



Gas Network Extensions in Northern Ireland
Gas to the West (“GTW”)

Phoenix Low Pressure Operational Business Plan

May 2014

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GLOSSARY OF TERMS

ACS	Accredited Certification Scheme
AGI	Above Ground Installation
AQ	Annual Quantity
ASHES	Awareness of Health, Safety and Environmental Systems
BCP	Business Continuity Plan
BES	BlackBerry Enterprise Server
BIP	Business Improvement Plan
CAPEX	Capital Expenditure
CBI	Confederation of British Industry
CCNI	Consumer Council for Northern Ireland
CIPD	Chartered Institute of Personnel and Development
CLM	Customer Liaison Manager
CNIP	Critical National Infrastructure Provider
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
Code	Phoenix Distribution Network Code (also "Network Code")
CPAR	Corrective and Preventative Action Request
CSP	Customer Supply Point
CSR	Corporate Social Responsibility
DETI	Department for Enterprise Trade & Investment
DM	Daily Metered
DR	Disaster Recovery
DRAUC	Divisional Roads and Utilities Committee
DSD	Department for Social Development
DSEAR	Dangerous Substances and Explosive Atmosphere Regulations
EAG	Engineering Action Group
ECC	Emergency Control Centre (National Grid)
EMS	Environmental Management System
ENGO02	Phoenix procedure for dealing with Reported Gas Escapes
EO	Engineering Officer
EU	European Union
Frontier	Frontier Economics Limited

FSB	Federation of Small Businesses
FTE	Full-Time Equivalent
GAA	Gaelic Athletics Association
GDF	Group Development Forum
GIS	Graphical Information System
GMD	Governor Maintenance Database
GSMR	Gas Safety Management (Northern Ireland) Regulations 1997
GTW	Gas to the West
HP	High Pressure
HPRS	High Pressure Reduction Station
HR	Human Resources
HSE	Health, Safety and Environment
HSENI	Health and Safety Executive for Northern Ireland
HSQE	Health, Safety, Quality and Environment
IoD	Institute of Directors
IOSH	Institute of Occupational Safety and Health
IPRS	Intermediate Pressure Reduction Station
IT	Information Technology
I&C	Industrial & Commercial
IGEM	Institution of Gas Engineers and Managers
IMECHE	Institute of Mechanical Engineers
Kellen	Kellen Investments Limited
LIFE	Phoenix's CSR Programme (Leadership in the market place, Investing in our people, Fostering our community and Environmental responsibility)
LP	Low Pressure
LPG	Liquefied Petroleum Gas
LPS	Land and Property Service
MCIPD	Chartered Member of the Institute of Personnel and Development
MP	Medium Pressure
McNicholas	McNicholas Construction Services Limited
NDM	Non-Daily Metered
NEC	Network Emergency Co-ordinator
Network Code	Phoenix Distribution Network Code (also "Code")
NGSE	Network Gas Supply Emergency

NIC	National Insurance Contribution
NIE	Northern Ireland Electricity
NIFHA	Northern Ireland Federation of Housing Associations
NIHE	Northern Ireland Housing Executive
NIIRTA	Northern Ireland Independent Trade Association
NINEC	Northern Ireland Network Emergency Co-ordinator
NINGA	Northern Ireland Natural Gas Association
NIRAUC	Northern Ireland Roads and Utilities Committee
NISEP	Northern Ireland Sustainable Energy Program
NIW	Northern Ireland Water
NOM	Networks Operations Manager
OFGEM	Office of Gas and Electricity Markets
OJEU	Official Journal of the European Union
OPEX	Operating Expenditure
PAYG	Pay As You Go
PDA	Personal Data Assistant
PDHL	Phoenix Distribution Holdings Limited
PE	Polyethylene
PEHL	Phoenix Energy Holdings Limited
PES	Phoenix Energy Services Limited
Phoenix HQ	Phoenix Headquarters; Airport Road West, Belfast
PIN	Periodic Indicative Notice
PNGF	Phoenix Natural Gas Finance PLC
PNGL / Phoenix	Phoenix Natural Gas Limited
PPE	Personal Protective Equipment
PQQ	Pre-Qualification Questionnaire
PR	Public Relations
PRS	Pressure Reduction Station
PSSR	Pressure System Safety Regulations (Northern Ireland) 2004
QMP	Quality Management Plan
QS	Quantity Surveyor
QuEST	Quality, Environmental, Safety and Training Group
RCM	Reliability Centred Maintenance

RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
RICS	Royal Institution of Chartered Surveyors
SCO	Safe Control of Operations
SMEs	Small and Medium Enterprises
SMP	Supply Meter Point
SNIP	Scotland to Northern Ireland Pipeline
SoLR	Supplier of Last Resort
SPA	Supply Point Administration
STEM	Science, Technology, Engineering and Maths
Trust	Energy for Children Charitable Trust
UK	United Kingdom
UR	the Utility Regulator (Northern Ireland Authority for Utility Regulation)
Utilities Contracts Regulations	Utilities Contracts Regulations 2006 and the Utilities Contracts (Amendment) Regulations 2009
WACC	Weighted Average Cost of Capital

1. BUSINESS PLAN OVERVIEW

1.1 PURPOSE OF BUSINESS PLAN

Phoenix Natural Gas Limited (“**Phoenix**”) is submitting this Low Pressure (“**LP**”) Operational Business Plan (the “**LP Business Plan**”) to the Northern Ireland Authority for Utility Regulation (“**UR**”) in support of its application for a conveyance licence for distribution to assist the extension of the Northern Ireland natural gas network to the towns of:

- Dungannon including Coalisland;
- Cookstown including Magherafelt;
- Enniskillen including Derrylin;
- Omagh; and
- Strabane,

(the “**GTW Licensed Area**”).

The purpose of the Phoenix LP Business Plan is to:

- facilitate the secure, safe, reliable, efficient and economic development and operation of the natural gas network in the GTW Licensed Area;
- provide UR with the evidence to identify Phoenix’s application as that which represents best value for gas consumers in Northern Ireland;
- connect the potential 40,000 domestic and commercial customers to the new gas network in the GTW Licensed Area;
- target industrial and commercial (“**I&C**”) customers in line with the preliminary connection profile determined by UR;
- ensure that these customers benefit from lower energy costs;
- ensure that society as a whole benefits from lower carbon and other emissions; and
- provide the information detailed in 3.17(a) and (b) and in 3.20(a) and (b) of the Published Criteria.

As detailed in this LP Business Plan, Phoenix has the skills and experience within its current operation to deliver a successful network, customer connections and wider natural gas industry. Through utilisation of these existing skills, Phoenix’s existing policies, systems and procedures and with

further training and development of additional staff in Phoenix's tried and tested staff development programmes, Phoenix is confident that it can make the GTW Licensed Area as successful as the existing Licensed Area.

The structure followed within each section of this LP Business Plan is therefore largely to:

- set out the robust, efficient and successful processes and principles in place within Phoenix; and
- highlight how these could be readily transferred or adapted to suit the needs of the GTW low pressure distribution business ("**the GTW distribution business**").

The Low Pressure Data Input Workbook to be completed by applicants is provided at Annex 10 of the Applicant Information Pack.

The completed Low Pressure Data Input Workbook associated with this LP Business Plan - the Phoenix Low Pressure Data Input Workbook ("**the workbook submission**") - is provided at Document LPDIW. The assumptions used are appended to the workbook submission and explained in chapter 8 of the LP Business Plan.

1.2 EXECUTIVE SUMMARY

In order to maintain the existing regulatory and security ring fence of Phoenix Natural Gas Limited (“**Phoenix**”), Phoenix intends to assign the GTW licence to a new legal entity, Newco, which will be a subsidiary of Phoenix Energy Holdings Limited. Further detail is provided at section 2.1.

Phoenix currently operates a licence granted to it in 1996 for the conveyance of natural gas (at distribution level) in Northern Ireland (“**the Licence**”)¹. At the time of its launch, the Phoenix project was one of the largest greenfield, private sector-led integrated gas transmission, distribution and supply investments in Western Europe. It is the only recent example of which Phoenix is aware of a gas distribution network being retro-fitted into a major, developed city.

Before the Phoenix investment, there was no existing natural gas infrastructure in Northern Ireland. The task set for Phoenix was an unusual project in the United Kingdom (“**UK**”), since it involved retro-fitting a gas distribution network in a major city. Most importantly, Phoenix faced the challenge of developing a network and a market for natural gas from scratch.

A key measure of the success of the business was its ability to roll out the network and make gas available widely within its Licensed Area. This outcome was initially the primary objective for both Phoenix and UR, since it would facilitate the future growth of the natural gas market. The mandatory development plan which was embedded in the Licence reflected this objective: it required Phoenix to develop a sustainable network through which natural gas would be available to no less than 81% of all properties within the Licensed Area, within a fixed rolling timescale.

Under the terms of the Licence, Phoenix is authorised to conduct its gas distribution business within an area covering approximately 40 per cent. of the population of Northern Ireland: Greater Belfast (comprising Belfast, Newtownabbey, Carrickfergus, Lisburn and North Down) and Larne (“**the existing Licensed Area**”). Since the Licence was first issued in 1996, the existing Licensed Area has been extended to include Comber (in 2007) and specific larger customers on the periphery of the Licensed Area (e.g. Temple and McQuillan Quarries).

Phoenix has always met (and in fact exceeded) its licence obligations in respect of coverage of the network. By 2006, approximately 250,000 properties had natural gas available to them (which compares with a licence obligation to pass only approximately 224,000 properties in the same timeframe). The Phoenix network currently extends to over 3,000 kilometres of intermediate,

¹ Phoenix’s original licence was a combined licence for the conveyance and supply of gas in the Licensed Area. The conveyance part of the licence allowed Phoenix to construct and operate both a transmission and distribution network in Northern Ireland, and the supply part of the licence allowed Phoenix to supply gas to customers from that network. In line with the requirements of the Second EU Gas Directive 2003/55/EC, Phoenix legally separated its gas supply division from its transmission and distribution business on 1 January 2007 and on 31 March 2008 Phoenix completed the sale of its transmission assets to Northern Ireland Energy Holdings. The supply and transmission parts of the original combined Phoenix licence now held by Phoenix have been revoked by DETI and all references to supply and transmission activities have been deleted from the licence.

medium and low pressure mains (7 to 4bar, 4bar to 800mb and 75mb to 25mbar respectively), which distribute natural gas throughout the existing Licensed Area. As at 31 December 2013, Phoenix had made gas available (in accordance with the terms of the Licence) to c.301,000 properties within the existing Licensed Area, of which c.171,000 (57 per cent.) have been connected to the network.

Phoenix is the pre-eminent natural gas business in Northern Ireland. Phoenix has undertaken innovative pipe laying techniques and has developed a strong skills base and a reputation for making safety the top priority. Imaginative marketing campaigns and hands-on customer support has expedited growth in the customer base and is key in building markets.

Since 1996 Phoenix has been successful in introducing natural gas to a new market and establishing a strong and vibrant supporting industry. Phoenix has established a downstream natural gas industry that has embraced a similar set of objectives to those of the Phoenix organisation. Independent installers, retailers and merchants align their businesses with the growth objectives set by Phoenix. Phoenix recognises the importance of an independent downstream natural gas industry and the benefits this can deliver e.g. improved customer service, additional investment, competitive prices and an ability to respond quickly to opportunities. Phoenix will play a key role in establishing the downstream natural gas industry across the GTW Licensed Area using the proven approach it adopted to establish a downstream natural gas industry across the existing Licensed Area.

Unfortunately only a fraction of the Northern Ireland population currently enjoys access to the natural gas network and the justification for bringing natural gas to the GTW Licensed Area is based on the achievement of Phoenix. There is still however much to be done to displace oil as the “fuel of choice” in Northern Ireland, and to achieve the level of market penetration achieved by natural gas in Great Britain (which is at approximately 90 per cent. of homes and businesses, compared with only approximately 20 per cent. in Northern Ireland).

Notwithstanding the challenges that remain, the development of a natural gas network is recognised as having brought considerable environmental, economic and social benefits to Northern Ireland. These successes are a function of investment, effective business decisions and efficient execution of those decisions that were made in the context of the regulatory environment that was designed in 1996 and enshrined in the Licence, and the expectations of investors that flowed from it.

Phoenix will draw on the strengths, knowledge and experience of existing FTEs (“**Full-Time Equivalents**”) including Senior Managers and Phoenix’s Executive Directors (“**the Directors**”) who intend to develop the natural gas network in the GTW Licensed Area using the proven policies and procedures in place in the existing Licensed Area. In doing so, Phoenix will ensure that the required corporate governance and ring fencing arrangements for the existing Licensed Area are maintained.

Alongside its significant operational achievements since its formation, Phoenix has also been recognised for its outstanding performance within the arena of both safety and Corporate Social Responsibility (“**CSR**”) culminating in the award of its second British Safety Council ‘Sword of Honour’ in recognition of world-class health, safety and environmental practices. In addition, the Group

received Business in the Community's 'Big Tick Award' for a ninth consecutive year, celebrating excellence in the delivery of leading edge CSR programmes. This award underlines its commitment to both its staff and the community it serves.

Phoenix's business activities are principally focused on the safe and efficient operation of the network. A primary objective of the LP Business Plan is to have gas flowing in the LP distribution network in the GTW Licensed Area as early as possible following the award of licence by UR. To achieve this Phoenix aims to carry out the first year's construction at the same time as the high pressure transmission network is being constructed.

On completion of the high pressure commissioning process, Phoenix will therefore be in a position to commission the LP mains that have been laid and tested.

Phoenix has the skills and experience within its current operation to deliver a successful network, customer connections and wider natural gas industry. Through utilisation of these existing skills, Phoenix's existing policies, systems and procedures and with further training and development of additional staff in Phoenix's tried and tested staff development programmes, Phoenix is confident that it can make the GTW Licensed Area as successful as the existing Licensed Area.

The structure followed within each section of the LP Business Plan is therefore largely to:

- set out the robust, efficient and successful processes and principles in place within Phoenix; and
- highlight how these could be readily transferred or adapted to suit the needs of the GTW distribution business.

Phoenix's cost build-up is largely derived from UR's assessment of Phoenix's allowable operating expenditure ("opex") within the GD14 price control for Northern Ireland's Gas Distribution Networks for 2014 – 2016 (the "GD14 Determination"). This is an appropriate basis for forecasting the opex requirements within the GTW distribution business; the GD14 determination captures any efficiency for customers already realised by Phoenix along with potential efficiencies forecast by Phoenix within each individual cost line. Therefore the GTW distribution business would immediately benefit from the innovation, improvements and efficiency gains already embedded within Phoenix's operation. As such this approach to the build-up of Phoenix's opex forecasts delivers efficiencies for the GTW distribution business more aligned to a mature business.

In years one to five, 18.25 FTEs will be required to manage operations across the GTW Licensed Area:

- ten FTEs will be based in the GTW Licensed Area; and
- a marginal increase of 8.25 FTEs will be required to manage the consolidated activities within Phoenix for the existing and the GTW Licensed Areas.

In years six to ten, the number of FTEs required to manage the consolidated activities within Phoenix for the existing and the GTW Licensed Areas will grow from 8.25 FTEs to 8.90 FTEs.

The GTW Licensed Area is remote from Belfast. It would not be practicable or cost effective to consolidate operational activities for Phoenix and the GTW distribution business in Belfast. Instead efficiencies can be achieved by having an operations depot in Omagh.

Omagh is situated c.30 miles from Enniskillen, c.20 miles from Strabane, c.25 miles from Cookstown, and c.30 miles from Dungannon and is therefore central to all parts of the GTW Licensed Area – Phoenix envisages that operatives in the GTW Licensed Area will never be more than 60 minutes from either the operational base in Belfast or the operations depot in Omagh. Omagh is therefore the prime operational location for a second site.

The high level key business operational objectives of Phoenix's LP Business Plan are to:

- facilitate the secure, safe, reliable, efficient and economic development and operation of the natural gas network in the GTW Licensed Area;
- provide UR with the evidence to identify Phoenix's application as that which represents best value for gas consumers in Northern Ireland;
- connect the potential 40,000 domestic and commercial customers to the new gas network in the GTW Licensed Area;
- ensure that these customers benefit from lower energy costs;
- ensure that society, as a whole, benefits from lower carbon and other emissions; and
- provide the information detailed in 3.17(a) and (b) and in 3.20(a) and (b) of the Published Criteria.

Preliminary profile work has already been carried out on I&C businesses in the GTW Licensed Area and there is a clear understanding and focus on the industrial opportunities that exist in each town. Phoenix representatives will target these potential consumers in line with the connection profile determined by UR.

References to the Published Criteria

Phoenix notes that the summary should indicate where in the body of this submission the matters referred to in 3.17(a) and (b) and in 3.20(a) and (b) of the Published Criteria are covered. Phoenix has therefore referenced each of the appropriate sections in the body of this submission which cover the various matters in the table below.

Please note that for ease of reference, the sections referenced in the table are the main sections within the body of this submission that the matters referred to in 3.17(a) and (b) and in 3.20(a) and (b) of the Published Criteria are covered and are not therefore exhaustive.

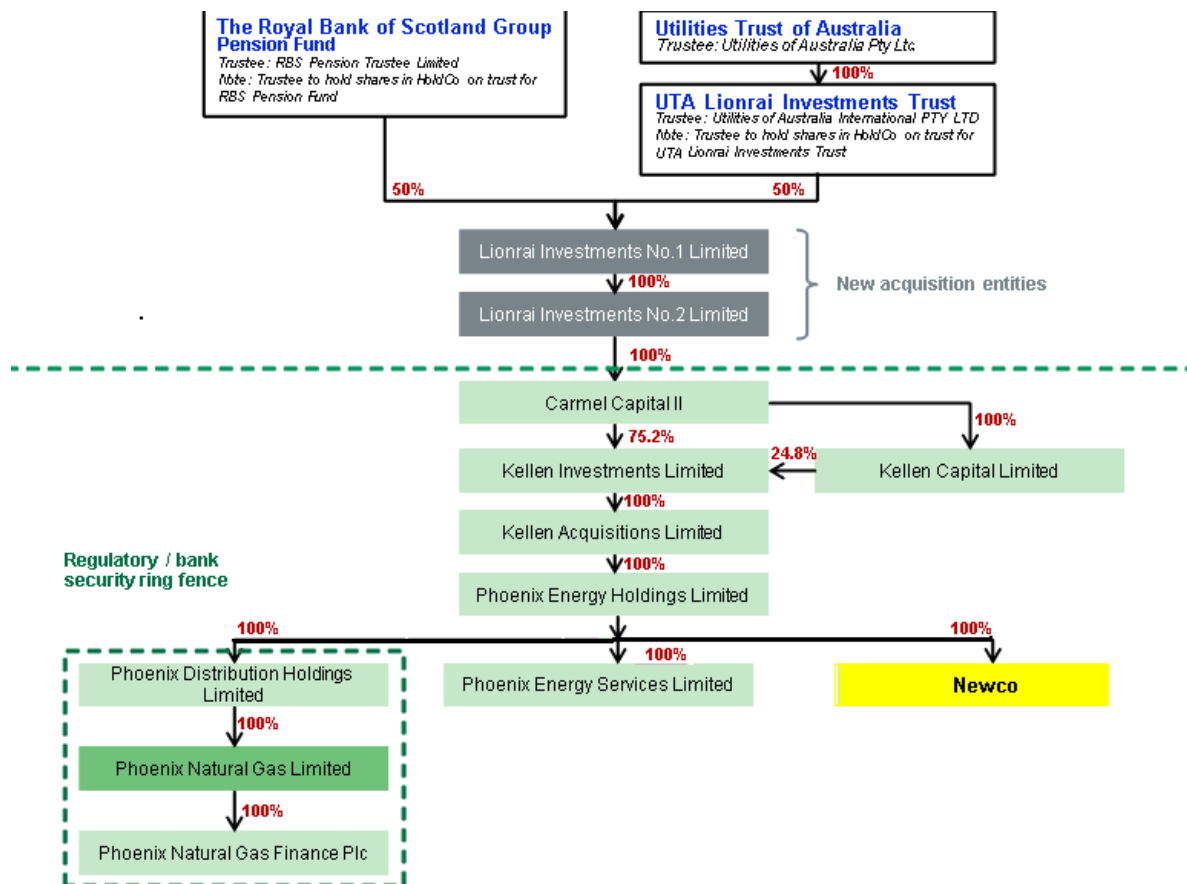
Published Criteria Reference	Section(s) of the LP Business Plan
3.17(a)(i)	3.1, 3.6, 5.4 and 7.4
3.17(a)(ii)	2.3, 3.1, 3.2, 3.7, 5.1, 5.2, 5.4 and chapter 7 (excluding 7.3)
3.17(a)(iii)	as per 3.17(a)(ii) and sections 2.1, 5.8, 6.2 and 6.3
3.17(a)(iv)	3.1, 3.7, 4.1, 5.4, 5.7 and 8.3
3.17(a)(v)	2.1, 5.8, 6.2 and 6.3
3.17(b)(i)	8.1, 8.3 and 9.2
3.17(b)(ii)	8.3 and 9.2
3.17(b)(iii)	8.1, 8.3 and 9.2
3.17(b)(iv)	8.1, 8.3 and 9.2
3.17(b)(v)	8.3 and chapter 10
3.17(b)(vi)	2.2 and 8.5
3.20(a)(i)	2.3, 3.1, 3.6, 3.7 and chapters 4 and 5
3.20(a)(ii)	2.3, 5.8 and chapter 7
3.20(a)(iii)	chapter 5 and section 7.3
3.20(a)(iv)	as per 3.20(a)(ii) and sections 2.1, 5.4, 5.8, 6.2 and 6.3
3.20(a)(v)	2.2, 2.3, 3.1, 3.2 and 3.7
3.20(a)(vi)	2.1
3.20(b)(i)	chapter 7, in particular sections 7.1 and 7.2
3.20(b)(ii)	5.4 and chapter 7, in particular section 7.2
3.20(b)(iii)	chapter 7, in particular section 7.2
3.20(b)(iv)	5.4 and chapter 7, in particular sections 7.2 and 7.4

2. ORGANISATION

2.1 STRUCTURE

Rationale for organisation structure

The position of Phoenix within the group structure is as follows:



The ultimate UK holding company is Lionrai Investments No. 1 Limited. The ultimate parent companies are Royal Bank of Scotland Group Pension Fund and Utilities Trust of Australia which have joint ownership interests and equal voting rights.

The ownership structure below Lionrai Investments No. 2 Limited was put in place in 2007 when the Kellen Group was under the control of Terra Firma Capital Partners. The new shareholders have simply inherited this structure on acquisition.

The Kellen Group comprises Phoenix Energy Holdings Limited ("**PEHL**"), Phoenix Distribution Holdings Limited ("**PDHL**"), Phoenix, Phoenix Energy Services Limited ("**PES**") and Phoenix Natural Gas Finance PLC ("**PNGF**"). The corporate diagram does not include PNG Storage Limited, Phoenix Power Limited, Belfast Energy Limited, Phoenix Gas Limited and Belfast Natural Gas Limited, all of

which are dormant subsidiaries of PEHL. Phoenix and PES are the Phoenix Group operating companies.

The Phoenix Financing Group comprises PNGF, Phoenix and PDHL.

The Kellen Group's corporate governance structure is set by the Board of directors of Kellen Investments Limited ("**Kellen**"). The Kellen Group is committed to the highest standards of corporate governance as set out in the Combined Code on Corporate Governance.

The Board of directors of Kellen has established three committees: the Audit Committee, the Remuneration and Nominations Committee and the Finance Committee, each with clearly defined terms of reference, procedures, responsibilities and powers.

In addition to owning and operating the gas distribution network, Phoenix is required under the Licence to carry out certain associated activities, including:

- installing and disconnecting gas meters;
- establishing and maintaining a 24 hour emergency service and attending to gas leaks as soon as is reasonably practicable, and taking all necessary steps to prevent an escape of gas within 12 hours of receiving a report; and
- installing and bringing into operation distribution pipelines so that not less than 90 per cent. of the cumulative annual total number of premises (excluding Larne) in the Licensed Area may be readily connected to the Phoenix Network by 31 December 2008 (which is deemed satisfied if 90 per cent. of this target is achieved). This obligation has been satisfied by Phoenix.

PES currently provides a number of these services under a services contract, including the installation, disconnection and maintenance of customer meters and the provision of the initial 24 hour/seven days a week emergency response to Phoenix's customers, under an agreement with Phoenix. PES was set up in 2002 for four key reasons:

1. The service being provided by the outsourced third party was not able to continue to be as robust or to the high standard needed to undertake such critical operations for the natural gas industry;
2. Meter reading services could not be procured from the market place at a cost-effective rate;
3. PES was able to lower the cost of the emergency and asset maintenance service being provided and as such lower the cost of natural gas to consumers; and
4. The essential 'after-sales' service, needed to assist the continued growth of the industry, could be provided by PES.

Phoenix continues to benchmark the costs of the services being provided by PES and it can be clearly demonstrated that the costs being charged by PES remain competitive within the market place.

PES utilises other local providers to supplement the workforce providing these services to Phoenix from time to time. PES will provide these services under a separate services contract to the GTW distribution business.

