CRU's Decision on Irish Water's Non-Domestic Tariff Framework

Irish Water Case Studies

1.1 Case Studies

This section presents a range of case studies which have been developed to assist customers to understand in more detail how the changes to tariffs may impact a bill. A total of nine cases studies have been developed. A broad range of customer types and locations have been chosen to provide a representative customer impact. Table 4.3 lists the case studies which are included in this paper.

Table 1.1 List of Bill Impact Case Studies

Case Study	Local Authority	Annual Usage (m^3)	Services	Customer Class	In receipt of a DA	Transition Path
1	Wicklow	150	Water + Wastewater	Band 1	No	No Transition
2	Dublin City	750	Water	Band 1	Yes	3 Year Transition
3	Galway City	2,000	Water + Wastewater	Band 2	No	10% Cap
4	Limerick County	14,000	Water	Band 2	No	3 Year Transition
5	Longford	40,000	Water	Band 3	No	No Transition
6	Fingal	70,000	Water + Wastewater	Band 3	No	10% Cap
7	Cork County	300,000	Water	Band 4	No	3 Year Transition
8	South Dublin	600,000	Water + Wastewater	Band 4	No	10% Cap
9	Mayo County	Unmetered	Water	Band 1	NA	3 Year Transition

Each case study demonstrates the annual bill currently and also under the final tariffs. If the bill under the final tariffs is at least €250 greater than the current bill the customer will be entitled to a transition. Where applicable, each case study outlines how bills change for customers over the transition period.

The values of water and wastewater usage have been chosen to represent a broad range of customer types. An indication of the customer or business type for a given level of usage is provided for each case study. This information is taken from Irish Water's billing system. Customer type information is only available for approximately half of the connections on the Irish Water non-domestic database at present. Irish Water is therefore unable to provide a more detailed or accurate breakdown of all possible customer types at present.

The formulae below outline how a bill is calculated by Irish Water. The water and wastewater components of a bill are calculated separately and are summed together for the total charge. Billable usage refers to total water and/or wastewater usage net of any domestic allowance.

$$\boldsymbol{Water\ Bill} = Standing\ Charge + (Volumetric\ unit\ rate\ x\ billable\ usage)$$

$$\boldsymbol{Wastewater\ Bill} = Standing\ Charge + (Volumetric\ unit\ rate\ x\ billable\ usage)$$

$$\boldsymbol{Total\ Bill} = Water\ Bill + Wastewater\ Bill$$

Case Study 1

Case Study	Local Authority	Annual Usage (m^3)	Services	Customer Class	In receipt of a DA	Transition Path
1	Wicklow	150	Water + Wastewater	Band 1	No	No Transition

This case study outlines the impact of the final tariffs on a customer located in **Co. Wicklow**. The customer is connected to both the **water and wastewater** networks and has recorded usage of **150m^3** of per annum. As the usage is below 1,000m^3, the customer will be classified into **Band 1**.

Irish Water's customer data shows that customers using approximately 150m^3 are often the following customer types: small retail or office units including cafés and restaurants, hairdressers, and schools.

Table 4.4 shows the impact of moving to the new tariffs for this customer. As can be seen, the volumetric charges for water and wastewater are increasing. This leads to a higher volumetric charge overall. The standing charge is decreasing. As this customer is a relatively low user of water and wastewater services the reduction in the standing charge is large enough to reduce their overall bill. The reduction in this customer's bill means that the final tariffs will apply immediately on commencement of the new tariff Framework.

Table 1.2 – Case Study 1: Bill Impact

	Current Tariffs		Final Tariffs
Water			
Standing Charge Water	€120.59		€43.76
Volumetric Charge Water/m^3	€1.41		€1.87
Billable Usage m^3	150	150	
Total Water Charge	€332[1]		€324
Wastewater			
Standing Charge Wastewater	€139.41		€44.81
Volumetric Charge Wastewater/m^3	€1.63		€1.92
Billable Usage m3	150	150	
Total Wastewater Charge	€384		€333
Total Bill (water plus wastewater charge)	€716		€657
Overall Bill Change €			-€59
Overall Bill Change %			-8%

[1] The Total Charge for water and wastewater has been rounded to the nearest euro in all case studies.

