



GD23 - Gas Distribution Price Control 2023-2028

Draft Determination Annex C
Connections and volumes
March 2022



About the Utility Regulator

Utility Regulator is the independent non-ministerial government department responsible for regulating Northern Ireland's electricity, gas, water and sewerage industries, to promote the short and long-term interests of consumers.

We are not a policy-making department of government, but we make sure that the energy and water utility industries in Northern Ireland are regulated and developed within ministerial policy as set out in our statutory duties.

We are governed by a Board of Directors and are accountable to the Northern Ireland Assembly through financial and annual reporting obligations.

We are based at Queens House in the centre of Belfast. The Chief Executive leads a management team of directors representing each of the key functional areas in the organisation: Corporate Affairs, Markets and Networks. The staff team includes economists, engineers, accountants, utility specialists, legal advisors and administration professionals.



Our mission

To protect the short- and long-term interests of consumers of electricity, gas and water.



Our vision

To ensure value and sustainability in energy and water.



Our values

- Be a best practice regulator: transparent, consistent, proportionate, accountable and targeted.
- Be professional – listening, explaining and acting with integrity.
- Be a collaborative, co-operative and learning team.
- Be motivated and empowered to make a difference.



Abstract

This document provides the Utility Regulator's detailed assessment of numbers and types of gas connections and gas consumption for the GD23 period and beyond. A reasonable estimate of gas consumption over the longer term is used to calculate the "profile adjustment" necessary to smooth tariffs over the long term. This contributes to the draft determination of revenues and tariffs in the GD23 period.

Audience

This assessment forms part of our draft determination for GD23 and is of direct relevance to the gas distribution regulated companies. It may also be of interest to consumers and their representatives, government and other regulated bodies.

Consumer impact

The overall consumer impact of GD23 is set out in the main draft determination report. The estimate number of connections and estimates of gas consumption in this Annex contribute to the determination of revenues and tariffs for GD23 targets set for numbers of domestic owner occupied property connections.



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Executive Summary

This document provides the Utility Regulator's detailed assessment of numbers and types of gas connections and gas consumption for the GD23 period and beyond. A reasonable estimate of gas consumption over the longer term is used to calculate the "profile adjustment" necessary to smooth tariffs over the long term. This contributes to the draft determination of revenues and tariffs in the GD23 period.

Our assessment is based on a review and challenge of the estimates provided by the GDNs in their Business Plan submission. We have reviewed these assessments taking account of historical information on connection rates and average consumption for different categories of consumers.

We have applied a consistent energy efficiency adjustment to estimated consumption from 2029.

1. Introduction

- 1.1 This Annex to the GD23 draft determination sets out the Utility Regulator's detailed assessment of numbers and types of gas connections and gas consumption for the GD23 period and beyond.
- 1.2 Chapter 2 provides general information on the range of types of properties considered in the analysis and the types of tariffs for which consumption volumes are estimated. It describes how key data such as average consumption volumes for different properties types have been determined and how future property numbers have been derived. It describes how common methodologies such as the determination of long term energy efficiency adjustments have been applied.
- 1.3 Subsequent chapters provide specific assessments and conclusions for each gas distribution network (GDN) company as follows:
 - a) Chapter 3 - firmus energy (FE)
 - b) Chapter 4 - Phoenix Natural Gas Limited (PNGL)
 - c) Chapter 5 - SGN Natural Gas (SGN)
- 1.4 The future consumption volumes are a key input to the "Pi models" we use to determine revenues and tariffs for the GD23 period. In accordance with the various company licences, these models require estimates of consumption for different tariff categories over the "revenue recovery period" which runs beyond GD23. This longer term assessment of consumption is used to smooth tariffs over the longer term. This smoothing of tariffs results in a "profile adjustment" which impacts the determination of revenues and tariffs in the GD23 period.
- 1.5 In addition to underpinning our estimates of gas consumption, our estimates of connection numbers are used in the determination of a range of costs including:
 - a) Capital costs for meters and connections.
 - b) Operational costs for meter maintenance and emergency response.

