling etc, as reflected in surveys, as opposed to specific metrics which may not encourage the correct behaviours.

### 3.2.3. Vulnerable customers

The UR proposes a new mandatory minimum standards Code of Practice which would replace and update existing licence/ code requirements to deliver the best practice consumer interventions for vulnerable customers in NIW. UR stated its intention to publish best practice framework public consultation in 2021, containing the detailed minimum standards.<sup>44</sup>

The UR also will also continue to require NIW to maintain Customer Care Register, a centralised database of consumers which require additional care during interruptions.<sup>45</sup>

### 3.2.4. NI PC21 outputs

The UR distinguishes between three types of outputs:<sup>46</sup>

- **Service level outputs** – which measure the impact of investment on the level of service experienced by consumers, such as number and duration of interruptions to supply
- **Nominated outputs** – specific items, often identified by quality regulators such as improvements to discharge standards

<sup>43</sup> Utility Regulator (May 2021) PC21 Final Determination, Main report, p. 42

<sup>44</sup> Utility Regulator (May 2021) PC21 Final Determination, Main report, p. 45, para. 3.73

<sup>45</sup> Utility Regulator (May 2021) PC21 Final Determination, Main report, p. 46

<sup>46</sup> Utility Regulator (May 2021) PC21 Final Determination, Main report, p. 26, para. 3.4

- **General activities** – such as the replacement of water mains where it is not possible to link an activity to a specific output (or difficult over short-term)

The following Tables summarise the outputs expected at PC21.<sup>47</sup> NIW reports against these summary outputs as part of its annual information return (AIR).<sup>48</sup>

**Table 3.2: PC21: Summary Customer Service, Water and Wastewater Outputs**

Line description	Units	PC15	PC21					
			2019-20	2021-22	2022-23	2023-24	2024-25	2025-26
<b>A Consumer Service</b>								
1 DG2 Properties at risk of low pressure removed from the risk register by company action	nr	115	147	145	143	139	137	135
2 DG2 Properties receiving pressure below the reference level at end of year	nr	626	492	427	365	306	250	195
3 DG3 Supply interruptions > 12hrs (unplanned and unwarned)	%	0.088	0.091	0.087	0.084	0.080	0.077	0.073
4 DG3 Supply interruptions (overall performance score)	nr	0.79	0.81	0.79	0.77	0.75	0.72	0.70
5 DG6 % billing contacts dealt with within 5 working days	%	99.97	Not targeted BUT subject to CM/SAT monitoring and review					
6 DG7 % written complaints dealt with within 10 working days	%	99.95	Not targeted BUT subject to CM/SAT monitoring and review					
7 DG8 % metered customers received bill based on a meter reading	%	99.5	99.0	99.0	99.0	99.0	99.0	99.0
8a Unwanted contacts	nr	67,013	67,000	66,100	65,200	64,300	63,400	62,500
8d First Point of Contact Resolved (FPOCR)	%	90	84	84	84	84	84	84
8e Net Promoter Score	nr	42	42	42	42	42	42	42
9 DG9 % Calls not abandoned	%	99.5	Not targeted BUT subject to CM/SAT monitoring and review					
10 DG9 % calls not receiving the engaged tone	%	100.0	Not targeted BUT subject to CM/SAT monitoring and review					
11 Overall Performance Assessment (OPA) score (11 Measures)	nr	246	Not targeted BUT subject to CM/SAT monitoring and review					
12 Total Leakage	M/d	161	157	156	154	153	151	150
13 Security of supply index	nr	100	100	100	100	100	100	100
14 Percentage of NI Water's power usage derived from renewable sources	%	44	45	45	50	50	75	100
<b>B Quality Water</b>								
15a % overall compliance with drinking water regulations	%	99.90	99.83	99.83	99.83	99.83	99.83	99.83
15b % compliance at consumers tap	%	99.84	99.74	99.74	99.74	99.74	99.74	99.74
16 % iron compliance at consumers tap	%	98.89	98.62	98.62	98.62	98.62	98.62	98.62
17 % Service Reservoirs with coliforms in >5% samples	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>C Water Outputs</b>								
18 Water mains activity - Length of new, renewed or relined mains	km	149	139.7	139.7	139.7	139.7	139.7	139.7
19 Completion of nominated trunk main schemes	nr	0	0	2	1	5	2	4
20 Completion of nominated water treatment works schemes	nr	1	1	0	6	4	1	7
21 Completion of nominated improvements to increase the capacity of service reservoirs and clear water tank	nr	1	1	0	0	0	3	0
<b>D Serviceability</b>								
22 Water infrastructure serviceability	Text	Stable	Stable	Stable	Stable	Stable	Stable	Stable
23 Water non-infrastructure serviceability	Text	Stable	Stable	Stable	Stable	Stable	Stable	Stable
<b>E PC15 Additional Output Measures</b>								
25 Number of lead communication pipes replaced	nr	1,781	1,844	1,844	1,844	1,844	1,844	1,844
26 Number of school visits	nr	229	176	176	176	176	176	176
27 Number of events	nr	143	57	57	57	57	57	57
<b>F PC21 Additional Output Measures</b>								
29 Number of catchments where management plan recommendations have been delivered	nr	n/c	0	3	4	5	5	3
30 Number of treatability studies completed	nr	n/c	0	0	0	12	0	0

**Table 3.1: Customer service and water quality outputs for PC21 (subject to Mid-Term Review).**

<sup>47</sup> Utility Regulator (May 2021) PC21 Final Determination, Main report, pp. 31&32.

<sup>48</sup> NIW (2021) Annual information return 2021, Tables 2 and 3. Link: [https://www.uregni.gov.uk/files/uregni/documents/2023-05/AIR21\\_Public\\_Domain\\_Version.pdf](https://www.uregni.gov.uk/files/uregni/documents/2023-05/AIR21_Public_Domain_Version.pdf)

Line description	Units	PC15	PC21					
			2019-20	2021-22	2022-23	2023-24	2024-25	2025-26
<b>A Consumer Service Sewerage</b>								
1 DG5 Properties at risk of flooding - number removed from the 2 in 10, 1 in 10 and 1 in 20 risk register by company action	nr	1	0	0	20	6	10	21
2 DG5 Properties on the 2 in 10, 1 in 10 and 1 in 20 risk register at the end of the year	nr	119	120	123	106	103	96	78
<b>B Quality Sewerage</b>								
3 % of WwTWs discharges compliant with numeric consents	%	94.90	92.05	91.63	92.33	93.26	93.72	94.14
4 % of total p.e. served by WwTWs compliant with numeric consents	%	99.50	99.18	94.65	94.65	95.71	95.72	95.77
5 Small WwTW compliance (works greater than or equal to 20p.e. but less than 250p.e.)	%	89.29	90.76	91.09	93.07	95.05	97.03	99.01
6 Number of high and medium pollution incidents attributable to Nil Water	nr	13	12	11	10	9	8	7
<b>C Sewerage Outputs</b>								
7 Sewerage activity - Length of sewers replaced or renovated	km	18.5	10.1	10.1	10.1	10.1	10.1	10.1
8 Delivery of improvements to nominated UIDs as part of a defined programme of work	nr	3	7	21	21	13	25	49
9 Delivery of improvements to nominated WwTWs as part of a defined programme of work	nr	2	0	5	16	3	7	14
10 Small wastewater treatment works delivered as part of the rural wastewater investment programme	nr	9	6	6	6	6	6	6
<b>D Serviceability</b>								
11 Sewerage infrastructure serviceability	Text	Stable	Stable	Stable	Stable	Stable	Stable	Stable
12 Sewerage non-infrastructure serviceability	Text	Stable	Stable	Stable	Stable	Stable	Stable	Stable
<b>E PC15 Additional Output Measures</b>								
13 Number of CSO and EO discharges at which event and duration monitoring equipment is installed/fully optimised, and meet NIEA requirements	nr	37	66	67	117	166	166	162
14 Number of qualifying Wastewater Treatment Works delivered as part of the defined programme of improvements to comply with PPC Regulations	nr	7	0	0	4	3	4	4
15 Impermeable surface water collection area removed from the combined sewerage network (such as roads and pavements, roofs and hardstandings)	m <sup>2</sup>	59,586	364,540	364,540	364,540	364,540	364,540	364,540
16 Number of 'sustainable solution' WWTW serving a PE ≥ 250 delivered as part of the defined programme of work for improvements to nominated WWTWs	nr	0	0	0	0	1	1	2
17 Number of 'sustainable solution' WWTW serving a PE < 250	nr	0	0	0	0	1	1	1
<b>F PC21 Additional Sewerage Output Measures</b>								
18 Number of Economic Constraint Areas Removed	nr	n/c	0	0	0	2	1	9
19 Number of Serious Development Restrictions Removed	nr	n/c	4	0	0	8	9	16

**Table 3.2: Sewerage service outputs for PC21 (subject to Mid-Term Review).**

Source: Utility Regulator (May 2021) PC21 Final Determination, Main report, pp.30-31.

### 3.3. Regime Comparability

Table 3.3 provides a comparison of PAF measures (and leakage) to comparable measures in E&W and Northern Ireland. In general, we find that:

- There is a high degree of comparability between measures across the three jurisdictions.
- There is greater prominence of asset health/serviceability measures in E&W and Northern Ireland. As we discuss in more detail in Section 4, UÉ is required to report equivalent measures either as part of the PAF or BPQ, but has not been able to provide data for a number of measures to date.
- Other omissions in Ireland relative to E&W include D-MeX, PCC, business demand and customer contacts about water quality. As we discuss in Section 4 and Appendix A, these measures provide a basis for potential new measures to be introduced by CRU to assist in reaching CRU's RC4 priorities.
- Ofwat (and UR) have adopted/will adopt more qualitative consumer satisfaction measures (e.g. surveys rather than quantitative metrics such as complaint handling) to ensure an holistic approach by the utility to customer service standards.

**Table 3.3: Performance Incentives for UÉ at RC3 Compared to E&W and NI**

Service	Ireland	E&W	Northern Ireland
<b>Customer Service</b>	Ease of telephone contact	C-MeX	Overall Performance Assessment (OPA)
	Billing of metered customers	D-MeX	Billing of metered customers
	Response to billing contacts	BR-MeX	Response to billing contacts
	Response to complaints	Business customer experience (Wales)	Response to complaints
	Unresolved complaints upheld by the CRU CCT to the CRU		
	Customer Satisfaction Survey Stakeholder Panel		
<b>Security of Supply</b>	Security of Water Supply	Per capita consumption and business demand	Security of supply index
	Leakage	Leakage	Total leakage
<b>Quality of Water</b>	Interruptions to Supply	Water supply interruption	Supply interruptions
	Drinking Water Quality	Compliance risk index	Water quality compliance
	Boil Water Notice and Drinking Water Restriction Notices	Customer contacts about water quality	Low pressure
<b>Sewer Service</b>	Internal Sewer Incidents	Internal sewer flooding	Properties at risk of flooding
	External Sewer Incident	External sewer flooding	
<b>Environmental Performance</b>	Incidents Relating to Wastewater	Biodiversity	
	Agglomerations with no Wastewater	Discharge permit compliance	
	Compliance with the Emission Limit Values for Urban Wastewater Licences	Serious pollution incidents	
	Compliance with the treatment requirements of the Urban Wastewater Treatment Directive	Total wastewater pollution incidents	Number of high and medium pollution incidents (sewerage)
	Sludge Reuse and Disposal	Bathing water quality River water quality Storm overflows	
<b>Energy and Emissions</b>	Energy Consumption	Operational greenhouse gas emissions (water and wastewater)	% of power usage from renewables
	Greenhouse Gas Emissions		
<b>Asset Health</b>		Mains repairs	Water and sewerage infrastructure serviceability
		Unplanned outage	
		Sewer collapses	

Source: NERA analysis.

## 4. Our Review of UÉ's RC4 Proposals and Recommendations

In Section 2, we summarised UÉ's proposed RC4 incentive metrics and targets. In this section, we comment on UÉ's proposed incentives and incentive targets for RC4, as well as provide our own recommendations for the RC4 incentives and targets taking into account UÉ's performance and other jurisdiction approaches (as summarised in Section 3). We breakdown incentives below according to their wider categories.

Where possible, we have included 2023 performance information from the draft PAF 2023 annual report.

### 4.1. Exclusion of Extreme Weather Events

As discussed in Section 2, UÉ proposes excluding extreme weather events from the calculation of the following metrics: speed of telephone response, call abandonment rate, response to complaints, response to billing contacts and interruptions to supply.<sup>49</sup>

Regulatory precedent on the exclusion of extreme weather events is mixed. For example:

- We understand that ESBN removes effects of severe weather in the annual performance report when reporting outages (Customer Interruptions and Customer Minutes Lost) in order to benchmark performance against other utilities.<sup>50</sup>
- In the E&W water and wastewater sector, Ofwat generally does not exclude extreme weather events from the calculation of incentive performance. For example, for water supply interruptions, Ofwat does not exclude extreme weather events because it considers companies can best manage risk related to these events relative to customers (who cannot mitigate these risks) and indeed are thus incentivised to manage these risks effectively.<sup>51</sup>
- In the GB energy sector, Ofgem has generally excluded severe weather exceptional events from its calculation of incentives relating to interruptions, subject to the relevant thresholds being met/exceeded. The removal of these events is part of Ofgem's general approach for interruptions incentives of removing items which it deems are outside the operators' control.<sup>52</sup>

Furthermore, for extreme weather events (including droughts) to be removed from the calculation of incentives requires further specification on their definition, specifically:

<sup>49</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.12, 14 and 26.

