

RIO-GD1

Business Plan Summary

April 2012





Since November we have built on our commitment to deliver best value to our customers

We delivered a frontier plan in November

- ✓ Stakeholder led - material impact on our proposal, we reduced costs to customers by £35m p.a.
- ✓ Maintained our legal, regulatory and moral obligations with a plan which secures a safe and resilient network for current and future customers.
- ✓ Compliant - in all aspects, the only GDN to achieve this.
- ✓ Transparent - no redactions instigated by NGN.
- ✓ Fully inclusive - all costs clearly identifiable for key policy areas.
- ✓ Optimised and efficient expenditure - balancing short, medium and long term network requirements.
- ✓ Range of scenarios considered driven by asset health and cost benefit analysis.
- ✓ Recognises wider current UK policy agenda and economic constraints.
- ✓ Recognised as the most efficient financial package.

We have listened carefully to additional feedback

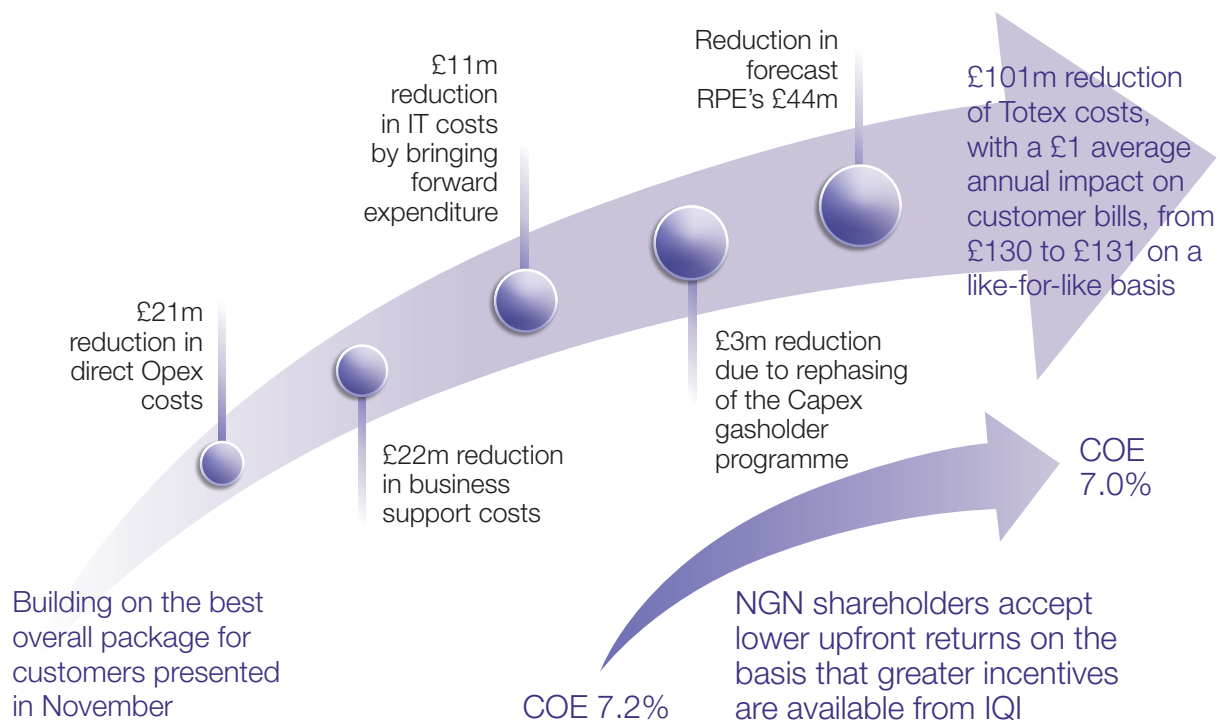
- ✓ Through further stakeholder engagement, which has reinforced earlier messages about our plan.
- ✓ The comparison with other network plans/Ofgem feedback/benchmarking data, giving rise to challenges and review of our expenditure forecasts and adoption of best practice.
- ✓ Our subject matter experts in relation to the potential to re-engineer to improve value and reduce network risk.
- ✓ A demand from our Pension Trustees (in light of maturity of scheme), resulting in a further investment in our deficit reduction and de-risking strategy.
- ✓ Discussions with our investors about the balance of risk and the options to support further value to be delivered to customers, with the understanding that this is balanced with increased outperformance potential if we perform. This represents an increased upfront risk for equity investors.

We have engaged positively to identify an appropriate balance of risk and reward and at the same time improve value delivered to our customers



A balanced package which rewards NGN for frontier performance

Key changes in Totex since November 2011



Best overall package

- ✓ Reduced Totex costs by £101m.
- ✓ Lower financing costs, Cost of Equity (COE) reduced from 7.2% to 7.0%.
- ✓ Shareholders taking more upfront risk and customers less. NGN has accepted all risks which it believes it is best placed to manage, and restricted uncertainty mechanisms to those risks outside company control.
- ✓ Maintained outputs including 21% reduction in shrinkage and associated CO₂ savings (highest proposed) and a doubling of our November commitment to connecting fuel poor customers.
- ✓ Fully utilised 3 tier approach to Repex to maximise outputs and financial benefits for customers.
- ✓ Pensions de-risking strategy incorporated aimed at addressing the deficit over the RIIO period, at a cost of £73m in RIIO-GD1.

Based on acceptance of our proposed IQI mechanism and allowances being set at upper quartile, allowing NGN to be rewarded for frontier performance.

Value for money being achieved at no material increase in cost for the customer over the period

NGN has updated this plan taking into account feedback and refined data from key stakeholders. The plan continues to represent excellent value for our customers.

This document highlights key changes.

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NGN is the UK's frontier gas distribution network and has a significant contribution to make to the UK's energy future.



NGN is the licensed gas transporter for the North of England

NGN is responsible for the safe and efficient delivery of gas to homes and businesses in West, East and North Yorkshire, the North East and northern Cumbria.

NGN's network:

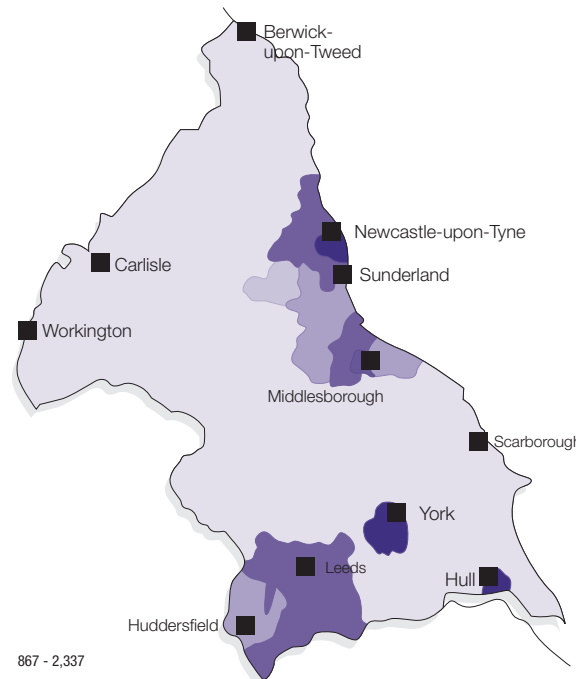
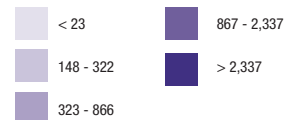
- Consists of 37,000km of pipeline
- Covers 25,000km²
- Serves 2.6m customers

50% of NGN's customers are located in two large conurbations. The remainder live in sparsely populated rural areas taking in four national parks.

