

Fig 8.1: System availability

### 8.2 DM Change of Shipper processing

The Change of Shipper process governs the recording of a change of registration of NDM Supply Points between Shippers on the Gas Point Register. A number of performance targets have been set in terms of processing requests for change of shipper and entry and exit capacity booking requests. These are outlined in table 4.12. The performance target has been consistently achieved over the past five years.

### 8.3 Invoice circulation

The trading and settlements team in Gas Networks Ireland generates and issues transportation invoices for all shippers on a monthly basis. The invoices are for transmission and distribution capacity and commodity. The team also issue shippers a letter each year regarding the pricing mechanism on the shrinkage contract and are responsible for the disbursement of account invoices and credit notes. The performance targets for invoices is to issue by the 12<sup>th</sup> day of the month, this has been achieved 100% of the time since 2011. The KPI for providing shippers with the shrinkage pricing mechanism is prior to the October billing date. This too has been achieved 100% of the time since 2011.

### 8.4 Meter reading access rates

This process governs the receipt and validation of all meter read information for Generic and Volume Corrected NDM Gas Points. The access rate in 2015 for both credit and PPM meters was 83%, this is above the KPI of 80% which has been consistently achieved by Gas Networks Ireland over the past five years. The read rate per site in 2015 was 3.4 times, the KPI for how often a meter is read per calendar year is 3.2 times. The performance has remained steady at circa 3.4 times in the past three years, this is illustrated in Figure 8.2. However there has been a decline in total access rate since 2011, the introduction of PPM meters into the read cycle has led to decrease in the figure as they have a lower access level.

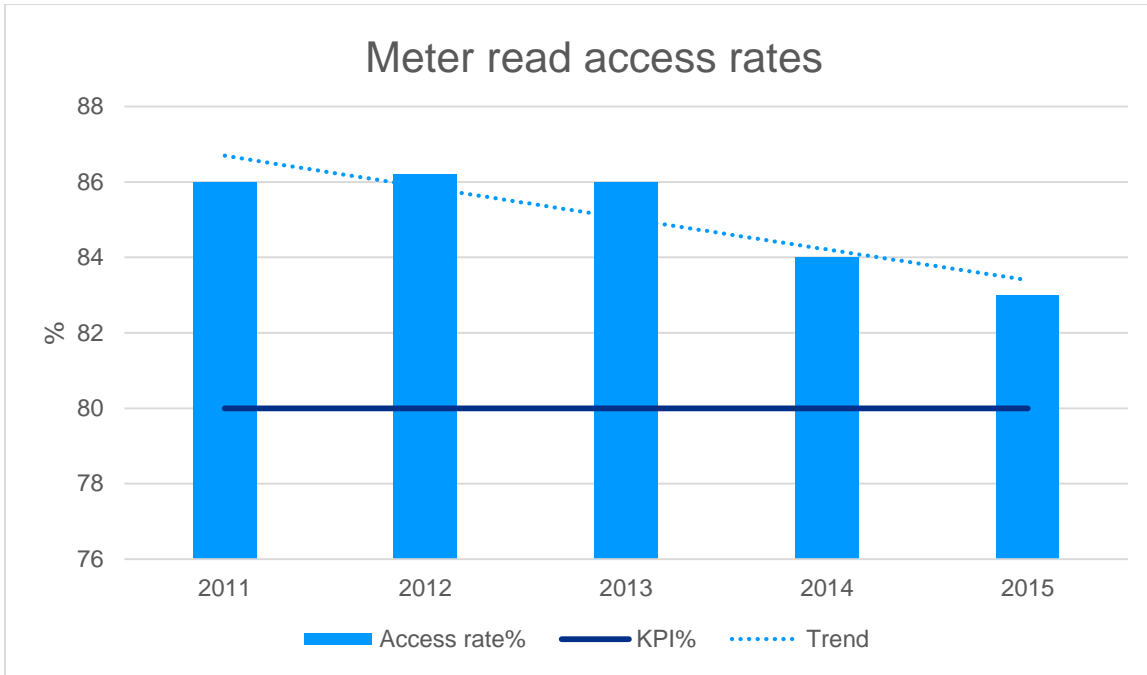


Fig 8.2: Meter read access rates



Fig 8.3 Meter read rate

### 8.5 Meter data services

In conjunction with the Code of Operations, procedures are in place that govern the forecasting demand at gas points, determining allocations by the transporter and for the reconciliation process. The KPI for within accuracy forecasting, allocation and reconciliation is 80% accuracy depending on the KWh. The accuracy rate has steadily improved for credit meters and I & C meters in 2015.