<sup>50</sup> ESBN (2 August 2024), Distribution Annual Performance Report 2023, p.36.

<sup>51</sup> Ofwat (February 2025), PR24 final determinations: Delivering outcomes for customers and the environment, pp.86-87 and Ofwat (December 2022), Creating tomorrow, together: Our final methodology for PR24, Appendix 7 – Performance Commitments, pp.29-30.

<sup>52</sup> Ofgem (20 November 2022), RIIO-ED2 Final Determinations Overview Document, p.104 and Ofgem (1 January 2024), RIIO-ED2 Regulatory Instructions and Guidance – Interruptions, paras 2.63 to 2.69; Ofgem (18 January 2017), Guide to the RIIO-ED1 electricity distribution price control, para.11.8.

- UÉ proposes to rely on Met Éireann Orange or Red weather warning for wind/rain/snow as an indicator of an extreme weather event, which would last until "*this event no longer impacts UÉ operations*".<sup>53</sup>
- On drought conditions, UÉ does not propose a specific "trigger", noting that Met Éireann does not issue drought related warnings. A potential implementation could rely on both CRU and UÉ agreeing that an event constitutes a drought.

Consistent with Ofwat's approach, we do not agree that extreme weather events should be removed from the identified metrics. As Ofwat notes, retaining the impact of extreme weather events incentivises companies to minimise the impact on customers of such event. Such an approach would also retain comparability with E&W networks, where we have comparable data, e.g. for supply interruptions.

## 4.2. Non-Domestic Billing Incentives

On non-domestic billing incentives (i.e. bad debt, efficient billing and billing correction), UÉ is proposing that these incentives are rolled over for RC4.

We agree with UÉ's proposal to roll-over these incentives to RC4.

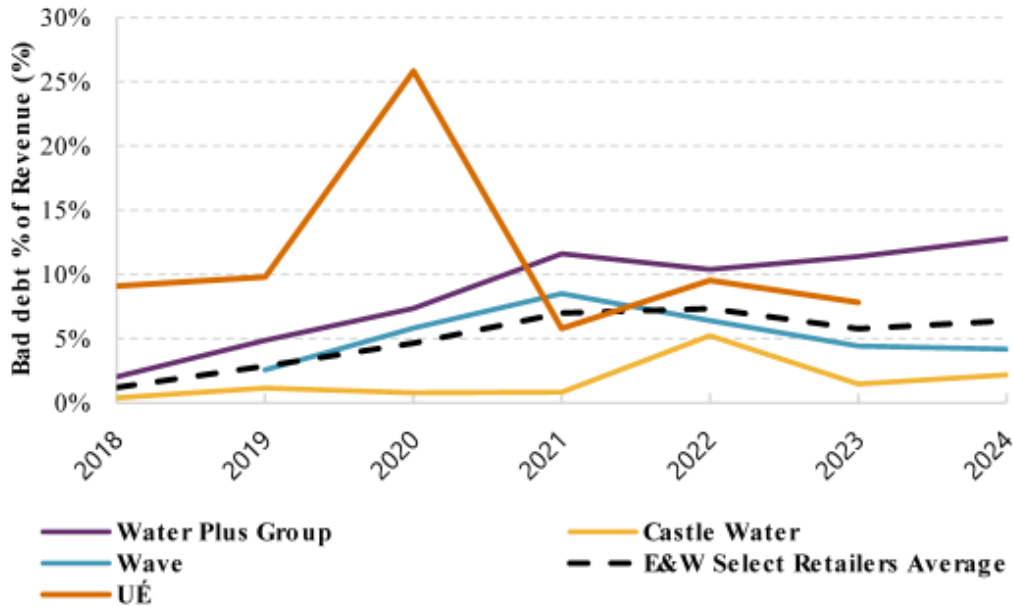
On bad debt, we consider it is important to maintain an incentive for UÉ to actively pursue bad debt. The current threshold for the bad debt calculation is 5 per cent, i.e. there is a reward (penalty) if bad debt as a percentage of revenues falls below (above) 5 per cent.

We have considered whether the 5 per cent threshold from RC3 should be maintained for RC4. To do so, we reviewed evidence from both UÉ and selected E&W water retailers, specifically Water Plus Group, Castle Water and Wave. Figure 4.1 sets out the bad debt as a percentage of revenues for these companies. From 2019 onwards, the average proportion of bad debt of the selected E&W retailers increased from 2.9 per cent to 6.4 per cent, whereas for UÉ it decreased from 10 per cent to 8 per cent.

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<sup>53</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.12.

**Figure 4.1: UÉ and E&W Water Retailers Bad Debt Trends**



Note: For E&W retailers, bad debt as percentage of revenues calculated as expected credit loss (i.e. expected losses from bad debt or other credit that is likely to default or become unrecoverable) to revenues.

Source: NERA analysis of Companies’ House data and UÉ data.

Our review of evidence indicates that a 5 per cent target is a challenging yet achievable target for UE over RC4, with our analysis showing UE performance around 8 per cent. We therefore recommend the continuation of the same target for RC4.

On efficient billing and billing correction incentives, we also consider important to maintain these incentives in order to ensure the accuracy of bills and maximise the number of properties billed.

### 4.3. Customer Service Incentives

In general, UÉ proposes maintaining the same customer service metrics for RC4 as for RC3. The exception is the metric First Call Resolution, which UÉ proposes to remove given that increasingly UÉ interacts with customers over a range of interfaces (not just phone calls). UÉ also notes that CRU remove the same metric from GNI in its 2017 decision.<sup>54</sup>

UÉ’s proposal to remove the First Call Resolution does not strike us as unreasonable, particularly in light of CRU’s GNI decision and recent technological developments which mean the simpler calls get addressed via other platforms (e.g. self-service on websites), whereas more complex issues are the ones that get addressed via calls (and thus less likely to be solved as quickly). Indeed, we understand that for RC4, one of CRU’s priorities is increased digitalisation, innovation and accessibility. However, instead of removing these two metrics in their entirety, UÉ should change the measure from “first call” to “first contact”, which would include contacts over the wider horizon of platforms UÉ refers to (e.g. websites, e-mail, etc.).

<sup>54</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.15-16.

In terms of targets, UÉ proposes a mix of higher and lower targets relative to RC3. UÉ's basis for its revised targets reflect both historical performance, as well as feasibility concerns (i.e. considers not possible to achieve 100 per cent in certain metrics).<sup>55</sup> Table 4.1 below summarises UÉ's RC3 targets, RC3 performance to date and RC4 proposed targets.

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<sup>55</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.14-20.

**Table 4.1: UÉ's Customer Service RC3/RC4 Targets and RC3 Performance**

<b>Metric</b>	<b>RC3 2024 Target</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>UÉ RC4 Proposal</b>
Speed of telephone response - % calls answered within 20 seconds	85%	82%	76%	80%	82%	80%
Call abandonment rate - % calls abandoned	<=4%	3%	4.4%	2.2%	1.5%	<=3%
First call resolution - % billing line calls resolved on first call	90%	86%	77%	72%	69%	Remove
First call resolution - % operation line calls resolved on first call	80%	75%	71%	70%	70%	Remove
Biling of metered customers - % of bills issued based on meter reading	70%	68.6%	78%	76%	73%	75% by 2029
Biling of metered customers - % of metered accounts that receive at least one bill based on meter read	100%	n.a.	85%	83%	81%	95% by 2029
Response to billing contacts - % of billing contacts closed out within 5 working days	95%	96%	95%	95%	97%	95%
Response to complaints - % complains responded within 5 working days (domestic)	100%	98%	94%	98%	100%	95%
Response to complaints - % complains responded within 5 working days (non-domestic)	100%	94%	90%	98%	100%	95%
Response to complaints - % complaints issued final decision within 2 months (domestic)	100%	96%	96%	97%	99%	95%
Response to complaints - % complaints issued final decision within 2 months (non-domestic)	100%	91%	88%	86%	98%	95%
Unresolved complaints upheld by the CRU CTT	Better than average of utilities/suppliers	0.02 <sup>1</sup>	0.04 <sup>1</sup>	0.05 <sup>1</sup>	0.08 <sup>1</sup>	Align with average
Customer satisfaction survey	Establish baseline	77%	78.5%	79.3%	78%	80.3% by 2029

Note: <sup>1</sup> Metric calculated as number of complains upheld per 10,000 customer sites.

Source: NERA analysis of Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.5-6, CRU (24 September 2024), Uisce Éireann Performance Assessment Framework, p.iv and CRU (2025), Uisce Éireann Performance Assessment Framework 2023 Annual Report, pp.vi and vii.

In general, we find that where there is evidence of outperformance, UÉ has proposed a more ambitious incentive target, whereas for those incentives where it has proposed a less ambitious incentive target, these are incentives where it has generally underperformed the RC3 target.

To inform our views, we have also considered evidence from other CRU-regulated sectors:

- For GNI at PC5 (2022-2027), CRU sets certain customer service metrics that are relatively similar to those set for UÉ and where we would expect some comparability. These include:<sup>56</sup>
  - Call abandonment rate: CRU set a 1.5 per cent target for calls abandoned, which is lower than UÉ's target of 4 per cent for RC3 (or 3 per cent proposed by UÉ for RC4). However, we understand that GNI's metric is measured based on calls abandoned after 10 seconds, whereas the UÉ metric does not include 10 second threshold.
  - Calls answered within 20 seconds: CRU set a target of 92 per cent for GNI, which is higher than UÉ's target of 85 per cent for RC3 (or 80 per cent proposed by UÉ for RC4).
  - Complaints resolved: CRU set a target of 96 per cent for complaints resolved within 10 days and 98 per cent within 30 days. The definition of this metric differs from the UÉ metric, where complaints resolved are measured over 2 months rather than 10 or 30 days.
  - Customer satisfaction survey: While the sector differs from UÉ and thus the questions may not capture precisely the same concepts, in general we would expect that a customer satisfaction survey trend should not materially differ between sectors and thus the GNI trend could provide useful indicator/basis for the UÉ survey.<sup>57</sup>
  - Stakeholder engagement incentive: CRU's stakeholder engagement panel scorecards can provide a useful comparison to the panel that CRU is currently aiming to establish for UÉ, e.g. in terms of improvement trends and overall score targets.<sup>58</sup>
- For ESB Networks at PR5 (2021-2025), CRU also sets some customer service metrics which can provide a useful indicator of trends and potential targets to apply for UÉ's metrics:
  - Customer satisfaction survey: CRU set a target for an annual improvement of 0.5p.p per annum, which would result in an 83 per cent target for 2029.<sup>59</sup> While the sector differs from UÉ and thus the questions may not capture precisely the same concepts, in general we would expect that a customer satisfaction survey trend should not materially differ between sectors.
  - ESATRAT performance: CRU sets the ESATRAT score based on a weighted average of difference incentives, some of which are comparable to UÉ's. These include: i) speed of telephone response (within 20 seconds) target of 89 per cent, which is tighter than UÉ's proposed target of 80 per cent; ii) call abandonment rate of 4 per cent, which is less tight than UÉ's proposal.<sup>60</sup>

<sup>56</sup> CRU (16 December 2024), Price Control 5 Regulatory Framework User Guide, pp.100-101.

<sup>57</sup> CRU (16 December 2024), Price Control 5 Regulatory Framework User Guide, pp.100-101.

<sup>58</sup> CRU (20 December 2023), CRU Decision on the PC5 Regulatory Framework, pp.48-49.

<sup>59</sup> CRU (18 December 2020), PR5 Regulatory Framework, Incentives and Reporting, p.81.

<sup>60</sup> CRU (18 December 2020), PR5 Regulatory Framework, Incentives and Reporting, p.117.