Case Study 2

Case Study	Local Authority	Annual Usage (m^3)	Services	Customer Class	In receipt of a DA	Transition Path
2	Dublin City	750	Water	Band 1	Yes	3 Year Transition

This case study outlines the impact of the final tariffs on a customer located in **Dublin City**. The customer is connected to only the **water** network and has recorded usage of **750m^3** in 2019. As the usage is below 1,000m^3, the customer will be classified into **Band 1**. This customer has **a domestic allowance** of 164.6m^3 resulting in **billable usage of 585m^3** in 2019. The domestic allowance is increasing to 213m^3 in 2020, resulting in billable usage of 537m^3 from 2020.

Irish Water's customer data suggests that a customer using approximately 750m^3 could be any of the following customer types: agriculture, sports clubs, guesthouses, restaurants and garages.

Table 4.5 below demonstrates the impact of moving to the new tariffs for this customer. As can be seen, the volumetric charge for water is increasing. This leads to a higher volumetric charge overall. The standing charge is decreasing. As this customer is a relatively high user of water in Band 1 the reduction in the standing charge is outweighed by the increase in the volumetric charge resulting in a bill increase. As the bill increase is greater than €250 the customer will be entitled to a three year transition.

Table 1.3 – Case Study: 2 Bill Impact

	Current Tariffs	Final Tariffs
Water		
Standing Charge Water	€88.02	€43.76
Volumetric Charge Water/m^3	€1.16	€1.87
Billable Usage m^3	585	537
Total Water Charge	€767	€1,048
Overall Bill Change €		€281
Overall Bill Change %		37%

A three year transition means that this customer's bill will gradually rise over three years to reach the final tariffs. Table 4.6 demonstrates the customer's bill for each year of the transition period. It will rise by no more than €127 in any one year to 2022. The volumetric charge, calculated using the formula outlined in section 4.3.1 of this paper, gradually rises from €1.16/m^3 in 2019 to €1.87/m^3 in 2022 which is in increments of €0.24 per annum. The standing charge is decreasing and as such customers will benefit from this decrease immediately in 2020. The charges for 2022 in Table 4.6 will continue until the transition period ends on 1st May 2023.

Table 1.4 – Case Study 2: Three Year Transition

	2019	2020	2021	2022
Water				
Standing Charge Water	€88.02	€43.76	€43.76	€43.76
Volumetric Charge Water/m^3	€1.16	€1.40	€1.63	€1.87
Billable Usage	585	537	537	537
Total Water Charge	€767	€794	€921	€1,048
Annual Change - €		€27	€127	€127

Case Study 3

Case Study	Local Authority	Annual Usage (m^3)	Services	Customer Class	In receipt of a DA	Transition Path
3	Galway City	2,000	Water + Wastewater	Band 2	No	10% Cap

This case study outlines the impact of the final tariffs on a customer located in **Galway City**. The customer is connected to both the **water and wastewater** networks and has recorded usage of **2,000m^3** in 2019. As the usage is between 1,000m^3 and 20,000m^3, the customer will be classified into **Band 2**.

Irish Water's customer data suggests that a customer using approximately 2,000m^3 is often one of the following customer types: large farms, car washes, small hotels, large pubs, and mid-size commercial/office buildings.

Table 4.7 shows the impact of moving to the new tariffs for this customer. As can be seen, the volumetric charge for water is increasing. This leads to a higher volumetric charge overall. All tariff components are increasing in this scenario resulting in a total bill increase. As the bill increase is greater than €750 and 10% per annum during the transition period, the customer will be entitled to a transition period and a 10% annual cap.

