

# **Stakeholder Event Gas Distribution**

**Sketchley Grange, Hinckley**9th June 2015



# **Agenda**

- Paul Rogers, NGD Operate & Maintain Manager
  - Introductions & Safety
  - The Regulatory Context
- Chris Warner / Dave Turpin/ David Addison, NGD & Xoserve Managers
  - Project Nexus
- Chris Warner / Dave Turpin/ David Addison, NGD & Xoserve Managers
  - MOD 428
- Chris Bowler, NGD Stakeholder Specialist
  - Firm Load Shedding
- Craig Neilson, NGD Pricing & Shrinkage Manager
  - Distribution Pricing
- Sharu Patel, NGD Stakeholder Specialist
  - Lunch
  - Future Events & Close

Part 1

**Paul Rogers** 

Stakeholder Delivery Manager

Welcome, Safety & Regulatory









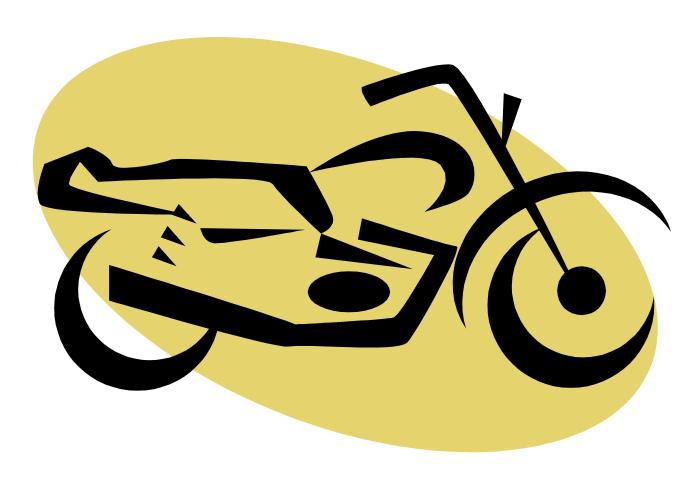
# **Introductions & Safety**

- Introductions
- Safety Moment
- Energy Industry Regulatory Outlook





# **Safety Moment**





# **Energy Industry Regulatory Outlook**

**Government Policy** 

**EU Policy development** 

**Competition Markets Authority** 

Ofgem



# **Energy Industry Regulatory Outlook**

# **Government Policy**

EU Policy development

**Competition Markets Authority** 

Ofgem

- Energy Bill
- Devolved energy powers
- EU referendum
- Smart metering
- Shale gas?



# **Energy Industry Regulatory Outlook**

**Government Policy** 

# **EU Policy development**

**Competition Markets Authority** 

Ofgem

- Gas Day
- Climate change targets
- Role of networks



# **Energy Industry Regulatory Outlook**

**Government Policy** 

**EU Policy development** 

# **Competition Markets Authority**

Ofgem

- RIIO ED1 appeal
- Bristol water appeal
- Supply Competition



# **Energy Industry Regulatory Outlook**

**Government Policy** 

EU Policy development

**Competition Markets Authority** 



National Grid Gas Distribution

- GD1/T1 Mid point review
- Fuel poor review
- Priority Services Register
- I&C Metering review
- Nexus
- Xoserve
- Faster switching
- Code Governance review

**UK GAS DISTRIBUTION** 



# **Energy Industry Regulatory Outlook**

**Government Policy** 

EU Policy development

**Competition Markets Authority** 

Ofgem

- Emergency response
- Mains replacement
- Future of Gas
- Stakeholder/customer engagement
- Minimising network costs
- Predictable charges
- Reliably delivering gas

### Part 2

Chris Warner, NGD Stakeholder Manager
Dave Addison Xoserve Engagement Manager
Dave Turpin, Xoserve Engagement Manager

# **Project Nexus**



# **Project Nexus – Topic Areas**

- Topics
  - Meter Read Submission & Processing
  - Allocation & Settlement
  - AQ Review
  - Reconciliation
  - Retrospective Updates
  - Supply Point Register
  - iGT Agency Services





# **High Level Requirements**

- Requirement for 4 new products that are referred to as 'Classes'
- Each 'Class' defines the way in which 4 types of Meter Readings are processed & used in downstream processes
  - Xoserve performs a two-step validation on every Meter Reading on receipt
    - AQ band <u>Tolerances</u> that can be over-ridden by the Shipper
    - Wider range AQ band 'Market Breakers' that cannot be overridden by the Shipper
- Monthly Annual Quantity (AQ) Review
- Meter Point Reconciliation for all Supply Meter Points
- Introduction of an industry-wide LDZ "smear" for Unidentified Gas and any other gas not accounted for through initial measurements or allocations
- Inclusion of iGT Supply Meter Points on the Supply Point Register
   agency services provided on behalf of iGTs