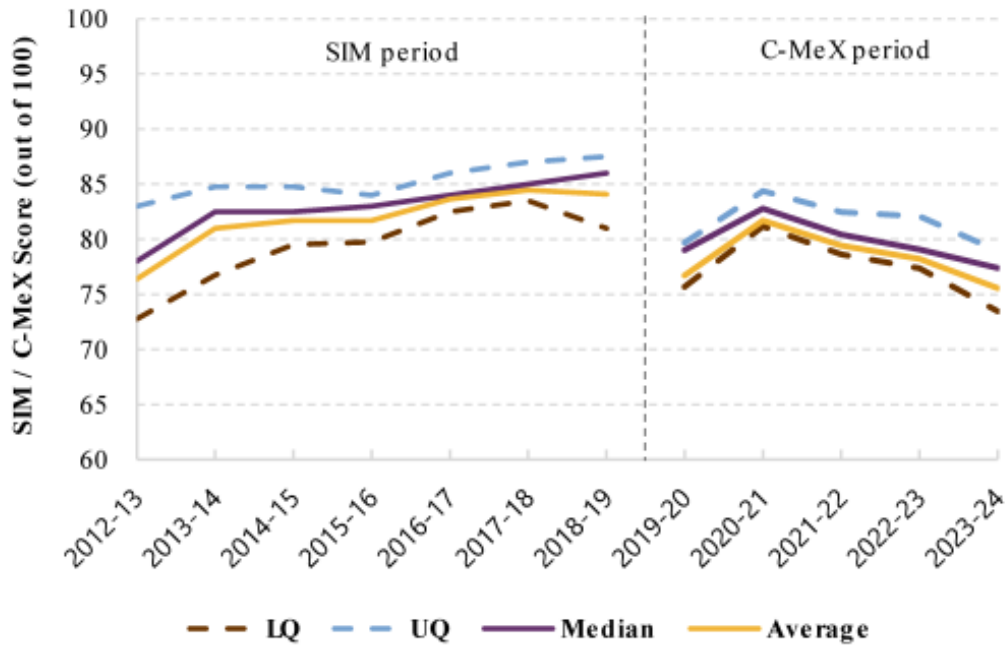
- Stakeholder engagement panel: CRU's stakeholder engagement panel scorecards applied for DSO and TSO can provide a useful comparison to the panel that CRU is currently aiming to establish for UÉ, e.g. in terms of improvement trends and overall score targets.<sup>61</sup>
- Overall, the above incentives provide a good basis for CRU to align incentives across sectors. They measure similar aspects where the sector particularities are likely to have less of an impact than in other incentives. However, it would require some alignment on their definition before implementing similar targets. Such an alignment may also need to take into account each utility's performance so as not to set unachievable targets in the short term.

We have also reviewed evidence from E&W water and sewerage companies (WaSCs). As explained in Section 3.1, Ofwat relies on more qualitative customer surveys rather than qualitative measures, although until PR19, the SIM measure score did include a quantitative component alongside a qualitative component. Therefore, the SIM and C-MeX do not map to individual UÉ metrics, but do capture customer satisfaction as the UÉ metrics are designed to. Therefore, the general trend over time from E&W scores may be informative for what we would expect to see from UÉ in terms of trends going forwards. Figure 4.2 shows that while E&W WaSCs were improving their score under the SIM measure between 2012-2013 and 2018-2019, under the C-MeX measure, WaSCs' performance has deteriorated since 2020-2021. The average annual score increase for the SIM measure score between 2012-2013 and 2018-2019 was 1.3, while for the C-MeX measure it was - 0.3 (i.e. a score decrease). While the more recent evidence suggests plateau/decline in performance, but this reflects 3 years following a period of general improvement.

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<sup>61</sup> CRU (18 December 2020), PR5 Regulatory Framework, Incentives and Reporting, sections 7.7 and 8.7.

**Figure 4.2: E&W SIM and C-MeX Scores**



*Note: Calculations based on E&W water and sewerage companies (WaSCs), i.e. does not include water only companies.  
Source: NERA analysis of Ofwat data.*

Table 4.2 summarises our recommendations regarding UÉ’s RC4 proposals for customer service incentives, taking into account the evidence discussed above.

**Table 4.2: NERA Recommendations on UÉ's RC4 Targets for Customer Service Incentives**

<b>Metric</b>	<b>RC3 Target (by 2024)</b>	<b>2020-2023 (Avg)</b>	<b>UÉ RC4 Proposal</b>	<b>NERA Recommendation</b>
% calls answered within 20 seconds	85%	76%-82% (80%)	80%	RC4 proposal in line with RC3 average, with limited improvement incentive Compares unfavourably with GNI (92%) and ESB (89%). Recommend 85% target as mid-point between RC3 average and peers
% calls abandoned	<=4%	1.5%-4.4% (2.8%)	<=3%	RC4 proposal consistent with historical performance given clear downward trend in last 3 years (4.4%, 2.2% and 1.5% respectively). Recommend 2% consistent with more recent performance
% billing line calls resolved on first call	90%	69%-86% (76%)	Remove	UÉ to change measure from "first call" to "first contact" to reflect wider platforms used
% operation line calls resolved on first call	80%	70%-75% (72%)	Remove	UÉ to change measure from "first call" to "first contact" to reflect wider platforms used
% of bills issued based on meter reading	70%	69%-78% (74%)	75% by 2029	Historical performance indicates higher target is achievable. Recommend 80% by end 2029
% of metered accounts that receive at least one bill based on meter read	100%	81%-85% (83%)	95% by 2029	RC4 proposal seems reasonable in light of historical performance
% of billing contacts closed out within 5 working days	95%	95%-97% (96%)	95%	Historical performance indicates higher target is achievable. Recommend 97%
% complains responded within 5 working days (domestic)	100%	94%-100% (98%)	95%	Historical performance indicates higher target is achievable. Recommend 97%

<b>Metric</b>	<b>RC3 Target (by 2024)</b>	<b>2020-2023 (Avg)</b>	<b>UÉ RC4 Proposal</b>	<b>NERA Recommendation</b>
% complains responded within 5 working days (non-domestic)	100%	90%-100% (96%)	95%	Historical performance indicates higher target is achievable. Recommend 97%
% complaints issued final decision within 2 months (domestic)	100%	96%-99% (97%)	95%	Historical performance indicates higher target is achievable. Recommend 97%
% complaints issued final decision within 2 months (non-domestic)	100%	86%-98% (91%)	95%	RC4 proposal reasonable
Unresolved complaints upheld by the CRU CTT	Better than average of utilities/suppliers	0.02-0.08 (0.05)	Align with average	RC4 proposal reasonable Maintain monitoring of number of charter payments and report the total monetary value alongside the number of payments
Customer satisfaction survey	Establish baseline	77.0%-79.3% (78.2%)	80.3% by 2029	Slightly higher target of 81% by 2029, equivalent to 0.5p.p increase per annum set for ESB target (from 2023 level) Achievable in context of E&W SIM score avg. annual increase of 1.3 p.p.

Source: NERA analysis.

We note that other jurisdictions have started to phase out quantitative measures (e.g. complaint handling) and rely more on qualitative customer satisfaction surveys (e.g. C-MeX) – in essence, to ensure an holistic approach by the utility to customer service standards. CRU may want to consider phasing out the specific customer service measures at some stage, and rely on survey results – however, we understand that there may still be a rationale to collect such data over RC4 as UÉ continues to improve performance.

### **NERA recommendations for new RC4 incentives**

In terms of potential new incentives to be introduced at RC4, we would highlight the potential introduction of an incentive aimed at incentivising UÉ to improve customer experience for developer services customers, which we understand is an important issue at RC4. Such an incentive could be based, for example, on Ofwat's D-MeX measure, which, as explained in Section 3.1 consists of a weighted average score based on a satisfaction survey and levels of service. While Ofwat's D-MeX is a financial incentive, CRU could first introduce a D-MeX-type incentive as a reputational incentive, allowing for the establishment of a baseline score based on a review of time-series data, before moving on to a financial incentive. Appendix A provides further detail on the survey questions and levels of service metrics of the D-MeX survey.

## **4.4. Security of Water Supply**

Below we provide our comments on UÉ's proposed incentives covering security of water supply.

### **Leakage**

UÉ proposes maintaining the leakage metric unchanged and with an updated target: 110 MLD on public side leakage and 10 MLD on customer supply pipe leakage, an overall 120MLD reduction. This is a lower reduction than the RC3 target of 176 MLD (161 MLD on public side and 15 MLD on customer supply).<sup>62</sup>

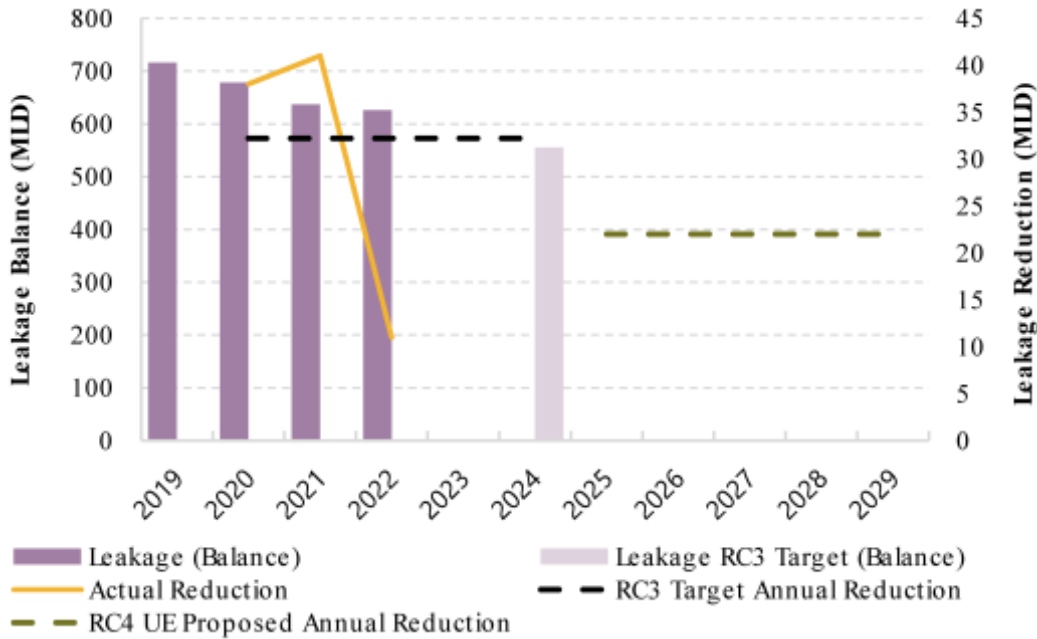
Figure 4.3 sets out UÉ's performance on public side leakage to date, forecast performance over remainder of RC3 assuming the RC3 targets are met and the implied RC4 performance based on UÉ's proposed targets.<sup>63</sup>

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<sup>62</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.20.

<sup>63</sup> CRU (24 September 2024), Uisce Éireann Performance Assessment Framework, pp.22-23 and Uisce Éireann, Performance Assessment Framework 2022 Annual report, pp.37-38. We understand that, to date, UÉ has not reported 2023 public side leakage performance.

**Figure 4.3: UÉ’s Public Side Leakage Reduction Performance and Targets**



Note: RC3 and RC4 target reductions calculated assuming equal progress each year.

Source: NERA analysis of Uisce Éireann, Performance Assessment Framework 2022 Annual report, p.31 and Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.20-21.

In terms of customer supply side leakage, UÉ reported that by 2023 it had reduced this leakage by 10 MLD, which is still below the target set for 2024 of 15 MLD.<sup>64</sup>

Overall, UÉ proposes a lower leakage reduction target for RC4 compared to RC3 (35MLD implied annual reduction for RC3 and 24 MLD for RC4), which may reflect likely failure to achieve RC3 target given CRU’s view that “Uisce Éireann is not on track to achieve its target by the end of 2024”.<sup>65</sup>

In terms of comparable metrics, Ofwat also reports a leakage metric, which is: i) defined as the sum of distribution system leakage, including service reservoir losses and trunk main leakage plus customer supply pipe leakage; and ii) it is reported as the annual arithmetic mean (referred to as ‘average’ in the guidance) daily leakage expressed in megalitres per day (Ml/d).<sup>66</sup> Table 4.3 sets out E&W WaSCs’ leakage balance over time.

<sup>64</sup> CRU (2025), Uisce Éireann Performance Assessment Framework 2023 Annual Report, p.15.

<sup>65</sup> CRU (24 September 2024), Uisce Éireann Performance Assessment Framework, pp.22-23 and CRU (2025), Uisce Éireann Performance Assessment Framework 2023 Annual Report, pp.15-16.

<sup>66</sup> Ofwat (19 December 2024), PR24 Common performance commitments – Leakage, p.3 and Ofwat (27 March 2018), PR19 Reporting guidance – Leakage, p.2.

**Table 4.3: E&W Leakage Balance (Megalitres per day)**

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Megalitres per day</b>							
LQ	96	96	88	87	84	99	98
UQ	352	354	321	318	312	316	291
Median	156	154	153	161	152	155	151
Average	234	233	218	220	213	222	212
<b>% change</b>							
LQ	n.a.	0.0%	-8.9%	-0.8%	-3.5%	18.4%	-1.1%
UQ	n.a.	0.6%	-9.5%	-1.0%	-1.9%	1.4%	-7.8%
Median	n.a.	-1.1%	-0.4%	5.1%	-5.7%	1.8%	-2.3%
Average	n.a.	-0.2%	-6.7%	1.1%	-3.2%	4.1%	-4.4%

Note: Calculations based on E&W water and sewerage companies (WaSCs), i.e. does not include water only companies.

Source: NERA analysis of Ofwat's data.

As shown in Table 4.3, there is some variability in the data depending on the year and company position (upper or lower quartile), but in general we note that the average WaSC has slightly decreased the leakage balance over the observed period. Using a 3-year average (2017-2020 and 2021-2024) to smooth volatility, the average E&W WaSCs' leakage decreased from 228 MLD to 216 MLD, i.e. by 5 per cent. In contrast, UÉ's RC3 target reflects a 22 per cent (or 4 per cent annual) reduction on public side leakage and its RC4 target reflects a 20 per cent reduction assuming RC3 target achieved (or 4 per cent annual).<sup>67</sup>

It is clear that an increased improvement in UÉ leakage performance than the recent improvement in E&W is appropriate, given the overall higher level of leakage in Ireland. The E&W improvement rate may provide a longer run improvement rate.