Table 1.5 – Case Study 3: Bill Impact

	Current Tariffs		Final Tariffs
Water			
Standing Charge Water	€14.67		€113.31
Volumetric Charge Water/m^3	€1.10		€1.30
Billable Usage m^3	2,000	2,000	
Total Water Charge	€2,215		€2,713
Wastewater			
Standing Charge Wastewater	€13.33		€135.79
Volumetric Charge Wastewater/m^3	€1.00		€1.82
Billable Usage m^3	2,000	2,000	
Total Wastewater Charge	€2,013		€3,776
Total Bill (water plus wastewater charge)	€4,228		€6,489
Overall Bill Change €			€2,261
Overall Bill Change %			53%

A 10% cap means that this customer's bill will gradually rise by no more than 10% per annum (assuming unchanged base year usage) to reach the final tariffs. The CRU will hold a public

consultation on the transitional arrangements beyond the transition period for connections like this. Table 4.8 demonstrates what the customer's bill will be for every year of the transition period. The bill increase will be spread over the transition period and the maximum annual increase will be €512 in any one year over the transition period to 2022. The charges for 2022 in Table 4.8 will continue until the transition period ends on 1st May 2023.

Table 1.6 – Case Study 3: 10% Cap

	2019	2020	2021	2022
Water				
Standing Charge Water	€14.67	€33.11	€53.40	€75.72
Volumetric Charge Water/m^3	€1.10	€1.14	€1.18	€1.22
Billable Usage m^3	2,000	2,000	2,000	2,000
Total Water Charge	€2,215	€2,308	€2,410	€2,523
Wastewater				
Standing Charge Wastewater	€13.33	€36.23	€61.42	€89.13
Volumetric Charge Wastewater/m^3	€1.00	€1.15	€1.32	€1.51
Billable Usage m^3	2,000	2,000	2,000	2,000
Total Wastewater Charge	€2,013	€2,343	€2,705	€3,104
Total Bill (water plus wastewater charge)	€4,228	€4,651	€5,116	€5,627
Annual Bill Change €		€423	€465	€512
Annual Bill Change %		10%	10%	10%

Case Study 4

Case Study	Local Authority	Annual Usage (m^3)	Services	Customer Class	In receipt of a DA	Transition Path
4	Limerick County	14,000	Water	Band 2	No	3 Year Transition

This case study outlines the impact of the final tariffs on a customer located in **Limerick County.** The customer is connected to only the **water** network and has recorded usage of **14,000m^3** in 2019. As the usage is between 1,000m^3 and 20,000m^3, the customer will be classified into **Band 2**.

Irish Water's customer data suggests that a customer using approximately 14,000m^3 could be any one of the following customer types: factory/manufacturing, sport and leisure facilities, hotels, and nursing homes.

Table 4.9 shows the impact of moving to the new tariffs for this customer. As can be seen, the volumetric charge for water is increasing. This leads to a higher volumetric charge. Both the standing charge and volumetric charge are increasing resulting in an overall bill increase. As the bill increase is greater than €250 the customer will be entitled to a three year transition.

Table 1.7 – Case Study 4: Bill Impact

	Current Tariffs		Final Tariffs	
Water				
Standing Charge Water		€92.59		€113.31
Volumetric Charge Water/m^3		€1.25		€1.30
Billable Usage m^3	14,000		14,000	
Total Water Charge		€17,593		€18,313
Overall Bill Change €				€721
Overall Bill Change %				4%

A three year transition means that this customer's bill will gradually rise over three years to reach the final tariffs. Table 4.10 demonstrates the customer's bill for each year of the transition period. It will increase by €240 every year to 2022 assuming usage remains constant. The volumetric charge, calculated using the formula outlined in section 4.3.1 of this paper, gradually rises from €1.25/m^3 in 2019 to €1.30/m^3 in 2022 which is in increments of approximately €0.02 per annum, while the standing charge increases by €6.90 per annum. The charges for 2022 in Table 4.10 will continue until the transition period ends on 1st May 2023.

Table 1.8 – Case Study 4: Three Year Transition

	2019	2020	2021	2022
Water				
Standing Charge Water	€92.59	€99.50	€106.40	€113.31
Volumetric charge Water/m^3	€1.25	€1.27	€1.28	€1.30
Water in/Water Out m^3	14,000	14,000	14,000	14,000
Total Water Charge	€17,593	€17,833	€18,073	€18,313
Annual Change - €		€240	€240	€240

Case Study 5

Case Study	Local Authority	Annual Usage (m^3)	Services	Customer Class	In receipt of a DA	Transition Path
5	Longford County	40,000	Water	Band 3	No	No Transition

This case study outlines the impact of the final tariffs on a customer located in **Co. Longford**. The customer is connected to the **water** network and has recorded usage of **40,000m^3** of per annum. As the usage is between 20,000m^3 and 250,000m^3, the customer will be classified into **Band 3**.