In order to maintain the regulatory/bank security ring fence of Phoenix Natural Gas Ltd., Phoenix intends to assign the licence for the whole of the GTW Licensed Area granted under this application, to a separate company, Newco. As illustrated in the figure above, Newco will be a wholly owned subsidiary of Phoenix Energy Holdings Limited and will trade under the Phoenix brand.

Explanation of the range of business activities and associated resource levels

A detailed explanation of the range of business activities and associated resource levels is provided at section 2.2.

Proposals to manage contract operations

The overall engineering and planning of the gas distribution network in the existing Licensed Area has been undertaken by Phoenix's engineering teams. However, installation and maintenance of mains and customer connections are sub-contracted to a locally-based company owned by McNicholas Construction Services Limited ("**McNicholas**"), an independent contractor and established UK construction services company. McNicholas also provides Phoenix with emergency response services.

Phoenix is subject to the Official Journal of the European Union ("**OJEU**") procurement thresholds, and as such the construction contract has been tendered three times with McNicholas being awarded a contract in 1996, in 2001 and in 2006. All contracts were awarded following a full tender process and McNicholas was successful in delivering the best tender bid on each occasion to meet the requirements of Phoenix. The current contract with McNicholas is in operation until July 2014.

McNicholas was awarded the current contract in July 2006 based on relevant skills, experience and price after an extensive tendering process advertised in the OJEU. McNicholas provides similar services to other utility companies within the UK and the Republic of Ireland. This contract operates through "Alliance" contracting principles, with a joint management approach being established through operations alongside Phoenix management and operating teams within the same location.

There are many aspects of the construction contract with McNicholas, but the key elements are as follows:

- (a) the contract is based on a philosophy that the party best able to manage the risk manages that risk;

- (b) Phoenix and McNicholas management resources are shared throughout the construction process i.e. there is no duplication or traditional “man-marking” of staff. Staff are treated as a “single” resource and are utilised where needed throughout both organisations;
- (c) an open-book actual cost approach is used, including a profit share mechanism. Tender rates are set by McNicholas but Phoenix pays McNicholas based on their actual costs plus agreed uplifts. Any difference between tender rates and actual costs are shared, both positively and negatively, between Phoenix and McNicholas; and
- (d) a fully integrated supply chain utilising a common Information Technology (“IT”) system ensures that stock levels are minimised throughout the supply chain resulting in lower financing costs for McNicholas and other suppliers.

Consequently, the contract with McNicholas provides a real opportunity to innovate and implement efficiency improvements which delivers immediate reductions in unit costs to Phoenix. As management resources are streamlined and the supply chain is integrated, any innovations, design changes or simple process improvements are implemented quickly, promptly delivering benefits. In addition, due to the actual cost approach, Phoenix and McNicholas have an in-depth understanding of each element of their construction costs down to the sub-elements of labour, materials, transport, fuel, etc. This enables Phoenix and McNicholas to focus in on specific cost elements with the aim of identifying and implementing improvements. Further detail is provided in section 9.3 and within Phoenix’s Innovation and Technology Transfer submission (“Technical and Construction” section).

Phoenix intends to manage the construction contract across the GTW Licensed Area in accordance with the established processes already in use in the existing Licensed Area. Phoenix is subject to the OJEU procurement thresholds and the construction contract for the GTW Licensed Area will be awarded by Phoenix following such a competitive tendering process completed during mobilisation. Phoenix’s proposals for initiating the competitive tender process and awarding the construction contract for the GTW Licensed Area are fully detailed in section 3.6.

Chapter 6 details Phoenix’s proposals to manage the procurement of any other contracts.

Operation and maintenance of the network in the existing Licensed Area is managed in line with the principles of PAS 55 (the British Standards Institution’s “Publicly Available Specification” for the optimised management of physical assets and infrastructure (see section 5.7)) and monitored and controlled via a 24 hour manned system control operation. Phoenix seeks to comply with manufacturers’ recommendations and to meet the requirements of the Pressure System Safety Regulations (Northern Ireland 2004) (“PSSR”) in carrying out its maintenance activities. Phoenix is currently in the process of implementing a Reliability Centred Maintenance (“RCM”) Regime and where appropriate, these philosophies will be duplicated across the GTW distribution business.

Downstream gas installation work (i.e. downstream of the meter) in the residential and commercial property sectors is undertaken, for the customer, by independent third party gas installers. There are currently c.200 independent installers in the existing Licensed Area able to provide such services.

Phoenix maintains a list of qualified installers to undertake this work and regularly reviews the level of service provided to ensure service levels are maintained. Phoenix will, if requested, also organise visits by installers to provide quotations to support the customer getting the downstream installation work progressed. This strategy is intended to benefit the end consumer in terms of cost and quality of downstream installation work. Again this philosophy will be duplicated across the GTW distribution business.

Everyone who works directly on gas, whether pipe laying or installing a cooker, must be qualified under the relevant gas safety regulations. Phoenix has and will continue to work closely with its contractors, other gas employers and training organisations to ensure that the pool of qualified individuals is increased to meet market demands across the GTW Licensed Area.

2.2 RESOURCE LEVELS

This section covers the manpower resource levels required post mobilisation i.e. in years one to ten as defined in the Low Pressure Data Input Workbook (Annex 10 of the Applicant Information Pack). The manpower resources required to manage the mobilisation process in the GTW distribution business are fully detailed in section 3.2.

Phoenix's cost forecasts are detailed in the workbook submission. Phoenix provides full detail of the manpower cost build up below and in the assumptions appended to the workbook submission.

Explanation of internal and external resource levels and how these are built up

Internal Resources

Phoenix currently provides centralised corporate services to the whole Phoenix Group. Similar efficiencies can be achieved for the GTW distribution business by consolidating some of the functions within Phoenix for the existing and the GTW Licensed Areas and will ensure that the GTW distribution business benefits from the knowledge and experience of existing FTEs including Senior Managers and the Directors.

"Consolidated resources" covers the marginal increase in FTEs as required to manage the consolidated activities within Phoenix for the existing and the GTW Licensed Areas i.e. consolidated FTEs.

"Remote resources" covers those personnel deployed to operational locations within the GTW Licensed Area (see section 2.4) i.e. remote FTEs.

In total 18.25 FTEs (ten remote FTEs and 8.25 consolidated FTEs) will be required to manage the GTW distribution business from years one to five. The total FTEs will grow from 18.38 FTEs in year six (ten remote FTEs and 8.38 consolidated FTEs) to 18.90 FTEs in year ten (ten remote FTEs and 8.90

consolidated FTEs). The build up of internal resources is provided in Table 1 with full justification of the resource levels detailed in this section 2.2.

External Resources

The external resource requirements are detailed separately in this LP Business Plan:

- Phoenix's proposals to manage contract operations are detailed in section 2.1. In summary the current contract with McNicholas provides a real opportunity to innovate and implement efficiency improvements which delivers immediate reductions in unit costs to Phoenix. As management resources are streamlined and the supply chain is integrated, any innovations, design changes or simple process improvements are implemented quickly, promptly delivering benefits. In addition, due to the actual cost approach, Phoenix and McNicholas have an in-depth understanding of each element of their construction costs down to the sub-elements of labour, materials, transport, fuel, etc. This enables Phoenix and McNicholas to focus in on specific cost elements with the aim of identifying and implementing improvements.

Phoenix intends to manage the construction contract across the GTW Licensed Area in accordance with the established processes already in use in the existing Licensed Area. Phoenix is subject to the OJEU procurement thresholds and the construction contract for the GTW Licensed Area will be awarded by Phoenix following such a competitive tendering process completed during mobilisation. Phoenix's proposals for initiating the competitive tender process and awarding the construction contract for the GTW Licensed Area are fully detailed in section 3.6.

- Phoenix's proposals to manage the first call emergency response i.e. the additional PES Service Engineer requirements, are detailed in sections 5.8 and 8.3. In summary PES currently provides the initial 24 hour/seven days a week emergency response to Phoenix's network, under agreement with Phoenix. All calls received by the emergency number that cannot be resolved over the phone or eliminated as enquiries are tasked to PES engineers. Phoenix will duplicate its existing emergency policies and procedures across the GTW Licensed Area and will extend PES's remit across the GTW Licensed Area so that the first call response service in the GTW Licensed Area is the same as that already provided in the existing Licensed Area.

Given the GTW Licensed Area is geographically dispersed, it must be divided into two sectors:

- Sector A covers Derrylin, Enniskillen, Omagh and Stabane; and
- Sector B covers Dungannon, Coalisland, Cookstown and Magherafelt

as illustrated in figure 5.8c. Three PES FTEs will provide the initial emergency response across these two sectors.

Assumptions associated with the build-up (including efficiency improvement plan)

Phoenix's cost build-up is largely derived from UR's assessment of Phoenix's allowable opex within the GD14 Determination. As detailed in section 8.1, this is an appropriate basis for forecasting the opex requirements within the GTW distribution business; in summary, the GD14 determination captures any efficiency for customers already realised by Phoenix along with potential efficiencies forecast by Phoenix within each individual cost line. Therefore the GTW distribution business would immediately benefit from the innovation, improvements and efficiency gains already embedded within Phoenix's operation.

As such this approach to the build-up of Phoenix's manpower cost forecasts delivers efficiencies for the GTW distribution business more aligned to a mature business.

Further efficiency improvements planned by Phoenix include maintaining unit costs across years one to ten.

Manpower numbers for all categories of personnel

As illustrated in Table 1, 18.25 FTEs will be required to manage operations across the GTW Licensed Area in years one to five:

- ten FTEs will be based in the GTW Licensed Area; and
- a marginal increase of 8.25 FTEs will be required to manage the consolidated activities within Phoenix for the existing and the GTW Licensed Areas.

In years six to ten, the number of FTEs required to manage the consolidated activities within Phoenix for the existing and the GTW Licensed Areas will grow from 8.25 FTEs to 8.90 FTEs.

Table 1 further breaks down the FTEs by organisational structure:

- The Directors;
- Commercial Operations (largely engineering FTEs);
- Business Development (largely sales staff i.e. FTEs involved with the customer connection process for domestic (owner occupier, Northern Ireland Housing Executive ("NIHE") and new build) and non domestic connections); and
- Finance (FTEs providing corporate services).

**Table 1: Manpower Resources
Years one to five**

	Remote Resources ²				Consolidated Resources ³				Total FTEs	Net FTEs
	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs		
Directors					0.35	<i>0.05</i>		0.30	0.35	0.30
Commercial Operations										
Network Operations Manager	1.00		<i>1.00</i>							
Engineering Officer	3.00		<i>3.00</i>							
Records Officer	2.00		<i>2.00</i>							
<i>subtotal</i>	6.00	<i>0.00</i>	<i>6.00</i>	0.00	3.45	<i>0.00</i>	<i>2.00</i>	1.45	9.45	1.45
Business Development										
Energy Advisors (OO)	2.00	<i>2.00</i>								
Energy Advisors (non-OO)	2.00			2.00						
<i>subtotal</i>	4.00	<i>2.00</i>	<i>0.00</i>	2.00	2.10	<i>0.10</i>	<i>1.00</i>	1.00	6.10	3.00
Finance										
<i>subtotal</i>	0.00	<i>0.00</i>	<i>0.00</i>	0.00	2.35	<i>0.45</i>	<i>0.00</i>	1.90	2.35	1.90
Grand Total	10.00	<i>2.00</i>	<i>6.00</i>	2.00	8.25	<i>0.60</i>	<i>3.00</i>	4.65	18.25	6.65

The net resource allocated to the manpower cost line from years one to five is **6.65 FTEs** given that:

1. "OO activity" i.e. owner occupier related sales staff (2.60 FTEs) will be covered by the domestic connections incentive cost line⁴; and
2. "CAPEX" i.e. engineering staff allocated from operating to capital expenditure (9.00 FTEs) will be covered by the capital expenditure cost lines⁵.

² "Remote resources" covers those personnel deployed to operational locations within the GTW Licensed Area i.e. remote FTEs.

³ "Consolidated resources" covers such marginal increase in FTEs as required to manage the consolidated activities across the existing and the GTW Licensed Areas.

⁴ UR's Low Pressure Workbook notes state that "Manpower costs relating to domestic OO connections must not be included here. These are excluded from the allowable costs as they are deemed to be covered by the Domestic Connections Incentive."

⁵ UR's Low Pressure Workbook notes state that "Any capex elements that are normally allocated from opex to capex (e.g. engineer employees costs) will be deemed to have been included in capex already."

Year six	Remote Resources ⁶				Consolidated Resources ⁷				Total FTEs	Net FTEs
	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs		
Directors					0.35	<i>0.05</i>		0.30	0.35	0.30
Commercial Operations										
Network Operations Manager	1.00		<i>1.00</i>							
Engineering Officer	3.00		<i>3.00</i>							
Records Officer	2.00		<i>2.00</i>							
<i>subtotal</i>	6.00	<i>0.00</i>	<i>6.00</i>	0.00	3.48	<i>0.00</i>	<i>2.00</i>	1.48	9.48	1.48
Business Development										
Energy Advisors (OO)	2.00	<i>2.00</i>								
Energy Advisors (non-OO)	2.00			2.00						
<i>subtotal</i>	4.00	<i>2.00</i>	<i>0.00</i>	2.00	2.20	<i>0.11</i>	<i>1.00</i>	1.09	6.20	3.09
Finance										
<i>subtotal</i>	0.00	<i>0.00</i>	<i>0.00</i>	0.00	2.35	<i>0.45</i>	<i>0.00</i>	1.90	2.35	1.90
Grand Total	10.00	<i>2.00</i>	<i>6.00</i>	2.00	8.38	<i>0.61</i>	<i>3.00</i>	4.77	18.38	6.77

The net resource allocated to the manpower cost line in year six is **6.77 FTEs**.

⁶ "Remote resources" covers those personnel deployed to operational locations within the GTW Licensed Area i.e. remote FTEs.

⁷ "Consolidated resources" covers such marginal increase in FTEs as required to manage the consolidated activities across the existing and the GTW Licensed Areas.

Year seven	Remote Resources ⁸				Consolidated Resources ⁹				Total FTEs	Net FTEs
	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs		
Directors					0.35	<i>0.05</i>		0.30	0.35	0.30
Commercial Operations										
Network Operations Manager	1.00		<i>1.00</i>							
Engineering Officer	3.00		<i>3.00</i>							
Records Officer	2.00		<i>2.00</i>							
<i>subtotal</i>	6.00	<i>0.00</i>	<i>6.00</i>	0.00	3.51	<i>0.00</i>	<i>2.00</i>	1.51	9.51	1.51
Business Development										
Energy Advisors (OO)	2.00	<i>2.00</i>								
Energy Advisors (non-OO)	2.00			2.00						
<i>subtotal</i>	4.00	<i>2.00</i>	<i>0.00</i>	2.00	2.30	<i>0.13</i>	<i>1.00</i>	1.17	6.30	3.47
Finance										
<i>subtotal</i>	0.00	<i>0.00</i>	<i>0.00</i>	0.00	2.35	<i>0.45</i>	<i>0.00</i>	1.90	2.35	1.90
Grand Total	10.00	<i>2.00</i>	<i>6.00</i>	2.00	8.51	<i>0.63</i>	<i>3.00</i>	4.88	18.51	6.88

The net resource allocated to the manpower cost line in year seven is **6.88 FTEs**.

⁸ "Remote resources" covers those personnel deployed to operational locations within the GTW Licensed Area i.e. remote FTEs.

⁹ "Consolidated resources" covers such marginal increase in FTEs as required to manage the consolidated activities across the existing and the GTW Licensed Areas.

Year eight	Remote Resources ¹⁰				Consolidated Resources ¹¹				Total FTEs	Net FTEs
	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs		
Directors					0.35	<i>0.05</i>		0.30	0.35	0.30
Commercial Operations										
Network Operations Manager	1.00		<i>1.00</i>							
Engineering Officer	3.00		<i>3.00</i>							
Records Officer	2.00		<i>2.00</i>							
<i>subtotal</i>	6.00	<i>0.00</i>	<i>6.00</i>	0.00	3.54	<i>0.00</i>	<i>2.00</i>	1.54	9.54	1.54
Business Development										
Energy Advisors (OO)	2.00	<i>2.00</i>								
Energy Advisors (non-OO)	2.00			2.00						
<i>subtotal</i>	4.00	<i>2.00</i>	<i>0.00</i>	2.00	2.40	<i>0.15</i>	<i>1.00</i>	1.25	6.40	3.25
Finance										
<i>subtotal</i>	0.00	<i>0.00</i>	<i>0.00</i>	0.00	2.35	<i>0.45</i>	<i>0.00</i>	1.90	2.35	1.90
Grand Total	10.00	<i>2.00</i>	<i>6.00</i>	2.00	8.64	<i>0.65</i>	<i>3.00</i>	4.99	18.64	6.99

The net resource allocated to the manpower cost line in year eight is **6.99 FTEs**.

¹⁰ "Remote resources" covers those personnel deployed to operational locations within the GTW Licensed Area i.e. remote FTEs.

¹¹ "Consolidated resources" covers such marginal increase in FTEs as required to manage the consolidated activities across the existing and the GTW Licensed Areas.

Year nine	Remote Resources ¹²				Consolidated Resources ¹³				Total FTEs	Net FTEs
	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs		
Directors					0.35	<i>0.05</i>		0.30	0.35	0.30
Commercial Operations										
Network Operations Manager	1.00		<i>1.00</i>							
Engineering Officer	3.00		<i>3.00</i>							
Records Officer	2.00		<i>2.00</i>							
<i>subtotal</i>	6.00	<i>0.00</i>	<i>6.00</i>	0.00	3.57	<i>0.00</i>	<i>2.00</i>	1.57	9.57	1.57
Business Development										
Energy Advisors (OO)	2.00	<i>2.00</i>								
Energy Advisors (non-OO)	2.00			2.00						
<i>subtotal</i>	4.00	<i>2.00</i>	<i>0.00</i>	2.00	2.50	<i>0.17</i>	<i>1.00</i>	1.33	6.50	3.33
Finance										
<i>subtotal</i>	0.00	<i>0.00</i>	<i>0.00</i>	0.00	2.35	<i>0.45</i>	<i>0.00</i>	1.90	2.35	1.90
Grand Total	10.00	<i>2.00</i>	<i>6.00</i>	2.00	8.77	<i>0.67</i>	<i>3.00</i>	5.10	18.77	7.10

The net resource allocated to the manpower cost line in year nine is **7.10 FTEs**.

¹² "Remote resources" covers those personnel deployed to operational locations within the GTW Licensed Area i.e. remote FTEs.

¹³ "Consolidated resources" covers such marginal increase in FTEs as required to manage the consolidated activities across the existing and the GTW Licensed Areas.

Year ten	Remote Resources ¹⁴				Consolidated Resources ¹⁵				Total FTEs	Net FTEs
	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs	Total FTEs	OO activity (see below)	CAPEX (see below)	Net FTEs		
Directors					0.35	<i>0.05</i>		0.30	0.35	0.30
Commercial Operations										
Network Operations Manager	1.00		<i>1.00</i>							
Engineering Officer	3.00		<i>3.00</i>							
Records Officer	2.00		<i>2.00</i>							
<i>subtotal</i>	6.00	<i>0.00</i>	<i>6.00</i>	0.00	3.60	<i>0.00</i>	<i>2.00</i>	1.60	9.60	1.60
Business Development										
Energy Advisors (OO)	2.00	<i>2.00</i>								
Energy Advisors (non-OO)	2.00			2.00						
<i>subtotal</i>	4.00	<i>2.00</i>	<i>0.00</i>	2.00	2.60	<i>0.10</i>	<i>1.00</i>	1.50	6.60	3.50
Finance										
<i>subtotal</i>	0.00	<i>0.00</i>	<i>0.00</i>	0.00	2.35	<i>0.45</i>	<i>0.00</i>	1.90	2.35	1.90
Grand Total	10.00	<i>2.00</i>	<i>6.00</i>	2.00	8.90	<i>0.60</i>	<i>3.00</i>	5.30	18.90	7.30

The net resource allocated to the manpower cost line in year ten is **7.30 FTEs**.

¹⁴ “Remote resources” covers those personnel deployed to operational locations within the GTW Licensed Area i.e. remote FTEs.

¹⁵ “Consolidated resources” covers such marginal increase in FTEs as required to manage the consolidated activities across the existing and the GTW Licensed Areas.

Justification for manpower numbers in relation to the range and volume of business activity

Phoenix has a proven track record in the natural gas market in Northern Ireland, having developed from scratch a network and a market for natural gas over the last c.17 years. Phoenix has undertaken innovative pipe laying techniques and has developed a strong skills base and a reputation for making safety the top priority. Imaginative marketing campaigns and hands-on customer support has expedited growth in the customer base and is key in building markets.

The Phoenix network currently extends to over 3,000 kilometres of intermediate, medium and low pressure mains, which distribute natural gas throughout the existing Licensed Area. As at 31 December 2013, Phoenix had made gas available to c.301,000 properties within the existing Licensed Area, of which c.171,000 (57 per cent.) have been connected to the network.

Phoenix has drawn on this experience to assess the manpower numbers required to develop the natural gas network in the GTW Licensed Area in accordance with the LP Business Plan to make the GTW Licensed Area as successful as the existing Licensed Area:

Internal Resources

Remote Resources

10 remote FTEs will be based in the GTW Licensed Area.

Commercial Operations

As a natural gas distribution asset owner and operator Phoenix ensures that its construction, operation and maintenance activities are undertaken in such a way as to meet the fundamental requirement of delivering a safe operation for customers and members of the public alike. This is the overarching principle which will be adopted to manage engineering activity in the GTW Licensed Area. There are a considerable number of pieces of legislation, regulations, policies and international standards that must be adopted and in so doing to ensuring requirements laid down by the Health and Safety Executive for Northern Ireland (“HSENI”) via the Phoenix Safety Case are satisfied (see section 5.1). The six remote FTEs forecast within Commercial Operations are required to deliver a safe, reliable and efficient operation.

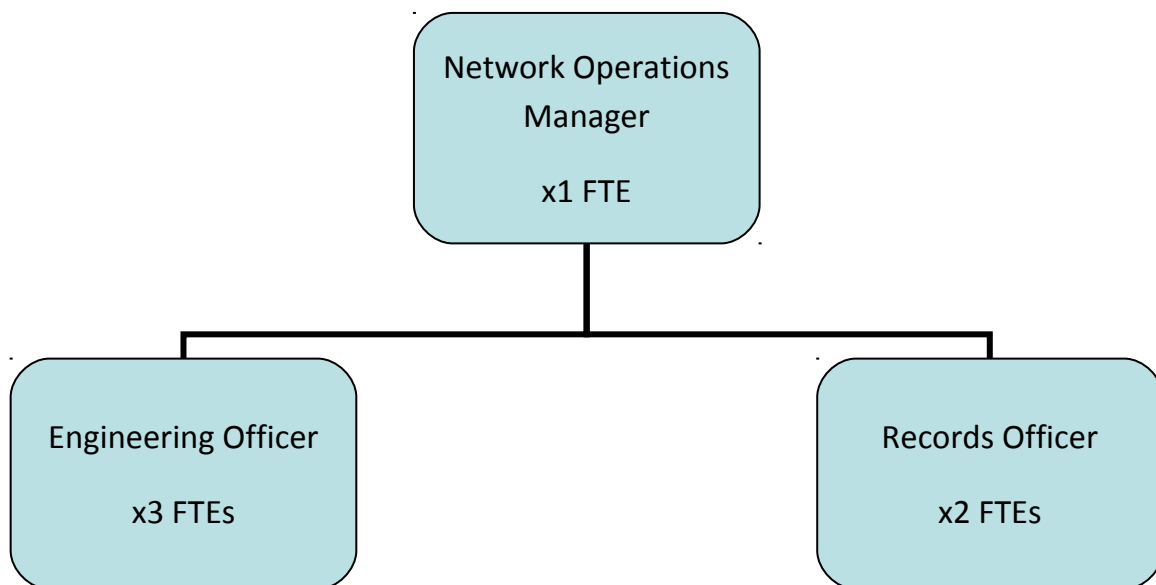
Detailed plans and proposals of the remote resource requirement during mobilisation (i.e. one Network Operations Manager and three Engineering Officers) and the activities they will undertake are provided in section 3.1. These four remote mobilisation FTEs will be supplemented by two remote FTEs (Records Officers) in years one to ten.

Records Officers

The requirement for two Records Officers is based on the successful model employed by Phoenix in capturing the records for the over 3,000 kilometres of main laid to date in the existing Licensed Area.

As with the other engineering roles, Phoenix will train the new Records Officers in capturing and digitising the as-laid data (see section 5.7) in the existing Licensed Area before deploying them on the GTW Licensed Area. This will ensure competency and also consistency in delivery of records between the two Licensed Areas. The Records Officers will report to the Network Operations Manager.

The final structure that will be employed within the Commercial Operations department of the GTW distribution business is:



Business Development

Two remote FTEs will be required to manage sales activities within the owner occupier sector to achieve the targets for growth in demand/connections in accordance with the LP Business Plan.

The two remote FTEs managing sales activities within the non-owner occupier sector during mobilisation will therefore be supplemented by two remote FTEs to manage sales activities within the domestic sector in years one to ten, building awareness of natural gas, meeting with prospective customers and promoting the development of suitable qualified installers within the local trade.