The proposed leakage reduction target (120 ML/d by the end of RC4 split 110/10 between network and supply pipes) is consistent with a reduction of 20 per cent in the Greater Dublin Area (GDA) by 2030 and 20 per cent elsewhere by 2034, recognising the greater water supply issues in the GDA. UÉ indicates that this is consistent with the wider policy objective of reaching a national leakage rate of 25 per cent in 2030 (compared to 46 per cent in 2018) and with its forecast opex and capital investment plan.

Arcadis has reviewed the leakage reduction programme put in place by UÉ, it is an ambitious programme underpinned by an ongoing process of effectiveness review (project Optimum) which identified 13 priority initiatives for leakage reduction.

In light of this, we find that the RC4 proposal is reasonable. Arcadis noted that if more challenging targets were to be adopted, it would be recommended to target them in water resource zones

<sup>67</sup> A decrease of 161 MLD in leakage over RC3 from a 2019 balance of 716 MLD is equivalent to a 22 per cent decrease. Assuming UÉ meets the RC3 target, a decrease of 110 MLD in leakage over RC4 from a 2024 balance of 555 MLD (i.e. 716 MLD minus 161 MLD) is equivalent to a 20 per cent decrease. See Uisce Éireann, Performance Assessment Framework 2022 Annual report, p.31 and Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.20-21.

where further leakage reductions can have the highest impact in deferring or removing water supply investment need.

### **Leakage repairs**

UÉ proposes an activity metric, leakage repairs, which ramps from 23,000 repairs / year to 35,000 repairs a year over RC4. While no evidence has been provided to justify the specific level of repairs, and this specific metric is not used by other regulators, Ofwat has a similar metric, repairs to burst mains per 1,000km of network. However, the Ofwat metric does not include customer supply pipes and is intended as a network condition metric with a reduction in number of burst mains as the target.

An activity-based repair metric will incentivise UÉ to increase the volume of its leakage “find and fix” activity, the RC4 proposal is a reasonable one.

### **Security of Water supply**

In RC3, UÉ was required to report on SOSI which is an aggregate measure of security of supply. It is UÉ's view that this metric is not suitable for the Irish system. Its proposal is to replace it with three new metrics:<sup>68</sup>

- Average operational capacity over average demand.
- Capacity for a 1:50 year event over average demand.
- Operational headroom over average demand.

The proposal is to build capability to report these over the course of RC4 with the intention of reporting from the 2029 reporting year (first report in 2030) and to provide progress reports during RC4 on that capability building. They propose to report for the Category 1 (73 per cent of the population) and the 17 key towns within the Category 2A Water Resource Zones (WRZs).<sup>69</sup>

It is UÉ's view that the SoSI was derived for UK water at a stage when those companies were long established. It consists of a single company-wide score which results in the potential for large deficits in large population centres dominating the index (due to population weighting). Using this methodology would lead to prioritisation of supply issues at the largest WRZs.<sup>70</sup>

Arcadis agrees that the population weighted nature of the SoSI drives investment to the largest population centres: since the scores are combined linearly, this can lead to a moderate risk of water supply shortfalls in the largest population centres (i.e. the Greater Dublin Areas in this case) “outweighing” very high risk of water supply shortfalls in small towns and village systems. This is the challenge faced by any aggregate metric, i.e. that such a metric may not adequately incentivise improvements to service for small areas.

<sup>68</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.20-21.

<sup>69</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.21-22.

<sup>70</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.21-22.

UÉ notes that as part of the Dry Year Critical Period planning scenario 355 of its WRZs (66 per cent), supplying a total of 3.66 million customers are not providing a 1:50 level of service.

For reference, SoSI is calculated as follows:

1. The available headroom for each WRZ is calculated in ML/d, this is the difference between demand and water available for use.
2. Calculate the deficit, if any, between the available headroom and target headroom as a percentage of distribution input in the WRZ.
3. The deficit percentage for each WRZ is squared and the results weighted by the percentage of the total population served by that WRZ.
4. The weighted squared deficits are added together.
5. The final company index is  $1 - (100 \times \text{the sum from step 4})$

In the UK version of SoSI, each company sets its target headroom based on its agreed level of service (e.g. 1:20 with no use restrictions or 1:50 with hosepipe bans but no other restrictions) which have historically been set by the company itself and therefore makes SoSI not comparable between companies.

In Arcadis' view, each of the three proposed metrics serves a purpose.

- The first (average operational capacity / average demand) measures which areas are at risk of supply shortfalls even in non-drought conditions. UÉ notes this is an issue in a substantial number of WRZs.
- The second (1:50 year yield / average demand) measures resilience in drought conditions.
- The third (operational headroom) measures overall deployable output resilience, for example to freeze-thaw induced Winter Critical Period demand.

There are several challenges with the approach proposed by UÉ.

First, the targeting on Category 1 and 2A WRZs fails to solve the problem of the smallest communities not being sufficiently weighted in SoSI. In the UÉ proposal these communities simply will not be included at all.

Second, an aggregate measure of supply adequacy, however flawed it might be in theory, has the advantage of providing a summary number for external stakeholders.

Third, UÉ is proposing to replace a metric which it was already required to report in RC3 with a set of metrics which would not be reported until RC5, and with only reporting on progress towards the readiness of this reporting during the whole of RC4, leaving one of the most critical parameters of system performance without an outcome measurement during the whole of RC4. Concerningly, UÉ indicates that its focus during RC3 and RC4 has been and will be elsewhere which is why it is not in a position to report on these metrics earlier. This does not seem to be an adequate explanation since UÉ has been making representations for several years on the inadequacy of the existing SoSI measure. That being the case, it is incumbent on UÉ to be prepared with its new measures on a much faster time scale than end of the period (ideally from the beginning of the period).

Arcadis would recommend that:

- Some form of aggregate metrics for security of supply are retained. Two of the three proposed metrics could form the basis for such metrics, for example the percentage of population served by WRZs which do not have adequate capacity in average years or 1:50 years can be calculated from the first two proposed metrics and would be easier for external stakeholder to understand. Keeping these as separate metrics rather than combining them as in SoSI would help resolving the issue with SoSI, which is that it may prioritise marginal improvements in very large WRZs at the expense of resolving critical issues in smaller WRZs.
- All WRZs should be covered, and not just Category 1 and Category 2a. While Arcadis accepts that it may be proportionate to model smaller WRZs in less detail and therefore accept greater uncertainty in the supply demand balance in these cases, it is not acceptable not to model them at all.
- UÉ should be required to accelerate its proposed programme for reporting on its security of supply metrics rather than taking all of RC4 as an implementation period for reporting in RC5. UÉ has proposed reporting progress towards the reporting in RC5 but without proposing a concrete programme for what it will do when in the period or offering interim reporting of some WRZs in-period.

**Conclusions and additional recommendations**

Table 4.4 summarises our recommendations regarding UÉ’s RC4 proposals for security of water supply incentives, taking into account the evidence discussed above.

**Table 4.4: NERA Recommendations on UÉ’s RC4 Targets for Security of Water Supply Incentives**

Metric	RC3 Target (by 2024)	2020-2023	UÉ RC4 Proposal	NERA Recommendation
Leakage reduction (cumulative)	Public Side: 161 MLD Customer Supply: 15 MLD	Public Side: 90 MLD Customer Supply: 10 MLD	Public Side: 110 MLD Customer Supply: 10 MLD	RC4 proposal reasonable
Leakage repairs	n.a.	n.a.	143,500 repairs across RC4	RC4 proposal reasonable
Security of water supply	Report on: Security of Supply Index Number of WRZs in deficit	n.a.	Replace with alternative metrics: i) average operational Capacity over average demand; ii) Capacity for a 1 in 50 event compared to average demand; and iii) Operational headroom compared to average demand	Retain one or more aggregate metrics Cover all WRZs Accelerate reporting and present an ex-ante programme to achieve it

*Note: Leakage reduction figures are cumulative over period – for 2020-2023, the reduction reflects figures as of 2022 for Public Side and 2023 for Customer Supply.*

*Source: NERA analysis.*

## NERA recommendations for new RC4 incentives

We understand that two of CRU's priorities for RC4 are water conservation and energy efficiency, which are inherently interlinked as reduction in demand supports both water conservation efforts and reduces the energy required. As a result, CRU may introduce incentives aimed at reducing water demand, as Ofwat recently did when introducing PCC and business demand measures. As explained in Section 3.1.2, these measures complement the leakage reduction incentive, working together to reduce abstraction to protect the environment, while also allowing sufficient water for customers. Appendix A provides further detail on how Ofwat calculates these metrics.

## 4.5. Quality of Water Supply

Below we provide our comments on UÉ's proposed incentives covering quality of water supply.

### Interruptions to supply

A key change at RC4 is the replacement of the incentive tracking the number of properties that experienced unplanned interruptions to supply for more than 4 hours with a metric that will track the minutes of lost supply for all interruptions (planned and unplanned combined) that have a duration of greater than 3 hours. Specifically, this metric will be measured as follows:<sup>71</sup>

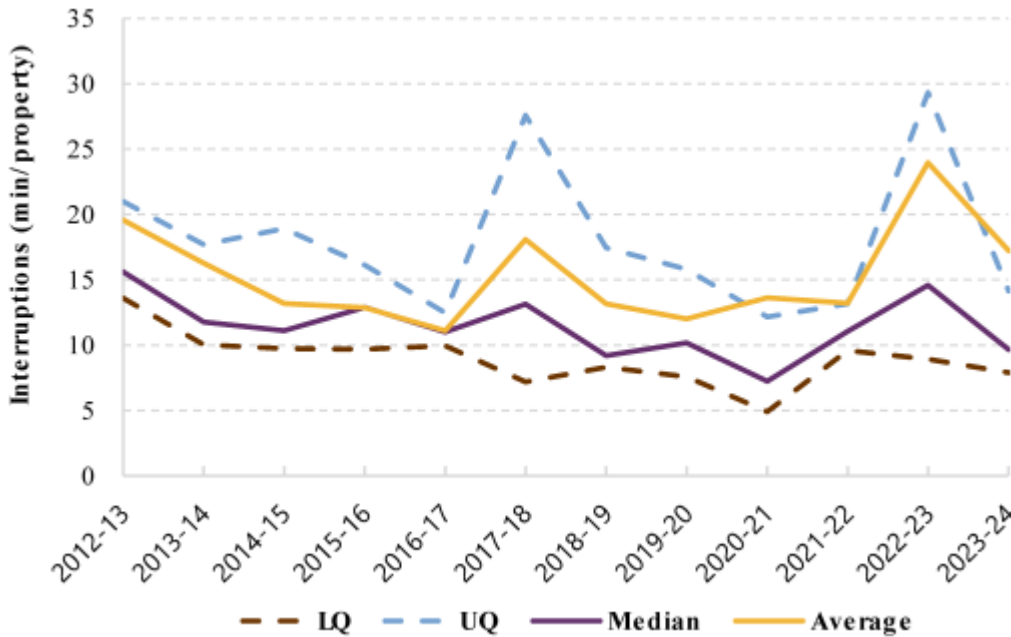
$$\sum \frac{\text{(Total duration of supply interruption of } \geq 180 \text{ minutes)} \times \text{(Number of properties impacted)}}{\text{Total number of properties served}}$$

Based on this definition, it appears this new metric is consistent with the water supply interruptions metric that Ofwat tracks in E&W, which relies on the same formula to track minutes of lost supply for both planned and unplanned interruptions of duration greater than 3 hours.<sup>72</sup> Figure 4.4 sets out E&W WaSCs' historical performance under the water supply interruptions metric, which has trended slightly downwards since 2012-2013 but has experienced substantial volatility.

<sup>71</sup> CRU (10 September 2021), Irish Water Performance Assessment Framework 2020 to 2024: Metric Review and Target Setting, pp.74-76.

<sup>72</sup> See for example Ofwat (27 March 2018), PR19 Reporting guidance – Supply interruptions, p.2.

**Figure 4.4: E&W Water Supply Interruptions (min/property)**



Note: Calculations based on E&W water and sewerage companies (WaSCs), i.e. does not include water only companies. Source: NERA analysis of Ofwat data.

We understand UÉ only recently started reporting this measure, with one year of data available: 553 minutes of lost supply for 2023.<sup>73</sup> UÉ also states that it expects 2024 outturn minutes of lost supply to be significantly higher (due to the scale and level of work required to fix current network issues) and therefore proposes a target of below 540 minutes by the end of 2029.<sup>74</sup>

UÉ’s outturn minutes of lost supply and proposed RC4 target are significantly higher than E&W WaSCs on a comparable metric (e.g. 2023-2024 average of 17 minutes and worst company performance of 82 minutes of lost supply).<sup>75</sup> We would therefore expect to see material performance improvement and an RC4 target that is less lenient than the one proposed by UÉ. We recommend a target of <360 minutes by 2029, i.e. a c.one-third improvement.