# **Summary of Processes**

	Allocation		Meter Read	AQ		Reconciliation	
Product	Initial Allocation	Final Allocation & Energy Balancing	Read Submission	Timing of AQ calculation	Nomination of SOQ	Trigger for Rec	Type of Rec
1: Daily Metered Time Critical Readings	Uses Daily read	Uses Daily read	Daily reads by 10am on GFD+1	Monthly using 'Optimum Read'	Shipper nominates	Re-synch or following an estimated read	DM Rec principles
2: Daily Metered Not Time Critical readings	GT estimate	Uses Daily read	Daily reads by end of GFD+1 (05.59am)	Monthly using 'Optimum Read'	Shipper nominates	Re-synch or following an estimated read	DM Rec principles
3. Batched Daily Readings	Allocation profiles	Allocation profiles	Daily reads submitted in batches: max monthly	Monthly using 'Optimum Read'	GT derives in line with AQ (fixed SOQ for charging)	Following receipt of a batch of daily reads	Individual daily rec using daily CV & SAP
4. Periodic Readings UK GAS DISTRIE	Allocation profiles	Allocation profiles	A single read submitted periodically: monthly or annually	Monthly using 'Optimum Read'	GT derives in line with AQ (fixed SOQ for charging)	Following receipt of a read	NDM Rec principles

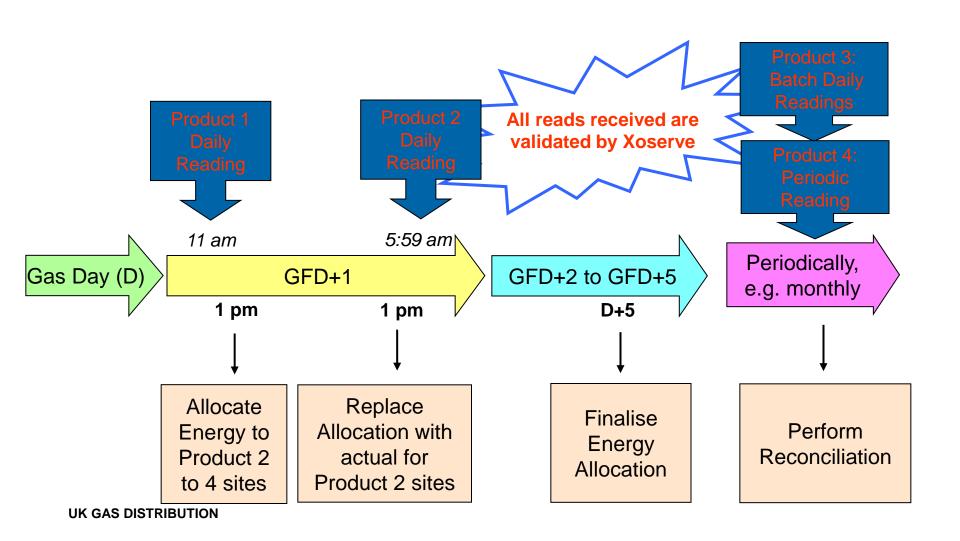


# **Project Nexus – Changes**

- Meter Read Submission
- Allocation & Settlement
- AQ
- Reconciliation
- Retrospective Updates
- Supply Point Register
- iGT Agency Services



# **Meter Reading Submission**



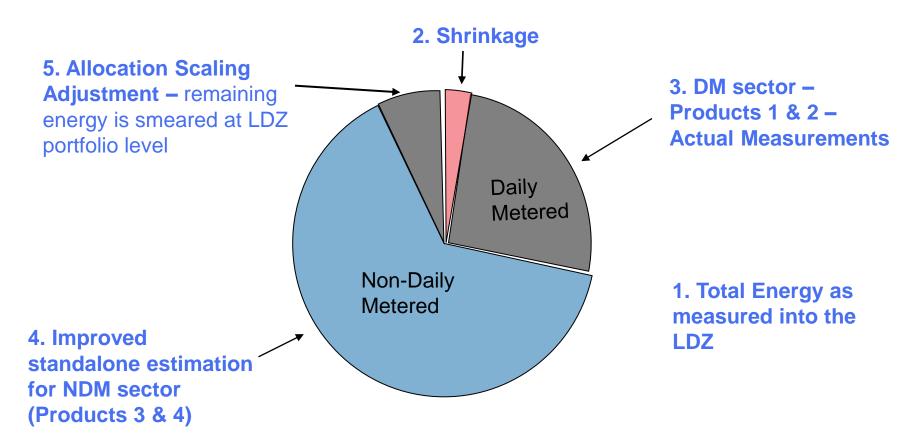


# **Project Nexus – Proposed Changes**

- Meter Read Submission
- Allocation & Settlement
- Annual Quantity (AQ)
- Reconciliation
- Retrospective Updates
- Supply Point Register
- iGT Agency Services