The network transports c.82,000 GWh of energy annually.

NGN is a significant regional employer with a highly skilled workforce of more than 1,200 staff and 800 contractors.

Key: Population density - number of people per km² per local authority district.



A corporate vision was introduced in 2005, reflecting the primary objectives of the business: safely, efficiently and sustainably delivering a secure supply of gas to NGN's customers.

To be benchmarked by Ofgem and the HSE consistently in the top two comparable utilities for safety, efficiency and customer service.

NGN's corporate vision is supported directly by its business values which reflect the way its employees deliver their roles and activities. The consistent demonstration of these values in day-to-day business activities has helped build a culture that drives sustainable business performance.

The vision is based firmly within the scope of NGN's role as a monopoly utility service provider, and has provided a robust basis against which NGN has successfully addressed the challenges faced since June 2005.

The vision remains appropriate as NGN adapts to the additional challenges that a changing energy market will present as the UK moves towards a low carbon economy

NGN plays a critical part in the regeneration of the local economy of the North of England

- Since 2001, the region has grown by over 0.25m (4%) with a particular concentration of population growth in and around Leeds and Bradford.
- Recent official population forecasts suggest potential further growth of 1m people in the North East and Yorkshire regions over the next 25 years (ONS, 2012).
- NGN's core areas of operation, are experiencing some of the worst impacts of the recession - since 2005, the unemployment rate has almost doubled.
- Middlesbrough, Hull, Hartlepool, Gateshead, Doncaster, South Tyneside and Sunderland, all had unemployment rates in excess of 10% during 2011, with youth unemployment being a particularly acute issue.
- Activities of relatively 'recession-proof' industries, such as energy infrastructure, are now an even more critical component of the region's economy and act as an important catalyst for economic growth.

As a regionally-focused organisation, with a long-term outlook, NGN plays a critical part in the economy of the North of England; an important investor in the region as it seeks to recover its economic well-being. In aggregate, assuming investment plans and employee numbers are maintained over the strategic plan period, 2013/14-2020/21, the Ripple Effect of NGN's activities could equate to over £2.6bn; a financial impact on the North of England economy of over £330m per year.

Northern Gas Networks, Regional Economic Impact, April 2012

(Professor Adrian McDonald, University of Leeds & Dr Peter Boden, Edge Analytics Ltd)

- NGN is a major employer within its area of operations. There are over 1,200 staff directly employed, of which 95% both live and work within the NGN region. In addition to this, NGN engage over 800 contractor employees.
- NGN will invest c.£31m in the recruitment and training of over 260 additional apprentices in RII0-GD1.
- Direct staff costs of c.£30m can be identified as 'disposable income' within the NGN area of operations.
- NGN's annual expenditure with suppliers is approximately £174m with a total of 680 individual vendors distributed across the UK.
- In the northern region, a total of 305 businesses are providing products and services to NGN, accounting for an estimated annual expenditure of £111m.

Experts forecast that during RII0-GD1, the ripple effect of NGN's activities could equate to over £330m per year in the North of England economy.

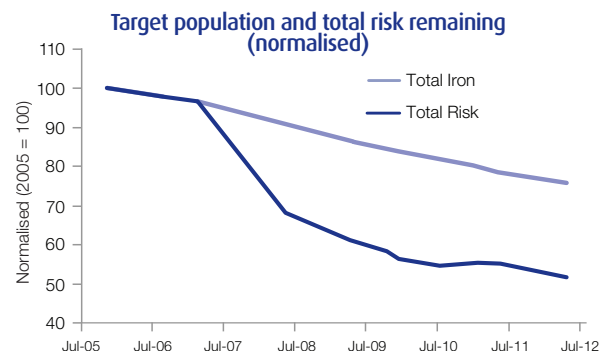


NGN is the UK's frontier gas distribution network

Since 2005, NGN's vision has been to be benchmarked consistently by Ofgem and the HSE, in the top two comparable utilities in safety, efficiency and customer service. This vision is being achieved.

Safety

NGN has almost halved the inherent risk from iron gas mains since taking ownership in 2005.



NGN is the only GDN with both ISO 14001 (environment) and ISO 18001 (safety) accreditations.

Efficiency

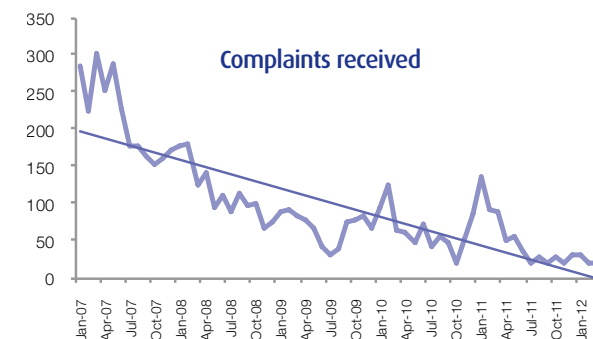
The best performing gas distribution network.

	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	*2011/12
Opex	1 st	1 st	2 nd	1 st	1 st	1 st	1 st
Repex	1 st	1 st	1 st	1 st	1 st	1 st	1 st
Totex				1 st	1 st	1 st	1 st

A clear leader in Opex, Repex and total expenditure (Totex) in each of the last six years and *forecast for 2011/12.

Customer service

Significant reductions in complaints over several years.



On target to be ranked consistently in top two.

This unrivalled performance is underpinned by excellent levels of network asset reliability and recent data demonstrates a continued improvement across these key measures

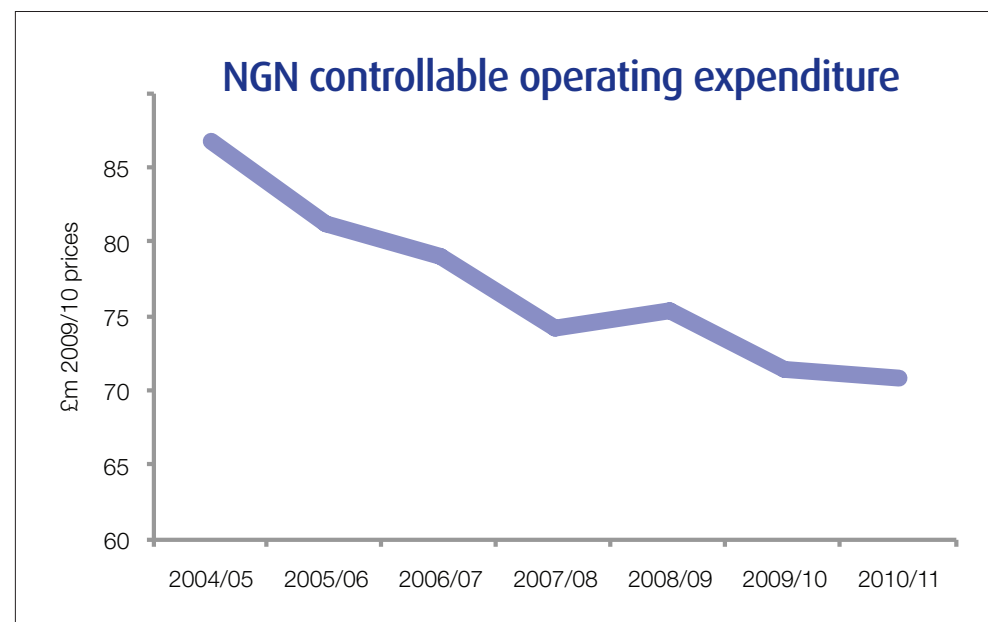
NGN has already delivered its 'demerger dividend' commitment to customers