2. Common approach and methodologies

Types of connections

2.1 Connection numbers and gas consumption is estimated for two broad categories of connections:

- Domestic properties.
- Industrial and commercial (I&C) properties

Types of domestic property connections

2.2 Domestic properties are considered in three categories: owner occupied (OO) new build (NB), Northern Ireland Housing Executive housing (NIHE). The definitions for each property types are shown in Table 2.1 .

| Property type | Definition |
|---|--|
| Owner occupied (OO) | Refers to domestic premises which do not fall into the definition of domestic new build or NIHE. Note that OO domestic premises as defined here can also be private rented. |
| New Build (NB) | Domestic premises which have never previously been owned or occupied by any person (that is they are, or are to be, newly built premises) and in respect of which the connection to the network shall be made prior to the premises first being occupied, including any such premises which are being constructed for the Northern Ireland Housing Executive or a Housing Association in Northern Ireland. |
| Northern Ireland Housing Executive housing (NIHE) | Domestic Premises (excluding any New Build Domestic Premises) which are owned by (i) the Northern Ireland Housing Executive, or (ii) a housing association in Northern Ireland. The Department for Communities is the regulator of registered housing associations of which lists are available on its website. Co-Ownership (Included on the Departments list) is excluded from this category. |

Table 2.1: Domestic property types

Categories of industrial and commercial connections

2.3 Industrial and commercial conveyance categories are defined by annual consumption and type of tariff. The annual consumption size bands used to define tariffs are:

- less than 2,500 therms per annum;
- 2,500 to 25,000 therms inclusive;
- greater than 25,000 therms per annum to 75,000 therms per annum;
- greater than 75,000 therms per annum; and

- for SGN only, demand over 10,000,000 therms per annum.

2.4 Within these size bands, separate conveyance charges are applied to different types of consumer, including: those using gas for combined heat and power (CHP) (typically on-site generation); and, supplies which may be interrupted in defined circumstances under high demand and ‘firm’ supplies which are not interruptible.

2.5 For the purpose of determining tariffs and revenues under the various licences are grouped by conveyance charge categories P1, P2, etc. with different ranges of conveyance charge categories defined in the licences of the GDNs. The structure of conveyance charge categories by size and type are shown in Table 2.2.

| Size (therms) | Conveyance charge categories | | |
|--------------------|---|--------------------------------------|---|
| | firmus energy | PNGL | SGNNG |
| less than 2,500 | P1: firm demand | P1: firm demand | P1: firm demand |
| > 2,500 to 25,000 | P2: firm demand | P2: small and medium I&C firm demand | P2: firm demand |
| > 25,000 to 75,000 | P3: firm demand | P3: large I&C firm demand | P3: firm demand |
| over 75,000 | P4: firm demand CHP P5: firm demand (non-CHP) P6: interruptible | P4: large I&C firm demand | P4: firm demand CHP P5: firm demand (non-CHP) P6: interruptible |
| over 10,000,000 | Not applicable | Not applicable | P7: firm demand (non-CHP) |

Table 2.2: Conveyance charge categories for industrial and commercial consumers.

Units

2.6 Gas consumption is stated in therms (or multiples of therms), consistent with the tariff models and licence conditions which define the calculation of tariffs.

Energy efficiency adjustment

2.7 In GD17 we estimated future consumption volumes based on reasonable estimates of current consumptions per property or specific information on larger users where this was available.

2.8 We recognised the possibility that energy consumption was likely to reduce in the future as the energy efficiency of appliances and buildings improved.

In GD17 we applied an energy efficiency adjustment to future gas volumes of 20% beginning in the first year of the next price control (GD23).

- 2.9 The GDNs applied similar energy efficiency adjustments to estimates of future gas consumptions in their Business Plans:
- a) FE applied an energy efficiency adjustment of 25% starting in 2023 profiled to the end of the revenue recovery period in 2045;
 - b) PNGL applied an energy efficiency adjustment of 20% starting in 2023 profiled to the end of the revenue recovery period in 2046;
 - c) SGN applied an energy efficiency adjustment of 30% starting in 2029 profiled to the end of the revenue recovery period in 2057.
- 2.10 We have based consumptions in GD23 and beyond on current average consumption for the various property types. We do not consider it appropriate to apply an energy efficiency adjustment to estimated consumptions in the GD23 period pending the introduction of wider support for energy efficiency measures. In this period, conversion from oil to gas will make a contribution to overall energy efficiency, but this is already factored into current average gas consumptions. We believe that it is reasonable to assume that the impact of future energy efficiency will be greater than allowed in GD17. We have assumed that this will reach 25% for FE and PNGL by the end of their revenue recovery periods in 2045 and 2046 respectively. We have assumed that energy efficiency measures will continue beyond this and have assumed that energy efficiency in the SGN area will reach 30% by the end of the company's energy recovery period in 2057 (28% by 2045). The energy efficiency adjustments applied in the draft determination are:
- a) for FE - an energy efficiency adjustment of 25% was applied starting in 2029 profiled to the end of the revenue recovery period in 2045;
 - b) for PNGL - an energy efficiency adjustment of 25% was applied starting in 2029 profiled to the end of the revenue recovery period in 2046;
 - c) for SGN - an energy efficiency adjustment of 30% was applied starting in 2030 profiled to the end of the revenue recovery period in 2057.