# **Project Nexus - Gas Allocations**



Unidentified Gas shared at portfolio level in each LDZ



# **Project Nexus – Proposed Changes**

- Meter Read Submission
- Allocation & Settlement

#### Annual Quantity (AQ)

- Reconciliation
- Retrospective Updates
- Supply Point Register
- iGT Agency Services





# AQ – Key Changes

- Monthly re-calculation of AQ, if a new meter reading has been received in the last month
- If reads have previously passed validation against data held on the GT register they are deemed suitable for all processes, including AQ
- Removal of amendment and appeals phases of AQ process
- 2 SOQs one for Allocation and another 'fixed SOQ' which applies for 6 or 12 months for transportation charging purposes.
- Minimum duration of the reference period for AQ calculation is 9 months (compared to ucurrent a months + 1 day)



# **Project Nexus – Proposed Changes**

- Meter Read Submission
- Allocation & Settlement
- Annual Quantity (AQ)

#### Reconciliation

- Retrospective Updates
- Supply Point Register
- iGT Agency Services





# **Reconciliation – Key Changes**

- Meter Point reconciliation for all MPRs
- Removal of RbD and replacement with an industrywide LDZ scaling adjustment
- No change to reconciliation principles and calculations for daily metered & non-daily metered, just to the range of meter points to which they apply
- Introduction of the concept of Resynchronisation for NDM meter points where meter readings are derived using certain types of automated reading equipment



# **Project Nexus – Proposed Changes**

- Meter Read Submission
- Allocation & Settlement
- Annual Quantity (AQ)
- Reconciliation

#### Retrospective Updates

- Supply Point Register
- iGT Agency Services



# **Project Nexus – Change Rationale**

Retrospective Updates

#### Key Principles

- The Supply Point Register should accurately reflect the current position
- Data held on the Supply Point Register must be updated where it is identified as incorrect
- Current shipper only can change their asset data with automatic adjustments flowing through
- Any Shipper can replace any reads in their period of ownership, with automatic re-reconciliations flowing through



# **Project Nexus – Proposed Changes**

- Meter Read Submission
- Allocation & Settlement
- Annual Quantity (AQ)
- Reconciliation
- Retrospective Updates

#### Supply Point Register

iGT Agency Services



# **Project Nexus – Proposed Change**

- Supply Point Register Principles
  - Single database for all meter supply points
    - iGT sites (CSEPs)
    - LPG sites
    - Unique Sites
  - Single Meter Point Supply Points
  - Market Sector Flag
  - Consumer Classification (vulnerable customers, priority consumers)



# **Project Nexus – Proposed Changes**

- Meter Read Submission
- Allocation & Settlement
- · AQ
- Reconciliation
- Retrospective Updates
- Supply Point Register
- iGT Agency Services





# **iGT** Agency Services

- Key Principles;
  - To provide a single service provision to Shippers for the operation of Supply Points on iGT networks
  - Where possible, to harmonise the administration of iGT Supply Meter Points with GTs
  - Shippers processes & interfaces are the same, where possible, for all Supply Meter Points
  - Exceptions:
    - Record of a CSEP & relationships are held & maintained
    - MPRN creation
    - Initial registration of a Supply Point
    - iGT charging methodology for services to Shippers is different to GTs

# Part 3

Chris Warner, NGG Stakeholder Manager
Dave Addison Xoserve Engagement Manager
Dave Turpin, Xoserve Engagement Manager

UNC Mod 0428





# **Single Meter Supply Points**

- Following implementation of UNC Modification 0428 all Supply Points should comprise only one Supply Meter Point
- The Modification sets out a timetable for transition from the Multi Meter Point Supply Points (mmSP).



# **Single Meter Supply Points**

- Modification timetable:
  - Modification implemented with effect from 1<sup>st</sup> April 2014
  - Transitional period until 3 months prior to 'Project Nexus Go Live Date' for Shippers to disaggregate any mmSPs (1<sup>st</sup> July 2015 – the Transition Date)
  - Any not disaggregated by this point, the Transporters will disaggregate on the Shipper's behalf
- Impacts of "Project Nexus Implementation Date" being deferred
  - "our view that the end of the transition period should remain 1 July 2015" \*\*
  - "GTs should intervene to ensure that any sites which have not been disaggregated by that date are reconfirmed as individual meter points by 1 October 2015" \*\*

<sup>\*\* -</sup> Source - Ofgem Open Letter - "Disaggregation of multi-meter supply points" - 18/05/2015