It was predicted that the sale of the gas networks by National Grid in 2005 would result in significant reductions in controllable operating expenditure over two regulatory periods through new ownership and comparative competition, referred to as the 'demerger dividend'.

NGN has delivered this benefit in just one regulatory period - through driving consistent year-on-year efficiencies whilst improving customer service and safety.

This represents early delivery of the full 'demerger dividend'.

Customers benefit from lower transportation charges from the beginning of RIIO-GD1 rather than waiting until RIIO-GD2 for the full benefit of demerger.



Industry-leading 18% real reduction in controllable operating expenditure since 2005

Benefit has been delivered 10 years early, creating significant long term value for customers and recent data demonstrates further improvement for our customers



NGN has maintained its frontier position, despite significant cost pressures

Loss of the National Grid metering contracts

- NGN lost the majority of its metering work having been unsuccessful in the 2008 retenders.
- This resulted in a stranded resource cost in the regulated business of c.£10m annually.
- NGN took the decision it was better for its customers to reduce the stranded costs and, wherever possible, to address this issue immediately.
- NGN has managed this stranded cost down as much as possible, however still faces c.£4m of recurring annual costs.
- No other GDN has faced this cost pressure in GDPCR1 and this should be reflected in Ofgem's benchmarking and setting of allowances going forwards.

There are several regional factors which NGN faces while maintaining its frontier position

- Work on mains and services in the West Yorkshire conurbation is affected by a unique combination of physical factors impacting c.£3m p.a. These are:
 - Underlying limestone bedrock, a feature of the Pennines, making excavation significantly more difficult than in other areas of the country.
 - Many services are on a 'double rail design' peculiar to the West Yorkshire districts.
- NGN is also impacted by an unique combination of sparsity and urbanity.
 - The NGN region has two of the UK's top six conurbations yet 97% of NGN's region has the lowest population density outside Scotland and contains four national parks.
 - Requires maintaining higher resource levels and number of depots to service these areas - equivalent to a further c.£4m p.a. operating cost impact.

These regional and stranded costs must be reflected in benchmarking and cost allowances



NGN recognises that it has a significant contribution to make to the UK's long term energy future

Gas will continue to play a long term role in the UK's energy mix

- The Energy Networks Association Gas Futures Group undertook a long-range scenario-based modelling study of the future utilisation of gas to 2050 which considered four key scenarios – all of which achieved the UK Government's 2050 environmental commitments.
- Gas and the associated distribution and transmission networks have a significant role to play in three of the four scenarios both in transition to and as a key component of the future low carbon energy mix.
- The study illustrated that gas will remain a cost-effective solution for a low-carbon transition, and could represent a total cost saving of more than £700bn compared to alternative scenarios.
- DECC 'Heat Strategy' describes gas boilers as useful transitional technology into the 2030s i.e. beyond RII0-GD2.

This business plan maintains network capability to meet future challenges

- The pathway to 2050 and the policy options required to deliver these commitments are uncertain at this stage. However, it is clear that gas and the distribution networks will have a significant role to play in that journey.
- This business plan ensures that the capability of NGN's network is maintained during RII0-GD1 and begins to adapt to the future challenges that a low carbon economy will bring.
- NGN's plan is predicated on this and delivers:
 - £1.2bn investment in the network;
 - maintains NGN's skilled workforce;
 - support and investment in innovation; and
 - maintains network reliability.
- DECC 'Heat Strategy' confirms the right approach is to maintain gas network capability as per NGN strategy, particularly given the lack of availability and uncertainty of most of the alternative domestic heat solutions at this time.

It is in the UK's interest to maintain strong and efficient gas distribution networks



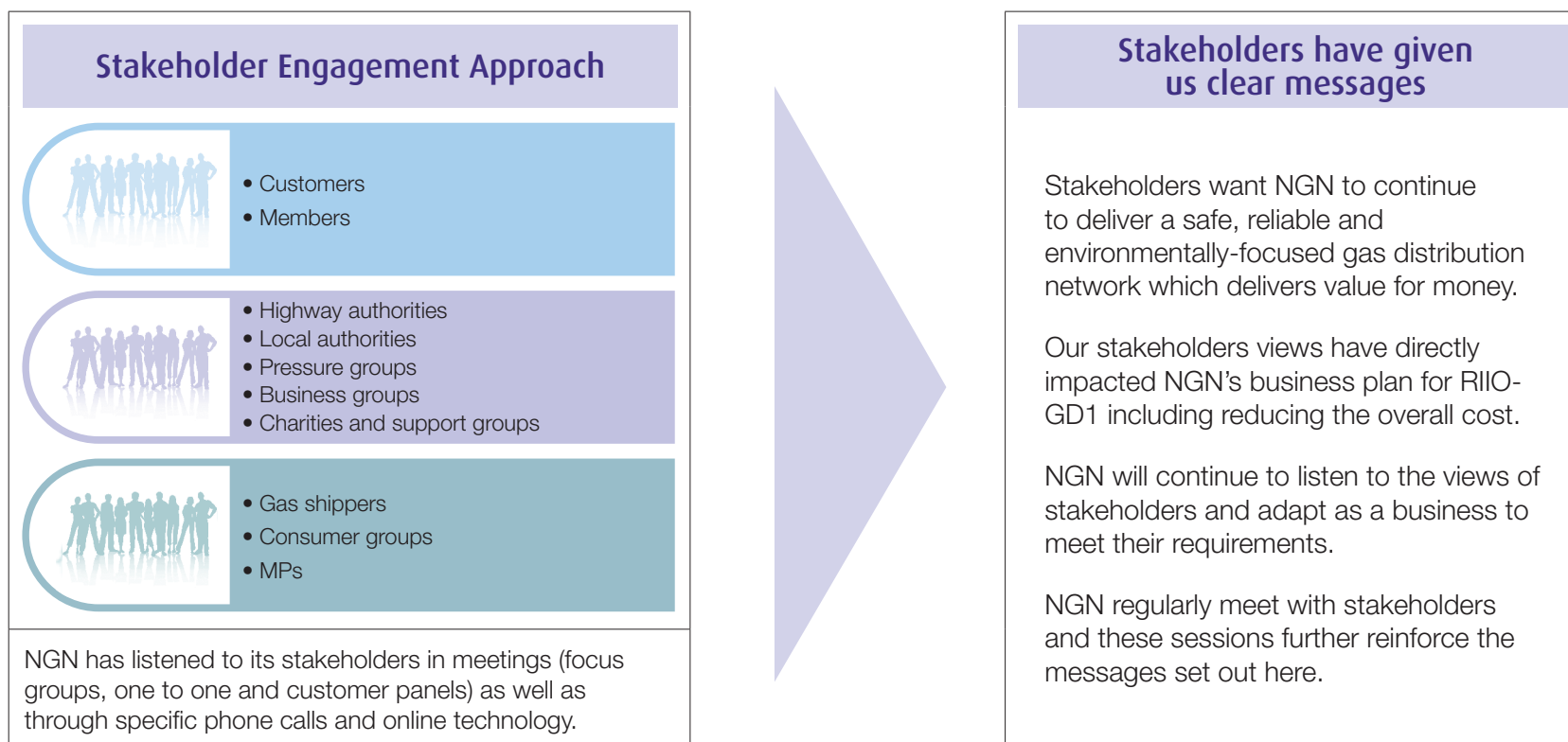
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Since November, NGN has continued to listen to its stakeholders to deliver value for money from a safe, reliable, customer and environmentally focused network.