All four Energy Advisors will work to sign up customers, based on imminent gas availability. The Energy Advisors will be managed and supported within the existing Phoenix structure, with a Senior Manager having overall responsibility.

An explanation of how these four remote FTEs will ensure that the pattern of connections set out in the LP Business Plan is met is provided in section 7.1.

Consolidated Resources

A marginal increase of 8.25 FTEs in years one to five, growing to 8.90 FTEs in year ten, will be required to manage the consolidated activities within Phoenix for the existing and the GTW Licensed Areas.

As noted above, efficiencies can be achieved by consolidating some of the functions within Phoenix for the existing and the GTW Licensed Areas and will ensure that the GTW distribution business benefits from the knowledge and experience of existing FTEs including Senior Managers and the Directors. These functions are:

- a centralised corporate services department with responsibility for IT, Business Planning, Regulation, Finance, Contracts and Procurement, Risk Assurance and Human Resources (“HR”) (see section 3.7);
- a centralised Customer Services department (see section 3.7);
- centralised Commercial Operations and Business Development management functions; and
- centralised Directors’ functions.

A marginal increase of 6.25 FTEs in years one to five, growing to 6.90 FTEs in year ten, will be required to manage these consolidated functions.

The two additional consolidated FTEs in years one to ten will be required within Phoenix to support the existing and the GTW Licensed Areas:

Quantity Surveyor

A Quantity Surveyor (“QS”) will be assigned to the project. Currently Phoenix has a Senior QS and Assistant QS working within the core business. The main role of a Quantity Surveyor is to provide a full range of valuation and cost control duties from project inception to final account stage in connection with a large engineering contract and to support the commercial activities of the Commercial Operations Department. An additional Assistant QS will be employed to support the two FTEs working within Phoenix thereby consolidating this activity across the existing and the GTW Licensed Areas.

Phoenix has considerable experience of development of new staff, including those in a QS role. Phoenix will employ the additional Assistant QS and ensure that sufficient experience has been achieved working on a ‘live’ gas distribution contract in advance of commencing any construction work.

The QS will be managed and supported within the existing Phoenix structure by the Commercial Manager.

Planner

The main role of a Planner is the administration of engineering records and requests received relating to Phoenix asset information from external organisations. Duties include organising and planning tasks utilising company computer and documentation systems, including the drafting of letters and the recording and distribution of mains packages within Phoenix.

Phoenix will employ one additional Planner to support the existing planning team within Phoenix thereby consolidating this activity across the existing and the GTW Licensed Areas.

External resources

The justification for the external resource requirements is:

- Phoenix's proposals to manage contract operations are detailed in section 2.1. In summary the current contract with McNicholas provides a real opportunity to innovate and implement efficiency improvements which delivers immediate reductions in unit costs to Phoenix. As management resources are streamlined and the supply chain is integrated, any innovations, design changes or simple process improvements are implemented quickly, promptly delivering benefits. In addition, due to the actual cost approach, Phoenix and McNicholas have an in-depth understanding of each element of their construction costs down to the sub-elements of labour, materials, transport, fuel, etc. This enables Phoenix and McNicholas to focus in on specific cost elements with the aim of identifying and implementing improvements.

Phoenix intends to manage the construction contract across the GTW Licensed Area in accordance with the established processes already in use in the existing Licensed Area. Phoenix is subject to the OJEU procurement thresholds and the construction contract for the GTW Licensed Area will be awarded by Phoenix following such a competitive tendering process completed during mobilisation. Phoenix's proposals for initiating the competitive tender process and awarding the construction contract for the GTW Licensed Area are fully detailed in section 3.6.

- Phoenix's proposals to manage the first call emergency response i.e. the additional PES Service Engineer requirements, are detailed in sections 5.8 and 8.3. In summary PES currently provides the initial 24 hour/seven days a week emergency response to Phoenix's network, under agreement with Phoenix. All calls received by the emergency number that cannot be resolved over the phone or eliminated as enquiries are tasked to PES engineers. Phoenix will duplicate its existing emergency policies and procedures across the GTW Licensed Area and will extend PES's remit across the GTW Licensed Area so that the first call

response service in the GTW Licensed Area is the same as that already provided in the existing Licensed Area.

Given the GTW Licensed Area is geographically dispersed, it must be divided into two sectors:

- Sector A covers Derrylin, Enniskillen, Omagh and Stabane; and
- Sector B covers Dungannon, Coalisland, Cookstown and Magherafelt

as illustrated in figure 5.8c. Three PES FTEs will provide the initial emergency response across these two sectors.

To maximise productivity, these three PES FTEs will also undertake other activities such as network maintenance (e.g. meter exchanges) and special meter reading when they are not providing the emergency response.

Manpower cost build-up process is specified to support cost forecasts entered in workbook, and takes account of the progressive development of the business

The manpower cost line comprises three cost elements:

1. Gross Salaries;
2. National Insurance Contributions (“NIC”); and
3. Fleet costs.

These three elements and their cost build-up are detailed in the assumptions appended to the workbook submission and as detailed above, the progressive development of the GTW distribution business will see operations grow in line with the LP Business Plan with no corresponding cost increase. In summary:

Gross Salaries

All staff will be employed on a personal contract basis with salary levels assessed within a band based on the job value. The position within the band will be driven by the specific experience and qualifications of the jobholder, the supply/demand of suitable candidates and also the effectiveness in undertaking the role.

Gross salaries comprise the following elements:

- *Base Salary*

Base Salary has been assessed taking the average base pay for each job in each band.

- *Bonus or Commission*

Salary is structured (fixed and variable pay elements) to take account of nature of the role being undertaken and the prevalence for similar schemes for roles of similar nature in the market elsewhere.

In general the business will use a basic salary and performance bonus for all staff with the exception of the following job groups:

- *Administration* – these employees receive salary only with progression through the band performance related; and
- *Energy Advisors* – these employees tend to have a lower basic salary supplemented by monthly and quarterly commission/bonus structure.

- *Standby and Call Out*

As a result of the requirement to provide a 24 hour/seven days a week emergency response (see section 5.8), there is a need to operate various levels of on call Managers and Engineers. Payment for this service is made either on a flat fixed amount per week or variable amounts dependent upon being physically called out.

- *Company Cars*

Company vehicles will be provided to selected employees either as a result of their position (job status e.g. Senior Managers) or where such provision is required for business purposes (job requirement).

In the case of job status cars, an alternative cash equivalent is payable in lieu of the company car for employees qualifying for such a benefit.

Job requirement vehicles include, where applicable, both branded and unbranded vans or cars as deemed suitable for that position. No cash equivalent is available for job requirement car users however if an employee decides to use their own vehicle for business purposes, a private car fuel rate is payable consistent with HMRC levels which covers overhead cost of the vehicle in addition to the fuel used.

- *Pensions*

The company will operate a Group Personal Pension Plan for its employees with contribution rates on a matching basis at rate [REDACTED] base pay.

In addition, the Group Personal Pension Plan scheme will be salary sacrifice based enabling employees to benefit from company's savings in NIC.

- *Life Assurance*

Life Assurance benefits will be provided to all employees.

As detailed in the assumptions appended to the workbook submission, Phoenix has determined gross salaries for:

- remote FTEs using the average unit costs derived by UR in the GD14 determination for each band; and
- consolidated FTEs using the total manpower costs determined by UR in the GD14 determination to derive an average unit cost per FTE.

National Insurance Contributions

Phoenix has built-up from first principles the calculation of NIC and reflects the current charging level. Car NIC costs are 13.8 per cent. of benefit in kind costs, assumed to be £3,500 per mobile employee.

Fleet Costs

An average fleet rate per vehicle has been determined based on the GD14 determination. There are several elements considered in the build up of fleet costs (lease charge, fuel costs, mileage). Whilst the unit rate of lease charges and fuel costs will remain consistent with that assumed in the GD14 determination, it has been anticipated that unit mileage rates will increase due to the geography of the GTW Licensed Area.

2.3 COMPETENCES AND ACCOUNTABILITIES

Competence management arrangements

Within Phoenix the skills, knowledge and ability required for each job role are defined in the job description and person specification of the role. This information is used to determine the shortlisting criteria for the role during the recruitment process and is further explored during a competency based interview. The recruitment process is fully detailed in section 3.2 under "Recruitment arrangements".

Once an employee commences employment, performance is monitored closely during their probationary period. During this period, their Manager will identify if any further training or support is required and address these needs through on the job training, coaching and support or through attendance at a formal training course.

New employees are reviewed at the end of their probationary period to determine if they have the skills and ability to carry out their role. At this stage an employee may (i) be confirmed in their role;

(ii) have their probationary period extended to allow additional time to assess their competency; or
(iii) have their employment terminated.

Managers continue to assess and monitor the ongoing performance of employees during employment. Where it is identified that a new skill, knowledge or technical ability is required this is managed through the annual training plan and budget process. Further detail is provided under “Training and development arrangements for all employees” below.

If performance management issues are identified the Manager will support the employee to obtain the required standard of performance using a performance action plan. If sufficient progress is not made within the agreed timescales, the disciplinary process may be initiated.

Phoenix have a number of roles which have a formalised training and development programme due to the time required to obtain the necessary skills, experience and technical knowledge to carry out the role. These are:

Commercial Operations

Within the Commercial Operations department, a competency matrix is in place to determine the training required for each role to ensure the job holder is trained and competent to perform their role. Eight classification labels (HSE 1 – HSE 8) have been created. Each role within the organisation has been assigned to one Health, Safety and Environmental (“HSE”) label, with each label specifying the HSE training needs for that role.

For example the label ‘HSE 2’ covers the training required for the roles of Grid Control Officer and Transportation Services Officer. The training specified for HSE 2 roles is Health and Safety Induction (Awareness of Health, Safety and Environmental Systems (“ASHES”)); Risk Assessment and Environmental Awareness; Manual Handling; Handling Emergency Calls; Fire Warden Training; Appointed Person Training and Safe Control of Operations Introduction.

In addition a development programme is in place to ensure that engineering staff have the appropriate behavioural, technical and supervisory competencies to carry out their role:

Engineering Officer Development Programme

Within the Commercial Operations department there is a formal development programme in place for the development and progression to the role of Engineering Officer. Employees may start the programme at entry level as a Trainee Engineer (level 0) or as an Assistant Engineer (Zone 1).

The development process is based on the attainment of twelve behavioural competencies and ten technical competencies. There are three levels within each of the 22 competencies (Zone 1-3). Each competency has a minimum level that should be demonstrated, with evidence, at each level of progression.

The minimum levels of behavioural competence that should be demonstrated, with evidence, at each level of progression are:

	Zone 1	Zone 2	Zone 3
1. Strategic Thinking	5	4	3
2. Analytical Thinking	4	4	3
3. Customer Orientation	5	3	2
4. External Sensitivity	5	4	3
5. Performance Orientation	4	3	2
6. Business Flair	5	5	4
7. Quality Orientation	4	3	2
8. Change Orientation	4	3	2
9. Leadership	5	5	4
10. Team Working	4	3	2
11. Influencing	4	4	3
12. Developing	5	5	4

The minimum levels of technical competence that should be demonstrated, with evidence, at each level of progression are:

	Zone 1	Zone 2	Zone 3
1. Legislation	1	2	3
2. Policy & procedures	1	2	3
3. Plant & Equipment	1	2	3
4. Tools & Techniques	1	2	3
5. Network Management	2	3	4
6. Systems & Applications	1	2	3
7. Gas Business Knowledge	2	3	4
8. Project Management	2	3	4
9. Supervisory Skills	1	2	2
10. Commercial Skills	2	3	4

Each participant is allocated a mentor who is responsible for ensuring that the trainee is given appropriate training and the opportunity to gain suitable experience for each of the competencies. The participant is required to maintain a log book detailing their training, experience and examples of work they have undertaken.

The process is based on regular assessments at six to nine monthly intervals. Assessments to confirm the attainment of each of the competencies are undertaken by a Senior Manager. Eligibility for progression is based on the participant meeting the required level for each of the 22 competencies and having a demonstrable record (log book) of sustained high performance and delivery of results at the current level (or above).

Progression from the position of Trainee Engineer to that of Assistant Engineer will normally take between 18 and 24 months, but maybe completed in 12 months by suitably qualified and competent individuals.

Progression from the position of Assistant Engineer to Engineering Officer will normally take between 12 and 18 months.

Once a participant has attained the level of Assistant Engineer the development process is based on the attainment of seven technical and supervisory criteria in addition to progression to Zone 3 of the 22 competencies.

The seven criteria consist of training to be completed, experience to be obtained and an assessment under the supervision of a competent person. These seven criteria are:

1. Emergency response;
2. Live Gas Operations;
3. Health, Safety and Environment;
4. Supervision/Quality;
5. Distribution Network Awareness;
6. Technical Skills; and
7. Project Management.

On successful completion of all the criteria and submission of the participant's log book, a final interview is held. If successful the participant is appointed to the role of Engineering Officer.

PES Service Engineers

As noted in section 2.1, PES currently provides a number of services to Phoenix under a services contract, including the installation, disconnection and maintenance of customer meters and the provision of the initial 24 hour/seven days a week emergency response to Phoenix's customers. PES will provide these services under a services contract to the GTW distribution business.

All PES Service Engineers are qualified to QCF Level 3 Gas Engineering or Plumbing and Gas Safe registered. Each PES Service Engineer's Gas Safe registration is reviewed and renewed on an annual basis. PES Service Engineers are retrained and assessed on a five year cycle in line with the expiry date of the assessment tickets (Accredited Certification Scheme ("ACS")) they are qualified for. The minimum ACS qualifications required for a PES Service Engineer are CCN1 (Domestic Core and

Appliances), MET1 (Domestic Meters), ESP1 (Emergency Service Providers) and CEN1 (Domestic Wet Central Heating).

On commencement of employment PES Service Engineers must provide evidence of their qualifications. PES Service Engineers are also trained to comply with the Phoenix procedure for dealing with Reported Gas Escapes (“**ENGO02**” see section 5.8).

Gas Safe registration cards for PES Service Engineers (see example below) are issued on an annual basis every April. Gas Safe registration cards detail the qualifications held by each PES Service Engineer and the expiry date of certification.



Prior to April each year the qualifications each PES Service Engineer holds are reviewed to assess continued relevance to the business and to identify expiry dates of certification.

A training database is used to log all training attended by PES Service Engineers including ACS qualifications, internal ASHES training, training from manufacturers and toolbox talks etc. The database includes information on the date ACS certification expires and exception reports are used to identify those PES Service Engineers who require training and re-assessment.

To ensure that all PES Service Engineers maintain Gas Safe registration and the required ACS qualifications required to perform their role, on an annual basis the training database and re-registration process are cross-referenced to confirm which PES Service Engineers require recertification.

Where it is identified that certification will expire, training and reassessment is scheduled to maintain PES Service Engineer competence.

This information is used in conjunction with ongoing safety reviews of working practises and legislation updates to formulate the annual training plan. Further detail regarding the annual training plan process is provided under “Training and development arrangements for all employees” later in this section 2.3.

As noted within Phoenix’s Innovation and Technology Transfer submission (“Resources” section), Phoenix worked closely with Energy and Utility Skills, Department of Learning and Belfast

Metropolitan College to agree a structured gas focused apprenticeship in order to develop the skills required to perform the role of a PES Service Engineer.

The current apprenticeship scheme leads to a QCF Level 3 Apprenticeship in Gas Utilisation, Installation and Maintenance qualification.

During the first year of the apprenticeship, an apprentice spends two days a week at college and three days a week with a PES Service Engineer. During the first year an apprentice learns from observing a PES Service Engineer at work, building a portfolio of knowledge on the different works carried out. It is a requirement for all apprentices to have obtained their driving licence by the end of year one.

By the end of year one an apprentice is equipped to undertake non safety related works such as battery jobs, the testing of B6 regulators, helping out with power flushes etc and start to build their experience portfolio.

During the second year an apprentice attends college two days a week and the remainder of the time is supervised by a PES Service Engineer. By the end of their second year an apprentice has obtained CCN1, MET1, ESP1 and CEN1 qualifications.

In their third year an apprentice attends college one day a week and is competent to undertake non emergency work such as meter faults. The work is undertaken independently and the apprentice has the use of a pool van.

During this time the apprentice is continually audited and reviewed by a Senior Technician who is trained to IGE/GL/8 (Reporting and investigation of gas related incidents) level. The apprentice is rotated through the different types of jobs to ensure they receive a broad variety of work and experience.

An apprentice is introduced to the emergency rota and taken out on gas works with a Senior Technician and required to deal with gas escapes under their supervision. The apprentice must complete 25 hours of supervised gas escapes before they are signed off by a Senior Technician as a competent Emergency Engineer.

An apprentice achieves a QCF Level 3 Apprenticeship in Gas Utilisation, Installation and Maintenance at various stages of the third year dependent on their individual skills and experience portfolio.

At this stage an apprentice may apply for the role of Emergency Engineer if a vacancy arises. The application for the role involves a written test, a practical test and a competency based interview.

If successful and appointed as Emergency Engineer, further training is provided for two years to expand the technical competence of the Emergency Engineer to broaden the type of jobs they are competent to deal with.

Professional and academic qualifications and experience associated with key personnel

The following table details Commercial Operations personnel responsible for management, design, planning and supervision of live gas and construction activities in the existing Licensed Area:

Job Description	Role	Number of Personnel	Professional Qualifications	Length of service in current role
Commercial Operations Director	Director responsible for all Commercial Operations activities as detailed below	1	1 x IGEM – Fellow Plus IMECHE member	1 x 10+ years
Senior Managers	Manage all aspect of Commercial Operations work and NOMs/EOs including: <ul style="list-style-type: none"> - Policy and Strategy - Operations and Maintenance - Upstream Gas Emergency Response - Downstream Gas Emergency Response - Emergency Control Centre Contract - Asset Management and Maintenance - Grid Control - Transportation Services - Network Construction Design - Contract Management - Business Management and Regulatory Interface 	9	4 x IGEM – Chartered Engineer 1 x Chartered Member of the Institute of Operational Safety and Health	5 x 10+ years 3 x 5+ years 1 x new appointment
Network Operations Managers (“NOMs”)	Manage/supervise the following activities and EOs: <ul style="list-style-type: none"> - Operations and Maintenance - Upstream Gas Emergency Response - Downstream Gas Emergency Response - Emergency Control Centre Contract 	4	2 x IGEM – Incorporated Engineer	1 x 5+ years 2 x 3+ years 1 x new appointment

Job Description	Role	Number of Personnel	Professional Qualifications	Length of service in current role
	<ul style="list-style-type: none"> - Asset Management and Maintenance - Grid Control - Transportation Services - Network Construction Design - Contract Management 			
<p style="text-align: center;">Engineering Officers (“EOs”)</p>	<ul style="list-style-type: none"> • Design and planning of network construction work • Monitoring quality, safety and compliance with design of network construction work • Supervise asset maintenance procedures and processes • Supervise as Competent Person live gas (Non Routine Operation) and site safety (Permit to Work) work • Supervise response to upstream gas escapes 	11	<p>5 x completed Phoenix Engineering Officer Development Programme</p> <p>4 x at various stages of completing Phoenix Engineering Officer Development Programme</p> <p>2 x new appointees</p>	<p>4 x 5+ years</p> <p>1 x 3+ years</p>
<p style="text-align: center;">Maintenance Technicians</p>	<p>Undertake asset maintenance work including:</p> <ul style="list-style-type: none"> • commissioning network and I&C customer pressure reduction equipment and safety devices • maintenance of network and I&C customer pressure reduction equipment and safety devices 	6	<p>4 x NVQ Level 3</p> <p>2 x Undertaking NVQ Level 3</p>	4 x 5+ years

The key personnel and associated professional qualifications and experience required for the GTW distribution business are summarised in the table below:

Role	Overview of Role	Qualifications	Experience Required
<p align="center">Network Operations Manager</p>	<p>Manage/supervise the following activities and the Engineering Officers:</p> <ul style="list-style-type: none"> • Operations and Maintenance • Upstream Gas Emergency Response • Downstream Gas Emergency Response • Emergency Control Centre Contract • Asset Management and Maintenance • Grid Control • Transportation Services • Network Construction Design • Contract Management 	<ul style="list-style-type: none"> • IGEM Incorporated Engineer • Engineering based HND or equivalent 	<ul style="list-style-type: none"> • Engineering experience in design, construction and operation of a gas network at Engineering Officer level or equivalent • Competent in all aspects of mains and service laying techniques, gas supply principles, gas regulating equipment, safe control of operations and emergency procedures. • Driving licence
<p align="center">Engineering Officer</p>	<ul style="list-style-type: none"> • Design and planning of network construction work • Monitoring quality, safety and compliance with design of network construction work • Supervise asset maintenance procedures and processes • Supervise as Competent Person live gas (Non Routine Operation) and site safety (Permit to Work) work 	<ul style="list-style-type: none"> • Engineering based HND or equivalent • New Roads and Street Works qualification. 	<ul style="list-style-type: none"> • Experience in a design/ construction role • Competent in all aspects of mains/service laying techniques, safe control of operations and emergency procedures. • Driving licence

Role	Overview of Role	Qualifications	Experience Required
	<ul style="list-style-type: none"> Supervise response to upstream gas escapes 		
Quantity Surveyor	<ul style="list-style-type: none"> Provision of a full range of valuation and cost control duties from project inception to final account stage in connection with a large engineering contract Support the commercial activities of the Engineering Department 	<ul style="list-style-type: none"> Degree in quantity surveying or equivalent relevant experience 	<ul style="list-style-type: none"> Experience of dealing with a large engineering contract
PES Service Engineer	<ul style="list-style-type: none"> Emergency response to gas escapes Installation, repair and removal of Phoenix meters and other assets Quality inspections, appliance service and repair Customer support in relation to downstream gas installations 	<ul style="list-style-type: none"> CCN1 MET1 ESP1 CEN1 Gas Safe registration QCF level 3 in Plumbing and heating or Domestic Natural Gas Maintenance or equivalent 	<ul style="list-style-type: none"> Driving licence Gas appliance servicing and repair Diagnostic skills
Energy Advisor	<ul style="list-style-type: none"> Promote and sell the benefits of natural gas to prospective homeowners. Field canvassing Carrying out energy surveys Collecting information and completing paperwork with customers as required 	<ul style="list-style-type: none"> NEA/City and Guilds Energy Awareness qualification 	<ul style="list-style-type: none"> Driving licence Sales experience

As detailed in section 2.2, efficiencies can be achieved by consolidating some of the functions within Phoenix for the existing and the GTW Licensed Areas and will ensure that the GTW distribution business benefits from the knowledge and experience of existing FTEs including Senior Managers and the Directors. These functions are:

- a centralised corporate services department with responsibility for IT, Business Planning, Regulation, Finance, Contracts and Procurement, Risk Assurance and HR (see section 3.7);
- a centralised Customer Services department (see section 3.7);
- centralised Commercial Operations and Business Development management functions; and
- centralised Directors' functions.

These existing FTEs hold a number of professional and academic qualifications from which the GTW distribution business will benefit e.g. Chartered Accountants, Chartered Member of the Institute of Personnel and Development (“**MCIPD**”), QS; and professional memberships of professional institutions including the Institution of Gas Engineers and Managers (“**IGEM**”), the Institute of Mechanical Engineers (“**IMechE**”), the Institute of Occupational Safety and Health (“**IOSH**”), the Chartered Institute of Purchasing & Supply, the Royal Institution of Chartered Surveyors (“**RICS**”), the Chartered Institute of Personnel and Development (“**CIPD**”), the Chartered Institute of Internal Auditors and Chartered Accountants Ireland.

A marginal increase of 6.25 internal FTEs from years one to five, growing to 6.90 FTEs in year ten, will be required to manage these consolidated functions.

An additional Assistant QS and an additional Planner will also be required in years one to ten to support the FTEs working within Phoenix thereby consolidating these activities across the existing and the GTW Licensed Areas. Full detail is provided in section 2.2.

Training and development arrangements for all employees

Within Phoenix training and development encompasses a broad range of activities including training course attendance; toolbox talks; work shadowing; on the job training; job specific development programmes; secondment; management training programmes; in-house training; attendance at conferences and employee sponsorship on further education courses.

All employees undergo an induction process on commencement of employment and the purpose of the induction is to ensure the effective integration of staff into the organization.

The induction contains three main elements to provide all the information that new employees need:

1. A general overview of the organisation and the main policies and procedures in place and the standards of behaviour expected from an employee. This is conducted by HR and includes an orientation tour of the premises and its facilities.

2. ASHES - this is an in-house safety induction on the ASHES Health, Safety and Environmental management system (see section 4.1), which provides more detailed safety and environmental information to employees including their responsibilities for Health and Safety in the workplace. This is delivered by the Health, Safety and Environment team.
3. Individually tailored on the job training and support provided by the employee's line Manager.

The induction process identifies any specific training and development requirements for new employees. The Senior Manager for the department is responsible for ensuring that these needs are addressed through on the job training, coaching and support or through attendance at a formal training course.

Training and development needs for employees are reviewed on an annual basis by the Senior Manager for the department. On an annual basis Senior Managers submit a training plan and proposed budget for their department to the HR Manager. The training plan identifies training and the associated costs required for their team members for the forthcoming year.