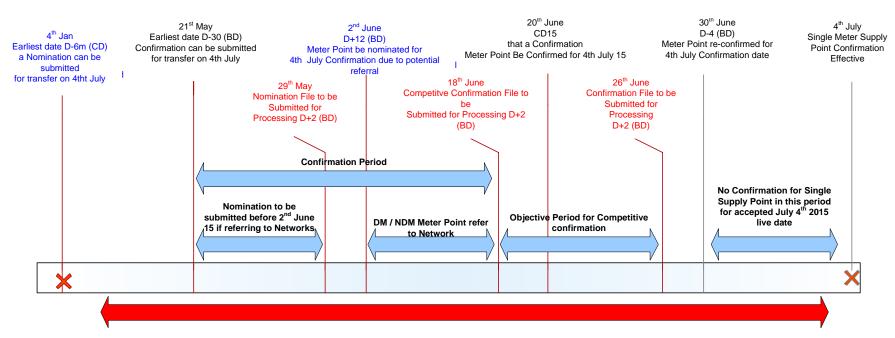
# **Twin Stream Metering**

- Twin Stream Meters are excluded from the Modification
  - Definition:
  - 'two identical meters installed in parallel, fed from a single service, with the flow through the meters combining immediately downstream of the meter outlets' \*
  - of the same size and capacity which are installed in parallel at a Supply Point (M 2.8.1)
- Shippers must notify Transporters of twin stream meters so that these may be excluded
  - Twin Stream arrangements will remain in a single Supply Point, under a single Meter Point
    - » Separate Transition will be required to Project Nexus

<sup>\* -</sup> Source – UNC Modification 0428 Final Modification Report



# **Proposed Confirmation Timeline**



Nomination/Confirmation period prior to 'Go Live' by Shippers or Xoserve for DM Meter Points





#### **Post Transition Date**

- Any Supply Points with Multi Meter Points Supply Points that remain after 1<sup>st</sup> July shall be confirmed by the Transporters on Shipper's behalf
  - Transporters are currently monitoring the numbers that have yet to disaggregate
  - Timescales of Transporter process yet to be defined
    - Volumes
    - Scenarios
- Remaining Supply Points will be disaggregated as soon as possible after 4<sup>th</sup> July 2015

# Part 4

**Chris Bowler, NGD Stakeholder Specialist** 

Firm Load Shedding (FLS)







# Firm Load Shedding

- Introduction
- Effectiveness of Current Process
- Considerations
- Potential Solution
- Time for Change





#### Introduction

- Firm Load Shedding (FLS) procedure used by Gas Transporters
- In a Network Gas Supply Emergency (NGSE),
   National Transmission System (NTS) contacts
   all 4 Distribution Networks (DNs) to reduce
   flows by a percentage of their Local Distribution
   Zone's (LDZ) demand
  - Protecting the NTS is the priority
    - Domestic consumers
    - Minimise supply restoration





#### **Effectiveness of Current Process**

- 2014 Exercise Viper
  - Requirement to interrupt ~ 1000 sites (top 200 per LDZ)
  - 4,544 calls made
- Call duration in excess of 5 hours
  - The majority of total load shed was witnessed within the first 1hr
  - Remaining 4+ hours spent contacting smaller sites





#### **Considerations** ...domestic consumers

- Under current arrangements the following sites could be called:
  - Prisons & Secure Units
  - University Halls of Residence (term time only)
  - Shared Heating & Power flats, 'vulnerable' occupants
  - Residential Care Homes (those not listed as Priority)
  - Hotels
  - MoD barracks
- Impact on consumers
  - Industry reputation at stake



# **Time for Change**

- Current arrangements in the event of a NGSE could be improved
- As the purpose of FLS in an NGSE is to protect the NTS, then it would be logical for the largest sites to be called first irrespective of location
- National database
  - Loads listed by Size in descending order
  - Each DN responsible for calling their own sites as at present
  - More effective as National database targets largest sites first
    - Avoids unnecessary interruption of smaller End Users
    - More efficient and timely
- What are your views on this proposal?