3. Firmus Energy - Connections and Consumption

Summary

3.1 The determined connections and volumes for FE are shown on Table 3.1. Further information is provided below on our consideration of connection numbers and consumption for different types of connections.

| Connections | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
|---------------------------|-------|-------|-------|-------|-------|-------|--------|
| Domestic owner occupied | 3,697 | 3,433 | 3,169 | 2,905 | 2,641 | 2,377 | 18,222 |
| Domestic new build | 1,250 | 1,250 | 1,250 | 1,250 | 1,250 | 1,250 | 7,500 |
| Domestic NIHE | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 6,000 |
| Industrial and commercial | 148 | 150 | 147 | 145 | 142 | 140 | 872 |
| Total | 6,095 | 5,833 | 5,566 | 5,300 | 5,033 | 4,767 | 32,594 |

| Volumes('000 therms) | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
|---------------------------|--------|--------|--------|--------|--------|--------|---------|
| Domestic owner occupied | 12,424 | 13,914 | 15,293 | 16,561 | 17,720 | 18,768 | 94,680 |
| Domestic new build | 4,914 | 5,307 | 5,700 | 6,093 | 6,487 | 6,880 | 35,381 |
| Domestic NIHE | 6,577 | 6,890 | 7,204 | 7,518 | 7,831 | 8,145 | 44,164 |
| Industrial and commercial | | | | | | | |
| Very small I&C | 1,844 | 1,981 | 2,118 | 2,252 | 2,384 | 2,513 | 13,092 |
| Small I&C | 8,303 | 8,303 | 8,303 | 8,303 | 8,303 | 8,303 | 49,819 |
| Medium I&C | 6,574 | 6,574 | 6,574 | 6,574 | 6,574 | 6,574 | 39,443 |
| Large and Interruptible | 33,345 | 33,701 | 34,170 | 34,641 | 34,722 | 34,722 | 205,301 |
| Total | 73,981 | 76,670 | 79,362 | 81,942 | 84,020 | 85,905 | 481,880 |

Table 3.1: GD23 determined connections and volumes - FE

3.2 The overall impact of our review of estimated consumptions for GD23 is shown on Table 3.2. These figures are totals post the energy efficiency adjustment. Figures are provided for GD23 and the last year of the energy recover period.

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2045 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|
| FE estimated consumption | 75.5 | 79.4 | 81.6 | 83.7 | 85.3 | 86.7 | 89.2 |
| Determined consumption | 74.0 | 76.7 | 79.4 | 81.9 | 84.0 | 85.9 | 81.1 |
| Variance | -2.1% | -3.5% | -2.8% | -2.1% | -1.5% | -0.9% | -9.1% |

Table 3.2: FE – estimated total consumption for GD23 (M.therms)

FE - Owner occupied domestic connections

3.3 In GD23, we propose moving from an OO connection incentive to a Cost to Serve model for funding the work undertake by the GDNs to promote and secure OO connections. Our reasons for this proposal are set out in Annex Q. We recognise that this may have an impact on the number of OO connections. For the draft determination we have assumed that OO connections will reduce from the company’s estimate for the last year of GD17 (2022) to 60% of this value in 2028. This is a steeper decline than the company estimates for GD23.

| P1 - Owner Occupied domestic | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|------------------------------|-------|-------|-------|-------|-------|-------|------------|
| Connections proposed by PNGL | 3,852 | 3,685 | 3,524 | 3,371 | 3,224 | 3,084 | 20,740 |
| Determined OO connections | 3,697 | 3,433 | 3,169 | 2,905 | 2,641 | 2,377 | 18,222 |

Table 3.3: FE additional Owner Occupied domestic connections in GD23

FE - New Build domestic connections

3.4 The average number of New Build connections to the FE network in the period 2017 to 2020 was circa 1,400 per annum. FE estimated that there would be a marginally high rate of New Build connections in GD23. Our draft determination takes a more conservative approach, assuming that there will be some reduction in New Build connections in GD23. The numbers of connections proposed by FE and the number determined are shown in Table 3.4 below. The GD23 uncertainty mechanisms adjust both investment and revenues for actual numbers of connections over time.

| P1 - New Build domestic | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|----------------------------------|-------|-------|-------|-------|-------|-------|------------|
| Connections proposed by PNGL | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 9,000 |
| Determined New Build connections | 1,250 | 1,250 | 1,250 | 1,250 | 1,250 | 1,250 | 7,500 |

Table 3.4: FE additional New Build domestic connections in GD23

FE - NIHE domestic connections

- 3.5 FE estimated that 1000 NIHE properties would be connected per annum in GD23. This is lower than an average in excess of 2000 per annum in the years 2018 to 2020 when significant network infill was completed. The level of infill will reduce in GD23. The numbers of connections proposed by the company has been accepted for the draft determination.