On receipt of the training plans, the HR Manager clarifies any queries with Senior Managers. The role of HR is to support managers to identify the appropriate training, to ensure there is no duplication of cost and to identify any potential efficiencies. The HR Manager is accountable for the training budget and agrees the departmental training budgets with the Group Finance Director on an annual basis.

Health, Safety and Environmental training

Employee HSE training records and training needs analysis are managed using Phoenix's HSE training and competency management system. This database system produces reports on training completed, training required and training/certification expiry dates which form the basis of the annual HSE training plan and budget.

The database is underpinned by a competency matrix in place to determine the training requirement for each role to ensure the job holder is trained and competent to perform their role. Eight classification labels (HSE 1 – HSE 8) have been created. Each role within the organisation has been assigned to one HSE label, with each label specifying the HSE training needs for that role.

For example the label 'HSE 2' covers the training required for the roles of Grid Control Officer and Transportation Services Officer. The training specified for HSE 2 roles is ASHES; Risk assessment and Environmental Awareness; Manual Handling; Handling Emergency Calls; Fire Warden Training; Appointed Person Training and Safe Control of Operations Introduction.

Phoenix place a significant focus on HSE training delivered throughout the organisation. HSE training delivered per employee is one of Phoenix's HSE Key Performance Indicators, which is reported at Board level.

Phoenix Energy Services training

The role, the training and the development of a PES Service Engineer is detailed above. PES maintains a training database which is used to manage the training records and training needs analysis for the PES Service Engineers and Apprentices. The database produces reports on training completed, training required and training/certification expiry dates.

This information is used to formulate the annual PES training plan and budget in conjunction with ongoing safety reviews of working practises and changes of legislation.

Further Education Policy

In addition to the annual submission of training plans Phoenix has a Further Education Policy designed to motivate and encourage effective business, team and individual performance. Staff are encouraged to actively seek opportunities for development, ensuring the achievement of competitive advantage at both an individual and business level.

The Directors and Managers will support staff to ensure that opportunities to develop skills and knowledge exist in a way that enables the most effective contribution to the Group's current and future objectives whilst at the same time helping each person derive maximum personal satisfaction from their work.

The Group recognises that the wider, long term aspirations of the individual employees must be considered in the context of opportunities that may become available throughout the business. This need not be restricted to the employee's current position.

Specific training and development plans

There are a number of roles which have a formalised training and development programme due to time required to obtain the necessary skills, experience and technical knowledge to carry out the role. Further information is provided under "Competence management arrangements" above.

The HR Manager will continue to be responsible for the training and development arrangements for all employees and the current processes and principles detailed above will be extended to include any new employees in the GTW distribution business.

2.4 DEPLOYMENT

Details of personnel deployment to operational locations in the GTW Licensed Area

Phoenix headquarters is at Airport Road West (“**Phoenix HQ**”) and its stores at Heron Road.

Phoenix currently provides centralised corporate services to the whole Phoenix Group. As detailed in section 2.2, similar efficiencies can be achieved for the GTW distribution business by consolidating some of the functions within Phoenix for the existing and the GTW Licensed Areas and will ensure that the GTW distribution business benefits from the knowledge and experience of existing FTEs, including Senior Managers and the Directors.

The GTW Licensed Area is remote from Belfast. It would not be practicable or cost effective to consolidate operational activities for Phoenix and the GTW distribution business in Belfast. Instead efficiencies can be achieved by having an operations depot in Omagh.

Omagh is situated c.30 miles from Enniskillen, c.20 miles from Strabane, c.25 miles from Cookstown, and c.30 miles from Dungannon and is therefore central to all parts of the GTW Licensed Area – Phoenix envisages that operatives in the GTW Licensed Area will never be more than 60 minutes from either the operational base in Belfast or the operations depot in Omagh. Omagh is therefore the prime operational location for a second site.

A site in Omagh would mean that, excluding Derrylin at c.40 miles, all other towns within the GTW Licensed Area would be a similar distance from the operations depot in Omagh as towns within the existing Licensed Area are from the operational base in Belfast i.e. c.25 miles.

This operations depot in Omagh will be provided by the construction contractor and will be a combined operation; the main usage will be a store and yard for construction operations with the secondary function being the provision of office facilities for Phoenix’s remote FTEs (i.e. the remote resources deployed to the GTW Licensed Area as detailed in section 2.2) and for Phoenix’s construction contractor operating within the GTW Licensed Area, therefore providing a more centrally located base than at Phoenix HQ.

Further detail of the operations depot in Omagh is provided within Phoenix’s Innovation and Technology Transfer submission (“Development of Gas Network in the GTW Licensed Area” section).

3. MOBILISATION

3.1 PLANS AND PROPOSALS

The GTW distribution business activities are principally focused on facilitating the secure, safe, reliable, efficient and economic development and operation of the natural gas network in the GTW Licensed Area. A primary objective of the LP Business Plan is to have gas flowing in the LP distribution network in the GTW Licensed Area as early as possible following the award of licence by UR. To achieve this Phoenix aims to carry out the first year's construction at the same time as the high pressure ("HP") transmission network is being constructed (see section 3.6).

On completion of the HP commissioning process, Phoenix will therefore be in a position to commission the LP mains that have been laid and tested.

Phoenix has identified the key activities that will be carried out during mobilisation as:

- Recruitment/Staffing Strategy
 - Engineering; and
 - Sales.
- Network Design;
- Stakeholder Engagement;
- Contract Procurement;
- Accommodation Procurement;
- Systems Deployment;
- Network Construction
 - Network Prioritisation; and
 - Initial Construction Timetable.

Further detail on each is provided below.

Recruitment / Staffing Strategy

Engineering

On award of the licence Phoenix will immediately begin the recruitment of four Engineers. Phoenix has considerable experience in training and developing Engineers and proposes to utilise the new Engineers, alongside the existing experienced Engineers, to carry out the detailed design of the LP gas network for the GTW Licensed Area. An experienced Engineer will be appointed as Network Operations Manager.

The engineering team for the GTW distribution business will be integrated into the overall Phoenix engineering team and, as such, supported by experienced Senior Managers who will have overall responsibility for project delivery.

This approach will allow Phoenix to commence the detailed design and liaison with key stakeholders at the earliest possible stage following award of licence.

Sales

Phoenix will recruit two Energy Advisors to work in the I&C sector during mobilisation. Their roles will include identifying and engaging with prospective customers, managing customer expectations and liaising with the Engineering Team to prioritise the network build. These Energy Advisors will also engage with relevant stakeholders, including the NIHE and New Build sectors.

Full detail on the activities of the Energy Advisors is provided in chapter 7.

Network Design

To date Phoenix has designed and constructed over 3,000 kilometres of distribution gas mains in its existing Licensed Area and has the processes and procedures in place to develop Engineers, ensuring competency in all aspects of the natural gas industry from network design through to construction and operation.

The complete high level design of the network will be carried out in advance of the award of the distribution contract. This will afford the design Engineers and the contractor an appropriate time period at the start of the contract to develop the processes/procedures/method statement etc. required prior to commencing construction. It is envisaged, at this stage, that these will be consistent with the processes/procedures/method statements etc. already in operation in Phoenix.

The design programme follows a standardised process (see diagram below). The first stage in a design process is to procure the necessary data for the Geographical Information System ("GIS") (see section 3.5). This will include the Large Scale Vector Data, Small Scale Raster Data and Properties Information

(Pointer Dataset). In evaluating the Fingleton McAdam (“FMA”) Feasibility Study in advance of this licence application process, Phoenix has already obtained all the relevant GIS data for the LP network.

With GIS data available the Phoenix Engineers and the Energy Advisors will be able to carry out detailed surveys. The engineering survey will identify areas of Special Engineering Difficulty e.g. River Crossings etc., Special Environmental Interest etc. The Energy Advisor’s survey will identify all prospective large loads, suitable meter positions etc.

As detailed in section 3.5, Phoenix uses the ArcGIS suite of GIS software supplied by Esri. This GIS is utilised in conjunction with SynerGee which is an industry standard network analysis package supplied by Stoner Software, part of the DNV GL Group. Phoenix has developed in-house, bespoke training programmes for both suites of software which are supplemented, where necessary by external training courses.

Stakeholder Engagement

In conjunction with the surveys, both the Energy Advisors within the GTW Licensed Area and the engineering teams, with appropriate support from Phoenix’s current resources - operational and corporate - will consult widely with relevant stakeholders, such as Department for Regional Development - Roads Service (“Roads Service”), NIHE, Councils and Chambers of Commerce. This will ensure that all statutory requirements are met, that relevant information is disseminated to stakeholders and that the construction programmes meet the business plan objectives. This approach has proven effective in the existing Licensed Area where Phoenix has developed from scratch a network and a market for natural gas over the last c.17 years. Further detail on stakeholder engagement and examples of some of the stakeholders Phoenix currently engages with is provided in sections 3.6 and 7.4. Phoenix will continue to engage with these stakeholders in relation to development of the GTW distribution business. These stakeholders provide Phoenix with a better understanding of the impacts that may be felt by an individual or group and allow Phoenix to articulate its own values, strategy, explain its commitments and proactively improve relationships.

Contractor Procurement

In order to construct the LP Network, Phoenix will engage a construction contractor who will carry out the construction of the network. This contractor will be responsible for the detailed design and construction of the network, including the delivery of all materials procurement, detailed design, statutory notifications and as-laid records.

As detailed in section 2.1, Phoenix has developed considerable experience in the procurement and management of such contracts and is currently in the process of completing the tender process for the fourth Period Distribution Contract for the existing Licensed Area. This fourth contract is due to commence July 2014. Further information on this process is provided in section 3.6.

Accommodation Procurement

As detailed in section 2.4, the contractor, once appointed, will be charged with procuring an operations depot in Omagh; the main usage will be a store and yard for construction operations with the secondary function being the provision of office facilities for Phoenix's remote FTEs (i.e. the remote resources deployed to the GTW Licensed Area as detailed in section 2.2) and for Phoenix's construction contractor operating within the GTW Licensed Area therefore providing a more centrally located base than at Phoenix HQ.

Systems Deployment

As detailed in section 4.5, access to core systems at the operations depot in Omagh e.g. email and Concerto (the corporate asset register) will be via Citrix, a secure and reliable solution currently deployed by Phoenix. In addition, Engineers will require remote access to GIS and to Network Analysis (SynerGee supplied by DNV GL). This will be provided via standalone licences for each Engineer. Phoenix has considerable experience in working with both these systems since their initial deployment in Phoenix in 2001.

Network Construction

As it will not be possible to construct the entire network in one year, it will be necessary to prioritise the build. As a basic principle Phoenix will initially construct the key feeders for each town before moving on in a structured manner to construct the remaining infill areas.

Network Prioritisation

Phoenix will work closely with all relevant stakeholders to develop a strategy for prioritising the build that will ensure that stakeholder expectations and business plan objectives are met. As an example, Phoenix will aim to ensure, as far as reasonably practicable, that gas is made available to:

- large customers expected to burn in the first year;

- social housing boiler replacement schemes;
- new build sites; and
- owner occupier areas.

In addition, where practicable, Phoenix will endeavour to make gas available to areas where there is high customer demand.

The internal and external resources required

As per section 2.2, the internal and external resources that will be required during mobilisation are:

Reference	Internal / External	Resource
001	Internal <i>(Remote Resource)</i>	Engineering Staff <ul style="list-style-type: none"> • 1 FTE x Network Operations Manager • 3 FTEs x Engineering Officers
002	Internal <i>(Remote Resource)</i>	2 FTEs x Energy Advisors (Non-domestic)
003	External	Construction Contractor
004	Internal <i>(Consolidated Resource)</i>	1 FTE x Senior Manager (see section 3.2)

How these resources will be secured and managed

Recruitment arrangements are set out in section 3.2.

001 – Engineering Staff

Phoenix has a well developed Engineering Officer Development Programme (see section 2.3). Within the core Phoenix business there are currently 20 Engineers operating at Network Operations Manager, Engineering Officer and Engineering Assistant levels.

For the LP Network, Phoenix will transfer experienced Engineers from the core business while recruiting new Engineers to being the Engineering Officer Development Programme. The recruitment for these roles will take place following award of the licence by UR to allow sufficient time for training of the additional Engineers without negatively affecting the core business.

Overall responsibility for the Engineers on this project will be assigned to a Senior Manager within the existing Commercial Operations department, who in turn reports to the Commercial Operations Director. Day-to-day management of the Engineers will be the responsibility of the Network Operations Manager (“**NOM**”) who will be working specifically on the project.

The NOM will have three Engineering Officers (“**EO**”) working on the project. All four Engineers (the NOM and three EOs) will have responsibility for the design and supervision of the construction of the LP network. This will include liaison with relevant stakeholders to ensure that the LP Business Plan objectives are achieved.

002 – Energy Advisors

Phoenix has a very experienced Sales team, with robust procedures and processes in place for training and development.

As noted above, Phoenix will recruit two Energy Advisors to work in the I&C sector during mobilisation.

The Energy Advisors will be managed and supported within the existing Phoenix structure, with an existing Senior Manager having overall responsibility.

003 – Construction Contractor

Appointment of the construction contractor is detailed in sections 3.6 and 6.1. Management of the contractor will be the responsibility of the Senior Manager (see 001 above), with direct supervision of the contractor being provided by the NOM and Engineering Officers assigned to the project. Commercial Management of the contractor will be by the QS assigned to the project supported by Phoenix’s current Commercial Manager.

Timetable for the overall delivery of the low pressure pipeline from licence grant to first operational commencement date. Applicants should explain the timetable, e.g assumptions, key dependencies, and risks

The timetable for the overall delivery of the GTW LP Pipeline System is provided at Figure 3.1.

Phoenix aims to make gas available as soon as possible after the award of the licence by UR. This is contingent on gas being made available, via the transmission system, and therefore the programme proposed is based, in part, upon the Phoenix High Pressure Operational Business Plan.

This timetable is based on the FMA designs and does not take into account areas where LP network could be substituted for HP network. These options are presented in section 3.6, along with revised timetables.

One key assumption in the development of the timetable, as mentioned, is that the HP network is completed in a timely manner. The completion of the HP network will, in turn, be contingent on a number of factors:

Award of licence

If there is undue delay in the award of the HP licence, this will have a significant knock on effect on the completion date of the HP project. Realistically HP pipeline construction is limited to a specific window which, among other things, is weather dependant. A delay in awarding the licence beyond October 2014 could result in the construction season being missed further down the line and could introduce a year's delay in the whole project.

Planning Approval

A HP pipeline, such as the one required for the GTW Licensed Area, will require Planning Approval. This is a complex process involving numerous parties and could introduce a degree of risk regarding timescales into the HP pipeline project. Phoenix has put forward a robust proposal for managing the Planning Approvals process within the Phoenix High Pressure Operational Business Plan which will mitigate the risk of delays in being awarded Planning Approval.

Landowners

Obtaining permission to construct the pipeline and associated easements is a major part of any pipeline project. Phoenix has robust proposals in place within the Phoenix High Pressure Operational Business Plan which will mitigate the risk of delays due to landowner disputes.

It should be noted that, in the event of the company being unable to successfully come to an agreement with a given landowner, it may be necessary to apply to the Department of Enterprise, Trade and Investment (“**DETI**”) for a necessary wayleave under the terms of the licence. It is important that the necessary provisions that allow for such a wayleave be included in the licence.

Phoenix aims to commence construction of the initial feeders at the start of the year that construction will commence on the HP pipeline. These initial feeders, once completed, will be tested as normal. As

there will be no gas available at that point, the mains will then be left until such time as the gas becomes available from the HP network.

This could be seen as introducing a degree of risk as there is the possibility of a third party contractor damaging the gas main and, as there is no actual gas leaking, failing to notify the gas company of the damage. To mitigate this risk, Phoenix will then leave the mains charged with a small amount of air, at a pressure that minimises the risk posed by the stored energy in the event of a sudden release.

Loggers will be attached to these networks and these will be set up to send an alarm through to the Phoenix control room in the event of a loss of pressure in the main. This will allow Phoenix Engineers to investigate, regardless of whether the offending contractor informs the company of the damage.

This will minimise the requirement for additional testing once gas becomes available.

As noted above, a primary objective of the LP Business Plan is to have gas flowing in LP distribution network in the GTW Licensed Area as early as possible following the award of licence by UR. To achieve this Phoenix aims to carry out the first year's construction at the same time as the HP transmission network is being constructed (see section 3.6).

On completion of the HP commissioning process, Phoenix will therefore be in a position to commission the LP mains that have been laid and tested. Phoenix expects to have gas flowing in the LP System within one month of gas being made available from the HP Pipeline System.

One month has been set aside in the programme to allow for this commissioning, which will result in gas being available for customers to burn in each of the towns. This process, of installing the LP System at the same time as the HP pipeline, minimises the interval from gas being available from the HP System and gas being available for customers on the LP System.

3.2 RESOURCES

Organisational arrangements to secure and manage internal and external resources

The recruitment process is utilised to manage any additional resource requirements where possible. Further information is provided under "Recruitment arrangements" below.

Phoenix have a framework agreement in place with various recruitment agencies (following a tendering process) in order to address occasions when resources are required in a tight timescale, for a short period or when it is not cost effective to recruit directly. Phoenix will adopt a similar tendering process and a similar framework agreement as required for the GTW business.

There are some situations when it is not cost effective to have an internal resource provision as the demand is ad hoc for a specific skill set e.g. Employment Solicitor. These resources are purchased by Phoenix from external providers in line with the company's Procurement Policy.

There are occasions when the service provision is bought in through a formal competitive tender process. Further detail is provided at chapter 6.

Phoenix intends to manage the construction contract across the GTW Licensed Area in accordance with the established processes already in use in the existing Licensed Area. Phoenix is subject to the OJEU procurement thresholds and the construction contract for the GTW Licensed Area will be awarded by Phoenix following such a competitive tendering process completed during mobilisation. Phoenix's proposals for initiating the competitive tender process and awarding the construction contract for the GTW Licensed Area are fully detailed in section 3.6.

Manpower numbers

As noted in section 3.1, seven internal FTEs will be required to manage the mobilisation phase.

The manpower resources to manage mobilisation will be disproportionate to the net resources allocated to the manpower cost line from year one given that:

- engineering staff normally allocated from operating to capital expenditure will not be covered by the capital expenditure ("**capex**") cost lines; and
- one-off regulatory and operational activities e.g. establishing a Network Code, recruiting additional resources, extending information systems, etc. will have to be delivered within a limited timeframe placing a greater demand on resources.

Two FTEs (Energy Advisors) will be required to manage sales activities during mobilisation. The primary role of an Energy Advisor is to promote and sell the benefits of natural gas. Duties include field canvassing, carrying out energy surveys, collating information and completing paperwork with customers as required. Further detail is provided in section 7.2.

Four FTEs (one Network Operations Manager and three Engineering Officers) will be required to manage engineering activities during mobilisation.

The Network Operations Manager is responsible for managing/supervising operations and maintenance, upstream gas emergency response, downstream gas emergency response, emergency control centre contract, asset management and maintenance, contract management, grid control, transportation services, network construction design and the Engineering Officers.

The Engineering Officer role is responsible for a broad range of activities associated with the construction, operation and maintenance of a natural gas network and ensures all supplies are designed and constructed in the most efficient, cost effective and safety conscious manner in line with company and statutory guidelines. Further detail is provided in section 3.1.

One FTE (one Senior Manager) will be required to undertake regulatory and operational activities during mobilisation. These activities include:

- all key Network Code and retail competition processes must be established with all necessary supporting systems developed. These activities are fully detailed in section 5.4;
- a number of regulatory submissions must be made e.g.
 - determining the first price control review;
 - agreeing the Connection Policy; and
 - determining the conveyance charges.
- the competitive tender process must be initiated and the construction contract awarded. These activities are fully detailed in section 3.6;
- additional resources must be recruited to meet the manpower requirements for the GTW distribution business; and
- information systems must be extended through the addition of additional data sets to enable processing for the GTW distribution business. These activities are fully detailed in section 4.5.
- managing and supporting the two FTEs responsible for sales activities within the non-owner occupier sector during mobilisation. See section 3.7.

As detailed in section 2.2, efficiencies can be achieved by consolidating some of the functions within Phoenix for the existing and the GTW Licensed Areas and will ensure that the GTW distribution business benefits from the knowledge and experience of existing FTEs, resulting in a marginal increase of one FTE to undertake regulatory and operational activities during mobilisation.

Recruitment arrangements

The HR department is responsible for the recruitment arrangements within the organisation. HR work alongside managers to ensure their resource requirements are met in a timely manner and in line with

equal opportunity legislation and any other relevant legislation. The HR department's role will be expanded to include the GTW distribution business.

Vacancies (i.e. recruitment of resources to manage mobilisation and recruitment of any additional resources to manage operations across the GTW distribution business thereafter) will be recruited using a combination of internal advertising, the Phoenix website and external advertising, including within the GTW Licensed Area.

An overview of the recruitment process is as follows:

1. Vacancy Identified

A Staff Requisition form is completed by the recruiting Manager and signed by their Director.

2. Vacancy Authorised

The Staff Requisition is authorised by the Group Chief Executive/Group Finance Director to ensure manpower budgets are not exceeded.

3. Attraction method agreed

HR discusses the vacancy requirement with the recruiting Manager and agrees the shortlisting criteria and where to place the advert. All vacancies are advertised internally in conjunction with any external recruitment.

4. Advert placed

HR agrees the advert wording and closing date with the recruiting Manager. HR places the advert in the appropriate publication/ website/ Job board. Vacancies are also advertised internally and on the Phoenix website.

5. Applications received

Candidates return completed application forms to HR before the closing date. HR removes the Equal Opportunities Monitoring Form and Criminal Declaration form and log candidate details.

6. Shortlisting

HR provides the recruiting Manager with copies of the application forms and the shortlisting criteria. HR and the recruiting Manager agree the shortlist for interview. HR writes to inform all unsuccessful candidates.

7. *Interviews*

Prior to the interview the recruiting Manager and HR agree any test (if appropriate) and interview questions and the scoring system to be used. HR invites candidates for testing/ interview. Competency based interviews are conducted by the recruiting Manager and HR.

8. *Recruitment decision*

Following testing/interview the recruiting Manager and HR score each candidate's performance. Using this information the recruiting Manager in conjunction with HR will select candidates to be offered the role/ for second interview (if appropriate).

9. *Job Offer*

HR will agree the salary for the role with the Group Finance Director. HR will contact the successful applicant and offer the role. All job offers are conditional upon the receipt of:

- satisfactory employment references (five years);
- pre-employment medical report;
- certificates confirming academic qualifications;
- photographic identification;
- address verification; and
- proof of eligibility to work in the United Kingdom.

10. *Referencing*

HR conducts all pre-employment reference checks and agrees start dates. HR notifies unsuccessful applicants. Feedback is provided on request.

3.3 ACTIVITIES

Provide details of the proposed activities

Phoenix provides full detail of each mobilisation activity and how the mobilisation cost forecasts entered in the workbook submission are built up (i.e. its identification and application of mobilisation activities,

mobilisation cost drivers and any assumptions made by it in its workbook submission) in this section 3.3 and in the assumptions appended to the workbook submission.

Based on Phoenix's previous experience the total number of FTEs gives a reasonable approximation of the main driver of the following activities:

- travel and subsistence;
- IT;
- office costs (providing, as detailed in section 8.3, that an appropriate unit cost deflator is assumed for the GTW Licensed Area to account for the reduced rental costs etc. outside Belfast);
- building insurance;
- stationery; and
- HR (recruitment and training).

The breakdown of costs classified by Phoenix within each activity is fully detailed in section 8.3 and is not therefore repeated here.

The mobilisation cost forecasts for each of these cost lines are largely derived from the GD14 determination. As detailed in section 8.1, this is an appropriate basis for forecasting the opex requirements within the GTW distribution business; in summary the GD14 determination captures any efficiency for customers already realised by Phoenix along with potential efficiencies forecast by Phoenix within each individual cost line. Therefore the GTW distribution business would immediately benefit from the innovation, improvements and efficiency gains already embedded within Phoenix's operation.

The build up of the remaining mobilisation activities and cost forecasts is detailed below.

Manpower

Section 3.2 sets out the manpower resources to manage the mobilisation process.

As detailed in section 2.2, the manpower cost line comprises three cost elements:

1. Gross Salaries (a detailed breakdown of the costs covered under gross salaries is provided in section 2.2);

2. National Insurance Contributions; and

3. Fleet costs.

These three elements and their cost build-up are detailed in the assumptions appended to the workbook submission. In summary:

Gross Salaries

As per the manpower cost build up post mobilisation detailed in section 2.2, mobilisation gross salaries have been determined in line with the GD14 determination. Phoenix has used the average unit costs derived by UR for each band as detailed in the assumptions appended to the workbook submission.

National Insurance Contributions

Phoenix has built-up from first principles the calculation of NIC and reflects the current charging level. As per the NIC build up post mobilisation detailed in section 2.2, car NIC costs are 13.8 per cent. of benefit in kind costs, assumed to be £3,664 per mobile employee.