NGN continues to listen to its stakeholders and its engagement strategy is highly effective

NGN has engaged with over 1,700 individual stakeholders and groups to ask them what they need, value and want. This critical engagement continues to be part of our ongoing business operations.



Customers want NGN to run a safe, reliable and environmentally-focused network which continues to deliver value for money

NGN will meet its increased output commitments and prioritise spend to deliver what stakeholders want

- NGN's business plan commits to improve current performance in 30 key output measures and maintain high levels of performance in a further 25 targeted areas.
- NGN is committed to six additional voluntary output measures identified as important by NGN's extensive stakeholder engagement.
- It is evident through comparison with other GDN plans that NGN has taken a frontier position in terms of leakage and CO₂ savings in the RIIO-GD1 period.

Output area						
Category	Customer Service	Environment	Social Obligations	Safety	Reliability	Connections
Ofgem measures (no.)	8	7	2	16	10	11
What stakeholders want more of	▲	▲	▲	↔	↔	↔
NGN's focus in RIIO-GD1	<ul style="list-style-type: none"> • Maintain commitment to a top two position across RIIO-GD1. • Reduce complaints by c.40% and improve customer satisfaction scores annually. 	<ul style="list-style-type: none"> • Reduce carbon footprint by 500,000 tonnes. • Facilitate bio-methane connections. • Maintain use of recycled aggregate at 80%. 	<ul style="list-style-type: none"> • Connect 12,000 more fuel poor customers. • Enhanced carbon monoxide awareness and testing. 	<ul style="list-style-type: none"> • Maintain a leading position. • Reduce risk by iron mains replacement. • Adopt a zero tolerance to employee and public safety incidents. 	<ul style="list-style-type: none"> • Minimise customer interruptions. • Target and measure asset health improvements. • Invest efficiently. 	<ul style="list-style-type: none"> • Maintain a reliable customer connections service. • Connect low carbon gas.

NGN is committed to delivering and maintaining high levels of performance and outputs despite the additional cost savings identified since November 2011



In response to stakeholder feedback NGN has reduced its forecast expenditure in RII0-GD1

Expenditure Forecast Comparison (normalised to September 2010 assumptions)



- Our November 2011 plans represented a reduction of c.£37m p.a. on a like-for-like basis (c.£293m in total over RII0-GD1) when compared to the previously submitted September 2010 forecasts (on a consistent basis) whilst still delivering improvements in safety, efficiency, customer service and environmental performance.
- This has been achieved by assessing NGN's expenditure using a more holistic risk-based approach and identifying the key trade-offs between expenditure categories and the delivery of outputs largely enabled by the changes to the Repex proposals.
- Our April 2012 submission delivers a further reduction of c.£11m p.a. on a like-for-like basis, in comparison to our November 2011 submission.

This plan delivers £1.2bn of investment for only a £1 increase in annual customers' bill

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This business plan delivers the most all-round efficient financial package and appropriate balance of short and long term impacts on customers' bills, investors and providers of finance.



NGN's required financial package balances critical financeability factors and the impact on customers' bills

The proposed financial package has been accepted as representing an appropriate balance between the short and long term impact upon customers and the providers of finance. The package we propose has been refined further and improves effectiveness against the four key assessment criteria.

Evaluation Criteria		NGN's Response
1	Impact on customer bills	Transitional arrangements over 12 years insulates customers' exposure to significant future volatility in bills driven by growth in the RAV as a result of the capitalisation of Repex.
2	Long term market confidence to attract investment	A package of transitional arrangements and we have accepted a lower upfront return with lower cost of equity that continues to support the stable regulatory framework essential to attract the significant investment required in UK energy networks over the longer term.
3	Ability to finance RIIO-GD1 investment	A financial package that delivers equity and credit metrics that are commensurate with NGN maintaining its strong investment grade ratings.
4	Appropriate balance of risk and reward between customer and shareholders	Shareholders continue to share the burden of risk with customers over the RIIO-GD1 period. This is being delivered with an overall significantly lower cost of capital.

This package continues to deliver an acceptable balance of risk/reward between customers and investors



NGN has an opportunity to act now in RII0-GD1 and implement a pensions de-risking strategy

NGN has a relatively low pensions deficit compared to the other GDN's (c.£124m as at December 2011 under de-risking assumptions)

- NGN believes it is in the customers interest to act now to significantly reduce ongoing pension risk and the funding burden on customers across RII0-GD1 and RII0-GD2.
- NGN has efficiently managed the NGN Pension Scheme (NGNPS) deficit in GDPCR1 with the resulting differentiating effect that NGN can now deliver a significant reduction in pension plan risk in RII0-GD1 for customers. This can be achieved for the same financial value as the other GDNs are requesting to stand still.

Dialogue with our Pension Trustees has resulted in a further investment in deficit reduction

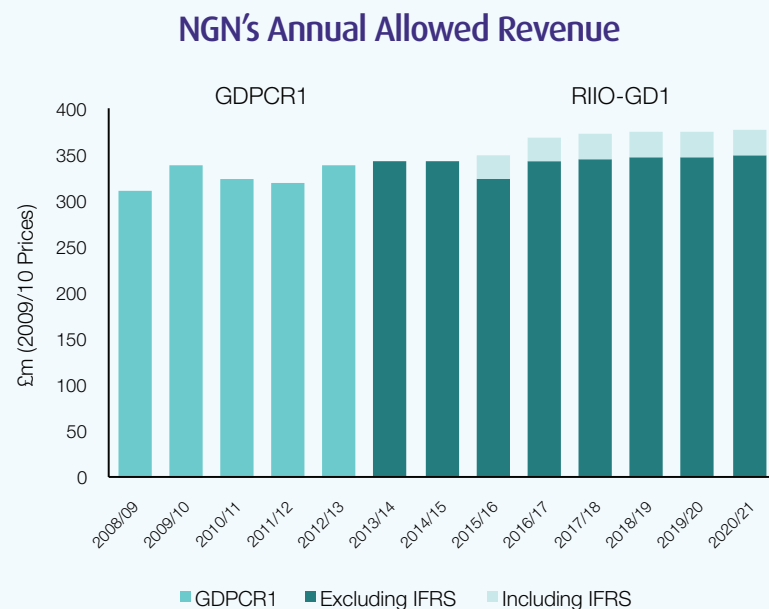
- NGN has limited control over the funding decisions made by the Trustees of the NGNPS, but believe that the Trustees' proposal represents an efficient approach which is consistent with the price control pension principles and the 15 year deficit repair period under RII0.
- Given the maturity of the closed NGNPS the Trustees have received expert advice that a de-risking strategy should be implemented now to target full funding within 15 years.
- The Scheme Actuary is also advising that market deterioration experienced in 2011 cannot be assumed to reverse in the future.