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|---------------------------|-------|-------|-------|-------|-------|-------|------------|
| NIHE domestic connections | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 6,000 |

Table 3.5: FE additional NIHE domestic connections in GD23

FE - Industrial and commercial connections

- 3.6 FE has proposed low levels of connections for small I&C consumers which reflect current run rates of connections from a mature network as set out in Table 3.6. FE did not include any larger connections in its estimates for GD23.

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|---------------------|------|------|------|------|------|------|------------|
| P1 - Very Small I&C | 148 | 150 | 147 | 145 | 142 | 140 | 872 |

Table 3.6: FE additional I&C connections in GD23

- 3.7 The level of connections proposed by the company is consistent with recent rates of connections and has been accepted for the draft determination.

FE - Determined volumes

- 3.8 Gas consumption volumes for the draft determination are based on a review the company's proposals and an assessment of recent average rates of consumption per property.

| | PNGL Average consumption 2028 (therms per prop) | Average consumption applied in the draft determination (therms per prop) |
|----------------------------|---|--|
| P1 Domestic Owner Occupied | 418 | 418 |
| P1 Domestic New Build | 315 | 315 |
| P1 Domestic NIHE | 314 | 314 |
| P1 Very Small I&C | 919 | 919 |
| P2 Small I&C | 8,586 | 8586 |
| P3 Medium I&C | 40,084 | 40,084 |
| P4 Large CHP | 988,109 | 554,776 |
| P5 Large Firm Non CHP | 248,896 | 249,674 |
| P6 Interruptible I & C | 793,283 | 681,277 |

Note 1. The average consumptions for P3 to P6 are the result of specific adjustments to total consumption estimated by FE as opposed to the application of averages in the determination of consumption

Table 3.7: FE - average consumption (therms) per property

- 3.9 We reviewed and accepted FE's average consumption for P1 and P2 connections. These average consumption figures were applied to the average of the numbers of connections at the start and end of the year to calculate consumption.
- 3.10 FE based its estimates of P3 to P6 targets on current total consumption with specific adjustments for major new connections or expected variations of existing connections. We have not included the additional volumes for two large new I&C connections identified by FE in its Business Plan, pending confirmation that these connections will proceed. We will review this decision for the final determination.
- 3.11 We have projected consumption volumes post GD23 on constant rates of consumption per property and estimates of future connections. In its Business Plan submission, PNGL applied a 25% energy efficiency adjustment in equal steps to estimated consumption from 2023 to 2045. As noted above, our draft determination includes an energy efficiency adjustment of 25% applied in equal steps from 2029 (post GD23) to 2045.
- 3.12 The overall impact of our review of estimated consumptions for GD23 is shown on Table 3.2 above.

4. PNGL - Connections and Consumption

Summary

4.1 The determined connections and volumes for PNGL are shown on Table 4.1. Further information is provided below on our consideration of connection numbers and consumption for different types of connections.

| Connections | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
|---------------------------|-------|-------|-------|-------|-------|-------|--------|
| Domestic owner occupied | 4,387 | 4,073 | 3,760 | 3,447 | 3,133 | 2,820 | 21,620 |
| Domestic new build | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 12,000 |
| Domestic NIHE | 350 | 350 | 350 | 300 | 300 | 300 | 1,950 |
| Industrial and commercial | 148 | 148 | 148 | 123 | 123 | 123 | 813 |
| Total | 6,887 | 6,573 | 6,260 | 5,872 | 5,558 | 5,245 | 36,395 |

| Volumes('000 therms) | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
|---------------------------|---------|---------|---------|---------|---------|---------|-----------|
| Domestic owner occupied | 58,052 | 59,956 | 61,718 | 63,340 | 64,820 | 66,160 | 374,047 |
| Domestic new build | 22,019 | 22,793 | 23,567 | 24,341 | 25,115 | 25,889 | 143,723 |
| Domestic NIHE | 17,003 | 17,114 | 17,224 | 17,327 | 17,422 | 17,517 | 103,606 |
| Industrial and commercial | | | | | | | |
| Very Small I&C | 5,951 | 6,028 | 6,105 | 6,175 | 6,236 | 6,298 | 36,793 |
| Small I&C | 21,957 | 22,094 | 22,231 | 22,368 | 22,505 | 22,642 | 133,796 |
| CHP | 269 | 269 | 269 | 269 | 269 | 269 | 1,616 |
| Firm I&C | 11,388 | 11,458 | 11,527 | 11,597 | 11,666 | 11,736 | 69,371 |
| CHP | 4,920 | 4,920 | 4,920 | 4,920 | 4,920 | 4,920 | 29,517 |
| Firm I & C | 14,126 | 14,126 | 14,126 | 14,126 | 14,126 | 14,126 | 84,759 |
| Interruptible I&C | 15,317 | 15,317 | 15,317 | 15,317 | 15,317 | 15,317 | 91,904 |
| | 171,003 | 174,075 | 177,005 | 179,780 | 182,397 | 184,873 | 1,069,132 |