Fleet Costs

As per the fleet cost build up post mobilisation detailed in section 2.2, an average fleet rate per vehicle has been determined based on the GD14 determination. There are several elements considered in the build up of fleet costs (lease charge, fuel costs, mileage). Whilst the unit rate of lease charges and fuel costs will remain consistent with that assumed in the GD14 determination, it has been anticipated that unit mileage rates will increase due to the geography of the GTW Licensed Area.

Professional and Legal Fees

Phoenix's mobilisation cost forecast of £500,000 (£450,000 in the mobilisation period and £50,000 in year one) as detailed in the assumptions appended to the workbook submission covers the costs relating to professional and legal services required for establishing GTW distribution business operations e.g.

- consultancy costs (payroll, engineering, health and safety, security, regulation and general) e.g. completing the first price control review;
- legal and advisor fees (corporate, commercial, financing, HR, regulatory, competition); and
- audit and accountancy fees.

Specific examples include obtaining:

- legal advice on establishing all key Network Code and retail competition processes and consultancy advice on developing all necessary supporting systems (see section 5.4);
- consultancy advice on completing the first price control review (see section 4.2); and
- legal advice on initiating the competitive tender process and awarding the construction contract (see section 3.6);
- consultancy advice on recruiting additional resources to meet the manpower requirements for the GTW distribution business (see sections 2.3 and 3.2); and
- consultancy advice on extending information systems through the addition of additional data sets to enable processing for the GTW distribution business (see section 4.5).

Business Insurance

Phoenix's mobilisation cost forecast of £20,000 as detailed in the assumptions appended to the workbook submission covers the costs of managing the risks that may occur during the normal course of business in the mobilisation period. The costs classified by Phoenix within the business insurance cost line are detailed in section 8.3.

Advertising, Marketing and PR

Phoenix has applied a strategic and consistent approach in developing each of the market sectors within the existing Licensed Area. Similarly Phoenix will need to develop the reputation of natural gas to optimise development in the GTW Licensed Area by obtaining a strong presence and share of voice in the energy market.

Natural gas as a product competes with other strong and established fuels such as oil, coal, electricity, and more recently with renewable technologies. All properties in the GTW Licensed Area are using an alternative fuel for their manufacturing processes, heating systems, cooking facilities etc. The advantages and disadvantages of natural gas need to be compared alongside competing fuels. It is only through market development activity that consumers are encouraged to consider converting to natural gas.

Changing consumer behaviour is one of the most difficult challenges in developing any new product or indeed establishing a new market. Our experience affirms that this can only be achieved when consumers (i) understand what you are offering and (ii) trust in the claims you make. Market development is essential not only to establish but also maintain the level of trust necessary to convince

a customer that the business in which you operate is reliable. Establishing trust over a sustained period of time helps a customer to consider a change in their current loyalty to a particular brand or product and to make a positive decision to change their behaviour.

Digital media and advertising opportunities have increased dramatically in recent years. This has added to the challenge of companies trying to communicate with their target market.

There are many benefits of natural gas and each will have a different appeal to each of the market sectors; however these still need to be communicated in order to persuade consumers that on the whole gas is an excellent fuel and one worth investing in. Unfortunately there is no single message that can be communicated which will persuade all consumers and therefore a specific range of benefits needs to be communicated to a more targeted group of consumers for the advertising to be effective. Our experience has demonstrated that consumers can be stimulated to respond in large numbers but this is only effective if resources are targeted.

Research has proven that promotions, vouchers, Groupons and guarantees on products help consumers to decide to spend. From the largest retailers such as Sainsbury's and Marks and Spencer to the local butcher, all are using some form of promotion to encourage consumers to spend.

Phoenix's mobilisation cost forecast of £250,000 spread over the first three years (i.e. £150,000 in the mobilisation period and £50,000 in each of years one and two) as detailed in the assumptions appended to the workbook submission covers the cost of all advertising, marketing and Public Relations ("PR") activities required to support development of a natural gas industry in the GTW Licensed Area. Further detail is provided in chapter 7.

The Advertising, Marketing and PR cost line also includes the cost of entertainment:

Staff Entertainment

Phoenix has also included costs for staff entertainment consistent with HMRC guidance on non-taxable employee benefits, based on offering £150 per employee. This has proven to be a reasonable and prudent allowance for staff entertainment and associated CSR functions within Phoenix and is therefore appropriate for mobilisation within the GTW distribution business.

Client Entertainment

Although Northern Ireland has a well-established natural gas supply chain, Phoenix envisages having to reintroduce some of these approaches in the GTW Licensed Area to develop the reputation of natural gas and ensure that natural gas conversions happen in all sectors. Phoenix will therefore need to invest a significant amount of time on engagement with all key stakeholders during mobilisation e.g.

- Phoenix will need to develop a strong community engagement programme designed to engage fully with the communities within the GTW Licensed Area e.g. by holding numerous seminars

across the GTW Licensed Area to extol the benefits of natural gas, to detail the network development programme and to provide communities with the opportunity to meet with Phoenix and address any queries;

- One of the key initiatives implemented by Phoenix was the annual Natural Gas Investment conference. This full day conference brought together several hundred senior representatives from various companies involved in the natural gas product supply chain across the UK and Europe to showcase the investment opportunities in Northern Ireland. This conference stimulated interest and enabled these companies to establish a 'presence' in Northern Ireland which opened technology opportunities to consumers converting to natural gas. Although Northern Ireland has a well-established natural gas supply chain, Phoenix envisages having to reintroduce this conference in the GTW Licensed Area;
- trade development will be a key part of the orderly development of the industry and Phoenix will need to provide a key role with installers, distributors, retailers, specifiers, architects etc.; and
- Phoenix will need to meet with architects and developers to discuss the programme and design of natural gas prepared homes. Further detail is provided within Phoenix's Innovation and Technology Transfer submission ("Natural Gas Prepared Homes and Local Councils" section).

Phoenix has included costs for client entertainment of £5,000 in the mobilisation period as detailed in the assumptions appended to the workbook submission.

Car Insurance

Phoenix's mobilisation cost forecast is based on the GD14 determination of £750 (£2012) per car as detailed in the assumptions appended to the workbook submission.

Billing

Phoenix's mobilisation cost forecast of £5,000 relates to bank fees, credit vetting etc. as detailed in the assumptions appended to the workbook submission.

Telephone and Postage

Phoenix's mobilisation cost forecast of £2,000 as detailed in the assumptions appended to the workbook submission relates to provision and usage of communications infrastructure (excluding IT) and stationery. The costs classified by Phoenix within the telephone, postage and stationery cost line are detailed in section 8.3.

The total number of mobile phones gives a reasonable approximation of the main driver of the mobile phone cost line. Phoenix has included a mobilisation cost forecast of around £3,000 for the provision of mobile phones determined using an average cost per mobile phone based on the GD14 determination.

3.4 COSTS

Details of each mobilisation activity and detail of how the mobilisation cost forecasts entered in the workbook submission are built up are provided in section 3.3. In summary Phoenix’s mobilisation cost of £1,082,498 in the workbook submission is built up as follows:

Activity / cost line	Costs
Manpower	£379,400
Travel and Subsistence	£3,653
Entertainment	£6,050
IT	£31,166
Office costs	£19,208
Stationery	£2,435
HR	£4,600
Telephone and Postage	£4,987
Advertising, Marketing and PR	£150,000
Professional and Legal Fees	£450,000
Billing	£5,000
Insurance	£25,999
Total	£1,082,498

Note this table excludes the “mobilisation” costs identified in section 3.3 which are forecast to be incurred in year one.

3.5 SYSTEMS

Arrangements to put in place required work processes

Phoenix has a proven track record in the natural gas market in Northern Ireland, having developed from scratch a network and a market for natural gas over the last c.17 years. Since 1996 Phoenix has been successful in introducing natural gas to a new market and establishing a strong and vibrant supporting industry. Whilst successfully constructing the network in the existing Licensed Area, Phoenix has created and developed a comprehensive suite of proven works management processes. The Directors strive for increased quality, safety and productivity by continuously reviewing and improving these various processes. The last c.17 years of process development and improvement will therefore be extremely beneficial for the GTW Licensed Area from the outset.

Each Senior Manager is responsible for his/her departmental processes within Phoenix and each of their remits will be expanded to include the GTW Licensed Area. Fully documented processes will be reviewed, updated and approved for the GTW distribution business. Therefore on the award of the licence each Senior Manager will have the same responsibilities within the GTW Licensed Area as they have in the existing Licensed Area and will be required to consider each of their processes to ensure they are appropriate for the GTW Licensed Area. This will ensure that any subtle changes required to accommodate remote working or geographical spread, will be highlighted and the processes will be developed accordingly to ensure they fully meet the requirements of the GTW distribution business.

Arrangements to put in place required asset management processes

Again the construction of the network in the existing Licensed Area has meant that Asset Management processes have already been developed - they are an essential part of owning and operating a successful distribution network. This means all the key systems and processes required to successfully locate, monitor and maintain Phoenix's existing assets will be deployed to carry out the same function within the GTW distribution business.

Asset Management has further been developed within Phoenix over the last four years with the appointment of an Asset Manager in 2010 with a team of Engineers responsible for all areas of Asset Management. The department began by engaging a consultant to carry out a Gap Analysis based on Phoenix's compliance with the principles outlined in the Institution of Asset Management's PAS 55 methodology. A short and long term Asset Management Strategy was then developed to improve compliance within Phoenix. This strategy is fully detailed in section 5.7.

As part of this project a RCM plan and process was developed. Two Engineers attained RCM facilitator qualifications and now head up a team who have analysed each piece of apparatus in the Phoenix asset to enable condition based maintenance schedules to be developed, improving equipment life span/reliability and decreasing breakdown and maintenance costs.

With the release of the ISO 55000 asset management standard in January 2014, Phoenix is currently working towards achieving accreditation by late 2015. Consequently, the work completed and ongoing within the Asset Management Department has led to continual development and improvement, resulting in a suite of robust Asset Management Processes. These existing processes will therefore provide an excellent Asset Management template for the GTW distribution business. The Asset Manager will be responsible for the implementation of these processes across the GTW distribution business.

Arrangements to procure required information systems

GIS

Phoenix currently uses the ArcGIS suite of GIS software supplied by Esri as the corporate GIS. ArcGIS is widely used by utilities and since migrating to it in 2001, Phoenix has developed considerable expertise in its use, both for capturing records and for the implementation of innovative GIS solutions.

For the purposes of the GTW Licensed Area, there are two distinct phases where different GIS solutions will be required:

1. Design and Planning

For the design and planning stage, the design Engineers will be provided with laptops incorporating standalone ArcView licences. This will provide a low cost mobile solution with full read/limited write capabilities for the Engineers.

The digitising of the network designs can take place on these laptops, if required, and transferred back to the corporate system when the engineer returns to Phoenix HQ. Alternatively, the networks can be digitised directly into the corporate system on the engineer's return.

Network analysis models are generated from this data. Phoenix utilises SynerGee, another industry standard package, as the network analysis tool. This is integrated with ArcGIS, allowing models to be directly imported into SynerGee from the GIS.

2. Construction

For the network construction phase of the LP system it will be necessary to have in place suitable resources to capture as-laid data (see section 5.7) as the network is being constructed. Phoenix will employ two Records Officers who will be based at the operations depot in Omagh.

The two Records Officers will be responsible for capturing the necessary data from site and for digitising it onto ArcGIS. The data that will be captured will include:

- Pipe Diameter
- Pipe Material
- Pipe Depth of Cover
- Carrier Main Details
- Gang Reference No
- Changes in Diameter / Method Laid
- Pipe Pressure
- Pipe SDR
- Pipe Position
- Protection Employed
- Connection Detail
- Pressure Reduction Details
- PSSR Compliance Information

- Test Certificates
- Concession Joint Certificates
- Weld Records

In addition to the capture of new as-laid data, it will be necessary to have systems in place to allow for the local printing of maps, as-laid plans and design plans. This will take place at the operations depot in Omagh. To facilitate this, an accompanying large format printer will be required onsite. Newly digitised as-laid records will be synchronised back to the corporate GIS Database using built in functionality in ArcGIS.

Once construction has commenced it will be necessary to equip the Plant Protection Officers with access to the as-laid data. This will be achieved using mobile tablets linked back to ArcGIS, providing a low cost and effective solution to providing field data to operatives.

Work Issue

Construction

Phoenix currently operates a works issue system for construction which is a bespoke database. All the necessary work details including diameters, lengths, etc. as well as approvals and compliance with PSSR are captured.

Phoenix will utilise the same system for issuing work in the GTW Licensed Area. There are no additional costs associated with this.

Maintenance

For meter, meter housing and small regulator (<65 scmh) maintenance, Phoenix uses the Concerto system for issuing work. This captures all the relevant details associated with the job.

For district Pressure Reduction Stations (“**PRS**”) and large (>40 scmh) I&C regulators, Phoenix use the Governor Maintenance Database. This is a bespoke database that records details of all items of plant and the faults and maintenance associated with them. RCM and Asset Management are also facilitated through this package.

Phoenix will deploy both Concerto and the Governor Maintenance Database for the GTW Licensed Area. There are no additional costs associated with these.

Further detail on Concerto and the Governor Maintenance Database is provided in section 5.7.

All the systems required to build, operate and maintain the network in the GTW Licensed Area are already procured and being successfully utilised within the existing Licensed Area. Therefore on the award of the licence each Senior Manager will immediately engage in a departmental analysis to identify if any existing system enhancements would be required for him/her to manage their responsibilities within the GTW Licensed Area.

Further detail is provided within Phoenix's Innovation and Technology Transfer submission ("Systems" section).

The Supply Point Administration system (to effectively manage all Licence and Network Code requirements for Supply Point Administration) and the SMP Confirmation System (to manage all processes associated with customer switching) are fully detailed in section 5.4.

3.6 LOW PRESSURE SYSTEM CONSTRUCTION

Phoenix began construction of the natural gas system in the existing Licensed Area in 1996. As part of the introduction of natural gas to Northern Ireland, Phoenix purchased the existing old towns' gas system from Belfast City Council. From the commencement of construction in 1996 through to the present day Phoenix has designed and constructed a LP natural gas system comprising of over 3,000 kilometres of gas mains.

The LP network in the existing Licensed Area has been designed in accordance with industry best practice and IGEM recommendations e.g.

- IGE/TD/3 - Steel and PE pipelines for gas distribution;
- IGE/TD/4 - PE and steel gas services and service pipework;
- IGEM/TD/13 - Pressure regulating installations for Natural Gas, Liquefied Petroleum Gas and Liquefied Petroleum Gas/Air;
- IGE/GL/1 - Planning of gas distribution systems of MOP not exceeding 16bar; and
- IGE/GL/5 - Procedures for managing new works, modifications and repairs.

As at 31 December 2013, Phoenix had made gas available to c.301,000 properties within the existing Licensed Area, of which c.171,000 (57 per cent.) have been connected to the network.

Construction

A variety of different construction techniques, dependant on site conditions and requirements, have been utilised in the development of the network in the existing Licensed Area. These have included:

- traditional open cut – excavating a trench in the carriageway / footway, installing a gas main and the trench backfilled and reinstating.
- directional drill – using a directional drill to bore a guided path through the ground and pulling a pipe back in. This minimises disruption to the general public, reduces the requirement to dispose of spoil in landfill, minimises reinstatement requirements.
- insertion – Using the existing, decommissioned Towns Gas Cast Iron network as a conduit for the new Polyethylene (“PE”) gas mains, minimising disruption, waste materials and reinstatement.
- roll-down - Using specialist contractors to squeeze down the PE to a smaller diameter in order to insert into existing old towns’ gas mains, reverting the PE pipe back towards its original size until it is a close fit to the carrier main, maximising the capacity of the main for a given size of carrier main while minimising the disruption, waste and reinstatement.

Phoenix has preferred to utilise ‘No Dig’ techniques such as rehabilitating an existing cast iron network via insertion or Directional Drilling, though both are dependent on other factors such as the existence of an old network or ground conditions.

Design

The primary network analysis tool used by Phoenix is SynerGee, supplied Stoner Software (part of DNV GL). All the high level design work for the network that has been constructed to date has been carried out in-house by Phoenix Engineers. Phoenix has developed a structured training programme for all Engineers.

As part of this training programme a comprehensive training guide, tailored to the Phoenix operational parameters, for network analysis has been developed. This ensures consistency in approach and design for any network analysis models created.

These high level designs, which dictate pipe diameters and preferred routes, are passed to the contractor who will complete out the detailed design, incorporating fittings etc and working collaboratively with the Engineers to agree a final route selection.

Proposal for engagement with external stakeholders necessary to construct a system

As part of the design and construction of any package of work, Phoenix has to engage with a range of external stakeholders. These range from statutory bodies to local interest groups and potential customers. The exact makeup of external stakeholders that need to be consulted will vary from work package to work package and will be determined on a project specific basis.

Some of the external stakeholders that Phoenix will engage with as part of the LP system construction in the GTW Licensed Area include:

- UR;
- HSENI;
- Roads Service;
- Department of the Environment - Planning;
- DETI;
- Department for Social Development (“**DSD**”);
- NIHE;
- Northern Ireland Federation of Housing Associations (“**NIFHA**”);
- Local councils;
- Chambers of Commerce/Local Interest Groups;
- Consumer Council for Northern Ireland (“**CCNI**”);
- General Public; and
- Other Utilities, including:
 - Northern Ireland Electricity (“**NIE**”);
 - Northern Ireland Water (“**NIW**”);
 - BT;
 - BGE(NI); and

- Firmus Energy.

It should be noted that Phoenix does, in the course of constructing network, engage with some or all of these stakeholders on a regular basis. This approach has proven effective in the existing Licensed Area where Phoenix has developed from scratch a network and a market for natural gas over the last c.17 years.

For the purpose of this application a number of key stakeholders will be discussed below. Further detail is provided in section 7.4. Phoenix will continue to engage with these stakeholders in relation to development of the GTW distribution business. These stakeholders provide Phoenix with a better understanding of the impacts that may be felt by an individual or group and allow Phoenix to articulate its own values, strategy, explain its commitments and proactively improve relationships.

Roads Service

As part of any project, Phoenix consults with Roads Service. Phoenix maintains positive and constructive relationships with the various Roads Service section offices. As part of this project, Phoenix will initiate early consultation with the relevant section offices in Western Division of Roads Service i.e.

- Cookstown;
- Dungannon;
- Fermanagh;
- Omagh;
- Magherafelt; and
- Strabane.

At a Northern Ireland level, Phoenix is a leading participant in the Northern Ireland Roads and Utilities Committee (“**NIRAUC**”) which meets quarterly to promote regional liaison and best practice, leading to improved cooperation between the parties.

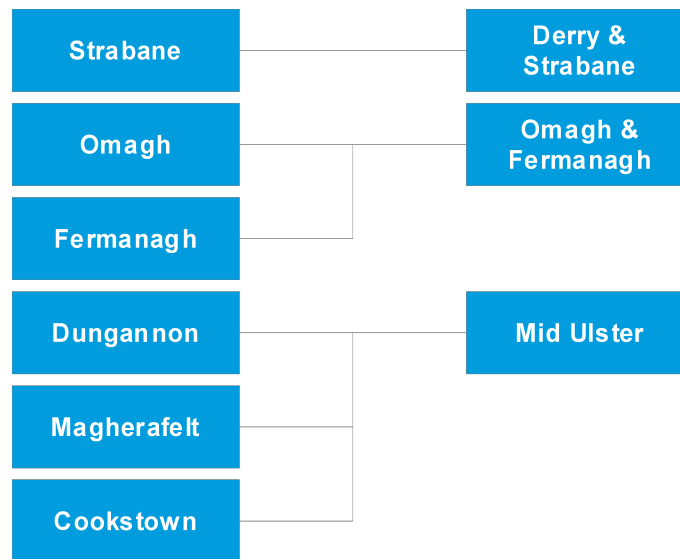
In order to assist with cooperation at local level, Phoenix attends Divisional Roads and Utilities Committees (“**DRAUC**”). As part of this project Phoenix will work with the relevant DRAUC groups from the outset to ensure good communication and cooperation with Roads Service and the other utilities.

Local councils

A key element of Phoenix’s approach to developing the natural gas network in the existing Licensed Area has involved early and open engagement with councils and local representatives. This ensures that the local communities, through their representatives, have clear communication channels to the company and that Phoenix is in the position to work with the community as part of the network development process.

Local knowledge and contacts aid Phoenix in the development of the gas market as well as ensuring that the local community are kept informed of the work that is being carried out, in turn helping to minimise the disruption to the community that a major infrastructure project can bring.

The mobilisation period of the LP system coincides with the Local Government Reform process in Northern Ireland that will see the number of councils reduced from 26 to 11. This is due to take place in April 2015. Phoenix is cognisant that there may be an impact due to this reform and will work closely with the existing councils prior to April 2015 and with the new councils post April 2015 to ensure that there are no adverse implications for the project.



Department for Social Development

A key stakeholder that Phoenix will engage with is the DSD. DSD is the sponsor body for public realm schemes and has completed numerous schemes in Belfast and neighbouring towns. Further detail is provided within Phoenix’s Innovation and Technology Transfer submission (“Natural Gas Prepared Homes and Local Councils” section).

Where possible Phoenix works closely with DSD and their partners/associated contractors, to maximise the network laid prior to high quality reinstatement being carried out. This prevents Phoenix from having to excavate in newly completed carriageways/footways and helps minimise the costs associated with this type of work.

Phoenix is aware of a number of public realm schemes that are soon to commence in a number of the towns. Immediately upon award of licence Phoenix will make contact with DSD and other stakeholders with regards to these schemes with the aim of coordinating works to minimise disruption to the newly laid surfaces. This may take the form of bring forward main laying works to ensure that the gas infrastructure has been, where practicable, completed in advance of the surface being installed.

Other Utilities

Phoenix, through NIRAUC, DRAUC and other forums maintains a positive and constructive relationship with the other utilities. As part of the construction process for the existing Licensed Area this involves the sharing of construction programmes and, where possible, the coordination of works.

A key element of the relationships that Phoenix has built is in the area of data sharing. Currently Phoenix shares asset information, in the form of GIS data, with NIE and NIW. This allows the three companies to produce job packs, including utility information, in-house and reduces, to an extent, the cost associated with dealing with third parties.

Phoenix will continue to work with the other utilities as part of the development of the LP system in the GTW Licensed Area.

In summary, Phoenix has, through the development of the natural gas network in the existing Licensed Area, amassed significant relevant experience in engagement with stakeholders, ensuring that business plan objectives are attained while managing expectations.

Proposal to establish the network design process

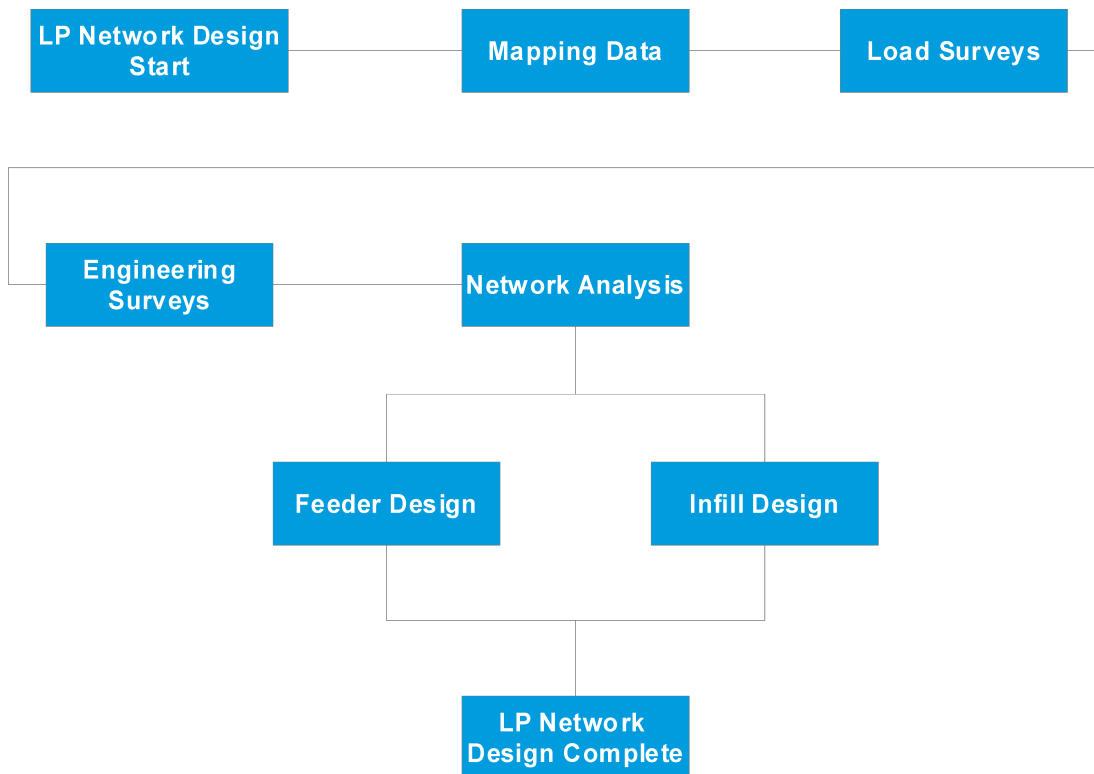
Phoenix has design procedures in place to specify the parameters and processes to be used in designing new networks or extensions to existing networks. These procedures, which have been in place since the commencement of construction in 1996, are continuously reviewed and, where necessary, refined.