#### Part 5

Craig Neilson, NGD Pricing & Shrinkage Manager

Pricing & Shrinkage





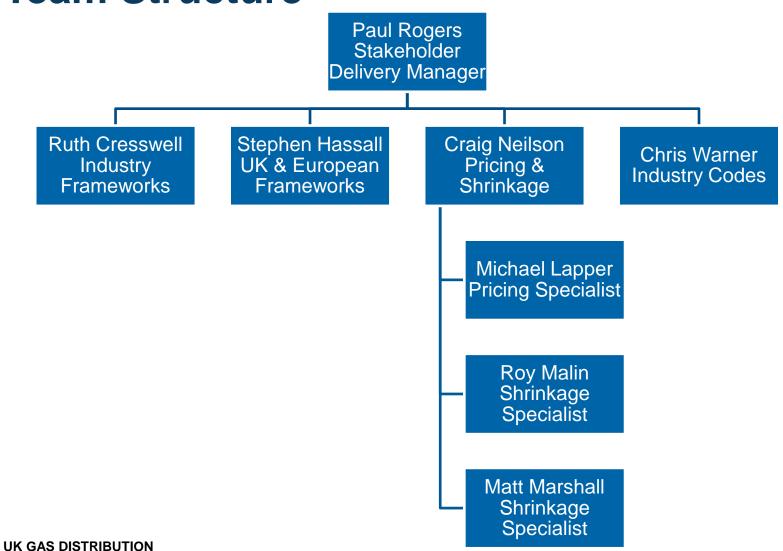


#### **Pricing & Shrinkage Overview**

- Introduction
- Team Structure
- Obligations & Principles
- Cost Reflectivity
- Timetable
- Current Pricing Landscape
- Charge Calculator
- Stakeholder Engagement Aspirations
- Q&A



#### **Team Structure**







#### **Obligations**

#### Legislative

**Gas Act 1995** 

Section 7 - Public gas transporters must follow licence activities set out in the gas transporter licence

#### Regulatory

Gas Transporter License

Special Condition 1B – Primary revenue restriction. Other special conditions contain incentives, etc.

#### Contractual

Uniform Network Code

Section Y Charging Methodology Part B -Contractual obligations between parties to the UNC. Subject to common governance via the Network Code modification process





# **Obligations**

- Price changes set once a year effective from 1<sup>st</sup> April
  - Must not aim to over recover
- Must provide 150 days notice of indicative charges, and 2 months notice of final definitive charges
- Transportation Charging Methodology
  - Must consult with Shippers on any changes (Ofgem can veto)
  - Embedded within UNC, allowing Shippers to propose changes
  - Must use Joint Office for administration of methodology and charges
  - Common methodology across all Distribution Networks

#### UNC MOD0186

5 year revenue forecast published and presented on a quarterly basis





# **Key Principles**

- Charging methodology is required to achieve 3 main objectives:
  - Be cost reflective
  - Take account of developments in the business
  - Facilitate competition in the market
- The MOD0186 Revenue Report is required to:
  - Provide early visibility of changes to future revenues
  - Provide transparency of our charges and the drivers behind change such as RPI, incentives & cost adjustments
  - Reduce the element of the risk borne by shippers in passing our charges to consumers (e.g. on fixed tariffs)

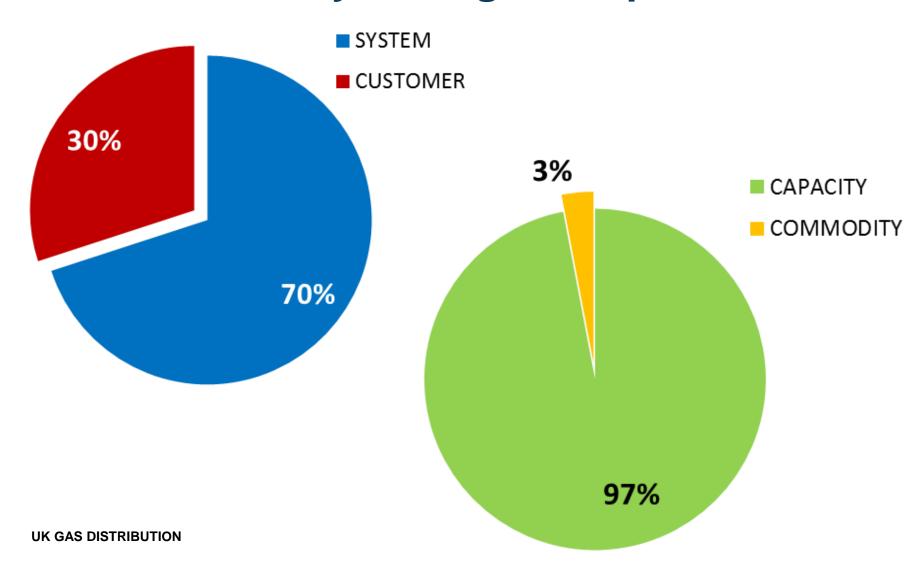


# **Cost Reflectivity: Charge Composition**

- Not all supply points require the same services
- For instance, there are charges associated with the emergency service and domestic connections allowance which are not utilised by supply points in CSEPs
- We therefore separate our charges into System and Customer elements
- Although different supply points can have different load characteristics, the key common requirement is the peak level of capacity needed to support ongoing use of the network over its asset life.
  - Capacity charges associated with supply points peak demand
  - Commodity charges associated with the actual flow of gas
- Our activities primarily support the ongoing provision of network capacity, in order to transport gas under peak demand conditions to supply points
- The majority (97%) of charges are therefore capacity related.