Table 4.1: GD23 determined connections and volumes – PNGL

4.2 The overall impact of our review of estimated consumptions for GD23 is shown on Table 4.2. These figures are totals post the energy efficiency adjustment. Figures are provided for GD23 and the last year of the energy recover period.

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2046 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|
| FE estimated consumption | 167.3 | 169.0 | 170.5 | 171.8 | 172.9 | 174.0 | 174.0 |
| Determined consumption | 171.0 | 174.1 | 177.0 | 179.8 | 182.4 | 184.9 | 165.4 |
| Variance | 2.2% | 3.0% | 3.8% | 4.7% | 5.5% | 6.2% | -5.0% |

Table 4.2: PNGL – estimated total consumption for GD23 (M.therms)

PNGL - Owner occupied domestic connections

4.3 In GD23, we propose moving from an OO connection incentive to a Cost to Serve model for funding the work undertake by the GDNs to promote and secure OO connections. Our reasons for this proposal are set out in Annex Q. We recognise that this may have an impact on the number of OO connections. For the draft determination we have assumed that OO connections will reduce from the company’s estimate for the last year of GD17 (2022) to 60% of this value in 2028. This is a steeper decline than the company estimates for GD23.

| P1 - Owner Occupied domestic | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|------------------------------|-------|-------|-------|-------|-------|-------|------------|
| Connections proposed by PNGL | 4,522 | 4,159 | 3,727 | 3,612 | 3,502 | 3,396 | 22,918 |
| Determined OO connections | 4,387 | 4,073 | 3,760 | 3,447 | 3,133 | 2,820 | 21,620 |

Table 4.3: PNGL additional Owner Occupied domestic connections in GD23

PNGL - New Build domestic connections

4.4 The average number of New Build connections to the PNGL network in the period 2017 to 2020 was circa 2,100 per annum. PNGL assumed a progressive increase in New Build connections for the remainder of GD17, with increasing connection numbers continuing into GD23. Our draft determination takes a more conservative approach, assuming that long term connections rates will be reflective of recent levels of connections. The numbers of connections proposed by PNGL and the number determined are shown in Table 4.4 below. The GD23 uncertainty mechanisms adjust both investment and revenues for actual numbers of connections over time.

| P1 - New Build domestic | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|----------------------------------|-------|-------|-------|-------|-------|-------|------------|
| Connections proposed by PNGL | 2,300 | 2,400 | 2,500 | 2,600 | 2,700 | 2,700 | 15,200 |
| Determined New Build connections | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 12,000 |

Table 4.4: PNGL additional New Build domestic connections in GD23

PNGL - NIHE domestic connections

- 4.5 PNGL proposed a low level of continuing connections for NIHE domestic properties as set out in Table 4.5 below. The numbers of connections proposed by the company has been accepted for the draft determination.

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|--------------------|------|------|------|------|------|------|------------|
| P1 - NIHE domestic | 350 | 350 | 350 | 300 | 300 | 300 | 1,950 |

Table 4.5: PNGL additional NIHE domestic connections in GD23

PNGL - Industrial and commercial connections

- 4.6 PNGL proposed low levels of connections for small I&C consumers which reflect current run rates of connections from a mature network as set out in Table 4.6 for tariff categories P1, P2 and P3. PNGL did not identify any future connection P4 tariff category (large I&C >75,000 therms per annum).

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2046 |
|---------------------|------|------|------|------|------|------|------|
| P1 - Very Small I&C | 123 | 123 | 123 | 98 | 98 | 98 | 663 |
| P2 - Small I&C | 25 | 25 | 25 | 25 | 25 | 25 | 150 |
| P3 - Firm I&C | 2 | 2 | 2 | 2 | 2 | 2 | 12 |

Table 4.6: PNGL additional I&C connections in GD23

- 4.7 The level of connections proposed by the company is consistent with recent rates of connections and has been accepted for the draft determination.