CRU may also consider separating the minutes of lost supply into planned and unplanned, on the basis that customers can better prepare for planned interruptions. For example, Ofgem sets different targets and incentive rates for planned and unplanned interruptions to reflect the fact that planned interruptions are less of an inconvenience to customers.<sup>76</sup> However, as noted above, other regulators such as Ofwat measure time for both planned and unplanned interruptions

<sup>73</sup> There is a slight inconsistency in the 2023 figure reported in the 2023 Annual Report (555 minutes) and the figure reported in UÉ’s proposal (553 minutes). We have relied on UÉ’s proposal figure,

<sup>74</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.25.

<sup>75</sup> NERA analysis of Ofwat’s WCPR report 2023-24, tab 5. This reflects WaSC

<sup>76</sup> Ofgem (30 November 2022), RIIO-ED2 Final Determinations Core Methodology Document, paras 6.9 to 6.146 and Ofgem (18 January 2017), Guide to the RIIO-ED1 electricity distribution price control, para.11.3.

combined, stating that "[e]ven if an interruption is planned, it will still be in customers' interest for the company to minimise how long it lasts for".<sup>77</sup>

In terms of the other metrics (percentage of properties impacted for greater than 12 hours and greater than 24 hours), these apply only to unplanned interruptions. Table 4.5 sets out UÉ's RC3 target, performance to date and proposed RC4 target.

**Table 4.5: UÉ's Unplanned Interruptions Metrics RC3/RC4 Targets and RC3 Performance**

Metric	RC3 Target (by 2024)	2020	2021	2022	2023	UÉ RC4 Proposal (by 2029)
% of properties impacted >12h	<12%	20.4%	25.3%	16.3%	9.1%	<6.6%
% of properties impacted >24h	<3.6%	7.6%	6.4%	8.9%	5.5%	<4.5%

Source: NERA analysis of Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.23, CRU (24 September 2024), Uisce Éireann Performance Assessment Framework, p.vi and CRU (2025), Uisce Éireann Performance Assessment Framework 2023 Annual Report, p. viii.

Overall, we would expect UÉ to improve its performance on these metrics as it also improves the minutes of lost supply.

### **Drinking water quality, Boil Water Notices and Drinking Water Restriction Notices**

On drinking water quality, UÉ proposes retaining the same metrics and targets as at RC3, which are close to 99.9 per cent for most metrics and close to 99 per cent for two metrics (THM and lead compliance). We note while from 2020 to 2022, UÉ has reached its targets for all but one year for one metric (THM compliance in 2022),<sup>78</sup> the 2023 results show an underperformance across all but one metric (E.coli compliance).<sup>79</sup>

In terms of new incentives to be introduced at RC4, we would highlight the potential introduction of an incentive aimed at incentivising UÉ to further improve water quality. Such an incentive could be based on Ofwat's recently introduced "customer contacts about water quality" incentive. This incentive is calculated as the number of times the company is contacted by consumers due to the taste and odour of drinking water or because the drinking water is not clear, reported per 1,000 population. The calculation is the number of contacts for all appearance, taste, and odour contacts multiplied by 1,000 divided by the resident population.<sup>80</sup>

On BWN and Drinking Water Restriction Notices, UÉ proposes maintaining the same target of zero but to be applied only to notices for operational reasons, i.e. where capital investment is not required. This is because UÉ considers a target of zero is unachievable due to the continuing

<sup>77</sup> Ofwat (February 2025), PR24 final determinations: Delivering outcomes for customers and the environment, pp.86-87.

<sup>78</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.23 and 26 and CRU (24 September 2024), Uisce Éireann Performance Assessment Framework, p.vi.

<sup>79</sup> CRU (2025), Uisce Éireann Performance Assessment Framework 2023 Annual Report, p.viii.

<sup>80</sup> Ofwat (December 2024), Customer contacts about water quality, p.2.

impacts of a legacy of underinvestment.<sup>81</sup> However, we consider that given the importance of this issue to customers, we would expect UÉ to prioritise addressing these issues over RC4. Historically, UÉ has not been able to meet the target of zero for any of these metrics in 2020, 2021, 2022 or 2023.<sup>82</sup>

Overall, we consider that the maintenance of the RC3 targets appears reasonable.

### **Conclusion**

Table 4.6 summarises our recommendations regarding UÉ's RC4 proposals for quality of water supply incentives, taking into account the evidence discussed above.

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<sup>81</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.27.

<sup>82</sup> CRU (24 September 2024), Uisce Éireann Performance Assessment Framework, p.vi and CRU (2025), Uisce Éireann Performance Assessment Framework 2023 Annual Report, p.ix.

**Table 4.6: NERA Recommendations on UÉ's RC4 Targets for Quality of Water Supply Incentives**

Metric	RC3 Target (by 2024)	2020-2023 (Avg)	UÉ RC4 Proposal	NERA Recommendation
Minutes of lost supply	Establish baseline	553 minutes (2023)	<540 minutes by 2029	Lower target to incentivise improvement, given performance significantly worse than E&W. Recommend < 360 minutes by 2029 i.e. c. one-third improvement
% of properties impacted >12h	<12%	9.1%-25.3% (17.8%)	<6.6%	RC4 proposal reasonable in light of improving trend in historical data
% of properties impacted >24h	<3.6%	5.5%-8.9% (7.1%)	<4.5%	Maintain RC3 target given significant impact on customers from interruptions >24 hours
Drinking water quality	Range of targets around 99%	2020-2022: UÉ reached its targets (except THM compliance in 2022) 2023: UÉ only reached E.coli target	No change to RC3 target	RC4 proposal reasonable. Recommend new water quality metric - water complaints relating to odor, colour or taste.
Boil Water Notices and Drinking Water Restriction Notices	0	UÉ not able to meet target in any metric over 2020-2023	Maintain target of zero but to be applied to notices for operational reasons only	Maintain RC3 target of 0

Source: NERA analysis.

## 4.6. Sewer Incidents

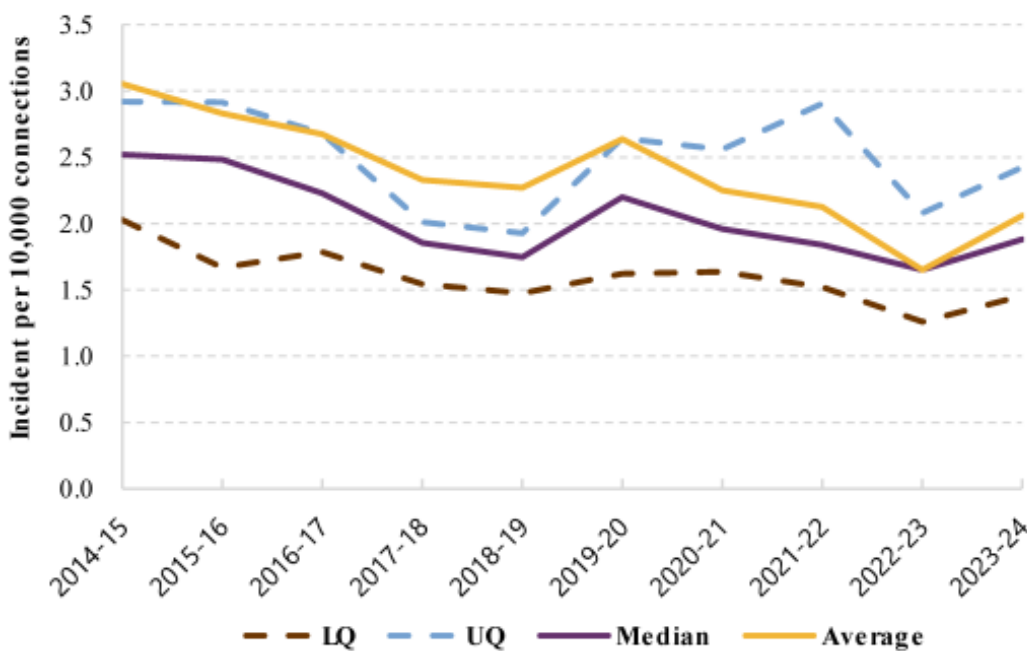
UÉ proposes to maintain the same sewer incident metrics, with separate metrics for overload, other causes (failure, blockage or collapse of a sewer) for RC4 as for RC3. However, unlike the expectation prior to RC3 that it would be able to report and establish a baseline performance in 2022, to date UÉ has not reported data on these metrics yet. UÉ proposes to report performance on some metrics in the 2025 PAF report and expects to have reporting capability in place for remainder metrics by end of 2029.<sup>83</sup>

<sup>83</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.28-29.

Once reporting capability is established on these metrics, we would expect to see an improving trend over the medium term that is at least as great to that observed by E&W companies on the following comparable metrics, which have been improving over time:

- **Internal sewer flooding:** This metric covers the number of internal sewer flooding incidents due to overload sewers and other causes (including severe weather events), excluding flooding events for which the responsibility falls outside the company’s statutory functions and flooding which originates from assets which are not part of the company’s sewerage system.<sup>84,85</sup> Figure 4.5 shows that E&W WaSCs internal sewer incidents per 10,000 connections have declined over time at a compound annual growth rate (CAGR) of 4.3 per cent, with the current average number of incidents per 10,000 connections standing at 2.1.

**Figure 4.5: E&W Internal Sewer Incidents (per 10,000 connections)**



Source: NERA analysis of Ofwat data.

- **External sewer flooding:** This metric covers the number of external sewer flooding incidents due to overload sewers and other causes (including severe weather events), excluding flooding events for which the responsibility falls outside the company’s statutory functions and flooding which originates from assets which are not part of the company’s sewerage system, consistent with the internal sewer flooding definition.<sup>86</sup> While this metric was introduced as a common PC only at PR24, it has been reported as part of asset health metrics in the past. Figure 4.6 shows

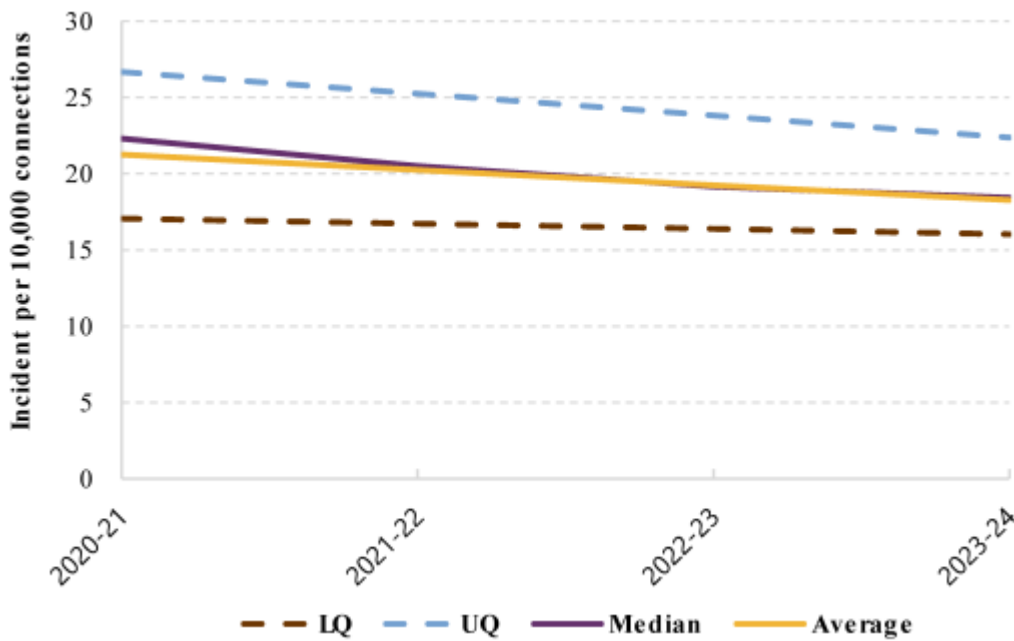
<sup>84</sup> Ofwat (19 December 2024), PR24 Internal Sewer Flooding, pp.2-4 and Ofwat (27 March 2018), PR19 Reporting guidance – Sewer flooding, pp.2-4.

<sup>85</sup> Events not included in the internal sewer flooding incidents include flooding due to surface water run off which has not originated from public sewers, fluvial flooding, coastal flooding, ground water which has not originated from a public sewer, flooding from water mains etc., flooding caused by any highway drainage failure, and flooding incidents caused by private assets (including drains). See Ofwat (19 December 2024), PR24 Internal Sewer Flooding, pp.5-6.

<sup>86</sup> Ofwat (11 July 2024), PR24 External sewer flooding, pp.2-6.

that E&W WaSCs external sewer incidents per 10,000 connections have declined over time at a CAGR of 4.9 per cent, with the current average number of incidents per 10,000 connections standing at 18.3.