Phoenix Engineers carry out high level designs, indicating pipe sizes, gas pressures and routes. These, high level conceptual designs, are passed to the contractor who carries out detailed designs indicating fittings required, the plant and equipment that will be employed, the method of construction etc. These

final designs are reviewed by the Phoenix engineer and the contractor’s Engineering Manager. Phoenix will employ a similar system for the GTW Licensed Area.

Design of an efficient network

The process for designing a new natural gas network that is employed by Phoenix in the existing Licensed Area is shown below. Phoenix will employ the same processes for designing the LP system in the GTW Licensed Area.



Mapping Data

The first stage in designing a new network is to obtain the necessary GIS data. In order to ensure the accuracy of the network build as well as the asset records once the construction has been completed, it is necessary to obtain the background geography in the highest resolution.

For Northern Ireland this is a mixture of 1:1250 and 1:2500 large scale vector data. The licence for this data is purchased from Land and Properties Service (“LPS”) and incurs an annual charge. This is levied on an individual tile (600m x 400m or 1200m x 800m) basis. As part of the review process into this project, Phoenix has obtained the tiles necessary to allow for the design of the network in the GTW Licensed

Area. This is maintained separately from the core GIS data for the existing Licensed Area, though on award of the licence for the GTW Licensed Area the data would be amalgamated into one database for efficiency purposes.

Additional GIS data that is required includes property information (LPS Pointer Dataset), which Phoenix has obtained for the GTW Licensed Area. For areas where there may be significant changes in elevation, particularly where long pipe runs are required, it may be necessary to obtain Digital Terrain Model data, which allows for elevation to be incorporated into both the GIS and subsequent Network Analysis Models.

Load Surveys

Once the GIS mapping data is available, the next stage is to carry out load surveys of the areas to be designed. This is carried out by Energy Advisors who, through training and experience, are competent to identify/calculate prospective energy requirements for customers. At this stage the Energy Advisors identify suitable meter positions for the majority of I&C customers.

These load surveys are passed to the design Engineers and allow them to design the network based on accurate load and meter location information.

Engineering Surveys

As part of the preparation for commencing the design of a given network, the design engineer obtains plant information from the other utilities. For NIE/NIW this is accessed directly via the Phoenix GIS. For other utilities, this data is obtained via Plant Information Requests.

Once the utility information is available, the design engineer identifies hazards and, in line with Construction Design Management ("**CDM**") Regulations requirements, attempts to design out the hazard. As this is not always possible, site specific risk assessments are carried out where appropriate.

The design engineer then carries out a comprehensive route survey on site. This ensures that any hazards that cannot be identified from a desktop survey are recognised and, where possible, designed out or risk assessed. The pipeline routes, when identified, are digitised on to the GIS.

Network Analysis

As stated, the network analysis package used by Phoenix is SynerGee, supplied by DNV GL. This is integrated with the GIS and network analysis models are extracted from the GIS into SynerGee.

Model Efficiency

To ensure that any network design is not over-designed while maintaining the requirements of IGE/GL/1, Phoenix employs a two-stage design process:

Feeder Model

A Feeder Model is initially developed using aggregated peak loads at key points. These peak loads are generated in line with the business plan and represent expected levels of customer presentation. In other words, across the entire network it is assumed that 100 per cent. penetration is not achieved in each sector.

In addition to the expected customer penetration, the Feeder Model Peak loads are fully diversified in line with IGE/GL/1. Diversification is the term used to describe the phenomena whereby not all customers burn their peak load at the same time and that for a group of customers, the aggregated peak flow is less than the summation of the individual peak flows.

By taking into account expected customer penetration and diversification, Phoenix ensures that Feeder Mains are not over designed.

Infill Model

As feeders represent the larger diameter mains that act as bulk transport for the gas through the town, the possibility of reinforcing the feeder main should the load develop to be greater than originally identified in the business plan is taken into account at the design stage.

For the individual streets and housing estates that are supplied by the feeders, it is not practical to return at a later date to account for an instance where customer penetration greater than that assumed in the business plan is achieved. In other words, while the customer penetration/loads for the overall model can be supplied, the business plan assumptions cannot be applied on an individual street basis. It is entirely possible that 100 per cent. penetration could be achieved in a given street, while the overall customer penetration is in line with the business plan.

To account for this, infill models are created. These assume source pressures from the feeder models, but use 100 per cent. customer penetration and localised diversification when assigning the aggregated load. This ensures that the infill models will be capable of supplying all the customers.

This two phased approach to network design ensures that feeder mains are not over-designed (both in terms of the size of the mains and the quantity of feeder mains required) while ensuring a robust overall

design. This ensures that the network design carried out by Phoenix is as efficient as possible while ensuring the requirements of IGE/GL/1 are met.

Pressure

FMA have recommended a Medium Pressure (“MP”) system operating at up to 4bar, in keeping with the system as operated by Phoenix, firmus energy, in the Republic of Ireland and wider afield across Europe. Operating at this pressure provides significant advantages, including increasing the carrying capacity of pipes for a given diameter or allowing the designer to reduce the diameter of pipe whilst still carrying the same amount of gas. This results in significant savings over operating the MP system at 2bar as is common in Great Britain.

Pressure System Safety Regulations (Northern Ireland) 2004

As the MP system will operate at 4bar, it will fall under PSSR. Phoenix, in conjunction with its Competent Person (DNV GL¹⁶), has developed systems of work, procedures and Written Schemes of Examination, ensuring compliance with PSSR. In general Phoenix has developed the view that rather than being onerous and difficult, PSSR brings significant advantages from both a safety and an Asset Management point of view. Phoenix will employ the processes and procedures for compliance with PSSR in the LP system in the GTW Licensed Area.

Package Construction

Once the overall designs have been completed for a town, the work is divided into Feeder and Infill packages of work. This is prepared, in conjunction with the Phoenix’s Business Development Department and in consultation with external stakeholders e.g. NIHE, industry. The packages are prioritised on the basis of making gas available across the towns to meet customer demand with Feeder packages constructed first, followed by Infill Packages.

Substitution of High Pressure Pipelines – alternate designs

Phoenix has examined the proposed network configuration and designs as developed by FMA. Consideration has been given as to “**whether any high pressure pipelines could be substituted for low pressure pipelines, taking into account the most appropriate size of pipeline and pattern of connections**” as detailed in Annex 6 of the Applicant Information Pack (see topic area 3.6).

¹⁶ Phoenix arranged for an independent consultant, DNV GL, to advise on the feasibility and suitability of Reliability Centred Maintenance for Phoenix

Based on the load and customer data supplied by FMA and Phoenix's knowledge of the costs/constraints involved in constructing HP pipelines, Phoenix considers that there are no opportunities for substituting HP pipelines for LP pipelines.

Phoenix has, alternatively, considered the feasibility of substituting LP pipelines for HP pipelines. The analysis that follows is based purely on the information provided by FMA. Phoenix has not carried out the detailed load and route surveys required to provide robust, detailed designs and costs for the alternative designs. Following licence award, Phoenix will carry out the detailed design work that is required in order to verify the feasibility or otherwise of these designs.

In line with the published criteria from DETI, Phoenix has also examined the feasibility of extending the network to *more remote geographical areas* beyond the towns covered by this application. Phoenix understands that there is considerable desire across Northern Ireland for natural gas to be made available and indeed notes a recent request by MLA Tom Elliott that the Clogher Valley be added to the GTW project.

As part of this application, Phoenix has examined the feasibility of connecting towns in the near vicinity to the GTW project but would suggest that, upon award of licence, a work strand be developed with UR to investigate the viability of other possible extensions.

For clarity, the assumptions made in carrying out this study are:

- loads and peak network demands are as per the FMA study;
- load growth beyond the FMA report have not be considered;
- desktop route surveys have been carried out – detailed site surveys are required in order to validate the feasibility of these proposals;
- all prospective customers can be supplied from a LP pipeline i.e. there is no requirement, for process reasons, for HP; and
- the design for supplying Strabane from LP pipelines comprises three separate scenarios:
 - Supply Strabane only with the expected flows as per the FMA report;
 - Supply Strabane with additional capacity being made available to supply Lifford (which is small town across the river Foyle from Strabane. Lifford is in the Republic of Ireland and, as such is outside the remit of UR. The possibility of cross border cooperation could be considered – this project could be eligible for European Union (“EU”) funding under Projects of Common Interest). The actual gas load requirements for Lifford have not been fully assessed as part of this study;

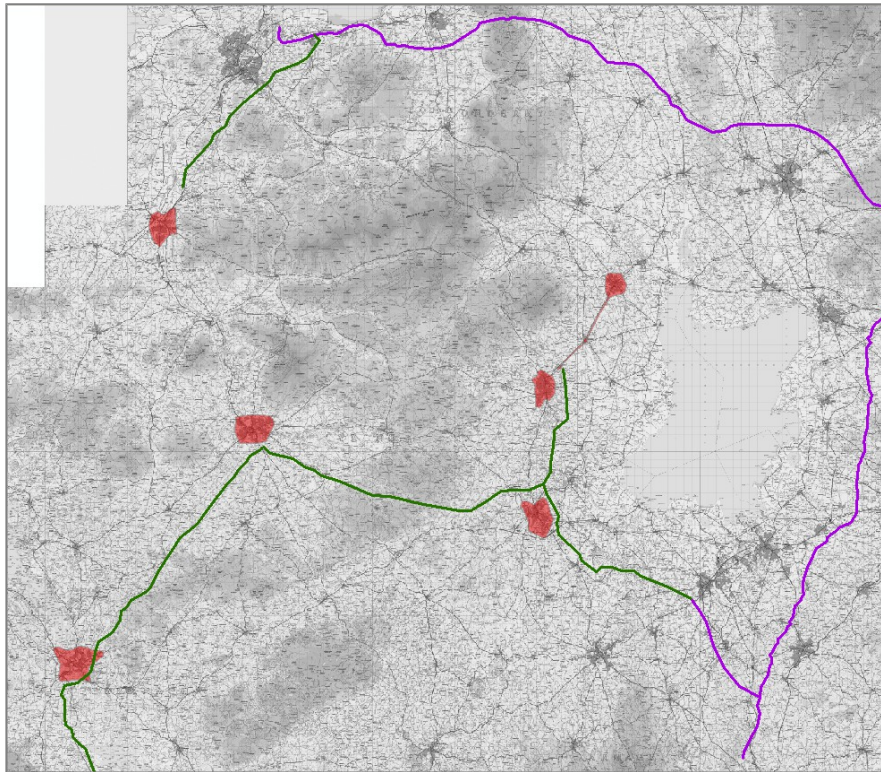
- Supply Strabane, Lifford and with additional capacity being made available to supply Letterkenny (which is the largest town in Donegal. As with Lifford the possibility of cross border cooperation could be considered). As with Lifford, the actual gas load requirements for Letterkenny have not been fully assessed as part of this study.
- the design for supplying Derrylin from LP pipelines will have some additional spare capacity. Some of this capacity could be used to supply the town of Ballyconnell. As with Lifford, this is a small town in the Republic of Ireland. It lies approximately 8km from the village of Derrylin. The actual load requirements for Ballyconnell have not been fully assessed as part of this study.
- The design for supplying Cookstown from LP pipeline will pass adjacent to and may have the capacity to supply the town of Coalisland. The load requirements for Coalisland have not been fully assessed as part of this study.

Methodology

A model was created that replicated the basic configuration of the HP system as proposed by FMA. In other words, the same lengths, pipe details and routes as the FMA study were used. A replica model was then developed to operate at Distribution Pressures and using the range of pipe diameters that have been employed in the Phoenix network.

Preliminary desktop analysis of routes was completed, with all the LP pipelines identified being designed for construction in the carriageways, eliminating the requirement for planning approvals and easements.

This model was used to discount, or otherwise, the possibility of using Distribution Pressures (LP pipelines) as an alternative to HP pipelines. The figure below shows the FMA arrangement, with the towns to be connected in red, the proposed pipeline as designed by FMA in green and the existing HP pipelines as operated by BGE(NI) in purple.



Pipeline Run No.	Description	Nominal Diameter (mm)	Approx. Length (km)	Design Flow (kSCMH)	Design Pressure (bar)
2	Derryhale AGI to Dungannon AGI	250	28	48	85
3	Dungannon AGI to Cookstown AGI	150	17	13	85
4	Dungannon AGI to Omagh AGI	250	38	23	85
5	Omagh AGI to Enniskillen AGI	200	35	12	85
6	Enniskillen AGI to Derrylin AGI	200	23	6	85
7	North-West Pipeline to Strabane AGI	150	28	7.5	85

This design requires Above Ground Installations (“AGI”) for reducing the pressure of the gas from HP for introduction into LP pipelines. The AGIs considered as part of this study are as listed in the table below.

AGI Name	Flow (kSCMH)
Dungannon	12
Cookstown	13
Omagh	11
Enniskillen	6
Derrylin	6
Strabane	7.5

Revised Transmission Proposals

In order to transport the quantities of gas specified in the FMA report, a portion of the proposed transmission system is required. Using the network analysis model mentioned above, it will be possible to construct some of the network at either 7bar or 4bar.

Phoenix, as part of its innovative design and operation of its existing network, has renowned expertise in the construction and safe operation of 7bar High Density Polyethylene and 7bar to 4bar Intermediate Pressure Reduction Stations (“IPRSs”). It is this expertise that enables Phoenix to offer this revised transmission proposal. To date Phoenix has constructed and is operating c.100km of 7bar pipeline and 36 IPRSs.

The revised design is as follows:

- the pipeline from Derryhale to Dungannon and the one from Dungannon to Omagh remain as per the FMA proposal;
- the pipeline from Omagh to Enniskillen is substituted by 355mm PE operating at 7bar;
- the pipeline from Enniskillen to Derrylin is substituted by 315mm PE operating at 4bar. It is assumed that the source for this will be an Intermediate Pressure Reduction Station installed as part of the distribution system to feed Enniskillen;
- the pipeline from Dungannon to Cookstown is substituted by 315mm PE operating at 7bar. It is assumed that the AGI supplying Dungannon will also supply this main; and
- as stated above, the pipeline feeding Strabane presents three possibilities – supplying Strabane only, supplying Strabane and Lifford and supplying Strabane, Lifford and Letterkenny;
 - Option A – Strabane only: is substituted by 315mm PE operating at 4bar. It is assumed that an AGI will be built to supply gas from the North West Pipeline;

- Option B – Strabane and Lifford;
- Option C – Strabane, Lifford and Letterkenny.



Pipeline Run No.	Description	Nominal Diameter (mm)	Material Steel/PE	Approx. Length (km)	Design Flow (kSCMH)	Design Pressure (bar)	End Pressure (bar)
2	Derryhale AGI to Dungannon AGI	250	Steel	28	48	85	N/A
3	Dungannon AGI to Cookstown	315	PE	12	13	7	5.0
4	Dungannon AGI to Omagh AGI	250	Steel	38	23	85	N/A
5	Omagh AGI to Enniskillen	450	PE	46	12	7	6.0
6	Enniskillen to Derrylin	315	PE	27	6	4	3.2
7 (A)	North-West Pipeline AGI to Strabane	315	PE	24	7.5	4	2.9
7 (B)	North-West Pipeline AGI to Strabane, Capacity of 800 scmh for Lifford	315	PE	24	8.3	4	2.6
7 (C)	North-West Pipeline AGI to Strabane, Capacity of 800 scmh for Lifford, 10,000 scmh for Letterkenny	450	PE	24	18.3	7	6.0

Note: Designs 7B and 7C do not include the mains that would be required to supply Lifford or Letterkenny.

The revised designs result in a reduction in the number of AGIs required, as detailed in the table below.

Name	Type	Flow (kSCMH)
Dungannon	AGI	12
Cookstown	Not required	13
Omagh	AGI	11
Enniskillen	Not required	6
Derrylin	Not required	6
Strabane	AGI	7.5

Conclusion

From this analysis that Phoenix has carried out, subject to the assumptions mentioned above, there is considerable scope for considering substituting LP pipelines for HP pipelines. The total length of HP pipeline required would drop to approximately 66km from 169km while, based on these preliminary designs, 109km of LP pipeline would be substituted.

The construction costs of LP pipelines are considerably less than the construction of HP pipelines. Indicatively Phoenix has estimated a possible net saving of c.£15m to c.£20m compared to the FMA costs.

Immediately upon award of Preferred Bidder Status, we will begin the detailed load surveys/design works/stakeholder engagement required in order to finalise the feasibility or otherwise of these designs and the possibility of supplying the town of Coalisland. Similarly Phoenix will engage with UR to investigate the feasibility of making capacity available for other towns in Northern Ireland and for cross-border supplies to Lifford/Letterkenny/Ballyconnell.

Proposals to initiate materials procurement processes and award contracts

With regards to materials to be incorporated into the gas network construction (gas engineering and civil engineering related), Phoenix would propose to procure these as part of the main construction contract – this particular contract being on a supply and fit basis. Phoenix has procured and awarded a number of similar construction contracts in the past (see section 2.1) and as part of our overall contract strategy we have reviewed the merits of separate contracts for both materials supply and network construction.

Phoenix's strategy development has seen it look at other options in this regard, one would be to procure materials separately from the construction contract, whilst another option would be to procure the materials and works on a supply and fit basis. Phoenix has explored both avenues in the past and found no material advantage in separate procurement exercises.

Where appropriate, Phoenix would therefore propose to procure materials as part of the overall network construction contract. That way any risk associated with cost, logistics and wastage is apportioned to the organisation best placed to manage it. Note, however, that the specification for these materials shall be stipulated by Phoenix with reference to industry and legislative standards – where applicable.

Phoenix would still propose to maintain full visibility of the material procurement process to ensure that supplier relations and technical conformance are appropriately addressed. This would be achieved through a supply chain forum, as utilised effectively by Phoenix in the existing Licensed Area. This forum would be attended by all principle suppliers, the construction contractor and Phoenix representatives. An important aspect of the forum is to review future network build requirements so that all supply chain parties can align their production and supply programme accordingly – thereby minimising the risk of any potential "stock-outs" in the future.

Other materials not forming part of the network construction such as those associated with downstream emergency response or telemetry for example, would be procured by Phoenix. Such contracts would be advertised by way of a "Contract Notice" in the OJEU and/or local press – the exact methodology depending upon anticipated contract value. Should the OJEU route be sought, then the Contract Notice would be placed advising that the "Negotiated Procedure" would be followed. The project plan for the

procurement process would adhere to best procurement practice – taking the process from a pre-qualification stage, through the tender period and culminating in the evaluation and ultimate award. Such best practice would also adhere to the requirements of the Utilities Contracts Regulations 2006 with the subsequent award taking into account the Utilities Contracts (Amendment) Regulations 2009 (together the “**Utilities Contracts Regulations**”). All awards would follow an evaluation based upon predetermined criteria and weightings which will have been advised to participating tenderers as part of the process. Award will be recommended to the “most economically advantageous tender” as determined by the award criteria. Sign-off of the award recommendation will be at Director level upon presentation of a full tender report.

Whether the procurement and award process is advertised in the OJEU or local press, the principles of transparency, non-discrimination and equal treatment shall be applied throughout. The timing of which shall be determined by the required lead times and inherent critical path as dictated by both industry factors and ultimate customer needs.

Proposals for preparation of construction, maintenance and specialist services contract tender documents

Following a full strategy review taking into account the anticipated demands, management approach etc. - the scope, timescales and general requirements of the respective contracts would be determined. Part of this determination would be how the required works/services would be procured and delivered i.e. the number and type of contracts to be awarded.

Tender documentation would be prepared by Phoenix in conjunction with an appointed technical expert who would most accurately specify the nature and scope of the works and services required.

Phoenix regularly awards contracts captured, due to nature and value, by the Utilities Contracts Regulations. The tender documentation required would therefore take into account such requirements.

The tender documentation prepared would be broken down, as a minimum, into five key sections:

- i. Instructions to Tenderers;
- ii. Proposed Terms & Conditions (either bespoke or standard);
- iii. Scope of Services/ Technical Specification (including programme – if applicable);
- iv. Pricing Schedule; and
- v. Form of Tender.

Each of the five sections would be cross-referenced, where appropriate, so as to ensure that the works/service required are fully described, and therefore understood, by each tendering organisation. The terms of contract engagement would be detailed so that all parties concerned would appreciate the covenants and obligations that are both sought and offered.

With regards to the proposed construction tender, we would propose an engineer, procure and construct arrangement whereby the appointed construction contractor would be responsible for the sourcing and logistics associated with the supply and fit of network specific and civil engineering related materials. The timescale for preparation of the actual invitation to tender documentation would be in the region of eight to ten working weeks. This timescale would be taken into account as part of the overall project plan.

The planned maintenance of the proposed system would be carried out by both in-house and out-sourced resources. With regards to in-house resources, Phoenix currently utilises its own Engineering Operations personnel and PES – depending upon the nature of the maintenance required. In turn, PES subcontracts maintenance operations to a number of smaller (by way of manpower and turnover) providers. These subcontracts are drafted and awarded in line with best tendering practices and, where appropriate, advertised in the OJEU and/or local press.

In some instances it may be appropriate to have the appointed construction contractor provide a maintenance service as he will have provided the necessary skill-sets to construct the network initially. If so, the planned maintenance requirements will form part of the “Scope of Services” section that is contained within the Invitation to Tender document.

Note that other maintenance requirements of an unplanned nature (defect or third party damage) shall also form part of the scope of the construction tender as the contractor appointed in this regard will be best placed to address the maintenance provisions arising.

In constructing and operating a natural gas network system there will be a requirement to award a number of specialist services contracts, over and above the construction and maintenance appointments referred to above. By “specialist” we mean those services largely unique to the natural gas distribution industry.

Phoenix has experience of tendering for a number of specialist contracts such as: natural gas metering equipment (mechanical and electrical); emergency call handling and engineer dispatch in connection with gas escape; telemetry/monitoring equipment etc.

The tender documentation for all the specialist services shall be in the same format as above, albeit such documentation shall be adapted to suit the nature of the services being procured, the pricing structure under which such services would be valued upon delivery and the specific terms and conditions that would be utilised to secure the services required. It would be envisaged that the terms of engagement

would involve a framework agreement in that the specialist services would most likely be delivered on an ad hoc (varying quantity) basis and that terms would require to be established under which the services could be “called off” as, and when required.

Tender documentation would be drafted to reflect the nature of the contract arrangement required in each instance.

Proposals to initiate the competitive tender process

As with any tender opportunity, the appropriate marketplace requires to be suitably notified so that bids may be sought from organisations that are best placed to deliver the services required. There are a number of avenues that Phoenix would wish to explore in order to ensure that maximum exposure is given to such an opportunity.

In line with Phoenix policy and procedure, upon receiving Director/Board approval to proceed with the project, we would propose to consider a number of media through which the competitive tender process would be initiated. Should the value of any proposed Contract exceed the thresholds stipulated in the Utilities Contract Regulations, currently £345k for services/supplies and £4.32m for works, then the tenders will require to be advertised in the OJEU. Initial interest could be raised by placing a Periodic Indicative Notice (“PIN”) which would advise the marketplace of our intent, albeit this would then require to be followed up by a Contract Notice which would, in effect, confirm the initial intent in that it would act as a call for competition. This call for competition would advise all potential Suppliers or “Economic Operators” of our intention whilst, at the same time, would summarise what is required and when. The Contract Notice would also advise of our intent to adopt the “Negotiated Procedure” throughout the course of the procurement process. Timescales, as determined by the Utilities Contract Regulations, shall apply with regards to the receipt of expressions of interest in response to this notice.

In order to promote the GTW project further, and by way of further stimulus of the local marketplace, the project could also be advertised in both local press and industry literature. This would be to supplement the OJEU Notice and not instead of it as in promoting the project, a balance will have to be maintained with regards to raising the profile, yet providing all suppliers – potential or otherwise – with equal treatment.

Although dependent upon the nature of the item being tendered, OJEU Contract Notices would require to be placed almost twelve months before the proposed start date of any contract to be awarded.

Phoenix has years of experience of the competitive tender process.

Proposals to award the construction, maintenance and specialist services contracts

Whether the Utilities Contracts Regulations apply to the award of contracts or not, there will remain a requirement to treat all tendering organisations equally, using a transparent procedure.

Award criteria shall require to be stated in the Invitation to Tender documentation and, where practical, in the initial Contract Notice. Such criteria will state the areas that Phoenix, as the contracting body would choose to judge the merits of each offer received, along with weightings that would advise in advance and the level of importance that we would place on that particular aspect of the tender offer.

Tenders received would be evaluated in line with the award criteria and adjudged by an evaluation panel which would be made up from both technical and procurement professionals. The outcome of the evaluation would result in a recommendation to award a contract to the “most economically advantageous tender” received. The evaluation process would be summarised in a report which would require sign-off at Director level prior to proceeding.

Upon sign-off all parties tendering organisations would be notified of the outcome and a full debrief offered to any unsuccessful tenderer.

Should the Utility Contracts Regulations apply, a ten day standstill period shall be observed between the date of notification and date for award of contract to the successful bidder.

Whilst the content of the Invitation to Tender documentation may vary depending upon the nature of the construction, maintenance or specialist services contracts to be awarded – the process for award will follow the principles outlined above.