PNGL - Determined volumes

- 4.8 Gas consumption volumes for the draft determination are based on a review the company's proposals and an assessment of recent average rates of consumption per property.

| | PNGL Average consumption 2028 (therms per prop) | Average consumption applied in the draft determination (therms per prop) |
|------------------------------|---|--|
| P1 - Domestic Owner Occupied | 431 | 450 |
| P1 - Domestic New Build | 375 | 387 |
| P1 - Domestic NIHE | 301 | 316 |
| P1 - Very Small I&C | 613 | 627 |
| P2 - Small I&C | 5,363 | 5483 |
| P3 - CHP | 44,896 | 44,896 |
| P3 - Firm I&C | 35,719 | 34,720 |
| P3 - CHP > 75,000 Th | 983,906 | 983,906 |
| P3 - Firm I & C > 75,000 Th | 77,618 | 77,618 |
| P4 - Interruptible I & C | 306,346 | 306,346 |

Note 1. PNGL consumption for 2028 is the total consumption in year divided by number of connections at the end of year.

Table 4.7: PNGL - average consumption (therms) per property

- 4.9 We have amended the estimated consumption for P1 and P2 connections to reflect the average consumption calculated for three years, 2018 to 2020. The consumptions were calculated by dividing the total consumption in the year by the average of the number of connections at the start and end of the year to reflect part year consumption of new connections made in the year. The average consumptions figures were applied in the same way to estimate annual volumes.
- 4.10 We have accepted the company's estimates of average therms per property for P3 and P4 connections with the exception of P3 – Firm I&C category where we have used an average over the GD23 period.
- 4.11 We have projected consumption volumes post GD23 on constant rates of consumption per property and estimates of future connections. In its Business Plan submission, PNGL applied a 20% energy efficiency adjustment in equal steps to estimated consumption from 2023 to 2046. As noted above includes an energy efficiency adjustment of 25% applied in equal steps from 2029 (post GD23) to 2046.
- 4.12 The overall impact of our review of estimated consumptions for GD23 is shown on Table 4.2 above.

5. SGN - Connections and Consumption

Summary

5.1 The determined connections and volumes for SGN are shown on Table 5.1. Further information is provided below on our consideration of connection numbers and consumption for different types of connections.

| Connections | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
|---------------------------|-------|-------|------|------|------|------|-------|
| Domestic owner occupied | 735 | 659 | 583 | 508 | 432 | 356 | 3,273 |
| Domestic new build | 200 | 203 | 182 | 108 | 81 | 43 | 817 |
| Domestic NIHE | 64 | 87 | 22 | 69 | 51 | 0 | 293 |
| Industrial and commercial | 43 | 59 | 80 | 134 | 121 | 112 | 549 |
| Total | 1,044 | 1,009 | 868 | 820 | 687 | 511 | 4,939 |

| Volumes('000 therms) | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
|---------------------------|--------|--------|--------|--------|--------|--------|---------|
| Domestic owner occupied | 1,039 | 1,304 | 1,540 | 1,748 | 1,926 | 2,076 | 9,634 |
| Domestic new build | 94 | 159 | 220 | 267 | 297 | 317 | 1,355 |
| Domestic NIHE | 243 | 266 | 283 | 297 | 316 | 324 | 1,730 |
| Industrial and commercial | | | | | | | |
| Small I&C | 50 | 78 | 117 | 176 | 246 | 310 | 978 |
| Medium I&C | 138 | 238 | 375 | 585 | 835 | 1,068 | 3,238 |
| Large I&C | 912 | 951 | 989 | 1,028 | 1,105 | 1,105 | 6,091 |
| Contract I&C | 28,006 | 28,137 | 28,279 | 28,279 | 28,279 | 28,279 | 169,256 |

Table 5.1: GD23 determined connections and volumes – SGN

5.2 The overall impact of our review of estimated consumptions for GD23 is shown on Table 5.2. These figures are totals post the energy efficiency adjustment. Figures are provided for GD23 and the last year of the energy recover period.