**Figure 4.6: E&W External Sewer Incidents (per 10,000 connections)**

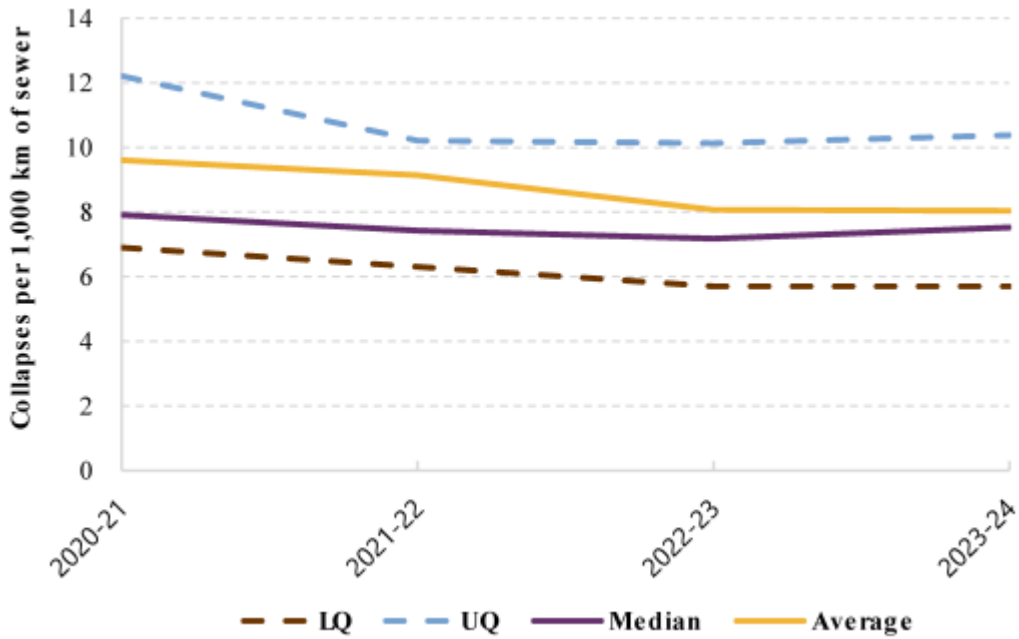


Source: NERA analysis of Ofwat data.

- **Sewer collapses:** This metric covers the number of sewer collapses that have not been identified proactively by the company and causing an impact on service to customers environment. This measure excludes proactively identified collapses and third-party damage.<sup>87</sup> Figure 4.7 shows that E&W WaSCs sewer collapses per 1,000 km of sewer have declined over time at a CAGR of 5.8 per cent, with the current average number of incidents per 1,000 km of sewer 8.0.

<sup>87</sup> Ofwat (19 December 2024), PR24 Sewer Collapses, pp.2-4 and Ofwat (4 April 2019), PR19 Reporting guidance – Sewer collapses per 1,000km, pp.2-4.

**Figure 4.7: E&W Sewer Collapses (per 1,000 km of sewer)**



Source: NERA analysis of Ofwat data.

For the above metric, as with other sewer metrics, we would expect the high-level trend to be relatively similar, e.g. decrease in properties at risk as investment to address internal/external sewer incidents is made.

Table 4.7 summarises our recommendations regarding UÉ's RC4 proposals for sewer incidents incentives, taking into account the evidence discussed above.

**Table 4.7: NERA Recommendations on UÉ's RC4 Targets for Sewer Incidents Supply Incentives**

Metric	RC3 Target (by 2024)	2020-2023	UÉ RC4 Proposal	NERA Recommendation
Internal sewer incidents (overload and other causes)	Establish baseline	n.a.	Establish baseline by 2029	Once reported, expect improving trend over medium term consistent with E&W evidence (c.5% annual reduction). Require UÉ to provide baseline data by 2027. CRU to consider setting targets later in the RC4 period
Internal sewer incidents (properties at risk)	Establish baseline	n.a.	Establish baseline by 2029	Expect decrease in properties at risk as investment to address internal sewer incidents is made. Require UÉ to provide baseline data by 2027. CRU to consider setting targets later in the RC4 period
External sewer incidents (overload and other causes)	Establish baseline	n.a.	Establish baseline by 2029	Once reported, expect improving trend over medium term consistent with E&W evidence (c.5% annual reduction). Require UÉ to provide baseline data by 2027. CRU to consider setting targets later in the RC4 period
External sewer incidents (properties at risk)	Establish baseline	n.a.	Establish baseline by 2029	Expect decrease in properties at risk as investment to address external sewer incidents is made. Require UÉ to provide baseline data by 2027. CRU to consider setting targets later in the RC4 period

Source: NERA analysis.

## 4.7. Environmental Performance Metrics

Below we provide our comments on UÉ's proposed incentives covering environmental performance metrics.

### **Incidents relating to wastewater**

UÉ proposes maintaining the same metrics as for RC3 but with more lenient targets for RC4. According to UÉ, RC3 targets are not achievable as they were based on a "*fundamentally different UK reporting protocol*", with reporting in Ireland reflecting a broad range of potential issues,

including breakdown of equipment even when there is no impact on the performance of the wastewater treatment plant or pose a risk to the environment.<sup>88</sup>

Table 4.8 sets out UÉ's RC3 targets, performance to date and proposed RC4 targets. To date, UÉ does not appear to be in line to achieve its RC3 targets other than for category 3-5 incidents.

**Table 4.8: UÉ's Wastewater Incidents RC3/RC4 Targets and RC3 Performance**

Metric	RC3 Target (by 2024)	2020	2021	2022	2023	UÉ RC4 Proposal (by 2029)
One-off incidents	<345	1,108	1,067	1,080	1,141	989
Recurring incidents	<98	238	249	244	230	216
Category 3-5 incidents	0	1	0	0	0	0

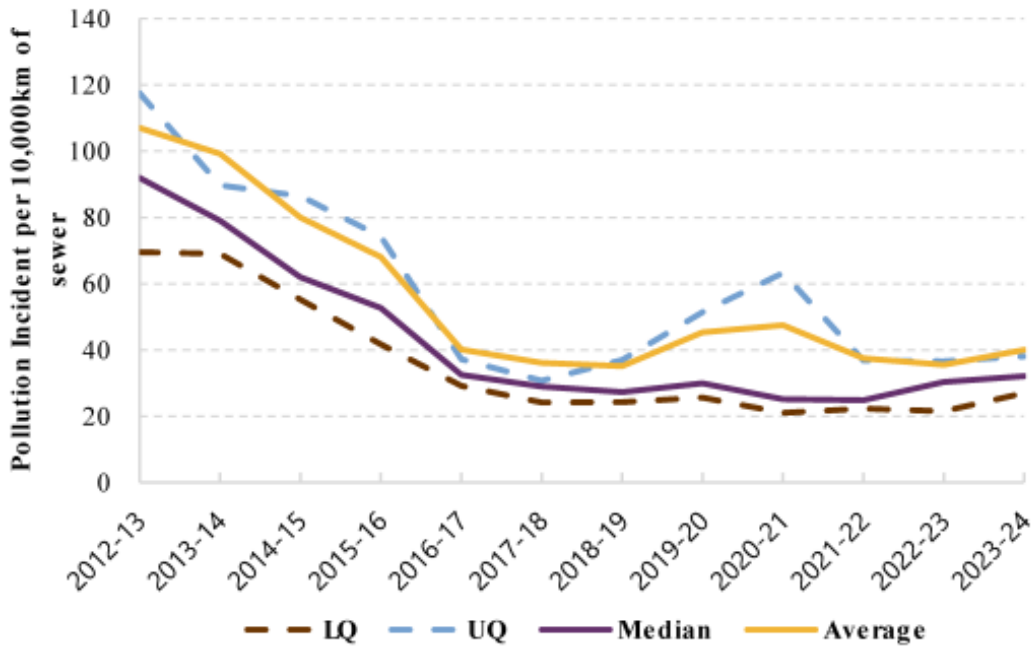
Source: NERA analysis of Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.29 and CRU (24 September 2024), Uisce Éireann Performance Assessment Framework, p.vii and CRU (2025), Uisce Éireann Performance Assessment Framework 2023 Annual Report, p.x.

Figure 4.8 sets out the WaSCs performance in the most comparable Ofwat metric to wastewater incidents: total pollution incidents per 10,000km of sewer. This metric measures the total number of pollution incidents (categories 1 to 3) in a calendar year emanating from a discharge or escape of a contaminant from a water company sewerage asset affecting the water environment, per 10,000km of sewer length from wastewater assets for which the company is responsible.<sup>89</sup> However, contrary to the UÉ metrics, it does not differentiate between one off and recurring incidents. While we understand that reporting standard may differ, we consider that this metric can provide a useful cross-check in assessing expected high-level trends for Ireland. For example, in E&W companies, pollution incidents per 10,000km of sewer decreased at CAGR of 8.5 per cent between 2012-2013 and 2023-2024.

<sup>88</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, pp.30-31.

<sup>89</sup> Ofwat (19 December 2024), PR24 Total pollution incidents, p.2.

**Figure 4.8: E&W Pollution Incidents per 10,000km of Sewer**



*Note: Calculations based on E&W water and sewerage companies (WaSCs), i.e. does not include water only companies.  
Source: NERA analysis of Ofwat data.*

We note that with PR24, Ofwat introduced a further metric: serious pollution incidents, which will measure the pollution incidents of category 1 and 2, and will also include incidents emanating from water supply assets (whereas total pollution incidents covers only incidents emanating from a sewerage asset).<sup>90</sup>

**Other metrics and conclusion**

With regards to UÉ’s proposed target of 4 wastewater agglomerations with no wastewater treatment by 2029, we understand from Arcadis that it considers this is a reasonable target and is consistent with the proposed capex plan.

Table 4.9 summarises our recommendations regarding UÉ’s RC4 proposals for environmental performance incentives, taking into account the evidence discussed above.

<sup>90</sup> Ofwat (19 December 2024), PR24 Total pollution incidents, p.2 and Ofwat (19 December 2024), PR24 Serious pollution incidents, p.2.

**Table 4.9: NERA Recommendations on UÉ's RC4 Targets for Environmental Performance Incidents Incentives**

Metric	RC3 Target (by 2024)	2020-2023 (Avg)	UÉ RC4 Proposal	NERA Recommendation
One-off incidents	<345	1,067-1,141 (1,099)	989	Recommend higher target of reduction of 80 incidents p.a., consistent with RC3, relative to RC3 closing position
Recurring incidents	<98	230-249 (240)	216	Recommend higher target of reduction of 25 incidents p.a., consistent with RC3, relative to RC3 closing position
Category 3-5 incidents	0	0-1 (0)	0	RC4 proposal reasonable
Wastewater agglomerations with no wastewater treatment	0	19-34 (29)	4 by 2029	RC4 proposal reasonable and consistent with proposed capex plan
Compliance with the treatment requirement of UWWTD	100%	91%-94% (93%)	97% by 2029	RC4 proposal reasonable in light of historical performance
Compliance with ELVs – overall compliance	Establish baseline	41%-45% (43%)	87%	RC4 proposal reasonable in light of historical performance
Compliance with ELVs – BOD limit	Establish baseline	77%-79% (78%)	90%	
Compliance with ELVs – COD limit	Establish baseline	86%-90% (87%)	91%	
Compliance with ELVs – suspended solids limit	Establish baseline	77%-82% (79%)	89%	
Compliance with ELVs – ortho phosphate limit	Establish baseline	65%-70% (67%)	84%	
Compliance with ELVs – ammonia limit	Establish baseline	56%-60% (58%)	82%	
Drinking water sludge	100%	100%	100%	RC4 proposal reasonable
Wastewater sludge	100%	100%	100%	RC4 proposal reasonable

Note: One-off and recurring 2029 incidents level in NERA Recommendations column calculated based on 2023 reported performance and assuming a 8.5 per cent annual improvement.

Source: NERA analysis of Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.30 and CRU (24 September 2024), Uisce Éireann Performance Assessment Framework, pp.vii and viii and CRU (2025), Uisce Éireann Performance Assessment Framework 2023 Annual Report, p.x.

## 4.8. Energy & Emissions

On the Energy & Emissions area, UÉ has incentive metrics measuring the reduction in energy consumption and greenhouse gas emissions (GHG).

On the reduction in energy consumption, CRU set UÉ's RC3 target as a minimum reduction of 40.71 GWh in Total Primary Energy Requirement (TPER) by end 2024. We understand that UÉ is

currently on track to achieve this objective, having achieved a cumulative reduction of 31.80 GWh by 2022.<sup>91</sup> For RC4, UÉ has proposed a reduction in energy consumption of 25.4 GWh by end 2029.<sup>92</sup>

On the reduction in GHG, UÉ's target is based on the Sustainable Energy Authority of Ireland (SEIA) target reduction, which we understand is a 51 per cent reduction in GHG by the end of 2029 and which UÉ has adopted as its RC4 target.<sup>93</sup>

We understand that UÉ's targets result from government requirement.<sup>94</sup>

## 4.9. Asset Health and Serviceability

The main omission in Ireland is that a number of asset health or serviceability metrics more widely do not form part of the PAF, whereas they form part of the explicit incentive arrangements in E&W and Northern Ireland. This is particularly relevant in light of CRU's priorities for RC4 on monitoring asset health to address the challenges of a growing population and economy.