Irish Water's customer data suggests that a customer using approximately 40,000m^3 could be any one of the following customer types: manufacturing, university campus, prison, shopping, hospital.

Table 4.11 shows the impact of moving to the new tariffs for this customer. As can be seen, the volumetric charge for water is decreasing. This leads to a lower volumetric bill. The standing charge is increasing. The increase in the standing charge outweighs the decrease in the volumetric charge. Overall the increase is €221 which is below €250 and means the customer will move immediately onto the final tariffs.

Table 1.9 – Case Study 5 Bill Impact

	Current Tariffs		Final Tariffs
Water			
Standing Charge Water	€52.08		€1,872.98
Volumetric Charge Water/m^3	€1.25		€1.21
Billable Usage m^3	40,000	40,000	
Total Water Charge	€50,052		€50,273
Overall Bill Change €			€221
Overall Bill Change %			0.04%

Case Study 6

Case Study	Local Authority	Annual Usage (m^3)	Services	Customer Class	In receipt of a DA	Transition Path
6	Fingal County Council	70,000	Water + Wastewater	Band 3	No	10% Cap

This case study outlines the impact of the final tariffs on a customer located in **Fingal County Council**. The customer is connected to both the **water and wastewater** networks and has recorded usage of **70,000m^3** in 2019. As the usage is between 20,000m^3 and 250,000m^3, the customer will be classified into **Band 3**.

Irish Water's customer data suggests that a customer using approximately 70,000m^3 could be any of the following customer types: shopping centre, large hotel, manufacturing, hospital.

Table 4.12 shows the impact of moving to the new tariffs for this customer. As can be seen, the volumetric charge and standing charges for water and wastewater are increasing resulting in a total bill increase. As the bill increase is greater than €750, and the annual increase during the transition period is 10% or more, the customer will be entitled to a 10% cap.

Table 1.10 – Case Study 6: Bill Impact

	Current Tariffs		Final Tariffs
Water			
Standing Charge Water	€59.08		€1,872.98
Volumetric Charge Water/m^3	€1.02		€1.21
Billable Usage m^3	70,000	70,000	
Total Water Charge	€71,459		€86,573
Wastewater			
Standing Charge Wastewater	€68.92		€1,969.50
Volumetric Charge Wastewater/m^3	€1.19		€1.81
Billable Usage m^3	70,000	70,000	
Total Wastewater Charge	€83,369		€128,670
Total Bill (water plus wastewater charge)	€154,828		€215,243
Overall Bill Change €			€60,415
Overall Bill Change %			39%

A 10% cap means that this customer's bill will gradually rise by no more than 10% per annum to reach the final tariffs. The CRU will hold a public consultation on the transitional arrangements beyond the transition period for connections like this. Table 4.13 demonstrates what the customer's bill will be for every year of the transition period. The biggest increase will be €18,374 in any one year over the

transition period to 2022. The charges for 2022 in Table 4.13 will continue until the transition period ends on 1st May 2023.

Table 1.11 – Case Study 6: 10% Cap

	2019	2020	2021	2022
Water				
Standing Charge Water	€59.08	€523.94	€1,035.28	€1,597.76
Volumetric Charge Water/m^3	€1.02	€1.07	€1.12	€1.18
Billable Usage m^3	70,000	70,000	70,000	70,000
Total Water Charge	€71,459	€75,332	€79,593	€84,280
Wastewater				
Standing Charge Wastewater	€68.92	€556.00	€1,091.78	€1,681.13
Volumetric Charge Wastewater/m^3	€1.19	€1.35	€1.52	€1.72
Billable Usage m^3	70,000	70,000	70,000	70,000
Total Wastewater Charge	€83,369	€94,978	€107,749	€121,796
Total Bill (water plus wastewater charge)	€154,828	€170,311	€187,342	€206,076
Annual Bill Change €		€15,483	€17,031	€18,734
Annual Bill Change %		10%	10%	10%

Table 4.14 demonstrates how this customer's bill will change every year if usage increases by 2% per annum. The customer is charged the same standing and volumetric charges as under the scenario where usage remains constant. However the bill increases by more than 10% per annum over the transition due to the additional usage recorded above the base year usage.

