

**Transmission Tariffs
for the
Gas Year 2016/17**

17th August 2016



1. Introduction

Gas Networks Ireland (GNI) welcomes the opportunity to present its paper to the CER on the Transmission Tariffs for 2016/17. Having updated the CER published 5 year allowance for PC3 and run the Revenue control formula the GNI revenue requirement for 16/17 is c. €188m.

The Tariff Model developed as per the CER decision paper CER/15/140 and CER/15/141 using the demands set out in section 4 then calculates the actual Tariffs for Moffat, Bellanaboy, Inch Production, Inch Storage and Exit.

The calculation of the 2016/17 Transmission tariffs involves a number of steps:

1. Updating the CER published 5-Year Revenue Control model to reflect the Incremental OPEX & CAPEX which results in the 2016/17 allowed revenue increasing by €3.05m in 16/17 monies.
2. Deriving the GNI allowed revenue through application of the revenue control formulae as determined by the CER for Price Control 3 (PC3).
3. Forecasting system demand, as per section 4.
4. Calculating unit capacity and commodity tariffs based on the required revenue in accordance with the CER approved methodology as set out in CER/15/140 and CER/15/141.

The calculations are shown in the appendices.

Separate capacity booking will be required for Inch Storage and Inch Productions. In the event that the capacity bookings are not clear to the Transporter the default will be the Production Entry Tariff.

2. Executive Summary

The Price Control determines the GNI allowed revenues for a 5-year period. GNI has calculated the 2016/17 revenue in line with the price control decision of November 2012 and the updated revenue profile published by the CER on 21st August 2013 when setting the 2013/14 tariff (ref CER/13/193).

Applying the Revenue Control Formulae results in an allowed revenue of €188m for 16/17. Incorporating updated demand forecasts and running the Tariff Model results in the following Tariff movements between 15/16 and 16/17:

- a nominal decrease of circa -1.3% for Moffat Shippers (Exit Capacity plus Moffat Capacity)
- a nominal decrease of -0.5% capacity charges for Inch Storage Shippers (Exit Capacity + Inch Storage Capacity)
- a nominal decrease of -1.7% for Inch production Shippers (Exit Capacity plus Inch Production)

- a nominal decrease of -1.0% for Bellanaboy Shippers (Exit Capacity plus Bellanaboy Capacity).

When compared to the original 2016/17 allowed revenue, the revised 2016/17 allowed revenue for GNI has decreased by €6.29m in 16/17 Monies. This decrease is the net effect following the application of:

- Incremental revenue for additional OPEX of €3.05m (see section 3)
- The 2016/17 allowed revenue has also been adjusted for an increase of €0.404m in Pass-Through costs for 16/17
- The return of the 14/15 correction factor calculated at €9.74m

The following sections outline the application of the Price Control Formula and discuss the tariff calculation in more detail.

3. Allowed Revenue Calculation

The Revenue Control Formula sets out the parameters for the calculation of the required revenue in a given gas year, in this case gas year 2016/17. The GNI required revenues are adjusted to take account of forecast pass through costs and inflation for 2016/17. The Revenue Control Formula also has a Correction Factor built into it which takes account of the actual revenue (over/under recoveries), inflation and pass through costs for the previous gas year i.e. 2014/15.

3.1 Assumptions

GNI have applied these formulae and have made the following assumptions therein;

- Inflation
 - In setting the 2016/17 tariffs, 1.3% inflation was assumed for the time period from April 16 to March 17¹.
- Euribor²
 - 2014/15 Euribor of 0.35% which represents an average 12-month rate to May 22nd 2015
 - 2015/16 Euribor of 0.08% which represents an average 12-month rate to May 22nd 2016

Please see Appendix 3 for an explanation of the interest rate multiplier/Euribor rates.

3.2 Update to PC3 Allowance with Incremental Revenue

The original PC3 2016/17 allowed revenue has been further adjusted for OPEX amounting to €3.05m to determine the revised allowed revenues for the period. As these costs were not approved in the original PC3 decision, GNI have followed the CER guidance per sec. 8.5 of CER/12/196 and made a subsequent application as part of the 2016/17 tariff setting process.

¹ The inflation for 2016/17 is estimated to be 1.3% based on figures from the Central Bank, ESRI and Department of Finance forecast.

² This is used to uplift revenue over/under-recoveries for the 2014/15 tariff year. Revenue over-recoveries up to 103% and under-recoveries attract an interest rate of Euribor + 2%.

Any over-recovery over 103% of allowable revenue attracts an interest rate of Euribor + 4% for Year t .

GNI has submitted separate submissions relating to these costs. The incremental costs allowed relate to the following activities.