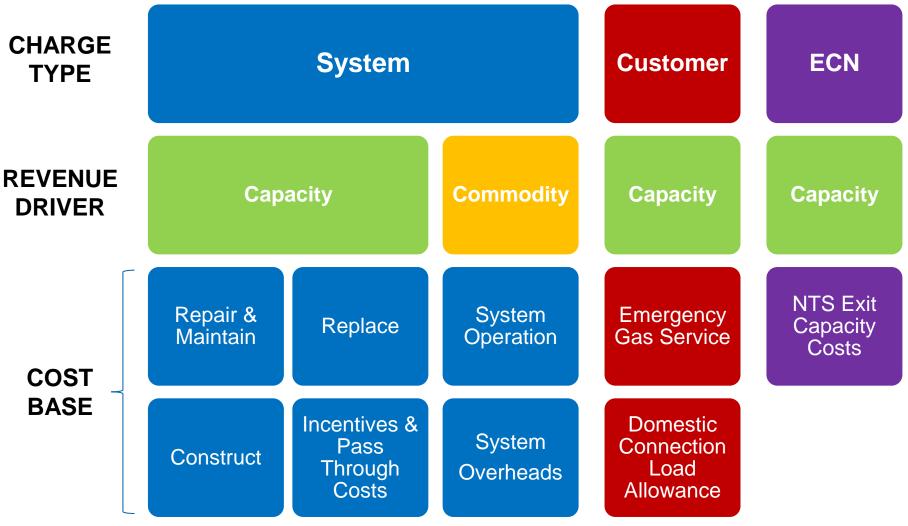


#### **Cost Reflectivity: Charge Composition**

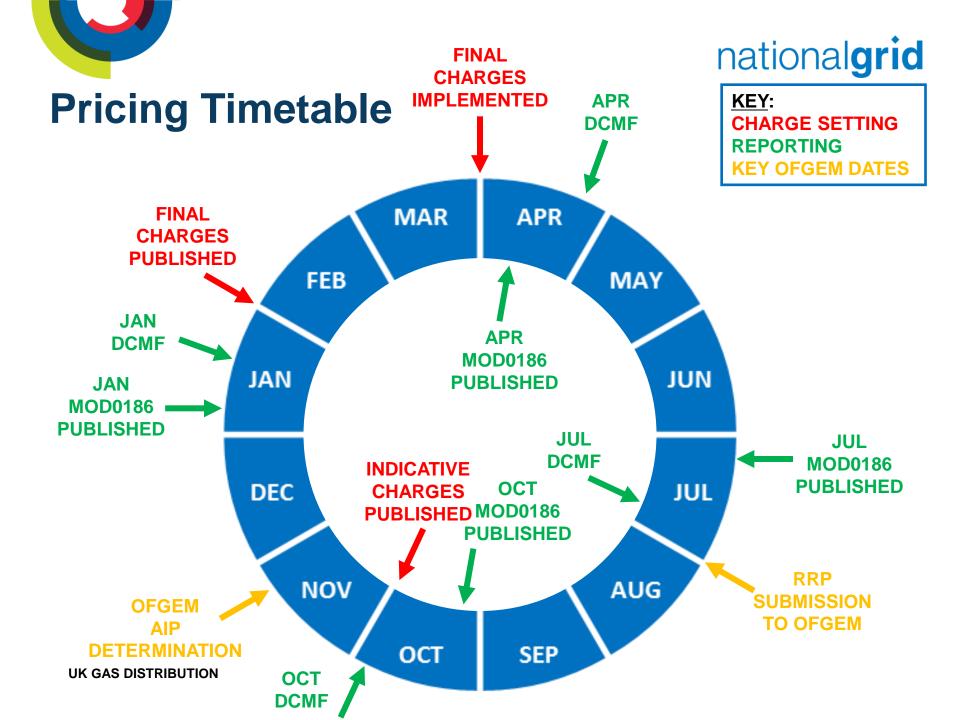




#### **Cost Reflectivity: Relating Services to Charges**

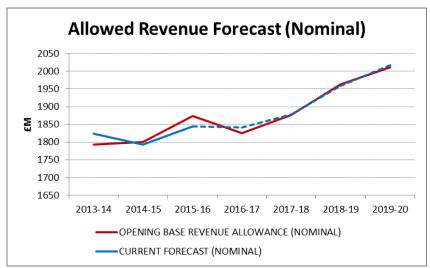


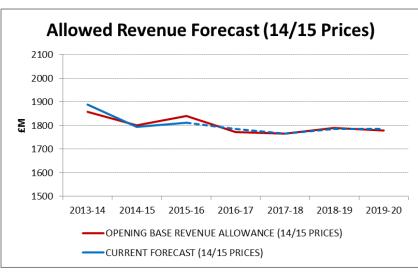
**UK GAS DISTRIBUTION** 





#### **Current Pricing Landscape: Revenue Forecast**





- Current top level revenue forecast based on Apr-15 MOD0186
- Shows current view of revenue forecast for RIIO GD-1 out to 2019/20 vs original allowances per regulatory settlement
- Nominal position shows effect of inflation
- Broad alignment to regulatory settlement
- In real terms (14/15 prices)
   downward trend for first half of RIIO
   GD-1, flattening thereafter
- Specific prices affected by demand assumption and changes to chargeable base