Table 1.12 – Case Study 6: 10% Cap (with usage increase scenario)

	2019	2020	2021	2022
Water				
Standing Charge Water	€59.08	€523.94	€1,035.28	€1,597.76
Volumetric Charge Water/m^3	€1.02	€1.07	€1.12	€1.18
Billable Usage m^3	70,000	71,400	72,828	74,285
Total Water Charge	€71,459	€76,829	€82,767	€89,341
Wastewater				
Standing Charge Wastewater	€68.92	€556.00	€1,091.78	€1,681.13
Volumetric Charge Wastewater/m^3	€1.19	€1.35	€1.52	€1.72
Billable Usage m^3	70,000	71,400	72,828	74,285
Total Wastewater Charge	€83,369	€96,867	€112,058	€129,148
Total Bill (water plus wastewater charge)	€154,828	€173,695	€194,825	€218,489
Annual Bill Change €		€18,867	€21,129	€23,664
Annual Bill Change %		12%	12%	12%

Case Study 7

Case Study	Local Authority	Annual Usage (m^3)	Services	Customer Class	In receipt of a DA	Transition Path
7	Cork County	300,000	Water	Band 4	No	3 Year Transition

This case study outlines the impact of the final tariffs on a customer located in **Cork County.** The customer is connected to only the **water** network and has recorded usage of **300,000m^3** in 2019. As the usage is above 250,000m^3, the customer will be classified into **Band 4**.

Irish Water's customer data suggests that a customer using approximately 300,000m^3 could be one of the following customer types: manufacturing, brewery, pharmaceutical, and medical devices.

Table 4.15 below demonstrates the impact of moving to the new tariffs for this customer. As can be seen, the volumetric charge for water is increasing. This leads to a higher volumetric charge overall. Both the standing charge and volumetric charges are increasing resulting in an overall bill increase. The bill increase is greater than €750, however the annual increase does not exceed 10% per annum over the transition period – consequently this customer will be on a three year transition.

Table 1.13 – Case Study 7: Bill Impact

	Current Tariffs		Final Tariffs	
Water				
Standing Charge Water		€41.92		€21,771.46
Volumetric charge Water/m^3		€0.94		€1.05
Billable Usage m^3	300,000		300,000	
Total Water Charge		€282,042		€336,771
Overall Bill Change €				€54,730
Overall Bill Change %				19%

A three year transition means that this customer's bill will gradually rise over three years to reach the final tariffs. Table 4.16 demonstrates what the customer's bill will be for each year of the transition period. It will increase by €18,249 every year to 2022 assuming usage remains constant. The volumetric charge, calculated using the formula outlined in section 4.3.1 of this paper, gradually rises from €0.94/m^3 in 2019 to €1.05/m^3 in 2022 which is in increments of approximately €0.04 per annum while the standing charge increases by €7,243 per annum. The charges for 2022 in Table 4.16 will continue until the transition period ends on 1st May 2023.

Table 1.14 – Case Study 7: Three Year Transition

	2019	2020	2021	2022
Water				
Standing Charge Water	€41.92	€7,285.10	€14,528.28	€21,771.46
Volumetric Charge Water/m^3	€0.94	€0.98	€1.01	€1.05
Water in/Water Out m^3	300,000	300,000	300,000	300,000
Total Water Charge	€282,042	€300,285	€318,528	€336,771
Annual Change - €		€18,243	€18,243	€18,243

Case Study 8

Case Study	Local Authority	Annual Usage (m^3)	Services	Customer Class	In receipt of a DA	Transition Path
8	South County Dublin	600,000	Water + Wastewater	Band 4	No	10% Cap

This case study outlines the impact of the final tariffs on a customer located in **South Dublin County Council**. The customer is connected to both the **water and wastewater** networks and has recorded usage of **600,000m^3** in 2019. As the usage is above 250,000m^3, the customer will be classified into **Band 4**.