This strategy should remove the deficit funding burden for customers by the end of RII0-GD2

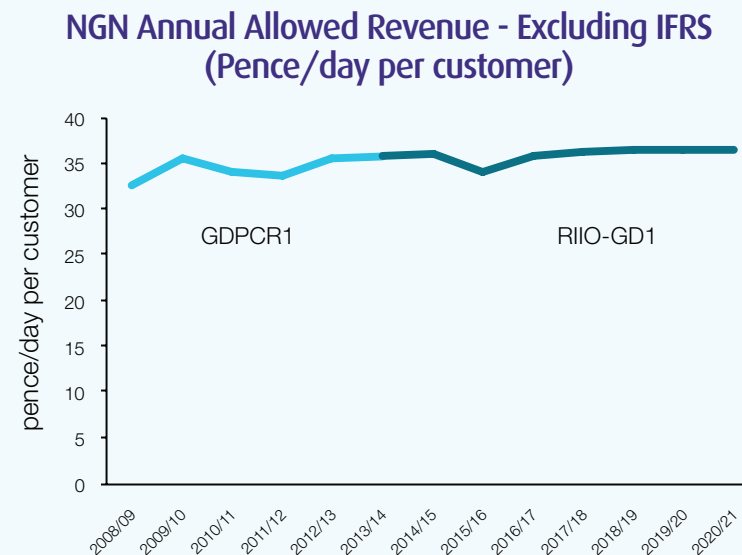


NGN's allowed revenue requirement for RIIO-GD1 is £2.7bn excluding IFRS

Average revenue of £342m p.a.
– broadly in line with GDPCR1



...or an average increase of £1 on the customers' annual bill



This plans delivers value for money for the customer – taking the average annual customer bill from £130 to £131 on a like-for-like basis

NGN's frontier levels of efficiency have created significant value for customers nationally

- Reward for frontier performance maintains the correct incentive framework both within and across regulatory periods by firstly the adoption of the proposed IQI matrix, and secondly, with allowances continuing to be set at the upper quartile.
- NGN's performance has forced less efficient companies towards the efficiency frontier and created enormous value for UK gas customers.
- Based on a broad range of benchmarking techniques NGN have delivered significant value for customers through extending the frontier: equates to £200-290m over RIIO-GD1.
- NGN's plan now includes a reduced upfront returns for shareholders with a 7.0% cost of equity and an IQI which increases rewards for delivering future efficiency savings.

NGN proposed IQI matrix for RIIO-GD1

NGN is proposing the IQI matrix set out here. These proposals provide a reduced RORE range for the most efficient GDN of 3.1-10.3% over the period. It is fully consistent with the wider objectives of the incentive framework set out by Ofgem during RIIO.

Operator: Ofgem Ratio	90	95	100	105	110	115	120	125	130	135	140
Efficiency incentive	78%	74%	70%	66%	63%	59%	55%	51%	48%	44%	40%
Additional income (£/100m)	4.1	3.3	2.5	1.6	0.6	-0.5	-1.8	-3.0	-4.4	-5.9	-7.5
Allowed expenditure	97.50	98.75	100.00	101.25	102.50	103.75	105.00	106.25	107.50	108.75	110.00
85	13.8	13.5	13.0	12.3	11.5	10.5	9.3	7.8	6.3	4.5	2.5
90	9.9	9.8	9.5	9.0	8.4	7.5	6.5	5.3	3.9	2.3	0.5
95	6.0	6.1	6.0	5.7	5.3	4.6	3.8	2.7	1.5	0.1	-1.5
100	2.1	2.4	2.5	2.4	2.1	1.7	1.0	0.2	-0.9	-2.1	-3.5
105	-1.8	-1.3	-1.0	-0.9	-1.0	-1.3	-1.8	-2.4	-3.3	-4.3	-5.5
110	-5.6	-5.0	-4.5	-4.2	-4.1	-4.2	-4.5	-5.0	-5.6	-6.5	-7.5
115	-9.5	-8.7	-8.0	-7.5	-7.3	-7.2	-7.3	-7.5	-8.0	-8.7	-9.5
120	-13.4	-12.3	-11.5	-10.8	-10.4	-10.1	-10.0	-10.1	-10.4	-10.8	-11.5
125	-17.3	-16.0	-15.0	-14.2	-13.5	-13.0	-12.8	-12.7	-12.8	-13.0	-13.5
130	-21.1	-19.7	-18.5	-17.5	-16.6	-16.0	-15.5	-15.2	-15.1	-15.2	-15.5
135	-25.0	-23.4	-22.0	-20.8	-19.8	-18.9	-18.3	-17.8	-17.5	-17.4	-17.5
140	-28.9	-27.1	-25.5	-24.1	-22.9	-21.8	-21.0	-20.3	-19.9	-19.6	-19.5

NGN should be rewarded for delivering significant value for UK customers

This plan delivers the most all round efficient financial package delivering even better value for customers

NGN's revised financial package contains a balanced set of parameters with equity willing to manage even greater risk.

Parameter	Base line assumption
Notional gearing	62.5%
Cost of Equity	7.0%
Cost of Debt (average)	2.8%
Vanilla WACC (average over RIIO-GD1)	4.37%
Asset lives	45 years
Depreciation profile	Sum of digits
Notional equity return	5% on equity RAV
Transition arrangements	Average c.8.4% p.a. adjustment to Fast:Slow money split

NGN will only obtain double digit returns through excellent operating performance.

The proposed transitional arrangements for Repex continue to be spread over 1.5 regulatory periods (12 years) to minimise the impact on customers and the cost of finance.

The transitional arrangement will allow NGN to:

- maintain its investment grade credit ratings;
- raise the necessary additional finance to deliver planned investment during RIIO-GD1;
- reduce the volatility in customers' bills between regulatory periods; and
- deliver this within an overall lower cost of capital.