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2057 |
|---------------------------|-------|-------|-------|-------|-------|-------|--------|
| SGN estimated consumption | 30.6 | 31.4 | 32.3 | 33.1 | 34.1 | 35.0 | 31.7 |
| Determined consumption | 30.5 | 31.1 | 31.8 | 32.4 | 33.0 | 33.5 | 28.2 |
| Variance | -0.5% | -0.9% | -1.4% | -2.3% | -3.2% | -4.3% | -11.1% |

Table 5.2: SGN – estimated total consumption for GD23 (M.therms)

Delivery of connections in GD17

5.3 SGN's Business Plan submission indicates that actual and planned delivery of connections in GD17 will be significantly lower than the connection projections and targets included in the GD17 final determination.

| Cumulative connections | At 2022 – GD17 FD projections | At 2022 – SGN GD23 BPS estimates | At 2028 – SGN GD23 BPS estimates |
|---------------------------|-------------------------------|----------------------------------|----------------------------------|
| Domestic - Owner Occupied | 3989 | 2,368 | 6,118 |
| Domestic - New Build | 1154 | 195 | 1,012 |
| Domestic - NIHE | 1914 | 752 | 1,438 |
| Small I&C | 1189 | 42 | 552 |
| Medium I&C | 396 | 19 | 365 |
| Large I&C | 26 | 16 | 27 |
| Contract I&C | 24 | 32 | 34 |
| Super Contract I&C | 1 | 1 | 1 |
| Total | 8693 | 3425 | 9547 |

Table 5.3: SGN connection delivery

5.4 The delivery of connections by SGN in GD17 has been affected by:

- a) The delayed completion of High Pressure and Intermediate Pressure pipelines under the Gas to the West High Pressure licence. As a result, gas only became available in Mid-Ulster and Fermanagh from July 2019.
- b) The on-set of COVID19 in 2020 limited opportunities for marketing and the ability of energy advisers to visit consumers and secure connections.

5.5 SGN has also indicated that it is unable to secure connections at the rate originally envisaged for Gas to the West. In particular:

- a) Delivery of domestic connections in GD17 is expected to be less than the targets and projections included in the GD17 final determination. However, the company expects to have exceeded the GD17 FD targets and projections for domestic connections by the end of GD23.
- b) Delivery of small and medium I&C connections in GD17 is significantly below the projections included in the GD17 final determination. The company now estimates that the number of small and medium connections at the end of GD23 (2028) will be lower than the GD17 projections for 2022.
- c) Delivery of large and contract I&C is on track. It is the delivery of these large I&C connections, which underpinned the economic development of a gas network in the west, which has allowed SGN to secure 84% of the anticipated gas volume in 2020 despite a material shortfall in the number of domestic and small and medium I&C connections.

5.6 SGN's I&C connections targets for GD17 were set from connection rates included in the Gas to the West licence application process. Based on its experience in GD17 SGN has estimated connections for the end of GD23 which are lower than those originally expected for the end of GD17. Because the company is subject to price cap regulation, its revenue is dependent on the connections achieved and the volume of gas consumed. This provides a strong incentive for the company to secure new connections. However, as a result of under-performing against the GD17 connection targets, the company has recovered less revenue than expected in the GD17 period.

5.7 For GD23, we consider it appropriate to estimate I&C connections for SGN on the company's own estimates for GD23. These estimates reflect both the company's experience in GD17 and its engagement with the industrial and commercial sector to date. In recognition of the challenges the company has experienced to date in securing I&C connections, and the balance of risk and reward associated with price cap regulation, we have reduced the number of I&C connections in the draft determination from the company's estimates by 25% for small and medium I&C and by 33% for large I&C. This provides an opportunity for the company to invest in promoting I&C connections to deliver and potentially exceed its own estimates of I&C connections and volumes in GD23.

SGN - Owner occupied domestic connections

5.8 In GD23, we propose moving from an OO connection incentive to a Cost to Serve model for funding the work undertaken by the GDNs to promote and

secure OO connections. Our reasons for this proposal are set out in Annex Q. We recognise that this may have an impact on the number of OO connections. For the draft determination we have assumed that OO connections will reduce from that delivered in 2020 to 60%.

| P1 - Owner Occupied domestic | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|------------------------------|------|------|------|------|------|------|------------|
| Connections proposed by SGN | 623 | 593 | 599 | 652 | 643 | 640 | 3,750 |
| Determined OO connections | 735 | 659 | 583 | 508 | 432 | 356 | 3,273 |

Table 5.4: SGN additional Owner Occupied domestic connections in GD23

SGN - New Build domestic connections

5.9 SGN has estimated the potential for New Build connections from area development plans. We have accepted the company's estimates for the draft determination.

| P1 - New Build domestic | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|-----------------------------|------|------|------|------|------|------|------------|
| Connections proposed by SGN | 200 | 203 | 182 | 108 | 81 | 43 | 817 |

Table 5.5: SGN additional New Build domestic connections in GD23

SGN - NIHE domestic connections

5.10 SGN has estimated the potential for NIHE connections from engagement with the Housing Executive and other housing providers in its area. We have accepted the company's estimates but excluded estimated connections in the 9 new areas which we have not included in the draft determination.