- Starting position is Base Allowed Revenue per regulatory settlement (expressed in 09/10 prices)
- Annual Iteration Adjustments (09/10 prices):
  - Changes to financing assumptions (cost of debt, tax pensions)
  - Legacy adjustments from previous price controls
  - Totex incentive mechanism cost and output variances with 2 year lag
  - Uncertainty cost mechanism evolving cost profile during RIIO GD-1
- Inflation impact:
  - To bring revenues into current prices
  - Initial assumption based on HM Treasury forecast for economy
  - True up to actual average year RPI with 2 year lag
- Base Allowed + Annual Iteration + Inflation = Base Revenue



- Regulatory settlement includes allowance for:
  - NTS Exit Capacity Costs
  - Costs of bringing gas onto Distribution Networks from NTS
  - Previously part of Gas Transmission prices in previous price controls
  - Now moved downstream under RIIO GD-1
  - Shrinkage costs
  - Cost of gas procured by NG for volume lost from / used by the system
  - Primarily leakage, but also includes own use gas and theft of gas
- Actual costs positions are adjusted in revenues with a 2 year lag
- Facility to revise allowances should forward unit costs materially differ
- NG proposed adjustment to Shrinkage allowance in 14/15 awaiting determination by Ofgem



- RIIO GD-1 includes a suite of financial incentives designed to reward DNs for driving benefits to customers and stakeholders:
  - Exit Capacity Incentive optimising use of system and avoiding future investment by flowing gas through lower cost offtakes
  - Shrinkage and Leakage finding durable solutions to reduce the amount of gas lost from the system
  - Customer satisfaction customer satisfaction, complaints management & stakeholder engagement
  - Environmental Emissions reducing carbon impact
  - Network Innovation driving durable benefits to customers through new and innovative projects and techniques
- Discretionary Reward Scheme contribution to CO safety, fuel poverty eradication, safeguarding vulnerable customers



- The final building block is an adjustment for over or under recovery of revenues:
  - Over or under recovery is primarily driven by variances in the demand assumptions used to underpin unit prices
  - For instance, if we had a particularly mild winter, we might expect a level of under recovery
  - Ofgem set deadbands for % level of over or under recovery which are
     6% of allowed revenue annually or 12% cumulatively
  - Any over / under recovery position that has materialised in year is adjusted with a 2 year lag



	13-14	14-15	15-16	16-17	17-18	18-19	19-20
	£m						
OPENING BASE REVENUE (09/10 PRICES)	1542	1494	1522	1489	1488	1484	1476
▼ FINANCING ADJUSTMENTS	-	(9)	(31)	(21)	(24)	(28)	(34)
▼ LEGACY ADJUSTMENTS	-	(2)	(4)	(2)	(2)	(2)	(2)
▼ TOTEX INCENTIVE	-	-	3	2	(26)	(19)	(18)
▲ UNCERTAINTY MECHANISM	-	-	9	16	25	20	21
▲ INFLATION	251	304	346	336	382	470	523
BASE REVENUE (NOMINAL)	1794	1787	1845	1821	1843	1926	1966
▲ COST PASS THROUGH	0	-	4	5	14	14	14
▼ EXIT CAPACITY COST ADJUSTMENT	-	-	(4)	(3)	(11)	(7)	11
▼ SHRINKAGE COST ADJUSTMENT	-	-	(7)	(20)	(20)	(21)	(21)
POST PASS THROUGH & COST ADJ	1794	1787	1838	1802	1827	1913	1969
▲ EXIT CAPACITY INCENTIVE	-	-	5	11	23	17	17
▲ SHRINKAGE INCENTIVE	-	-	2	2	2	2	2
▲ CUSTOMER SATISFACTION INCENTIVE	-	-	6	7	8	9	10
▲ ENVIRONMENTAL EMISSION INCENTIVE	-	-	6	8	8	7	7
▲ DISCRETIONARY REWARD SCHEME	1	1	-	-	-	-	-
▲ NETWORK INNOVATION INCENTIVE	3	7	8	9	11	12	12
POST INCENTIVES	1797	1795	1865	1840	1877	1959	2017
▼ (OVER) / UNDER RECOVERY ADJ	6	-	(21)	1	1	-	-
MAXIMUM ALLOWED REVENUE	1803	1795	1845	1841	1878	1959	2017
FINAL PROPOSALS	1794	1800	1874	1826	1877	1963	2011
VARIANCE	(10)	5	29	(15)	(1)	4	(6)
% VARIANCE	(1%)	0%	2%	(1%)	(0%)	0%	(0%)