Appendix B provides a set of serviceability metrics employed in E&W historically and Northern Ireland at present. Relative to these jurisdictions, we note that UÉ:

- Reports on a wide range of water quality metrics which are analogous to the E&W and Northern Ireland non-infrastructure metrics and some infrastructure metrics. See Appendix B for a comparison of the NI serviceability metrics and the analogous metrics reported by UÉ as part of the PAF and/or BPQ.
- Reports on some metrics which are analogous to E&W and Northern Ireland infrastructure related metrics, specifically: percentage of properties affected by supply interruptions (>12 hours) and number of category 1, 2 and 3 pollution incidents (wastewater).
- Under the PAF, UÉ should report on some infrastructure metrics but has not yet started reporting on these, specifically: number of properties internally flooded due to overloaded sewers; number of incidents of property flooding due to sewer collapses (included in other causes).
- Under the BPQ (i.e. not part of the PAF), UÉ should report on some infrastructure metrics but has not yet started reporting on these, specifically: percentage of properties receiving pressure/flow below reference level; number of mains bursts; number of sewer collapses.

We recommend that serviceability or asset health measures should be an elevated focus for RC4, e.g. require UÉ to report on set of data and comment on whether serviceability being maintained, improving, deteriorating. In other words, it would be a UÉ led initiative. It is important to note that trends can only be inferred over many years as a result of data volatility.

<sup>91</sup> CRU (24 September 2024), Uisce Éireann Performance Assessment Framework, pp.46-47.

<sup>92</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.34.

<sup>93</sup> Uisce Éireann (28 February 2025), Uisce Éireann Revenue Control 4 – Regulatory Incentives and the Performance Assessment Framework, p.34.

<sup>94</sup> CRU (10 September 2021), Irish Water Performance Assessment Framework 2020 to 2024: Metric Review and Target Setting, Section 3.7.

## Appendix A. Additional information on Ofwat PR24 Incentives

### A.1. D-MeX Score Calculation

D-MeX is an annual performance commitment measure of developer experience, set out by Ofwat to incentivise water companies to increase their levels of customer service satisfaction. The final D-MeX measure is a single score for each regulated company, deriving from i) a qualitative component through a satisfaction survey; and ii) a quantitative component that compares the company’s performance against a list of service metrics. The calculation formula is set out in Figure A.1 below:

**Figure A.1 D-MeX Score Calculation**



*Note: SLP refers to self-lay provider; NAV refers to new appointee; Large developer is defined as developer customer who is neither an SLP or NAV and involved in ≥ 100 transactions with regulated water companies; Small developer is defined as customer who does not fall in the previous 3 classifications.*

*Source: Ofwat (December 2024), Developer measure of experience (D-MeX), p.3.*

Ofwat expects to conduct customer satisfaction surveys in quarterly frequency via digital and conventional survey methods (e.g. email, telephone, postal). Ofwat then averages and converts the survey results to a 0-100 scale, which accounts for two-thirds of the final D-MeX score. Table A.1 summarises the specific interview questions in the survey.

**Table A.1: Summary of Questions in D-Mex Survey Questionnaire for PR24**

<b>Question<sup>1</sup></b>	<b>Description</b>	<b>Response option</b>
<b>1</b>	Taking everything into account how satisfied are you with your experience with [water company]?	0-10 <sup>2</sup>
<b>2</b>	What did the company do well? (If respondent chooses 9-10 for <b>Q1</b> )	Written response
<b>3</b>	What could the company do to improve this score? (If respondent chooses 6-8 for <b>Q1</b> )	Written response
<b>4</b>	What causes you to give that score? (If respondent chooses 0-5 for <b>Q1</b> )	Written response
<b>5</b>	Ease of contacting them	0-10
	The quality of information available on their website	0-10
	Understanding your needs	0-10
	Timeliness of response to queries and requests	0-10
	Keeping you informed on progress, where required	0-10
	Offering value for money	0-10
	Completing the work within a timescale that is reasonable	0-10
	Meeting agreed deadlines	0-10
	Accuracy and completeness of any documentation provided	0-10
	Any advice and guidance they gave you, to help progress the work	0-10
<b>6</b>	How many sites in the UK does your organisation operate from	1, 2, 3, 4, 5-10, 11-50, 51-250, 250+, Prefer not to say
<b>7</b>	How many employees does your organisation have in the UK	0 (sole trader), 1-9, 10-49, 50-249, 250+, Prefer not to say

Note: <sup>1</sup> Respondent needs to answer questions 1-5 for all (three) water companies that the developer has interacted with in the past 3 months; <sup>2</sup> 0 is extremely dissatisfied, 5 is neither satisfied nor dissatisfied and 10 is extremely satisfied.

Source: Ofwat (December 2024), D-MeX Survey Questionnaire 2025-30.

For the quantitative component, Ofwat compares the companies against a list of relevant service metrics and calculates for each of the metrics an annual score as a percentage of completed transactions within the targeted time period. Ofwat then calculates the overall score by taking simple average across all relevant metrics, which accounts for one-third of the final D-MeX score. Table A.2 summarises the list of service metrics and corresponding targets.

**Table A.2 Summary of Service Metrics in D-MeX Quantitative Component for PR24**

<b>Service metrics</b>	<b>Applicable to</b>	<b>Target (days)</b>
Pre-development enquiry - reports issued within target	All companies	21
s45 quotations - within target	All companies	28
s45 service pipe connections - within target	All companies	21
Mains design <500 plots - quotations within target	All companies	28
Mains design >500 plots - quotations within target	All companies	42
Mains construction within target	All companies	90
Mains diversions (without constraints) - quotations within target	All companies	42
Mains diversions (with constraints) - quotations within target	All companies	By agreement
Mains diversions – construction/commissioning within target	All companies	90 or by agreement
Pre-development enquiry - reports issued within target	Water and sewerage companies only	21
Sewer requisition design - offers issued within target	Water and sewerage companies only	Period agreed between undertaker and customer
Sewer requisition – constructed and commissioned within agreed extension	Water and sewerage companies only	Water and sewerage companies only
Adoption legal agreement – draft agreements issued within target	Water and sewerage companies only	14
Update draft agreement	Water and sewerage companies in England only	14
Inspections & construction period	Water and sewerage companies in England only	14
Review PoC proposal	Companies in England only	14/28
Design Self-Laid Main (Stage 2) – Provide design	Companies in England only	28/42
Design Self-Laid Main (stage 2) – Water Company to Provide design acceptance	Companies in England only	14/21
Execute the Water Adoption Agreement (stage 3)	Companies in England only	7
Delivery Data (stage 3/4) – Source of Water Delivery Date	Companies in England only	As agreed
Connect Self-Laid Main – Review request and carry out Final Connection	Companies in England only	14

Make Service Connections (stage 7 – part 2) – Validate notification and provide consent to progress with connection	Companies in England only	5
Self-lay point of connection report <500 plots etc (reports issued within target)	All companies	21
Self lay point of connection report >500 plots etc (reports issued with target)	All companies	28
Self lay design and terms request <500 plots etc - quotations within target	All companies	14
Self lay design and terms request >500 plots etc - quotations within target	All companies	28
Self lay water for pressure/bacteriological testing - provided within target	All companies	28
Self lay permanent water supply - provided within target	All companies	14
Self lay plot references and costing details - issued within target	All companies	14
% of confirmations issued to the applicant within target period	All companies	21
% Bulk supply offer letters issued to the applicant within target period	All companies	28
% of main laying schemes constructed and commissioned within the target period	All companies	90
% of testing supplies provided within target period	All companies	28
% of permanent supplies made available within the target period	All companies	14
% Bulk discharge offer letters issued to the applicant within target period	Water and sewerage companies only	28
% of main laying schemes constructed and commissioned within the target period	Water and sewerage companies only	180 or as agreed

Source: Ofwat (December 2024), Developer measure of experience (D-MeX), Annex 1.

Having calculated the annual final D-MeX score, Ofwat determines the companies' incentive rewards/penalties by comparing the company's performance against the industry median in each regulatory year using the following formula:

$$|\text{Company's final score} - \text{Median score}| * \text{Company's Out/Underperformance ODI rate}$$

In PR24, the payments are calculated with ODI rate, which is based on the proportion of a company's regulated equity. Additionally, the payments are subject to a symmetric cap and collar of +/-0.2 per cent of company's Return on Regulatory Equity (RoRE).<sup>95</sup>

<sup>95</sup> Ofwat (December 2024), Developer measure of experience (D-MeX), pp.4-6.

## A.2. Per Capita Consumption (PCC) Performance Commitment

Per Capita Consumption (PCC) is a performance commitment measure that incentivises companies' efforts in reducing customers' water consumption, improving long-term supply-demand balance of water resources. The PCC performance measure is defined as the percentage reduction of the 3-year average PCC (i.e. average level of the reporting year and the two preceding years; unit: litres per person per day) against the 2019-20 baseline level, with the annual PCC calculated using the formula below:

$$\frac{\text{Measured household consumption} + \text{Unmeasured household consumption}}{\text{Total household population}}$$

Ofwat requires companies to calculate the measured and unmeasured household consumption under the Maximum Likelihood estimation (MLE) approach, which determines a confidence interval to reflect the accuracy of the estimates.<sup>96</sup> Ofwat provides further guidance on the relevant PCC components as set out below:<sup>97</sup>

- **Relevant premises** – identified in line with Ofwat's classification of domestic/non-domestic premises, updated at least annually. Companies should provide explanation and justification for any adjustments made for void premises.
- **Total household population** – estimated annually in accordance with UKWIR methodology. Companies should provide justification for any adjustments made for clandestine population.
- **Measured household consumption** – derived from third party-assured actual and estimated meter readings under company's billing system, which are subsequently adjusted for any meter under and over-registration (MUR). For externally metered premises, companies should further deduct the leakage allowance and exclude the estimated annual level of supply pipe leakage from the metered volume.
- **Unmeasured household consumption** – calculated by multiplying per household consumption (PHC) by the number of unmeasured households. Companies should, where practicable, estimate the PHC for the whole company based on individual household monitors (IHMs) or Small Area Monitors (SAMs) surveys by means of extrapolation under stratification.<sup>98</sup> Analogous to measured household consumption, companies should further adjust for any MUR and exclude any estimated annual supply pipe leakage when calculating the final consumption level.

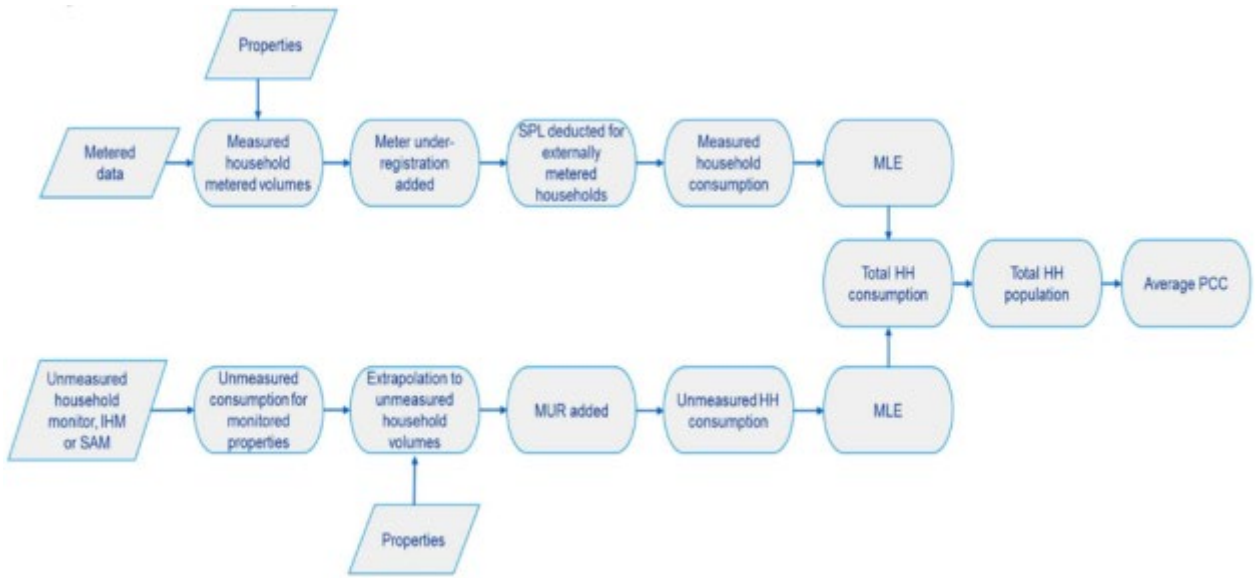
Figure A.2 below summarises the calculation steps for PPC.

<sup>96</sup> Ofwat (December 2024), Per capita consumption (PCC) – PC definition, p.2; Ofwat (December 2024), Leakage – PC definition, p.25.

<sup>97</sup> Ofwat (December 2024), Per capita consumption (PCC) – PC definition, pp.3-9.

<sup>98</sup> Ofwat requires companies to demonstrate the representativeness of IHMs and SAMs of the company as a whole. While Ofwat allows companies to adopt alternative monitoring approach, companies should clearly set out the methodology and justify the appropriateness of such approach. Ofwat (December 2024), Per capita consumption (PCC) – PC definition, p.7.

**Figure A.2 Derivation Steps of PPC**



Source: Ofwat (December 2024), *Per capita consumption (PCC) – PC definition*, p.10.