Meter data services	KPI	2011	2012	2013	2014	2015
Forecasting, Allocation and Reconciliation (FAR) <sup>7</sup> – Domestic Reconciliation (PPM <sup>8</sup> Meters - 12 month Rolling)	80% within accuracy of 1,250 kWh	N/A	N/A	N/A	99.37%	94.58%
Forecasting, Allocation and Reconciliation (FAR) – Domestic Reconciliation (Credit Meters - 12 month Rolling)	80% within accuracy of 1,250 kWh	90.30%	92.43%	94%	89.54%	99.56%
Forecasting, Allocation and Reconciliation (FAR) – I & C Reconciliation <sup>9</sup>	80% within accuracy of 4,500 kWh	74.47%	74.54%	74%	74.98%	76.51%

Table 8.6: Meter data services

### 8.6 Provision of shrinkage gas quantity/costs estimates

“Shrinkage gas” is used to operate the System (own use gas) and to replace gas which is lost or unaccounted for. The Transporter buys Shrinkage Gas to ensure the safe and efficient operation of the System and enters into one or more contracts for Shrinkage Gas.

The Transporter recovers the cost of shrinkage gas for the transmission system from Shippers (by reference to throughput). For distribution Shippers that are not subject to an additional Code charge for shrinkage, there is a distribution shrinkage factor included in the tariff. Shrinkage charges are paid by Shippers based on throughput (their entry and exit allocations).

Imbalance charges are paid to or by Shippers depending on whether they have positive or negative imbalances. Overrun charges are charges payable by Shippers where their allocations exceed their relevant active capacity on a day. Shrinkage charges are paid by Shippers based on throughput (their entry and exit allocations).

### 8.7 Maintenance Days interruptions

Gas Networks Ireland operates, maintains and repairs the transportation system in accordance with the provisions of the Code of Operations<sup>10</sup>. Maintenance days are days nominated by Gas Networks Ireland where part of the transportation system may be subject to maintenance. During maintenance days, natural gas available for offtake from that part of the transportation system may be reduced, the maintenance programme is planned in advance with the input of the Shippers. From time to time additional unscheduled maintenance may need to be conducted due to unforeseen circumstances as considered necessary in order to ensure the operational integrity and security of the transportation system. Reasonable notice will be given to each affected

<sup>7</sup> <http://www.gasnetworks.ie/en-IE/Gas-Industry/Services-for-Suppliers/Capacity-registerFAR/>

<sup>8</sup> PPM figures were not reported from 2011-2013

<sup>9</sup> The I & C band ranges between 73,000 kWh and 5,500,000 kWh so range of reconciliation accuracy can vary significantly given the wide range of annual volumes consumed at these sites.

<sup>10</sup> [part G, section 5](#), Code of Operations

Shipper as soon as is reasonably practicable, recognising that such maintenance is unscheduled. In 2015, there were no scheduled or unscheduled maintenance days. In 2015 the in-line inspection programme was very limited, which would be the primary cause of planned interruptions on the network. There was no planned upgrade works at any of the connection points or AGIs which required flows to be interrupted. When carrying out these types of planned maintenance activities Gas Networks Ireland will implement measures to prevent interruptions on the network where possible. Upgrades and in-line inspection requirements occur every 10-15 years which may be an intermittent programme based on the age of the assets.

Unplanned/ reactive maintenance requiring flow interruption are unpredictable and is generally a result of 3rd party intervention or asset failure. Gas Networks Ireland designs its network according to the appropriate codes and standards which requires redundancy to be built to minimise interruptions.

2015 was an excellent year from a network performance perspective but this figure was influenced by the low level of intrusive planned maintenance under taken. See Table 8.7.

## **9 Distribution System**

### **9.1 Distribution System Data**

In the DM I & C sector gas demand was up by circa 4.9%, compared to 2014. The key factors in terms of increased gas demand within the I & C sector are economic growth and new connections growth. The I & C sector as a whole witnessed an increase of 3.1% growth in connections.