3.7 MOBILISATION OPERATIONS MANAGEMENT

Phoenix currently provides centralised corporate services to the whole Phoenix Group. As detailed in section 2.2, similar efficiencies can be achieved by consolidating some of the functions within Phoenix for the existing and the GTW Licensed Areas. Phoenix departments will therefore be expanded to support cost monitoring and control, including operational activity based cost information, across the GTW Licensed Area. This will ensure that the GTW distribution business benefits from the knowledge and experience of existing FTEs (including Senior Managers and the Directors) and the strong financial and management accounting controls already in place.

Proposal to establish the management team

Phoenix's Directors (detailed below) will lead Phoenix and the GTW distribution business across the existing and the GTW Licensed Areas respectively. Phoenix will ensure that the required corporate governance and ring fencing arrangements for the existing Licensed Area are maintained.

Peter Dixon is the Chief Executive Officer



Peter has spent his entire career in the gas industry, acquiring over 35 years' experience. He started out as an Engineer in 1976 with North West Gas and went on to play a key role in the break-up of what was then the old British Gas.

Peter joined Phoenix as Commercial Director in February 1997. He was appointed Chief Executive in July 2000. He is currently Chairman of the Energy for Children Charitable Trust, as well as Chairman of Arena Network - the environmental arm of Business in the Community of which he is also a Board member. In 2008 he was appointed a Belfast Harbour Commissioner.

Michael McKinstry is the Group Finance Director



Michael has been with Phoenix from its earliest days, joining the fledgling company in 1996 as Finance Director. He took his place on the Kellen Group Board in January 2006 following the acquisition of Phoenix by Kellen.

As Michael has been at the financial helm of Phoenix throughout its history, overseeing the various changes to its ownership, corporate, financial and regulatory structures, as well as developing its strategies, he has a comprehensive knowledge and understanding of the business. Prior to joining Phoenix, Michael gained extensive financial management experience across a broad range of business sectors, starting in heavy engineering with GEC, in the textiles industry with Ulster Weavers and in the energy industry with Premier Power following its purchase by British Gas.

Ivan Bell is the Commercial Operations Director



Ivan is a chartered engineer and Fellow of the Institution of Gas Engineers and Managers who spent 8 years involved in various aspects of the natural gas industry in Great Britain. In 1998 he returned home to Northern Ireland as Transportation Development Manager for Phoenix, before taking on the position of Commercial Manager in November 1999.

Ivan is Commercial Operations Director responsible for the Construction, Operation and Maintenance of the Gas Distribution and Transmission Pipeline Network, the provision of additional Customer Connections and the delivery of the company's Health, Safety and Environmental policy - including the emergency services operation and Network Design and Planning. He also has responsibility for providing transportation services to all gas supply companies and end users. Since 2008, Ivan has also been responsible for Regulation within Phoenix.

Ivan is currently a Board member of Energy and Utility Skills, a Member of the Institution of Mechanical Engineers ("IMECHE"), a committee member of the Institution of Gas Engineers and Managers (Ireland Section) and a Fellow of the Institute of Directors.

Alastair Pollock is the Business Development Director



Alastair has helped to drive forward the development of the local natural gas industry in the last 10 years by adopting a number of innovative sales, marketing and customer service strategies.

Before joining Phoenix, Alastair was Managing Director of Kwik Fit in Ireland, and had held several senior roles within the BP organisation both in Britain and Northern Ireland.

Alastair has responsibility for all Residential and Commercial Sales, including NIHE and new build homes. He also has responsibility for Trade Development, Customer Service and Corporate Affairs.

Alastair is currently a member of the CBI Council for Northern Ireland, is Secretary of the Energy for Children Charitable Trust, and is a member of the Musical Theatre for Youth Committee.

Proposal to establish customer contact representatives

Phoenix has an established Customer Services team responsible for generating initial leads and thereafter managing the customer up to and throughout the connection process to becoming gas customers. In addition this team is responsible for handling all calls and other queries arising from customers and other third parties once they get connected alongside any other business type contacts.

Phoenix's Customer Services team are also responsible for the planning and coordinating of work including the obligations under the notification system operated by the roads service (Symology), work scheduling and resource and plant management for the contract. Further detail is provided in chapter 7.

Phoenix's Customer Services team is broadly split into the following activities:

- Outbound team responsible for generating interest with unconnected customers, market research, cold calling, follow up calls with potential customers and expediting of new connections.
- Inbound team responsible for handling calls from potential customers to the point where a connection has been made plus complaints, enquiries, business contacts and general advice about natural gas.

- Planning and scheduling jobs for construction teams including coordinating activities with customer from application to connection, scheduling new connections for each of the customer sectors and handling on a daily basis connections, failures and problems arising thereon.
- Customer Services and Administration team responsible for updating records from sales information through to connection details plus providing information on installers.

Phoenix will resource its Customer Services team to ensure that it is capable of servicing both its existing and the GTW Licensed Areas. This additional resource is required in years one to ten as detailed in section 2.2. Any incidental activities required during mobilisation will be provided by the FTE (one Senior Manager) undertaking regulatory and operational activities as detailed in section 3.2.

Phoenix will duplicate the policies and procedures of Phoenix across the GTW distribution business, where appropriate, and brief its Customer Services team including any conditions unique to GTW Licensed Area. Some of the high level macro and micro considerations are:

- review of Phoenix's internal policies and procedures e.g. operational policies and procedures, and financial reporting and accounting policies and procedures to ensure that these can be duplicated across the GTW distribution business;
- brief relevant staff of any changes to Phoenix's internal policies and procedures for the GTW Licensed Area;
- review all customer literature including electronic communications, standard written responses to media enquiries etc. and implementation of any required changes for the GTW Licensed Area; and
- brief all consumer-facing staff at the appropriate time to advise them of the implementation of any change in policy, call scripting etc. for the GTW Licensed Area.

Phoenix has an established Sales team responsible for all aspects of private residential sales plus the activity associated with development of third party trade (installers, equipment manufacturers, merchants, distributors and retailers). It should be noted that installers and retailers directly contract with customers in order to facilitate their conversion to natural gas:

- the **Domestic Sales** team is required to canvass customers directly by generating leads through cold calling, trade shows, and shopping centre activity and through recommendation from previously connected customers. They follow up on these leads as well as those generated by outbound sales or inbound call handlers in order to encourage potential customers to undertake the steps necessary to facilitate a conversion to gas;

- the **I&C Sales** team drives all new connections within the I&C sector. Activity levels in this sector include all I&C refurbishments / new build developments alongside direct conversion of existing buildings to natural gas;
- Phoenix was able to persuade the NIHE to amend their Heating Policy in 2001 to ensure that natural gas heating systems would be installed where natural gas was available. Up until that point, tenants were able to choose between oil and natural gas central heating and thousands of homes who had access to the natural gas network did not convert to natural gas. In its most recent review, NIHE has confirmed that its heating policy remains that natural gas heating systems are to be installed where natural gas is available, with oil or biomass recommended elsewhere. Whilst this is the current policy, each tenant must then be persuaded of the benefits of natural gas otherwise they can choose to convert to oil or biomass; NIHE will not insist that a tenant in their property install a natural gas heating system. Continued market development is therefore required to persuade tenants that natural gas should be their preferred option. Further detail is provided at section 7.2. Phoenix's **Public Sector Liaison team** is responsible for managing the relationship with the NIHE and its tenants; and
- the **New Build Sales** team takes prime responsibility for managing the relationship with developers etc. to ensure all potential new build properties take natural gas.

Phoenix will use the mobilisation period to establish a dedicated Sales team to service the GTW Licensed Area i.e. customer contact representatives who will be based in the GTW Licensed Area to support the domestic, public, new build and I&C sectors. Section 2.2 sets out the manpower resource requirements. In summary two FTEs (Energy Advisors) will be required to manage sales activities within the non-owner occupier sector during mobilisation and through to year ten. During mobilisation, these two FTEs will be managed by the Senior Manager resource detailed in section 3.2. Two additional FTEs (Energy Advisors) will be required to manage sales activities within the domestic sector in years one to ten, building awareness of natural gas, meeting with prospective customers and promoting the development of suitable qualified installers within the local trade.

Phoenix will also duplicate the policies and procedures of the existing Licensed Area - which have ensured that c.57 per cent. of the c.301,000 properties with natural gas available have connected to the network - across the GTW Licensed Area. Further detail of the challenges which Phoenix has overcome to ensure that natural gas conversions happen in all sectors of the existing Licensed Area is provided within Phoenix's Innovation and Technology Transfer submission ("Utilisation Support to Consumers" section).

Proposal to establish the information system to support management of the mobilisation process

Phoenix provides a centralised IT department to the whole Phoenix Group, with responsibility for developing and maintaining computing services using third party providers under commercial contracts as required.

The main system within Phoenix is Concerto, which records and manages assets and any movements thereto at a customer's premise. For larger Pressure Regulating Equipment, Phoenix operates a bespoke Governor Maintenance Database, which is used to record asset details, to schedule maintenance and PSSR Inspections and to capture fault data for RCM analysis.

Phoenix currently uses the ArcGIS suite of GIS software supplied by Esri which provides a graphical record of the network and in conjunction with SynerGee enables effective management of the distribution network. These systems coupled with those used in Finance (Total), Contracts and Procurement (6 over 6), HR/Payroll (ICS Unicomp) together with mail, internet, office desktop solutions for current users within Phoenix will be used to support management of the mobilisation process. Further detail on Phoenix's core systems is provided in sections 4.5 and 5.6.

In addition Phoenix also has a proven customer switching system to meet the needs of operating with independent suppliers. Further detail is provided within Phoenix's Innovation and Technology Transfer submission ("Systems" section). The GTW distribution business will be able to take advantage of this system ensuring that supply competition may be facilitated from the moment gas starts to flow.

As detailed in section 4.5, it is envisaged that Phoenix's existing robust systems would simply be extended through the addition of additional data sets to meet the demands of the GTW Licensed Area. Phoenix intends to review its current systems to ensure that any (i) additional data sets and (ii) changes to Phoenix's systems e.g. to Phoenix's site works system (see section 4.5) or to Phoenix's switching system, are identified and progressed during the mobilisation period to meet the increased demand.

As detailed in section 2.2, efficiencies can be achieved by consolidating some of the functions within Phoenix for the existing and the GTW Licensed Areas. This includes the IT function. Phoenix will resource its IT Department to ensure that it is capable of providing technical support to meet the demands of both its existing and the GTW Licensed Areas. Section 2.2 sets out the manpower resource requirements. During mobilisation, technical support will be provided by the Senior Manager resource detailed in section 3.2.

Proposal for mobilisation cost monitoring and control, including contingency costs

Phoenix provides centralised corporate services to the whole Phoenix Group:

1. Phoenix's Business Planning and Regulation Departments support management of business plans and forecasts, collation of data and statistics, liaison with key agencies and other third parties.
2. Phoenix's Contracts and Procurement Department is responsible for the management of all contracts and services, provision of facilities and fleet requirements and the effective operation of the office.
3. As detailed in section 4.1, Phoenix employ a Risk Assurance Manager with specific responsibility for the management of risk to Phoenix, its employees, customers, assets, reputation and interests of stakeholders and for the implementation of best practice and businesses improvement initiatives.
4. Phoenix's Finance Department is responsible for accounting and treasury functions. This incorporates financial reporting to meet all statutory, regulatory and financing requirements, internal management accounting and reporting, audit and review of costs under the McNicholas contract arrangement, bank and other treasury management functions, tax management and compliance, stock and asset management, purchase and sales ledger control.
5. Phoenix's HR Department is responsible for the recruitment, training and development arrangements for all employees.
6. Phoenix's IT Department is responsible for developing and maintaining computing services as detailed above.

As detailed in section 2.2, efficiencies can be achieved by consolidating some of the functions within Phoenix for the existing and the GTW Licensed Areas. This includes the corporate services function. Phoenix will resource the above departments to support mobilisation cost monitoring and control, including contingency costs across the GTW Licensed Area in accordance with the established processes already in use in the existing Licensed Area. Section 2.2 sets out the manpower resource requirements. During mobilisation, support will be provided by the Senior Manager resource detailed in section 3.2. Further detail on Phoenix's finance function is provided at section 8.4.

Proposal for risk assessment and proposals to mitigate/resolve identified issues

As detailed in section 4.1, Phoenix employ a Risk Assurance Manager with specific responsibility for the management of risk to Phoenix, its employees, customers, assets, reputation and interests of stakeholders and for the implementation of best practice and businesses improvement initiatives.

Phoenix already has in place robust risk management procedures for its operations in the existing Licensed Area (see section 4.1 for more information). It is envisaged that these risk management

processes will be replicated across the GTW distribution business i.e. Risk Registers, Risk Review Committees etc.

However based on our experience of the development of a new distribution network, it is anticipated that the risks faced on the GTW distribution business will change as the network matures. As such, we would plan to manage risks for the GTW distribution business in three distinct phases:

- Phase 1 – Mobilisation;
- Phase 2 – Network Construction; and
- Phase 3 – Normal Operations (i.e. similar to those in the existing Licensed Area).

Phoenix outlines how it would anticipate managing risk during the mobilisation phase below:

Mobilisation

The initial mobilisation (or start up) phase is anticipated to be highly challenging and will require significant and robust risk management process. For example, some of the areas of operation that are likely to have a different risk focus during this phase compared with normal operations include:

- Security of operations and personnel;
- The establishment of relations with stakeholders and the local community; and
- PR.

Risk management procedures to identify, resolve and mitigate issues for the mobilisation phase are anticipated to include:

Risk Workshops

Risk workshops would be performed with Senior Managers and other experts (including industry and local experts) to identify risks, related controls and actions required to manage these risks.

Risk Assessments

Detailed risk assessments, utilising the risk assessment procedures for the existing Licensed Area, would be performed for all routine or non-routine tasks, materials, equipment, substances or situations which could pose a risk to an individual whether an employee, contractor, customer or member of the public.

Risk Register

A detailed risk register would be developed specifically for the risks relating to the mobilisation phase. The register would be based on the same best practice risk management principals utilised in the Phoenix Corporate Risk Register for the existing Licensed Area, namely:

- assessment of the probability that each risk will materialise;
- assessment of the impact on the business if the risk were to materialise (quantitative and qualitative);
- formally document controls in place to manage/mitigate the risk;
- assign persons responsible for the management of the risk and the implementation of additional actions to further mitigate the identified risk; and
- traffic light system utilised to rank risks identified.

Risk Review Committees

Senior Engineering Manager and Director led committees would be established to assist the management of risks i.e. similar to the Phoenix Risk Review Committee and the Networks Safety Group for the existing Licensed Area.

Further detail on each is provided in section 4.1.

4. GOVERNANCE

4.1 RISK MANAGEMENT

This section covers the following:

- *identification and quantification of risk issues, including significant asset risk issues;*
- *description of the policy and processes to identify and manage risk issues; and*
- *description of the procedures to mitigate risk and monitor actions to completion.*

Phoenix recognises that risk management is a fundamental component of sound corporate governance. Risk management is integrated throughout Phoenix at a strategic and operational level and is fully endorsed by the Directors.

Phoenix has a holistic approach to the identification of risks, creating controls to mitigate those risks, and for monitoring and revising identified risks and controls. Management within Phoenix see the mitigation of risk as a challenge and utilise risk management processes to identify and implement measurable actions to mitigate identified risks.

Phoenix's risk management processes include:

- Corporate Risk Register;
- Operational Risk Register;
- Risk Assessments;
- Risk Review Committee;
- Network Safety Group;
- Business Continuity Arrangements;
- Dedicated Risk Assurance Manager;
- Internal Audit;
- External Audit;
- Health and Safety Audits;

- Regulatory Compliance Register;
- Processes for Compliance with New Legislation / Legislative Amendments;
- Financial Authority Matrix; and
- Security Arrangements.

Further detail on each of these risk management processes is provided below. It is envisaged that the risk management processes currently in operation in Phoenix would be replicated for the GTW distribution business.

Corporate Risk Register

The Corporate Risk Register serves as a central repository for Phoenix’s risk information and allows for the information identified from risk management processes i.e. risk assessments etc. to be suitably sorted, standardised, and managed from a strategic and business risk perspective.

Its key function is to provide the Directors, Phoenix’s Board and key stakeholders with significant information on the major risks faced by Phoenix and the controls to mitigate them.

In line with best practice, risks included in the Corporate Risk Register are assessed based on:

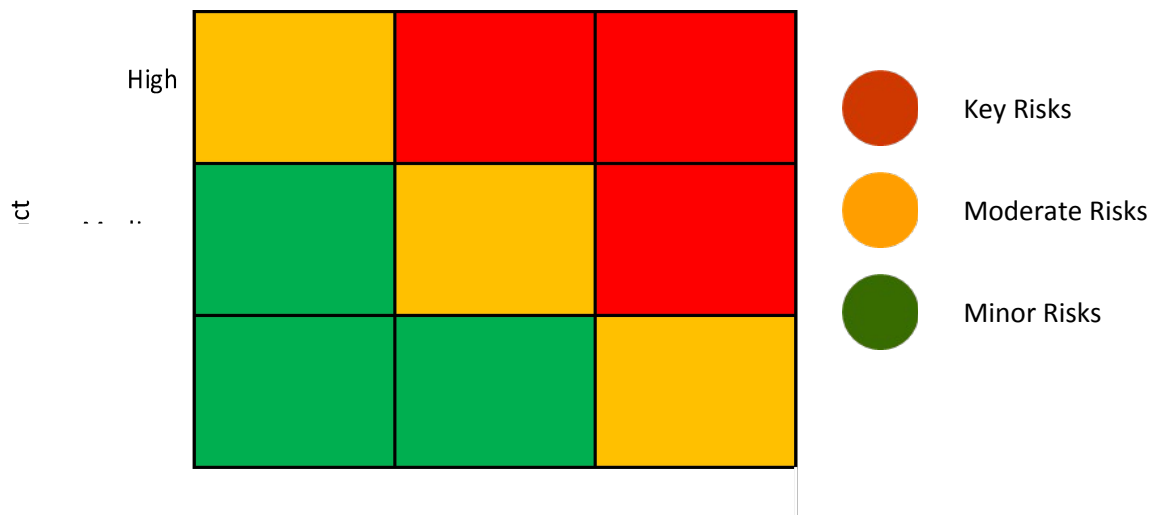
1. The probability that the risk will materialise; and

Probability		Likelihood of Occurrence
Rating	Score	
Remote	1	Less than 10 per cent.
Possible	2	Between 10 per cent. and 50 per cent.
Likely	3	Greater than 50 per cent.

2. The impact on the Phoenix if the risk materialises (quantitative and qualitative).

Impact		Impact Assessment	
Rating	Score	Quantitative	Qualitative
Low	1	Less than £xm impact on Profit or net assets	Low impact on strategic objectives and minor impact on public image
Medium	2	Between £xm and £xm impact on Profit or net assets	Medium impact on strategic objectives and moderate impact on public image
High	3	Greater than £xm impact on Profit or net assets	High impact on strategic objectives and major impact on public image

Phoenix utilise a traffic light system to rank its risks and to aid effective risk management.



Individual Managers are assigned responsibility for the management of each risk included in the register and for the implementation of additional controls to mitigate risks identified.

Risk workshops are held with Phoenix’s Senior Managers on at least an annual basis to review and update the Corporate Risk Register.

The objectives of risk workshops are to:

- review in detail each risk included in the register;
- re-assess the likelihood of each risk occurring and its potential impact on Phoenix;
- verify the performance of and assess the impact of actions identified to mitigate identified risks;

- identify new actions to further mitigate identified risks; and
- identify and assess new risks.

The updated register is presented to the Phoenix Board for review and approval on an annual basis.

Operational Risk Register

The Phoenix Operational Risk Register identifies significant risks (and controls) specifically concerning the safety and integrity of the distribution network, including the occupational safety of those involved in network activities. The register forms a significant element of the Phoenix Safety Case detailed in section 5.1.

The register is formally linked to the Corporate Risk Register, in that major risks included in the Operational Risk Register are escalated into the Corporate Risk Register.

In line with risk management best practice management, the Operational Risk Register utilises the same principles as the Corporate Risk Register.

The Operational Risk Register contains the following elements:

- the hazard identified (including initiating events and their causes);
- existing safety controls that are used manage the risk;
- an assessment of the risk based on the likelihood and consequence of the risk occurring (quantitative and qualitative);
- a description of any further additional controls that are required to reduce the risk to as low as reasonably practicable;
- a revised assessment of the risk based on the implementation of additional control measures;
- the name of the person who is responsible for the day-to-day management of the risk and for the implementation of any additional controls within a defined timeframe; and
- traffic light system to rank risks identified.

The Operational Risk Register is reviewed and updated by the Senior Engineering Management Group (including the Health, Safety and Environmental (“HSE”) Manager) on an annual basis and is formally approved by the Director of Commercial Operations.

Additional actions identified to mitigate risks identified are monitored to implementation through the monthly Risk Review Committee meetings and the HSE Action Tracker System.

Distribution Network Risks

Phoenix utilise a three tiered approach to the identification, management and control of risks that may impact on the safe and continued operation of the distribution network (including asset risks):

<p>1. Risk Assessments</p>	<p>Detailed assessment of each risk identified</p>
<p>2. Risk Review Committee</p>	<p>Senior Manager led forum to discuss the effective management of significant risks identified through the risk assessment process</p>
<p>3. Network Safety Group</p>	<p>Director of Commercial Operations led Group to aid the management of risks escalated by the Risk Review Committee</p>

Risk Assessments

Phoenix's policy and procedure for ensuring risks are adequately assessed and controlled sits within the Health and Safety Management System, ASHES.

Risk assessments are carried out for all routine or non-routine tasks, materials, equipment, substances or situations which could pose a risk to an individual whether an employee of Phoenix, a contractor, a customer or members of the public.

The risk assessment process is fundamental in ensuring both an environment that is safe for staff and members of the public and for facilitating effective and productive working practices. Phoenix utilise risk assessments on all areas or issues that may impact on the integrity of the gas distribution network.

The risk assessment process for all types of risk follows the same basic procedure:

- identification of the hazards;
- identification of who is at risk;
- likelihood of risk;
- identification of existing controls;

- evaluation of the risk (based on the likelihood of the risk occurring and the severity of its consequences, taking into account existing controls);
- identifying any additional controls which may be required;
- recording of the findings; and
- review.

When controlling risk the following hierarchy will generally be considered;

- elimination of the risk – can certain activities and processes be avoided completely;
- substitution – substituting the use of an item with a less hazardous alternative;
- isolation - the use of engineering controls should be considered;
- minimising the risks by designing suitable safe systems of work to control the risk (i.e. permit to work, safe control of operating procedure); and
- as a last resort, issuing personal protective equipment.

Risk assessments are completed in the following situations:

- all activities undertaken where a potential hazard could exist;
- on any new systems, processes, techniques, equipment, materials or amendment to documents prior to implementation;
- prior to any organisational change;
- on any situation where approved codes of practice or technical guidance cannot be implemented;
- changes to existing legislation or introduction of new legislation; and
- if any accident, incident or near miss investigation requires it.

The majority of risk assessments undertaken within Phoenix are simple qualitative risk assessments. However more detailed and complex risk assessments are performed for larger projects or work activities with higher levels of risk, for example quantitative assessments, hazardous operations, asset management risk assessment etc. Where applicable, the findings of risk assessments will be reviewed in detail by the Risk Review Committee or, if more significant, at the Network Safety Group.

Risk assessments are only performed by trained personnel with appropriate experience and knowledge of the area of concern. Each risk assessment must be signed by the individual who has undertaken the risk assessment; authorised by the relevant Senior Engineering Manager to verify that the operation is permissible and authorised to proceed; and countersigned by Phoenix's HSE Manager.

Risk assessments associated with asset management are reviewed by the Risk Review Committee and countersigned by the Policy and Strategy Manager.

All risk assessments are allocated unique reference numbers and are recorded on the central Phoenix Risk Assessment Register. The register is utilised to ensure they are monitored and reviewed on a regular basis.

Once risk assessments are completed they are communicated to all relevant personnel via formal risk assessment briefings or engineering updates (formal presentations to all engineering personnel), which are recorded. Any additional controls required are implemented within the agreed timeframes.

Risk assessments are reviewed by appropriate managers on an annual basis or more frequently if the circumstances change.

The Risk Assessment System is periodically audited as part of the Health, Safety and Environment Auditing programme.

Risk Review Committee

The Risk Review Committee is responsible for the identification and assessment of risks in relation the safe operation of the network asset (the network asset being defined as the distribution network, associated resources, systems, procedures and processes). Significant risks identified via the risk assessment process are presented to the Risk Review Committee for discussion and agreement on controls and appropriate actions to mitigate them.

The committee meets on a bi-monthly basis and is attended by all Phoenix Senior Engineering Managers and the Network Operations Managers.

The objectives of the committee are to:

- identify risks that may affect the safe operation of the distribution network;
- to ensure all risk assessments are completed as appropriate;
- to develop and agree suitable actions to mitigate risks identified;
- implement and monitor agreed mitigation measures and controls;

- to ensure the Operational Risk Register is maintained and reviewed;
- to verify that actions identified to mitigate risks are appropriately implemented;
- to review and monitor health and safety performance specifically in relation to the management of network related risks management;
- to contribute to the formation of technical and safety related policies and procedures; and
- to ensure all relevant technical and safety related information is adequately communicated to employees.