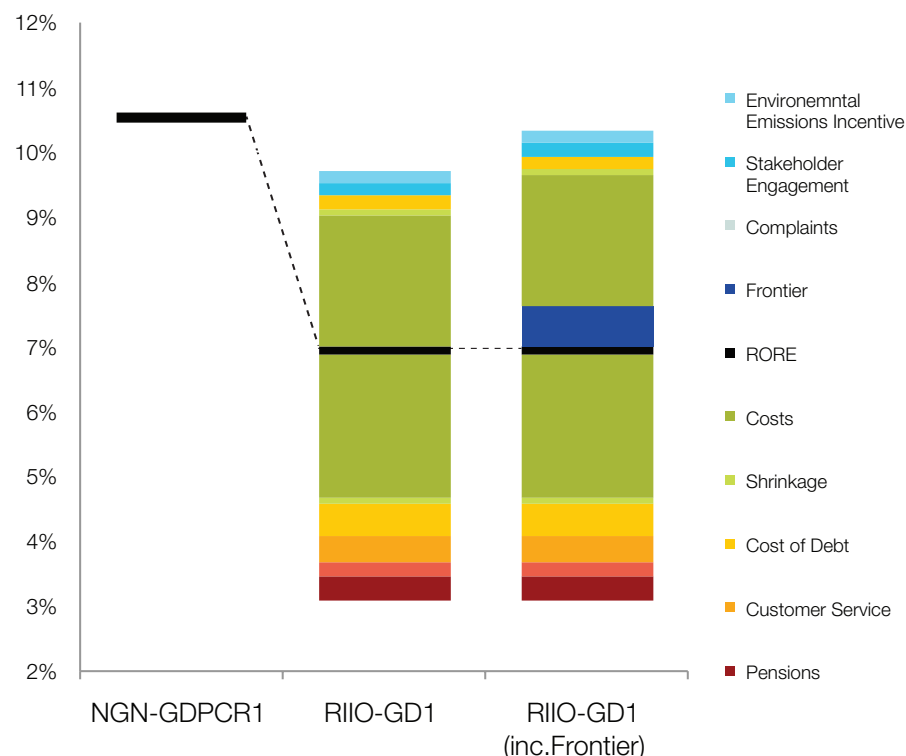
Without the transitional arrangements there are several significant implications:

- a sharp increase in revenue which is effectively 'mortgaging' future customers bills;
- deterioration of credit ratings, reducing NGN's ability to raise finance;
- investors in UK energy networks will look for greater returns to compensate for the additional risk of delayed cash flows; and
- sends an adverse message to investors that Ofgem are unwilling to reward frontier companies.

NGN shareholders accept lower upfront returns with a reduced cost of equity on the basis that greater incentives are available from IQI



NGN, as a frontier company, should have the opportunity to earn higher returns

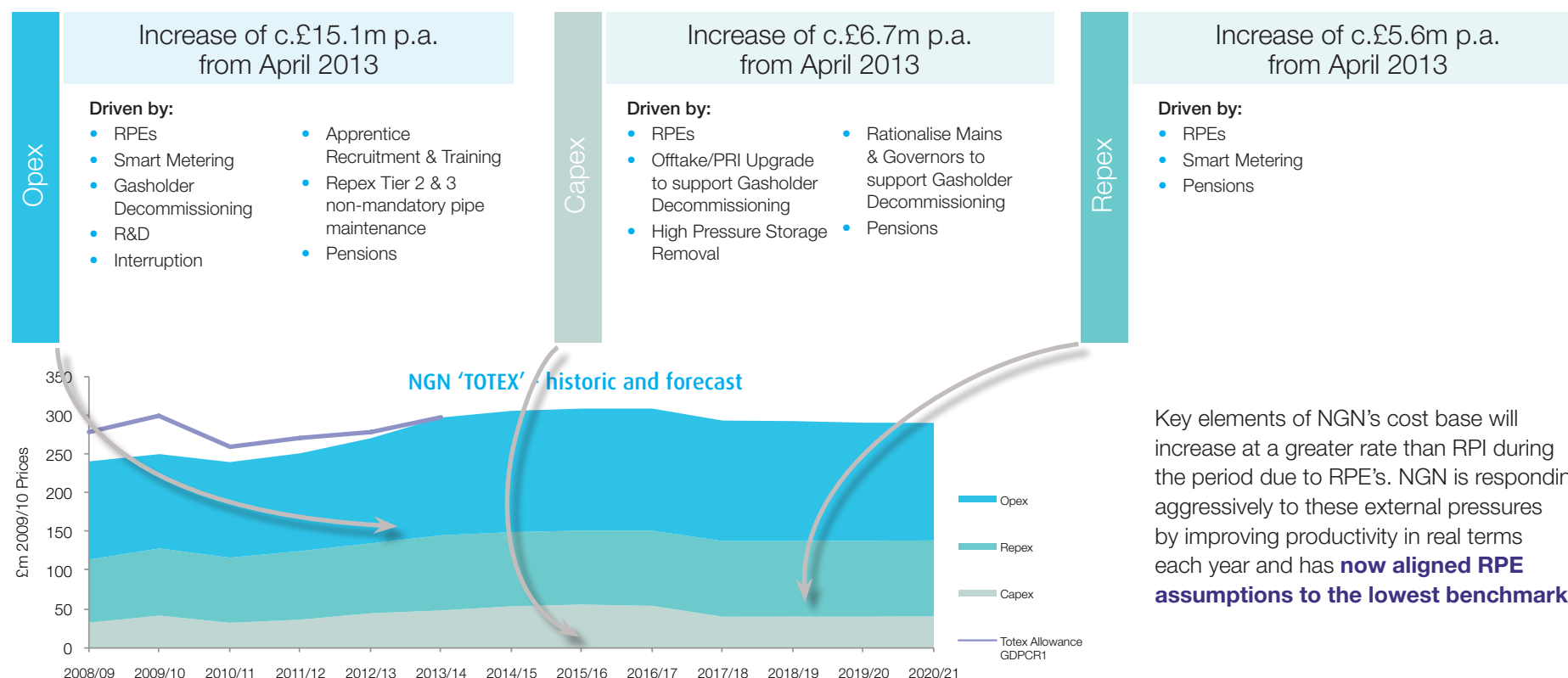


- NGN's revised financial package with transitional arrangements represents an appropriate balance between:
 - the level of notional gearing;
 - the level of cash flow risk; and
 - the ability of NGN as a frontier company to earn double digit returns.
- NGN's plan now includes reduced upfront returns for shareholders with a 7.0% Cost of Equity and an IQI which increases rewards for delivering future efficiency savings.
- The impact of these changes gives a RORE range of 3.1-10.3%. Poor performers only achieve cost of debt, good performers achieve double digit returns.
- This approach is wholly consistent with regulatory precedent and the core incentive principles of RIIO and should be reflected in NGN's final allowance.

NGN's revised plan represents a lower level of return for equity on the basis that this is balanced with upside potential for being the most efficient operator

The overall levels of required Totex are consistent with allowances received in GDPCR1

NGN will spend a total of £2.4bn in RIIO-GD1, investing £1.2bn in the network and a further £1.2bn in continuing to operate an efficient, safe and reliable network. Excluding the exceptional costs listed below, this plan now represents an 8% increase in Totex.