- Middleton Compressor Station
- Training and Apprenticeship Scheme
- Technical Competency
- Balancing
- Innovation

3.3 Application of the Revenue Control Formula

As outlined above, GNI have included additional OPEX with the Revenue allowed under the Price Control to determine the revised allowed revenue for 16/17, this is then adjusted for updated 16/17 Pass Through costs and the 14/15 Correction Factor.

Forecast for 2016/17 Pass Through Costs

The impact of the forecast 2016/17 pass through costs can be seen in the table below:

2016/17 Forecasts	(Saving)/Charge
<i>(2016/17 monies)</i>	
Pass Through Costs Variance	€m
Rates *	0.437
CER Levy	-0.497
Prisma	0.571
CO2 **	-0.107
Pass Through Costs Difference - Charge	0.404

*For rates, 50% of the variance between allowed and estimated costs is passed through.

**For CO2, 100% of the variance between the original allowed price and the estimated price is passed through. In year of close out, 100% of the variance between the estimated and actual price is passed through when the actual price is known.

- Pass Through Costs for 16/17
 - Rates for 16/17 are projected to be €14.99m
 - The projected carbon costs included for 2016/17 are based on a carbon price of €6.03 per tonne.
 - CER Levy for 16/17 is estimated to be €869k
 - The costs associated with the activities previously carried out by Gaslink are forecast to be €2.91m.

2014/15 Correction Factor

The correction factor adjusts for differences in revised forecast and actual out turn revenues for the previous period (i.e. 2014/15). A significant over-recovery occurred in the Transmission Revenue in 14/15. This was due to the delay in the Corrib field coming on stream combined

with a period of deflation over 14/15. The estimated correction factor is c. €15.11m for 14/15. Of this it is estimated that c. €12.52m relates to higher demands materialising than were forecasted, the majority of which occurred at Moffat due to the delay in the commencement of Corrib with the remainder due to variations in pass-through costs and deflation.

As indicated in the 15/16 Tariff submission to CER 26th August 2015 in the interests of tariff and revenue stability GNI propose that a limit of 5% of the overall amount of the allowable revenue in the 16/17 gas year be applied to the Correction Factor. This rule existed in both the Transmission and Distribution PC2 decision and is explicitly stated in the Distribution PC3 decision document. The 5% has also been previously applied in Transmission. This result is an over-recovery of €9.2m which is offset by €0.06m due to higher actual pass-through costs. After applying interest in the form of Euribor this results in a €9.74m correction factor for 14/15.

2014/15 Actual Outturn (Kt-1)		€m
Revenue Over Recovery	-	9.205
<u>Pass Through Costs</u>		
Rates - Charge	-	0.203
CER Levy - Saving		0.074
ISO -Saving		0.290
CO2 - Charge	-	0.220
Total Pass Through Costs		-0.060
Total 2014/15 Adjustment for Excess Revenue & Cost Excess		-9.145
Interest Rate Multiplier		1.065
Total Kt-1 Ajustment (2016/17 monies)	-	9.741

Please see Appendix 1 for the detailed correction factor calculation.

3.4 Revenue Summary

The revenues derived from applying the Revenue Control Formula are as follows:

Table 3.4.1

2016/17 REVENUE CONTROL				
	Allowed Required Revenue 2016/17	Effect of additional allowances 2016/17	Revenue Control Formula 2016/17	Variance due to Kt- 1 adjust. and revised forecast Pass-through Costs
Revenue Summary	€m	€m	€m	€m
<i>(2016/17 monies)</i> Total Transmission Network	194.5	197.5	188.19	-9.34
Total Revenue Allowed	194.471	197.522	188.185	-9.337

Please see Appendix 2 for the Revenue Control Formula calculations.

At a total level the impact of the correction factor (Kt-1) adjustments and the revised forecast pass through costs for 2016/17 on the Revenue Requirement comes to (€9.34m). The detail can be seen in the table below.

Total Revenue Summary	
<i>Values in 2016/17 monies</i>	€m
GNI Allowed Required Revenue	194.47
<i>Plus : OPEX & CAPEX adjustments</i>	3.05
	197.52
Revenue Control Formula Adjustments	
Pass Through Costs Forecast Charge 2016/17	0.40
2014/15 Correction Factor (Kt-1)	-9.74
Total Revenue Control Formula Adjustments	-9.34
Final 2016/17 Required Revenue	188.19

4. Capacity and Commodity for 16/17

The Capacity projected for 2016/17 assumes a mix of both firm and short term capacity products. It is expected that a significant amount of short-term capacity will be utilised in 2016/17.