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|-----------------------------|------|------|------|------|------|------|------------|
| Connections proposed by SGN | 89 | 53 | 92 | 180 | 88 | 184 | 686 |
| Determined NIHE connections | 25 | 0 | 70 | 111 | 37 | 184 | 427 |

Table 5.6: SGN additional NIHE domestic connections in GD23

SGN - Industrial and commercial connections

SGN –Small I&C connections

5.11 SGN identified an additional 441 Small I&C loads connecting in the GD23 period. In recognition of the challenges the company has experienced to date in securing I&C connections, and the balance of risk and reward associated with price cap regulation, we have reduced this by 25% for the

draft determination. This provides an opportunity for the company to invest in promoting I&C connections to deliver, and possibly exceed, its own estimates of I&C connections and volumes in GD23.

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|----------------------------------|------|------|------|------|------|------|------------|
| Connections proposed by SGN | 34 | 48 | 64 | 109 | 97 | 89 | 441 |
| Determined Small I&C connections | 26 | 36 | 48 | 82 | 73 | 67 | 332 |

Table 5.7: SGN additional Very Small I&C connections in GD23

SGN –Medium I&C connections

5.12 SGN identified an additional 298 Medium I&C loads connecting in the GD23 period. In recognition of the challenges the company has experienced to date in securing I&C connections, and the balance of risk and reward associated with price cap regulation, we have reduced this by 25% for the draft determination. This provides an opportunity for the company to invest in promoting I&C connections to deliver, and possibly exceed, its own estimates of I&C connections and volumes in GD23.

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|-----------------------------------|------|------|------|------|------|------|------------|
| Connections proposed by SGN | 23 | 34 | 45 | 71 | 65 | 61 | 298 |
| Determined Medium I&C connections | 17 | 23 | 32 | 52 | 48 | 45 | 217 |

Table 5.8: SGN additional Small I&C connections in GD23

SGN –Large I&C connections

5.13 SGN identified an additional 11 Large I&C loads connecting in the GD23 period. In recognition of the challenges the company has experienced to date in securing I&C connections, and the balance of risk and reward associated with price cap regulation, we have reduced this by 33% for the draft determination. This provides an opportunity for the company to invest in promoting I&C connections to deliver, and possibly exceed, its own estimates of I&C connections and volumes in GD23.

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | GD23 Total |
|-----------------------------------|------|------|------|------|------|------|------------|
| Connections proposed by SGN | 3 | 1 | 2 | 2 | 3 | 0 | 11 |
| Determined Medium I&C connections | 2 | 1 | 1 | 1 | 2 | 0 | 7 |

Table 5.9: SGN additional Large I&C connections in GD23

SGN –Contract I&C connections

5.14 SGN identified two additional Contract I&C loads in GD23, located in one of nine additional development areas. Because we have not supported the extension of the network into these 9 additional areas in the draft determination, we have removed the additional connections and associated consumption from the determination.

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Tot GD23 |
|-------------------------------------|------|------|------|------|------|------|----------|
| Connections proposed by SGN | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| Determined Contract I&C connections | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 5.10: SGN additional Contract I&C connections in GD23

5.15 SGN has not identified any additional connections in the P6 or P7 contract categories. We consider this a reasonable assumption for GD23.

SGN - Determined volumes

5.16 Gas consumption volumes for the draft determination are based on a review the company’s proposals and an assessment of recent average rates of consumption per property.

| | PNGL Average consumption 2028 (therms per prop) | Average consumption applied in the draft determination (therms per prop) |
|--------------------------------|---|--|
| P1 - Domestic Owner Occupied | 381 | 380 |
| P1 - Domestic New Build | 373 | 320 |
| P1 - Domestic NIHE | 328 | 310 |
| P1 - Small I&C Tariff IC1 | 1,418 | 910 |
| P2 - Medium I&C Tariff IC2 | 6,080 | 5000 |
| P3 - Large I&C Tariff/Contract | 40,529 | 38500 |

Table 5.11: SGN - average consumption (therms) per property

5.17 In view of the limited experience of consumption per property in the SGN area, we have reduced the average consumption per property for future new build and NIHE domestic and small I&C to reflect the experience of FE which serves an area with some similar characteristics.

- 5.18 We have accepted the company's estimates for consumption in the larger contract categories which are based on current volumes with no expectation of additional major connections after the end of GD17.
- 5.19 We have projected consumption volumes post GD23 on constant rates of consumption per property and estimates of future connections. In its Business Plan submission, SGN applied a 30% energy efficiency adjustment in equal steps to estimated consumption from 2029 to 2057. We have applied the same approach in the draft determination.
- 5.20 The overall impact of our review of estimated consumptions for GD23 is shown on Table 5.2 above.