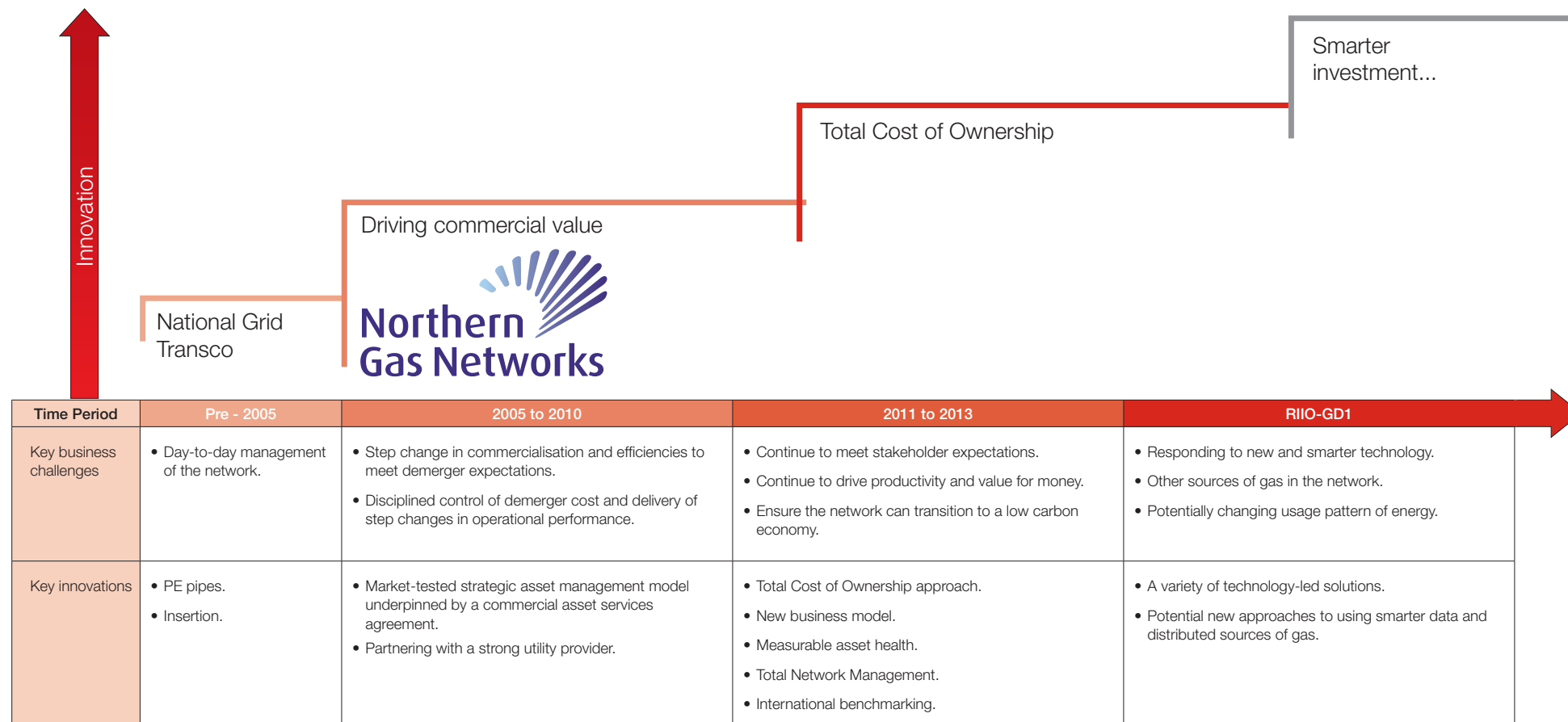
NGN aims to deliver significantly more for less in RIIO-GD1 and remains mindful of impact of customers' bills despite some significant upward cost drivers

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NGN's innovation strategy, based on our industry-leading Total Cost of Ownership approach to replacement, capital and operating expenditure, is driving further improvements in safety, efficiency and meeting environmental challenges



NGN has a significant track record of innovation, particularly in developing its business model



NGN will continue to innovate to deliver enduring customer benefit



NGN's expenditure programme is driven by stakeholder and safety needs and requires a new approach: Total Cost of Ownership (TCO)

The challenges of the future require a new approach to management and operation of network assets.

- This innovative approach drives informed decisions in the most efficient way to deliver the required outputs for customers and other stakeholders.

- Detailed geographic and asset performance data coupled with greater flexibility on mains Repex enables investment to be targeted at the worst performing assets.

The TCO approach is at the heart of our innovation strategy and has four main building blocks all aligned to RIIO principles.

NGN's innovation strategy = TCO

Integrated business model	Fully integrated business model that allows functions to work together.
Total Network Management	A deeper approach to asset management using health indices.
Innovation investment programme	Detailed innovation plans including new ways of working, new technologies and new processes.
Benchmarking	An understanding of best practice internationally and in other industries.

NGN's approach

TCO delivers an holistic approach to asset stewardship which is required to meet increasingly complex challenges and cost-pressures over the next decade. In particular the business has to deliver:

- a reduction in safety risks;
- fewer gas leaks and supply interruptions;
- better customer service;
- less impact on the environment;
- improved sustainability;
- improved asset health;
- further operating cost efficiencies; and
- investment in processes, skills and workforce renewal.

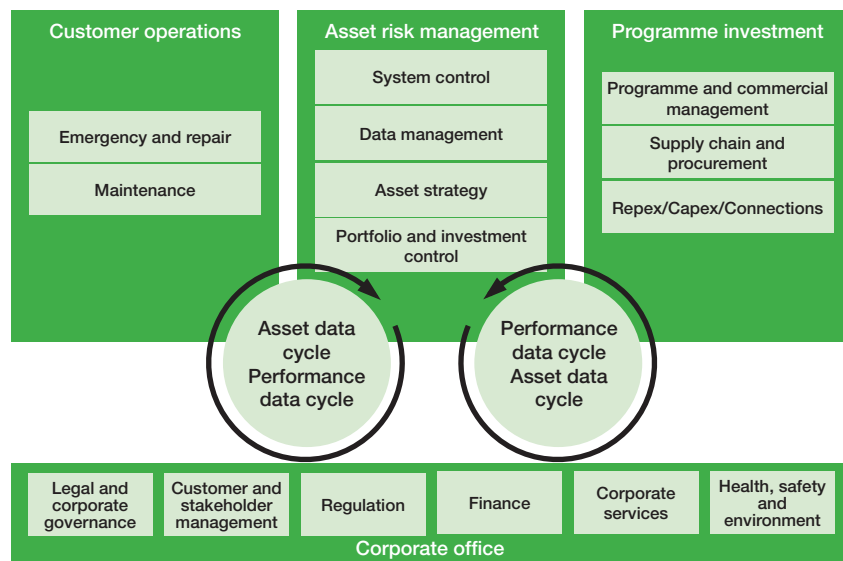
NGN's innovative TCO approach prioritises network expenditure to effectively manage risk and deliver key outputs for the least cost to the customer



NGN's new integrated business model has been designed to enable TCO

A fully integrated customer-focused business model

- Links asset integrity management with customer operations and in turn, programme investment; and
- Puts asset management strategies and asset health at the heart of the business, underpinning all investment and expenditure decisions.