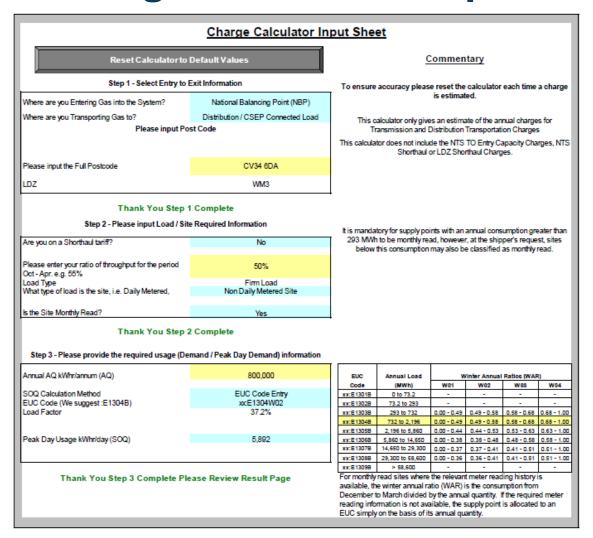


#### **Charge Calculator**

- We recognise that pricing is a complex area, and want to help our stakeholders understand what our prices mean to them specifically
- Each year, we publish a "Charging Calculator" on the website of the Joint Office of Gas Transporters (<a href="http://www.gasgovernance.co.uk/DNcharges">http://www.gasgovernance.co.uk/DNcharges</a>)
- The charge calculator estimates NTS and Distribution transportation charges for any UK site
- It uses Supply Point characteristics (Maximum peak day usage, annual usage, location, etc.) to estimate transportation charges
- Updated nationally by NG on behalf of all Distribution Networks



#### **Using the Charge Calculator: Inputs**





# **Using the Charge Calculator: Results**

#### Charge Calculator Results

Distribution Network	West Midlands		
Distribution Network Company	National Grid		
Transmission Network Company	National Grid		
Input Data			
AQ (kWh/a)	800,000		
Load Factor	37.2%		
SOQ (kWh/pd/a)	5,892		

The site is categorised as a Non Daily Metered Site

The site is categorised as a Firm Load

The site is connected to the Distribution Network

The site is a Non Daily Metered Site and read monthly

Transmission charges calculated on gas flows from National Balancing Point (NBP)

Transmission charges calculated on gas flows to Distribution / CSEP Connected Load

Distribution Network Charges	
LDZ System Capacity	£3,742.01
LDZ System Commodity	£222.40
LDZ Customer Charge (Capacity)	£227.96
LDZ ECN Charge (Capacity)	£223.66

TOTAL	
	£4.416.03

Transmission Charges	
NTS TO Exit Commodity Charge	£125.60
NTS SO Exit Commodity Charge	£172.00
TOTAL	£297.60
Total Charge	£4,713.63

	Unit Rates
0.1740	pence per peak day kWh per day
0.0278	pence per kWh
0.0106	pence per peak day kWh per day
0.0104	pence per peak day kWh per day

	Unit Rates
0.0157	pence per kWh
0.0215	pence per kWh



# **Stakeholder Engagement Aspirations**

- Encourage use of MOD0186 reports and participation of quarterly Distribution Charging Methodology Forum (DCMF)
- Help foster a level playing field with our Stakeholder's knowledge and understanding of pricing:
  - Companion user document / glossary for MOD0186
  - Dedicated deep dive education session for Stakeholders that don't usually attend DCMF
  - Extension of DCMF to include focussed sessions on particular topic areas of interest
  - One to one education sessions
  - Charging calculator support
- Always happy to hear from our customers via email or phone queries





#### **Contact the Pricing Team:**

**Craig Neilson** 

Stakeholder Implementation Manager (Pricing & Shrinkage)

Mob: 07827 929 678

Email: craig.neilson@nationalgrid.com

Michael Lapper

**Pricing Specialist** 

Mob: 07769 646 518

Email: michael.lapper@nationalgrid.com

**Matt Marshall** 

**Shrinkage Specialist** 

Mob: 07768 536 731

Email: matt.marshall@nationalgrid.com

# Lunch



Part 6
Sharu Patel, NGD Stakeholder Specialist

Future Events & Close







#### **AOB**

#### Future Events

- National Grid Gas will be hosting an Annual Gas Industry Forum event on the 9<sup>th</sup> November 2015 in Warwick.
- Operational level forum for new comers wanting an appreciation within the Gas Distribution Industry.

#### Event Survey

 Your feedback is important to us, please take a few moments to compete the survey on your table.





# Thankyou & Safe Journey Home!