Forecast Capacity for 16/17

The forecast Capacity figures are shown in table 4.1 below.

Table 4.1

Capacity Bookings		2015/16 Tariff Forecast	2016/17 Tariff Forecast	2016/17 % Change v's 2015/16
Exit Bookings	GWh	267.09	264.91	-0.8%
Inch Storage	GWh	26.26	10.79	-58.9%
Inch Production	GWh	3.99	4.60	15.4%
Moffat Bookings	GWh	124.37	102.85	-17.3%
Bellanaboy	GWh	50.26	103.59	106.1%
Entry Bookings	GWh	204.88	221.82	8.3%

Annualised 16/17 ROI Exit bookings 0.8% behind 15/16 Tariff forecasts.

- Power is ahead due to increased overall demand.
- LDM capacity bookings is forecast to decrease. Though LDM commodity is forecast to increase, the reduction in capacity bookings is due to the increasing extent that Shippers are optimising their bookings. Lower NDM 1-in-50. The overall NDM capacity demand has declined over the past few years. This has been reflected in a decrease in the key NDM capacity demand forecasting parameter, the ***1-in-50 NDM parameter***. This capacity demand decrease has been further influenced by a decrease in residential NDM demand as a proportion of the overall NDM Sector (from 67.2% in 08/09 to 61.8% in 15/16). Residential NDM demand is more temperature sensitive, which drives a higher peak capacity requirement.

Total Annualised 16/17 Entry bookings 8.3% ahead of 15/16 Tariff forecasts.

- Corrib is fully commissioned in 2016
- The 8.3% is the overall Entry Bookings with Inch, Bellanaboy and Moffat combined

Overall Exit Commodity is ahead of 2015/16 by 2.9% as Power and DM I/C demand remains strong.

5. Transmission Tariff for 2016/17

The 2016/17 tariff calculation is based on the CER decision papers CER/15/140 and CER/15/141. The Tariffs for 2016/17, apply the Revenue Control Formulae as outlined in Section 3 and set against the revised forecast system demand for the gas year as outlined in Section 4. The Tariff Model developed as per the CER decision paper CER/15/140 and CER/15/141 then calculates the actual Tariffs for Moffat, Bellanaboy, Inch Production, Inch Storage and Exit.

The primary tariff for Inch is €53.058 €/MWh which is equal to the simple average cost of all paths from the Inch Storage Entry multiplied by 33%, i.e., the percentage of the required revenue being recovered from entry.

The table below outlines the resultant tariffs by applying this approach and states the change in tariffs that a Shipper would incur.

GNI Transmission Tariffs for 2016/17			Published Tariffs		
	€	(16/17 Monies)	2014/15 Tariffs	2015/16 Tariffs	% Change
<u>Exit</u>	2016/17 Tariff		€	€	Nominal from 15/16
capacity	428.352	per peak day MWh	443.036	430.882	-0.6%
commodity	0.256	per MWh	0.275	0.267	-4.2%
<u>Moffat Entry</u>					
capacity	360.253	per peak day MWh	358.577	367.786	-2.0%
commodity	0.123	per MWh	0.157	0.118	4.5%
<u>Bellanaboy Entry</u>					
capacity	610.463	per peak day MWh	NA	617.996	-1.2%
commodity	0.123	per MWh	NA	0.118	4.5%
<u>Inch Storage Entry</u>					
capacity	53.058	per peak day MWh	53.604	53.058	0.0%
commodity	0.123	per MWh	0.034	0.118	4.5%
<u>Inch Production Entry</u>					
capacity	156.653	per peak day MWh	53.604	164.186	-4.6%
commodity	0.123	per MWh	0.034	0.118	4.5%
Illustrative Transmission Transportation Costs					
	€		€	€	
<u>Transmission Transportation Cost of UK Gas</u>					
capacity	788.605	per peak day MWh	801.612	798.668	-1.3%
commodity	0.379	per MWh	0.433	0.385	-1.5%
<u>Transmission Transportation Cost of Bellanaboy Gas</u>					
capacity	1,038.815	per peak day MWh	NA	1048.878	-1.0%
commodity	0.379	per MWh	NA	0.385	-1.5%
<u>Transmission Transportation Cost of Inch Storage Gas</u>					
capacity	481.410	per peak day MWh	496.639	483.940	-0.5%
commodity	0.379	per MWh	0.309	0.385	-1.5%
<u>Transmission Transportation Cost of Inch Production Gas</u>					
capacity	585.006	per peak day MWh	496.639	595.068	-1.7%
commodity	0.379	per MWh	0.309	0.385	-1.5%