Irish Water's customer data suggests that a customer using approximately 600,000m^3 could be one of the following customer types: manufacturing, brewery, pharmaceutical, transport.

Table 4.17 shows the impact of moving to the new tariffs for this customer. As can be seen, the volumetric charge and standing charges for water and wastewater are increasing. As all tariff components are increasing in this scenario the result is a total bill increase. As the overall bill increase is greater than €750 and 10% per annum over the transition period the customer will be entitled to a 10% cap.

Table 1.15 – Case Study 8: Bill Impact

	Current Tariffs		Final Tariffs
Water			
Standing Charge Water		€48.91	€21,771.46
Volumetric Charge Water/m^3		€0.80	€1.05
Billable Usage m^3	600,000	600,000	
Total Water Charge		€480,049	€651,771
Wastewater			
Standing Charge Wastewater		€69.09	€25,266.78
Volumetric Charge Wastewater/m^3		€1.13	€1.75
Billable Usage m^3	600,000	600,000	
Total Wastewater Charge		€678,069	€1,075,266
Total Bill (water plus wastewater charge)		€1,158,118	€1,727,038
Overall Bill Change €			€568,920
Overall Bill Change %			49%

A 10% cap means that this customer's bill will gradually rise by no more than 10% per annum to reach the final tariffs. Table 4.18 demonstrates what the customer's bill will be for every year of the

transition period. The bill increase will be spread over the transition period and the maximum annual increase will be €140,132 in any one year over the transition period to 2022. The charges for 2022 in Table 4.18 will continue until the transition period ends on 1st May 2023.

Table 1.16 – Case Study 8: 10% Cap

	2019	2020	2021	2022
Water				
Standing Charge Water	€49	€4,470.85	€9,334.97	€14,685.51
Volumetric Charge Water/m^3	€0.80	€0.85	€0.91	€0.97
Billable Usage m^3	600,000	600,000	600,000	600,000
Total Water Charge	€480,049	€515,005	€553,458	€595,755
Wastewater				
Standing Charge Wastewater	€69.09	€5,198.44	€10,840.72	€17,047.23
Volumetric Charge Wastewater/m^3	€1.13	€1.26	€1.40	€1.55
Billable Usage m^3	600,000	600,000	600,000	600,000
Total Wastewater Charge	€678,069	€758,924	€847,865	€945,700
Total Bill (water plus wastewater charge)	€1,158,118	€1,273,930	€1,401,323	€1,541,455
Annual Bill Change €		€115,812	€127,393	€140,132
Annual Bill Change %		10%	10%	10%

Case Study 9

Case Study	Local Authority	Annual Usage (m^3)	Services	Customer Class	In receipt of a DA	Transition Path
9	Mayo County	Unmetered	Water + Wastewater	Band 1	No	3 Year Transition

This case study outlines the impact of the final tariffs on a customer located in **Mayo County**. The customer is connected to both the **water and wastewater** networks. The customer is an unmetered Band 1 customer.

Irish Water's customer data suggests that an unmetered customer could be any one of the following business types: agriculture, public house and retail unit.

Table 4.19 shows the impact of moving to the new tariffs for this customer. As can be seen, the unmetered charge is increasing. As the bill increase is greater than €250 the customer will be entitled to a three year transition.

Table 1.17 – Case Study 9: Bill Impact

	Current Tariffs	Final Tariffs
Water + Wastewater		
Flat unmetered charge	€125.00	€503.49
Annual Bill Change €		€379
Annual Bill Change %		302%

A three year transition means that this customer's bill will gradually rise over three years to reach the final tariffs. Table 4.20 demonstrates what the customer's bill will be for each year of the transition period. The flat charge, calculated using the formula outlined in section 4.3.1 of this paper, gradually rises from €125 in 2019 to €503.49 in 2022 which is in increments of €126.16 per annum. The charges for 2022 in Table 4.20 will continue until the transition period ends on 1st May 2023.

Table 1.18 – Case Study 2: Three Year Transition

	2019	2020	2021	2022
Water + Wastewater				
Flat unmetered charge	€125.00	€251.16	€377.32	€503.49
Annual Change - €		€126.16	€126.16	€126.16