### A.3. Business Demand Performance Commitment

Business demand is a performance commitment measure that incentivises companies’ efforts in promoting water efficiency among business customers, improving long-term supply-demand balance of water resources. The performance measure is defined as the percentage reduction of the 3-year average business demand (i.e. average level of the reporting year and the two preceding years; unit: mega-litres per day) against the 2019-20 baseline level. Essentially, the business demand performance commitment serves as the counterpart of PCC, focusing on the consumption of potable water by non-household customers. The formula for the business demand measure is set out as follows:

#### Measured business demand + Unmeasured business demand

Similar to PCC PC in section A.2, Ofwat requires companies to calculate the performance measure under the Maximum Likelihood estimation (MLE) approach, which determines a confidence interval to reflect the accuracy of the estimates.<sup>99</sup> Ofwat provides guidance on the relevant performance measure components as set out below:<sup>100</sup>

- **Relevant premises** – identified in line with Ofwat’s classification of domestic/non-domestic premises, updated annually. Companies should include void non-household premises.
- **Measured business demand**<sup>101</sup> – measured by the Central Market Operating System (CMOS) metered data for premises served primarily by system in England. For premises served by

<sup>99</sup> Ofwat (December 2024), *Business Demand – PC definition*, p.3; Ofwat (December 2024), *Leakage – PC definition*, p.25.

<sup>100</sup> Ofwat (December 2024), *Business Demand – PC definition*, pp.4-7, 9.

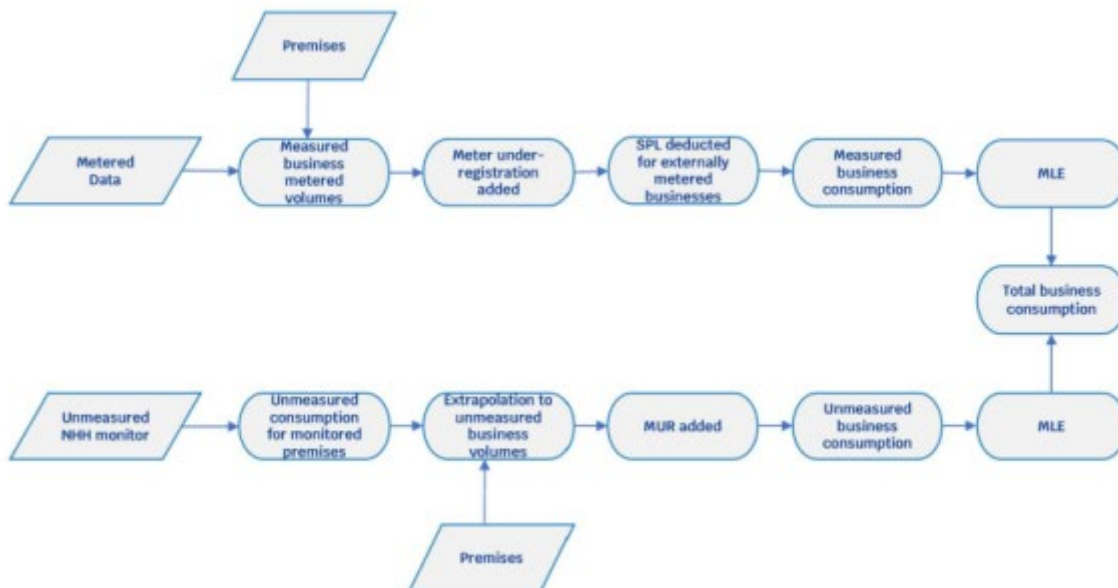
<sup>101</sup> Ofwat excludes consumption by other water companies (e.g. NAV) in companies’ measured and unmeasured business demand. Ofwat (December 2024), *Business Demand – PC definition*, p.9.

system in Wales, derived from third party-assured actual and estimated meter readings under company’s billing system, which are subsequently adjusted for any meter under and over-registration (MUR). For externally metered premises, companies should further deduct the leakage allowance and exclude the estimated annual level of supply pipe leakage from the metered volume.

- **Unmeasured business demand** – derived from statistical analysis (e.g. extrapolation under stratification) of comparable measured non-households with similar categories and features. Ofwat requires companies to update the per premises consumption estimates i) every two years if the reported volume is less than 2 per cent of total non-household demand; and ii) every five years if the reported volume is greater than 2 per cent of total non-household demand. Analogous to measured business demand, companies should further adjust for any MUR and exclude any estimated annual supply pipe leakage.

Figure A.3 below summarises the calculation steps for PPC.

**Figure A.3: Derivation Steps of Business Demand**



Source: Ofwat (December 2024), *Business Demand – PC definition*, p.4.

In sustaining the incentive stretch throughout the price control period, Ofwat sets out an end of period adjustment mechanism to the Performance Commitment Level (PCL). The mechanism could trigger if the outturn performance in any single year is materially different (i.e. larger than +/-3 per cent for water and wastewater companies; larger than +/-2 per cent for water only companies and Hafren Dyfrdwy) from the established PCL, subject to a set of conditions.<sup>102</sup> To be eligible for outperformance payments, Ofwat further requires companies to demonstrate active

<sup>102</sup> The conditions are: 1. the material difference is not caused by customers’ proactive measures in improving water efficiency; 2. the material difference is not the consequence of non-delivery of water efficiency activities under the enhancement programme; and/or 3. the material difference is caused by an increased consumption from a productivity growth in the commercial sector, whereas the company has maintained its effort in promoting water efficiency. Ofwat (December 2024), *Business Demand – PC definition*, p.7; Ofwat (February 2025), *PR24 final determinations: Delivering outcomes for customers and the environment*, p.107.

collaborations with retailers and other third-parties, which could be evident by direct communication in improving water efficiency and demand reductions, involvement and contribution in developing water efficiency initiatives, etc.<sup>103</sup>

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<sup>103</sup> Ofwat (July 2024), Business Demand – PC definition, pp.3, 10.

## Appendix B. Serviceability Measures

At reviews prior to PR19, Ofwat has undertaken a “serviceability assessment”, which measures the performance of assets and the service provided to customers, drawing on data submitted to Ofwat, as well as the Drinking Water Inspectorate (DWI) and the Environment Agency (EA).

The Table below lists the basket of indicators used to inform Ofwat’s assessment for each sub service (water infrastructure and non-infra.; wastewater infra. and non-infra) for 2010-15.<sup>104</sup> The output of its analysis is a headline assessment of serviceability for each sub-service for each company, ranging from (best to worst), ‘improving’, through ‘stable’ to ‘marginal’ and ‘deteriorating’.

The UR continues with this approach in NI.<sup>105</sup>

The specific measures reported against have evolved over time, with Ofwat allowing companies to identify their own specific measures. Ofwat’s no longer publishes a specific serviceability report, but the measures are incorporated within a wider set of ODI reporting. As an example of its serviceability analysis, see Ofwat’s serviceability report published in July 2018, which reports performance against common measures such as leakage, water supply interruptions, sewer flooding, and mains bursts.<sup>106</sup>

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<sup>104</sup> Ofwat (November 2015) Letter to regulatory directors. Link: [https://www.ofwat.gov.uk/wp-content/uploads/2015/11/ltr\\_rd1506\\_annexes.doc](https://www.ofwat.gov.uk/wp-content/uploads/2015/11/ltr_rd1506_annexes.doc)

<sup>105</sup> Utility Regulator (2021) NIW PC21 Revenue Control, pp. 49-51. Link: <https://www.uregni.gov.uk/files/uregni/media-files/PC21%20FD%20-%20Main%20Report%2002.00.pdf>

<sup>106</sup> Ofwat (January 2018) Service delivery report 2016-17. Link: <https://www.ofwat.gov.uk/wp-content/uploads/2018/01/Service-Delivery-Report-2016-17-final.pdf>

**Table B.1: Serviceability Measures Used by Ofwat**

Water service		Sewerage service	
Infrastructure (below ground)	Non-infrastructure (above ground)	Infrastructure (below ground)	Non-infrastructure (above ground)
% of properties receiving pressure/flow below reference level - "DG2" at end of year	Water treatment works with determinations containing <u>coliforms</u> <sup>3</sup>	Number of properties internally flooded "DG5" due to overloaded sewers	% Sewage treatment works failing numeric consents
% of properties affected by supply interruptions - "DG3", but only the >12 hour time band	Number of possible enforcement actions at water treatment works	Number of incidents of property flooding "DG5" due to sewer collapses	% of Population Equivalent (PE) served by non-compliant works based on look up table (LUT) <sup>5</sup>
Number of mains bursts <sup>1</sup>	% of water treatment works <sup>4</sup> with leaving water turbidity samples: 95 percentile above a threshold of 0.5 Nephelometric Turbidity Unit (NTU)	Number of sewer collapses <sup>5</sup>	Sub-threshold indicators <sup>6</sup> of forecast biochemical oxygen demand (BOD), suspended solids (SS) and <u>ammonia</u> <sup>8</sup> compliance.
Water Quality: Iron (100% minus % mean zonal compliance) <sup>2</sup>	Percentage of the number of service reservoirs with <u>coliforms</u> detected in more than 5% of tests.	Number of Category 1, 2 and 3 pollution incidents occurring at combined sewer overflows and foul sewers	

1 Calculated from burst/1000 km and mains length  
 2 Before 2006 was percentage of zones with iron failures. Ofwat has provided additional historic data.  
 3 Number of water treatment works with coliforms as a percentage of coliform samples taken at works (avoids double counting of WTWs sample failures)  
 4 Total number of water treatment works where turbidity is measured. Number in relation to those works where turbidity is not measured informs assessment.  
 5 Calculated from collapses/1000 km and sewers length. Includes failures of rising mains.  
 6 Includes UVWTQ failures from JR 2003.  
 7 Forecast is based on events where average, 95 percentile and maximum values of regulatory samples in last three years are more than 0.5, 1, and 2 times the relevant consent value respectively.  
 8 Ammonia included from JR 2006

The UR's serviceability metrics employed at PC21 are set out in the Table below, alongside the analogous metrics reported by UÉ as part of the PAF and/or BPQ metrics.<sup>107</sup>

**Table B.2: Serviceability Indicators Employed by UR**

	NI	Analogous UE reporting arrangements
Water Infrastructure	<ol style="list-style-type: none"> <li>Mains bursts per 1000km</li> <li>Interruptions to supply greater than 3 hours resulting from equipment failure</li> <li>% of properties affected by interruptions greater than 12 hours (unplanned/unwarned)</li> <li>Percentage of regulatory Iron samples exceeding 75% of the drinking water standards PCV</li> <li>Customer contacts per 1000 population (Discoloured water)</li> <li>Distribution losses (explanatory only)</li> </ol>	<ol style="list-style-type: none"> <li>BPQ, submission tab "3.2_Serviceability", row 8 – <i>not provided</i></li> <li>PAF, p.38</li> <li>PAF, p.38</li> <li>Water quality: PAF, p.46</li> <li>Water quality: PAF, p.46</li> <li>Leakage: PAF, p. 32</li> </ol>
Water Non-Infrastructure	<ol style="list-style-type: none"> <li>Percentage of regulatory samples taken for Turbidity at WTWs which exceed 0.8 NTU</li> <li>Number of regulatory THM samples exceeding 75% of the drinking water standard PCV</li> <li>Events at WTW resulting from treatment difficulties categorised as "significant" or higher</li> <li>% of regulatory samples taken for coliform bacteria at Service Reservoirs exceeding drinking water standard PCV</li> </ol>	<ol style="list-style-type: none"> <li>Water quality: PAF, p.46</li> <li>Water quality: PAF, p.46</li> <li>[No clear equivalent]</li> <li>Water quality: PAF, p.46</li> </ol>
Sewerage Infrastructure	<ol style="list-style-type: none"> <li>Sewer collapses per 1000km</li> <li>Sewer blockages per 1000km</li> <li># of H, M and L pollution incidents from network (CSOs, rising mains and foul sewers)</li> <li>Properties flooded in the year (other causes)</li> <li>Total number of equipment failures repaired</li> </ol>	<ol style="list-style-type: none"> <li>BPQ, submission tab "3.2_Serviceability", row 30 – <i>not provided</i></li> <li>BPQ, submission tab "3.2_Serviceability", row 31 – <i>not provided</i></li> <li>Incident related to wastewater, PAF, p.61.</li> <li>PAF, p.54</li> </ol>
Sewerage Non-Infrastructure	<ol style="list-style-type: none"> <li>% of WwTW discharges not compliant with numeric consents</li> <li>% of BOD, SS and Ammonia compliance sample results which exceeded their numeric consent value</li> <li># of WwTWs with one or more compliance sample result (BOD, SS or Ammonia) &gt; consent value</li> <li># of total population equivalent served by WwTWs not compliant with numeric consents</li> </ol>	<ul style="list-style-type: none"> <li>These comprise series of measures reported against EA consents</li> <li>UE has similar measures – "compliance with emission limit values for Urban Wastewater Licences", PAF, p. 6</li> </ul>

<sup>107</sup> **NI:** Utility Regulator (2021) NIW PC21 Revenue Control, Appendix F. Link: <https://www.uregni.gov.uk/files/uregni/media-files/PC21%20FD%20-%20Main%20Report%2002.00.pdf>; **Ireland:** UÉ (April 2024), BPQ RC4 submission; UÉ (September 2022), IW 2021 Performance Assessment, Annual Data report.



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