In the NDM sector gas demand in 2015 was up by approximately 6% on the previous year. The NDM sector is sensitive to weather and demand. In 2015 demand was up due to the fact that 2014 was particularly mild. On a Degree Day (DD) basis 2014 was approximately 8% warmer than 2015, which was more in line with long run averages. For the NDM I & C sub-sector growth was further driven by the increase in economic activity. In the Residential NDM sub-sector, despite growth in new connections, growth was dampened, most likely due to the impact of domestic energy efficiency measures/improvements. Table 9.1 illustrates the distribution system data.









































## Meter reading

Meter reading						
Customer Commitment	KPI	2011	2012	2013	2014	2015
Access Rate	80%	86%	86.2%	86%	84%	83%
Read Rate	Average 3.2 reads per site per calendar year	3.53	3.47	3.42	3.41	3.40

Table 8.4: Meter reading

## Trading and settlements

Trading and settlements						
Customer Commitment	KPI	2011	2012	2013	2014	2015
Invoice circulation	By 12 <sup>th</sup> day of month	100%	100%	100%	100%	100%
Provision of shrinkage Pricing mechanism	Prior to October billing	100%	100%	100%	100%	100%

Table 8.5: Trading and settlements

## Maintenance days

Maintenance Days	KPI	2011	2012	2013	2014	2015
<b>Maintenance Days</b>	0				0	0
Unscheduled maintenance/Interruptions due to maintenance	0 5	0 5	0 5	0 5		

Table 8.7: Maintenance days



## Distribution gas flows

		2011	2012	2013	2014	2015	% Change
<b>Dx* DM I &amp; C</b>							
Annual Total	MWh	2,997,560	3,312,979	3,407,738	3,460,876	3,629,253	4.9%
Annual Daily Average	MWh	8,212	9,052	8,412	9482	9,943	4.9%
Peak Day Flow	MWh	12,149	12,668	12,541	12,785	13,737	7.4%
<b>Dx NDM I &amp; C</b>							
Annual Total	MWh	3,716,728	3,990,528	4,030,462	3,916,686	4,315,443	10.2 %
Annual Daily Average	MWh	10,183	10,903	11,025	10,731	11,823	10.2 %
Peak Day Flow	MWh						
<b>Dx NDM RES</b>							
Annual Total	MWh	7,341,417	7,744,001	7,817,915	6,908,094	7,158,766	3.6%
Annual Daily Average	MWh	20,113	21,158	21,438	18,926	19,613	3.6%
Peak Day Flow	MWh						
<b>Dx NDM Total</b>							
Annual Total	MWh	11,058,146	11,734,529	11,848,376	10,824,780	11,474,209	6.0%
Annual Daily Average	MWh	30,296	32,062	32,464	29,657	31,436	6.0%
Peak Day Flow	MWh	74,481	71,705	75,507	65,821	73,463	11.6 %
<b>Dx Total</b>							
Annual Total	MWh	14,055,705	15,047,508	15,256,114	14,285,656	15,103,462	5.7%
Annual Daily Average	MWh	38,509	41,113	40,875	39,139	41,379	5.7%
Peak Day Flow	MWh	85,525	84,373	87,913	78,393	86,402	10.2 %

Table 9.1: Distribution gas flows

## Distribution connections by category

Connections	2011	2012	2013	2014	2015	% Change from 2014
Dx DM I & C	203	207	203	200	212	+6.0%
Dx NDM I & C	23,684	23,967	24,054	24,548	25,111	+2.3%
Dx NDM RES	622,573	626,791	630,921	636,012	642,836	+1.0%
Dx Total	646,460	650,965	655,178	660,760	668,159	+1.1%

Table 9.2 Distribution connections

## Distribution system length

Distribution system length					
	2011	2012	2013	2014	2015
Total Length (km)	11,030	11,131	11,218	11,288	11,339

Table 9.3: Distribution Network Lengths - Systems Length at end 2015.

## New Connections by category

Meters	2011	2012	2013	2014	2015
Mature Housing	5,378	4,722	5,321	4,841	4,544
New Housing <sup>22</sup>	887	874	1,003	1,878	2,804
I & C	867	724	610	681	607

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