As can be seen above this will result in circa -1.3% nominal decrease to capacity charges for Moffat Shippers (Exit Capacity plus Moffat Capacity), a decrease of -0.5% nominal to capacity charges for Inch Storage Shippers (Exit Capacity + Inch Storage Capacity), a decrease of -1.7% for Inch production Shippers and a decrease of -1% for Bellanaboy Shippers

APPENDIX 1: Correction Factor Calculations

CALCULATION OF KSYSTEMt-1			
$KSYSTEM_{t-1} = \{ (RSYSTEM_{t-1} + (0.5 * USYSTEMF_{t-1})) * (1 + HICPA_{t-1} / 1 + HICPR_{t-1}) - PSYSTEMA_{t-1} - (ASYSTEMR_{t-1} + (0.5 * USYS$			
Description		Formula Ref	Value
Allowed Revenue period t-1	Year t-1 Monies	$RSYSTEM_{t-1}$	192.86
Forecast Other Revenue in period t-1	Year t-1 Monies	$0.5 * USYSTEMF_{t-1}$	0.00
Actual Inflation t-1		$HICPA_{t-1}$	2.81%
Allowed Inflation t-1		$HICPR_{t-1}$	3.74%
Calculation - Revenue * Inflation		$(RSYSTEM_{t-1} + (0.5 * USYSTEMF_{t-1})) * (1 + HICPA_{t-1} / 1 + HICPR_{t-1})$	191.13
Expected pass-through costs less Actual (100%)	Year t-1 Monies	$PSYSTEMA_{t-1}$	0.14
Expected pass-through costs less Actual (50%)	Year t-1 Monies	$PSYSTEMA_{t-1}$	- 0.20
Actual Revenue Recovered in period t-1	Year t-1 Monies	$ASYSTEMR_{t-1}$	200.34
Actual Other Revenue from IC in period t-1	Year t-1 Monies	$0.5 * USYSTEMA_{t-1}$	-
Calculation - Actual Revenue		$PSYSTEMA_{t-1} - (ASYSTEMR_{t-1} + (0.5 * USYSTEMA_{t-1}))$	-200.28
Actual Revenue Recovered vs Allowed			103.9%
Euribor Rate period t		It	2.08%
Euribor Rate period t-1		$It-1$	4.35%
Correction Factor period t-1	Year t+1 Monies	$KINCH_{t-1}$	- 9.74

APPENDIX 2: Revenue Control Formula Calculations³

Total Transmission Network		<i>Revenue Allowed in year t+1</i>	
<u>Description</u>		<u>Formula Ref</u>	<u>Value</u>
Inflation		<i>HICPDj</i>	3.52%
Allowed Revenue for period t+1	<i>10/11 Monies</i>	<i>BSYSTEMt+1</i>	190.80
Calculation - Inflated Allowable Revenue	<i>{(1+(HICPj /100))* BSYSTEMt+1}</i>		197.52
Forecast less Allowable pass through costs (50%)	<i>Yr t+1 Monies</i>	<i>PICFt+1</i>	0.44
Forecast less Allowable pass through costs (100%)	<i>Yr t+1 Monies</i>	<i>PICFt+2</i>	-0.03
Correction Factor Kt-1	<i>Yr t+1 Monies</i>	<i>KICt-1</i>	-9.74
Forecast Other Revenue in period t+1	<i>Yr t+1 Monies</i>	<i>0.5*UICFt</i>	0.00
Allowable Revenue to be Recovered in year t+1			188.19

³ Note: Terminology in tables is a per Transmission Submission during PC3

APPENDIX 3: Interest Rate Multiplier/Euribor Rates

The interest rate multiplier is used to uplift revenue over/under recoveries for the previous year (e.g. 14/15). In 2014/15 Transmission experienced a revenue over-recovery. This over recovery of revenue was over 103% and therefore attracted an interest rate of Euribor + 2% and +4%. The Euribor Rate applied is based on information downloaded from the Euribor website:

<http://www.euribor-ebf.eu/euribor-org/euribor-rates.html>

Euribor 2014/15	0.35%	
Euribor 2015/16	0.08%	
Euribor + 2% 2014/15	2.35%	<i>lt-1</i>
Euribor + 2% 2015/16	2.08%	<i>lt</i>
Euribor + 4% 2014/15	4.35%	<i>lt-1</i>
Euribor + 4% 2015/16	4.08%	<i>lt</i>
The interest rate factor calculated as		
$= (1 + lt - 1 / 100) * (1 + lt / 100)$	1.045	@Euribor + 2%
$= (1 + lt - 1 / 100) * (1 + lt / 100)$	1.086	@Euribor + 4%