A geographic focus supported by central planning and scheduling

- Ability to drive performance at a local level, importantly close to the customer and the asset, ensuring NGN has the right resource, in the right place, at the right time.
- Highly focused performance data and geographical mapping allowing improved targeting of resources and investment.
- 2013/14 Repex programmes are now being developed using TCO/3 Tier principles and live 2012/13 TCO projects.



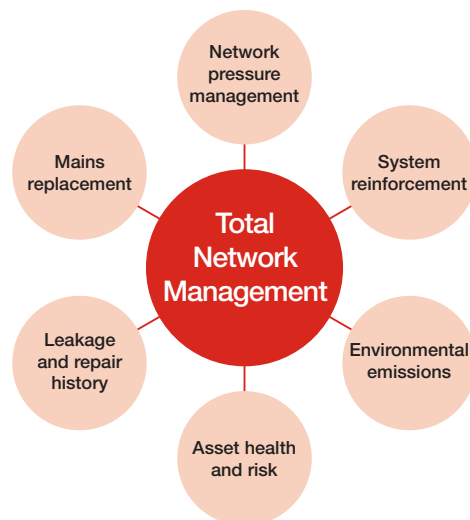
The flow of asset and performance data through the integrated business facilitates holistic and economic decision making about the network with a focus on the customer experience

The new Total Network Management (TNM) processes are central to supporting NGN's TCO approach

TNM considers a wide range of factors to identify where it is most appropriate to focus expenditure to deliver improvements across single and multiple output measures.

The approach allows clear trade-offs to be made between alternative solutions and type of expenditure to deliver the best value for money.

The overall TNM approach



Asset health indices

- An holistic, joined up approach to the management of our network assets.
- Links accurate data about the condition and health of the asset to the risk and consequence of failure.
- Drives timely and efficient investment decisions and creates the ability to assess all alternative approaches to managing identified risks.
- First full network analysis of asset health has been completed and built into our investment plans.

NGN has developed a programme to allow the evolution of asset health from its initial 'first cut' assessment. The programme's ultimate objective is to establish and embed asset health as a primary driver behind investment decisions into a 'business as usual' process. The programme is structured to prioritise the asset health indices which are currently driving the greatest level of investment throughout RIIO-GD1. The process includes:

Data cleansing, collation and manipulation

- Undertaking a series of field based surveys to provide tailored condition information from the field supplementing the current assessment.
- Undertaking additional data cleansing and manipulation of data.

Dec 2012

Asset health process

- NGN has undertaken a comprehensive exercise to create a base set of asset health indices.
- This exercise has been completed for all 22 asset categories on the NGN network.
- NGN has developed asset health indicators in line with best practice. NGN consider this to be an ongoing and evolving process which will be further refined during RIIO-GD1.

Asset health - the Evolution

Deterioration modelling and analysis

- Data analysis and scenario modelling to establish a clear methodology for asset health deterioration rates and prioritisation modelling.

Jun 2013

Development and embedding of asset health driven investment processes

- Establishing and embedding the asset health processes for investment decision making. Including decision investment and asset health updates through a 'business as usual' model.

Dec 2013

The NGN asset health model has been used to inform the prioritisation of investment and reduce Totex costs for RIIO-GD1

NGN already has detailed innovation plans that will be executed during RII0-GD1

NGN has earmarked investment on innovation of £25m for RII0-GD1

- NGN will develop many of these innovations in partnership with external organisations.
- NGN will also continue to generate ideas and carry out research and development in partnership with other GDNs and third parties.
- The investment model is designed to meet a changing energy market.
- The focus will be to explore new ways of working, new technologies and new processes to enable continuous improvement in:
 - customer service;
 - environmental impact;
 - safety;
 - asset performance; and
 - efficiency.

Key:

Business as usual
Short Term
Medium Term
Long Term
Network Innovation Competition

NGN'S innovation investment programme		Benefit Areas						
Delivery Method	Innovation Project	Safety	Asset Management	Customer & People	Operational Efficiency	Environment	Social Obligations	Other - Defined Learning
Business As Usual	Business Model		✓	✓	✓			
	Total Network Management	✓	✓		✓	✓		
	Asset Health		✓		✓	✓		✓
	Customer & Operations Management	✓		✓	✓			
Network Innovation Allowance - Incremental	Low Carbon Economy Initiatives Alternative Fuels for Vehicles			✓	✓	✓	✓	✓
	Gas Conditioning Study (MEG)	✓			✓	✓		
	Carbon Monoxide Awareness and Safety Through Alliances	✓			✓			
	Local Authority, Utilities and Highways Alliances			✓	✓			
	System Control Operation Simulator	✓	✓					✓
	Automation of Supply Chain Reporting		✓		✓			
	Enhanced Smartphone Technologies Direct Updates	✓	✓	✓	✓			
	Remote Monitoring & Control	✓		✓	✓			✓
	Post Smart Metering Emergency Meterwork for Suppliers (PEMS)			✓	✓			✓
	CCTV Inspections	✓			✓			✓
Network Innovation Allowance - Transformational	Innovative Excavation & Reinstatement Technologies	✓		✓	✓	✓		
	Developing Strategies for Storage and Leakage	✓	✓		✓	✓		
	Customer Interface Platform			✓		✓		✓
	Planning Smart Meter Data Capture, Using to inform the Leakage Model	✓	✓	✓				
	Reduced Carbonisation of Natural Gas		✓		✓	✓	✓	✓
	Alternative Aerial/Satellite Surveillance & Gas Detection	✓		✓		✓		
	Turbo Expanders Energy Generation	✓		✓	✓	✓		
Network Innovation Competition	Configuring for and Managing Assets on a Smart Grid	✓	✓	✓	✓			
	Delivering Renewable or Alternative Heat and Power to High Rise Buildings	✓	✓	✓		✓		✓
	Compressed Natural Gas for Vehicles		✓	✓		✓		✓

The innovation strategy will continue to be at the heart of NGN's business, delivering a safe, reliable and operationally excellent network

Contents

Since November NGN has continued to work with stakeholders to build on its frontier position to ensure that customers continue to get more value: safely, efficiently and sustainably.



This updated business plan delivers...

NGN has updated this plan taking into account feedback and refined data from key stakeholders. The plan continues to represent excellent value for our customers.

- A network driven by customer and stakeholder requirements.
- Expenditure plans derived from industry leading levels of efficiency and a commitment to ongoing real improvements in productivity.
- Firm commitment to deliver more for less, with increased outputs for an average increase of £1 on customers' annual bill, on a like-for-like basis.
- A revised financial package underpinned by appropriate incentives that balances short and long term requirements of customers but still provides an appropriate risk-reward balance for equity.
- Significant improvements in the health, integrity, reliability and safety of the network which can play its full part in the transition to a low carbon economy.
- A strategy for investment in young people and the regional economy of the North of England.
- The revised plan includes further significant investment to reduce pension risk and importantly the enduring funding burden to the customer.

We have made changes to the plan to reduce costs and enhance the value delivered to our customers. In doing this we have proposed lower upfront equity returns and a sharper IQI mechanism which requires that companies work harder to meet shareholder expectations.

...exceptional value for money



NGN will continue to innovate and build on its frontier position, working with stakeholders, to ensure that customers continue to get more value for money safely, efficiently and sustainably.

That is our pledge.





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