Network Safety Group

The Network Safety Group comprises of all Senior Managers within the Commercial Operations department and is chaired by the Director of Commercial Operations. This group meets on a quarterly basis to review all health and safety issues and risks relating to the safe operation of the distribution network.

The Group also reviews any safety related matters which has been elevated by any other safety meetings within the organisation, for example the Risk Review Committee.

An example of some of the areas reviewed are emergency procedures, risk assessments undertaken and reviewed, safety related training, results accident/incidents investigations and lessons learnt, results of safety audits/inspections undertaken and policy formation.

This group ensures that health and safety is an integral part of all projects and operations undertaken by Phoenix.

Business Continuity Arrangements

Phoenix maintain a Business Continuity Plan (“BCP”) that outlines how it would continue to operate if access to the main office, or to the systems therein, are restricted for prolonged periods.

A BCP Working Group, comprising representatives from key Phoenix departments, meets on at least an annual basis to discuss business continuity issues and to improve the BCP. Members of the BCP Working Group are responsible for reviewing and updating battleboxes¹⁷, key business process and actions listings for their areas of responsibility.

¹⁷ A box (physical or virtual) of critical documentation required to assist the continuation of critical business processes should the BCP be invoked.

The BCP disaster recovery (“DR”) arrangements include the provision of a DR Site, which can be utilised by Phoenix following a major incident affecting the main office. As part of the DR arrangements, the following resources are available at the DR Site:

- dedicated, replicated control room;
- replicated networks drives;
- workstations (computers, telephones etc) with access to Phoenix systems;
- a dedicated computer suite;
- fax machines;
- printers;
- photocopiers; and
- storage.

Risk Assurance Manager

Phoenix employ a Risk Assurance Manager with specific responsibility for the management of risk to Phoenix, its employees, customers, assets, reputation and interests of stakeholders and for the implementation of best practice and businesses improvement initiatives.

The Risk Assurance Manager is a Chartered Accountant (big four accountancy firm trained) with over ten years experience in Enterprise Risk Management and Internal Audit.

The Risk Assurance Manager’s key activities include:

- planning, designing and implementing an overall risk management process;
- evaluating and assessing risks facing the business (e.g. facilitating risk workshops with Senior Managers);
- reporting on key risks to the Directors (e.g. by way of the twice yearly Chief Executive Officer led Group Development Forums (see section 7.1));
- ensuring appropriate corporate governance arrangements are in place;
- the implementation and management of best practice risk management practices (e.g. risk registers);

- conducting audits of policy and processes; and
- implementing policy and procedure improvements.

Audit

Internal Audit

Phoenix recognises that the activities involved in managing risk, play a central role in maintaining a sound system of internal control. One of the key roles of the internal audit function within Phoenix is to provide the Directors with assurance that risks identified are being appropriately managed.

The Phoenix internal audit plan, which is agreed on an annual basis, is designed to complement the Corporate Risk Register and Operational Risk Register through the review of areas of significant risk and to ensure actions to mitigate risks have been implemented appropriately.

The Phoenix internal audit function provides the Directors with assurance on:

- risk management processes, both their design and how well they are working;
- the management of key risks, including the effectiveness of the controls; and
- the complete, accurate and appropriate reporting and classification of risks.

The internal audits performed provide the Directors with an independent assessment on the adequacy and effectiveness of Phoenix processes.

The final results of all internal audits and follow up audits performed are presented to the Chief Executive Officer and the Directors.

External Audit

Phoenix are audited by KPMG on annual basis to confirm that the financial statements are presented fairly, in all material aspects, and/or give a true and fair view in accordance with financial reporting standards.

Health and Safety Audits

Phoenix ensures the effectiveness of its Health and Safety Management System through a combination of internal and external audit regime.

Phoenix's internal HSE Audit procedures sit within ASHES. Phoenix maintains an annual HSE Internal Audit Schedule. The findings of the audits, including Corrective and Preventative Action Requests ("CPARs") raised (see section 4.4) are communicated to the Directors and are monitored to implementation through the HSE Action Tracker System.

Phoenix have attained ISO 14001 (Environmental Management System) and OHSAS 18001 (Occupational Health and Safety Assurance Systems). Both systems have been externally verified and as such are independently audited twice yearly by a third party to ensure continued compliance and certification.

Phoenix has also been audited by the British Safety Council as part of their Five Star Audit and was awarded two consecutive swords of honour as a result of the standards attained.

Each year an external audit plan is prepared which, along with the above Health, Safety and Environment Management Systems Audit, will also specify other areas of independent HSE Audits required. For example Phoenix Safety Case compliance audit, Construction Design Management compliance audit.

Phoenix recognises that it is only through regular internal and external audit can assurance of the adequacies of the Health and Safety Management System be assured and a culture of continual improvement fostered.

Regulatory Compliance Register

The Regulatory Compliance Register is utilised by Phoenix to summarise and manage the main conditions within the Licence. The register is reviewed on a monthly basis to ensure Phoenix continues to meet the Licence requirements and is periodically presented to the Directors.

New Legislation / Legislative Amendments

Phoenix has robust procedures in place for the identifications and implementation of amendments to processes as a consequence of new or amended legislation e.g. the UK Bribery Act.

When applicable, Phoenix implements the following processes to ensure timely compliance with new /amended legislation:

- legal review;
- development/amendment of policy;

- identification of required changes to existing procedures or the development of new procedures;
- provision of training to relevant personnel (normally utilising industry or legal experts); and
- development of processes to ensure compliance (ongoing review, internal audits etc).

Financial Authority Matrix

Phoenix utilise a financial authority matrix to assign procurement spending limits to budget holders. The authority matrix is reviewed and approved by the Finance Director on annual basis.

Purchase orders are independently reviewed by personnel with appropriate authority prior to the placing of all procurement orders.

Security Arrangements

Phoenix is committed to minimising the risk to personnel through potential security incidents. The following procedures have been implemented to reduce the security risk of personnel, contractors and subcontractors working on behalf of Phoenix:

- mandatory personal safety awareness training provided to all personnel deemed at risk;
- arrangements for effectively monitoring the location of at risk personnel (vehicle tracking, panic alarms, signing on and off jobs etc.);
- formal procedures for reporting security incidents/attempted incidents;
- 24 hour/seven days a week central resource available to monitor and manage security incidents/attempted incidents;
- procedures for the timely notification of security incidents/attempted incidents to other personnel, contractors or subcontractors working in the areas affected; and
- a register of security incidents/attempted incidents is maintained on the Phoenix asset register.

4.2 INTERACTION WITH UR

Phoenix has significant knowledge and experience operating in a regulated environment. Phoenix's Directors have in total c.70 years experience working with UR. As well as the normal day-to-day interactions, Phoenix has completed five price control reviews, agreed several licence extensions and successfully delivered both commercial and domestic retail competition in the existing Licensed Area.

During mobilisation, Phoenix sees the immediate requirement being to complete a price control review to establish the capital and operating expenditure for the first five year period. Although Phoenix acknowledge that in principle the operating costs will be predominately established as part of this licence application process, the profile of expenditure may need to change as detailed discussions on actual network rollout are progressed between Phoenix and UR and the allowable capital expenditure is determined. Phoenix would also expect the first price control review to adopt the same approach and use the same templates established during the GD14 price control review. The first price control review will also determine the network development plan for the GTW Licensed Area.

With full retail competition commencing on day one, there would also be the need to establish and agree during mobilisation, conveyance charges with UR that would apply from day one. Phoenix is experienced in setting annual conveyance charges and would propose a similar approach is adopted for the GTW Licensed Area as that established in the existing Licensed Area.

Phoenix also sees the need, during mobilisation, to deliver a Connection Policy that would apply from day one. Again Phoenix has already established a Connection Policy for the existing Licensed Area and, subject to the principles determined as part of the first price control review, would use its current Connection Policy as a template for establishing a Connection Policy for the GTW Licensed Area.

As fully detailed in section 5.4, Phoenix has an established Network Code and retail competition processes within the existing Licensed Area with all necessary supporting systems. Phoenix sees the requirement, during mobilisation, to propose and reach agreement with UR on a consistent Network Code, retail competition processes and systems for the GTW Licensed Area.

Phoenix has already established accountability for regulatory affairs in its current organisation structure. Ultimate responsibility rests with the Chief Executive Officer with the Commercial Operations Director being the Director accountable within the company. The Regulatory Manager, supported by the Business Planning Manager, is responsible for all strategic interaction with UR e.g.

- ensuring licence compliance;
- providing detailed analysis and supporting information for each price control review;
- submitting licence extension applications;
- submitting annual conveyance charges determinations; and

- submitting periodic reviews of Phoenix's Connection Policy.

These Senior Managers are supported by the Transportation Services Manager whose regulatory responsibilities, as detailed in section 5.4, are largely operational.

These three Senior Managers have many years experience operating in Northern Ireland and interacting with UR. A pool of analysts provides support on both operational and strategic regulatory issues where required alongside their core work activities.

Phoenix proposes to utilise this existing organisational structure to manage the regulatory requirements and ensure accountability for regulatory affairs in the GTW distribution business.

Phoenix believes that to deliver a successful natural gas industry in Northern Ireland requires close cooperation and a good working relationship between the company and UR. Phoenix believes that the success of the existing Licensed Area is a result of its working relationship with UR at all levels in the organisational structure, with regular interaction between the Chief Executive Officers of Phoenix and UR, the appropriate Directors and the appropriate Senior Managers. Phoenix proposes that similar interaction would be required to deliver a successful natural gas industry in the GTW Licensed Area.

Phoenix currently provides UR with a range of both periodic and ad hoc information to report performance and support regulation of the business e.g.

- Phoenix submits its network development information annually. This details distribution pipeline installed and total distribution system capital expenditure by Licensed District; connections made to the network by tenure; energy off taken from the network by Gas Suppliers; and cumulative premises connected and cumulative premises passed to the end of the calendar year. This information is provided to UR more frequently if requested;
- Phoenix publishes its Network Capacity Statement annually;
- Phoenix publishes its Standards of Service annually;
- Phoenix submits its Regulatory Accounts and compliance certificates annually;
- Phoenix publishes its conveyance charges as approved by UR annually; and
- Phoenix submits a quarterly report on supplier transfers.

Phoenix has also worked closely with UR to develop the cost reporting templates which formed the basis for cost comparison for the GD14 price control review. These GD14 templates are consistent with the templates used as part of this licence application process. Phoenix will work closely with UR to implement an enhanced, robust and consistent system for cost reporting.

Phoenix intends that the existing suite of information and reports currently provided to UR would be duplicated for the GTW distribution business with further reports developed to meet any additional specific requirements of UR.

4.3 POLICIES AND PROCEDURES

Phoenix utilise robust processes to control the development, review, approval, dissemination and retention of policies and procedures for its operations in the existing Licensed Area.

A suite of policies and procedures that document all aspects of its operations is maintained by Phoenix. Personnel are provided with access to policies and procedures via the Phoenix intranet web pages.

Further detail on Phoenix's:

- *process for development of policies and procedures;*
- *process for maintenance/review of policies and procedures;*
- *organisational arrangements for personnel access to current documents; and*
- *proposals for communication of changes*

is provided below.

It is envisaged that the processes currently in operation in Phoenix would be replicated for the GTW distribution business.

Development

Policy and procedures are developed by Managers with responsibility for the areas of consideration. Various resources to aid the development of uniform and consistent policies and procedures for the organisation are available e.g.

- policy and procedure templates – that provide guidance on font types, logos, format, copyright notices, version control etc; and
- acronyms and glossary of terms – information on agreed definitions and terminology to be utilised in relation to our operations.

As a minimum all Phoenix policy and procedures must include:

- title;
- publication date;
- unique reference number;
- version control;
- approvals; and
- copyright notice.

Consultation

New or amended policy or procedures are consulted on both internally (by relevant Phoenix departments) and externally (by external stakeholders e.g. Gas Suppliers, CCNI) if applicable, prior to being published.

Approval

Policies and procedures are approved by the Manager that developed or amended them and by a Director. Approvals are evidenced by way of signature on hard copies. A central repository of all signed policies and procedures, including historic versions, is held.

Publication

New or updated policies or procedures are issued by email to Senior Managers in advance of formal publication. Emails include copies of the new/amended policies or procedures and briefing notes on the key aspects of the new processes/changes.

The Directors are notified on the key aspects of all new or updated policies and procedures via the twice yearly Chief Executive Officer led Group Development Forum (see section 7.1).

Copies of policies and procedures are made available to all staff via the Phoenix intranet web pages. Staff are notified by email when new or updated policies or procedures are added to the intranet web

pages. Hard copies are also provided to relevant personnel without intranet access e.g. emergency response Engineers.

New staff commencing employment with Phoenix are briefed on relevant policies and procedures as part of the induction process.

In some circumstances, separate verbal briefings on new or updated policies or procedures are provided to all personnel e.g. the Health and Safety ASHES Policy is briefed to all Phoenix employees.

Copies of policies and procedures are issued to contractors or subcontractors working on behalf of Phoenix if deemed relevant.

Update and Review

Phoenix policies and procedures are updated by relevant managers bi-annually or earlier if processes change significantly.

Where applicable, Senior Managers are provided with updated versions of policies and procedures with new or amended aspects highlighted.

Policy and procedure documents are updated with new version numbers for each new publication.

4.4 INSPECTION REVIEW QA AUDIT

Health, Safety, Quality and Environmental (“**HSQE**”) matters are currently managed by Phoenix via a structured series of HSQE management meetings as detailed in Figure 4.4a. These meetings will be referred to throughout section 4.4.

Phoenix is proposing that the same HSEQ management meeting structure outlined in this section 4.4 will be followed across both the existing and the GTW Licensed Areas.

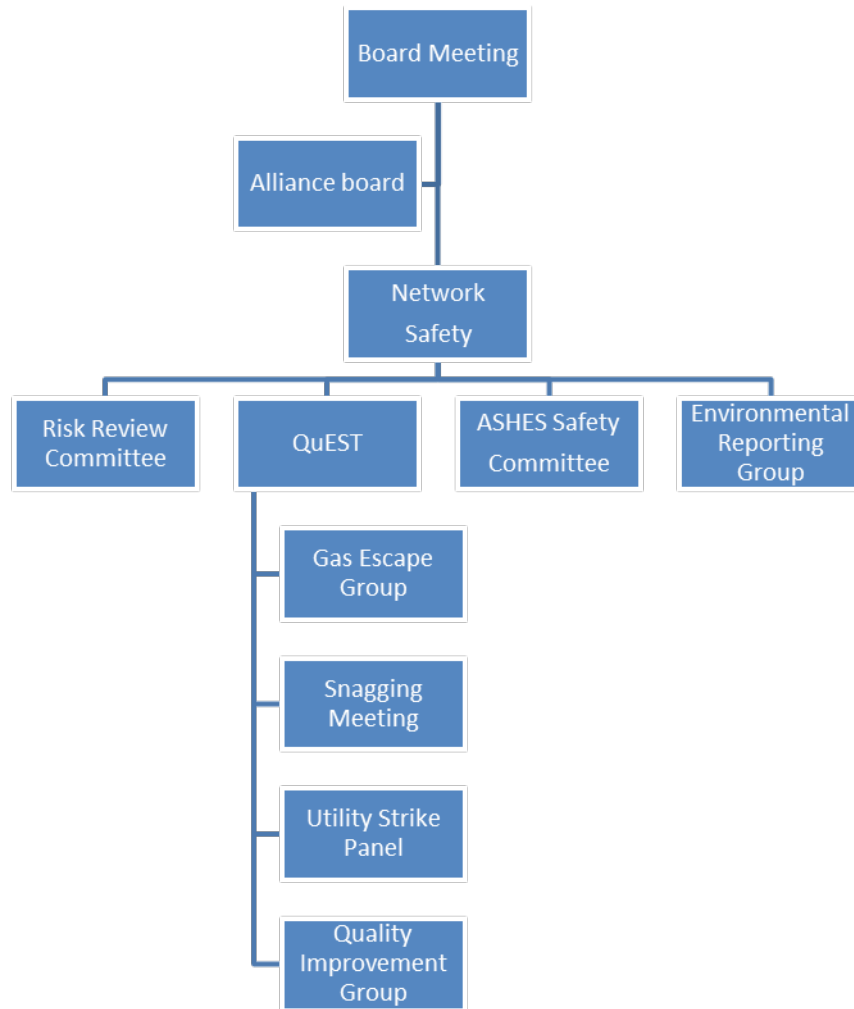


Figure 4.4a HSEQ management meeting structure

The three meetings which are most relevant to section 4.4 are Network Safety, Risk Review Committee and QuEST:

- **Network Safety Group**

The Network Safety Group comprises of all Senior Managers within the Commercial Operations department and is chaired by the Director of Commercial Operations. This Group meets on a quarterly basis to review Health, Safety and Quality related performance, issues and risks relating to the safe operation of the network in the existing Licensed Area.

The group also reviews any safety or quality related topic which has been elevated by another group within the organisation e.g. by the Risk Review Committee or QuEST.

Further detail on the Network Safety Group is provided in section 4.1.

- **QuEST**

The Quality, Environmental, Safety and Training Group (“**QuEST**”) meet monthly to review HSEQ performance relating to the construction, testing and commissioning of the distribution network in the existing Licensed Area. This is the primary HSEQ interface group between Phoenix and its construction contractor.

QuEST reviews performance in relation to accidents, incidents, near misses, asset integrity and all quality and technical related issues. The results of all safety and quality related audits and site inspection are also reviewed by QuEST.

- **Risk Review Committee**

The Risk Review Committee is responsible for the identification and assessment of risks in relation the safe operation of the network asset (the network asset being defined as the distribution network, associated resources, systems, procedures and processes). Significant risks identified via the risk assessment process are presented to the Risk Review Committee for discussion and agreement on controls and appropriate actions to mitigate them.

The committee meets on a bi-monthly basis and is attended by all Phoenix Senior Engineering Managers and the Network Operations Managers.

The objectives of the committee are set out in section 4.1 under “Risk Review Committee”.

Proposals identified for inspection/review/QA/audit

Phoenix ensures the effectiveness of health, safety and quality management systems through a combination of internal and external audit regime. A similar combination of both internal and external audit and inspection would be proposed in order to ensure the highest level of health, safety and quality standards are implemented in the GTW Licensed Area. Phoenix recognises that only through regular internal and external audit can verification of the adequacies of the HSEQ management system be assured and a culture of continual improvement fostered.

The existing inspection, audit and benchmarking regimes in Phoenix are detailed below and would be replicated in the GTW distribution business:

- **Internal Audit Regime**

Phoenix's internal HSE Audit procedure sits within ASHES and is fully detailed in section 4.1 under "Health and Safety Audits". The findings of the audits, including CPARs raised are communicated to the Executive Team and are monitored to implementation through the HSE Action Tracker System.

- **External Audit and Verification Regime**

Phoenix has attained ISO 14001 (Environmental Management System) and OHSAS 18001 (Occupational Health and Safety Assurance Systems). Phoenix has also been audited by the British Safety Council as part of their Five Star Audit and was awarded two consecutive swords of honours as a result of the standards attained. Full detail is provided in section 4.1 under "Health and Safety Audits".

Each year an external audit plan is prepared which along with the Health, Safety and Environment Management Systems Audit detailed in section 4.1 will also specify other areas of independent HSEQ Audits required e.g. Phoenix Safety Case compliance audit, Construction Design Management compliance audit, technical design and various quality and integrity related construction issues. In the past these have included topics such electro/butt fusion, excavation safety, testing and commissioning and live gas operations. Phoenix place significant emphasis on independent audits performed by industry experts to provide reassurance of existing systems and to continually improve its standards and performance.

- **Benchmarking**

Phoenix is listed as one of the top scoring companies in this year's Northern Ireland Environmental Benchmarking Survey conducted by Business in the Community's ARENA Network, achieving platinum quintile status. Phoenix also achieved the highest score overall within the utility sector. The annual survey assesses top businesses in Northern Ireland for environmental management, performance and assurance.

- **Site inspections (construction related activities)**

These are safety, technical and quality related inspection carried out by Engineers, Supervisors, Senior Managers and Directors on all construction related activities undertaken by Phoenix's construction contractor (see below).

- **Safety Tours (Phoenix Operations – post construction)**

These are safety based inspections which are carried out on a range of Phoenix operational functions such as maintenance activities, emergency response and live gas operations.

Proposed range of operational activities covered

At the tender stage of the construction contract, Phoenix will define all safety, quality and technical standards which must be achieved during network construction (including any future network alterations or operations). This will include the specific range of activities and processes which will be subject to continual site inspections and safety tours.

Phoenix will also request a proposed Quality Management Plan (“QMP”) be submitted along with each tender response. Each QMP will be reviewed and evaluated accordingly against the delivery of the minimum standards defined in respect of health, safety, quality and management.

The QMP applies to all contractors’ construction activities in connection with the construction contract. It covers the four main areas of the contract:

- Engineering (technical and quality);
- Health, Safety and Environmental;
- Commercial; and
- Customer Services (operations)

The scope of the QMP will cover the detailed design, procurement, stock management, programming, construction, site supervision and staff management associated with the installation, maintenance and emergency response related to gas mains, domestic service connections and I&C service connections. It is based on proven procedures and tools which were developed during three successful distribution contracts managed by Phoenix for the construction of the network in the existing Licensed Area. The QMP will provide clear accountabilities to all deployed on the contract.

At the award stage of the construction contract, Phoenix will contribute to the overall QMP before finally approving the plan for implementation.

The QMP will clearly define all audits and inspections to be completed throughout the contract. This will include the frequency of these audits and inspections and the individuals responsible for completing them. The effectiveness of the QMP will be formally reviewed at six month intervals by Phoenix and the construction contractor.

Minimum numbers of site safety, technical and quality inspections will also be defined with the QMP. Site inspections will be performed on all construction teams and activities. Site inspections will focus on key construction quality and safety related issues such as:

- compliance with Personal Protective Equipment (“PPE”) policy;
- signing, lighting and guarding;
- safe excavations;
- electro/ butt fusion process;
- depths of cover;
- minimum proximity from buildings and routes of mains and services;
- maintenance and use of specific safety related equipment;
- mains and services testing process;
- commissioning process; and
- reinstatement processes

Note this list is not exhaustive but a sample of topics covered within Phoenix’s standard suite of site inspections questions.

Site inspections will be carried out using a combination of Personal Data Assistants (“PDAs”) and paper based systems. The benefit of PDAs is that information can be relayed immediately from site to Phoenix headquarters. The results of all site inspections are a key part of Phoenix’s quality management information.

Any failures identified through site inspection (following rectification on site) will generate a corrective and preventive action request which will be managed and monitored to close out via the QuEST group.

All management procedures will also be subject to periodic systems audits. Both Phoenix and its construction contractor will maintain a management system audit schedule. The findings of these audits will be evaluated by both the Network Safety Group and QuEST. Performance in relation to maintaining audit schedules and issues identified will be reported at board level.

At the monthly QuEST group the construction contractor shall report on quality assurance and the management of quality related activities detailed in the Contract Quality Plan. Percentage compliance with inspections is defined as a leading key performance indicator.

All individual and trend failings identified within site inspections will be reviewed at this forum. Performance will also be measured in league tables among individual construction teams and



supervisors in order to identify trends. Phoenix uses this essential management information to develop policies, procedures, establish improvement groups and various annual initiatives to continually improve safety and integrity of its gas distribution system. Figures 4.4b and 4.4c are extracts of from recent QuEST reports.

Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Engineer 1	0	0		8		2	15				1		26
Engineer 2	7	6	11	14	16	11	8	15	13	10	19	6	117
Engineer 3	0	0	7	2	5								14
Engineer 4	12	7	17	12	13	15	10	10	17	10	9	8	123
Engineer 5	11	8	10	9	9	1	11	6	9	6			71
Engineer 6	0	1			1	1	2						5
Engineer 7	0	5	3	3	2	2	2	2					19
Engineer 8	0	0		2									2
Engineer 9	0	0											0
Engineer 10	6	0	8	6			9						29
Engineer 11							3	8	14	3	5	6	25
Engineer 12	0	0											0
Engineer 13	13	13	16	11	17	11	16	9	14	16	12	13	147
Engineer 14				8					4				8
Engineer 15	16	8	15	10	16	9	11	11	11	9	3	1	109
Engineer 16	0	2	13										15
Total	65	50	100	85	79	52	87	61	0	54	49	28	710

Figure 4.4b - extract from QuEST Report (HSEQ audits completed by Phoenix in 2013)

Month	No. Completed
Jan	95
Feb	98
Mar	109
Apr	186
May	107
June	65
July	32
Aug	98
Sept	95
Oct	88
Nov	96
Dec	76
TOTAL	1,145

Figure 4.4c - Extract from QuEST Report (HSEQ inspections completed by the appointed contractor in 2013)

Proposals to identify actions and manage to completion

All corrective or preventative actions identified either through inspections, management system audit, incident investigation or other means will be formally raised via the Phoenix CPAR system. A CPAR will be raised if noncompliance with defined criteria is identified. This criterion will be based upon statutory requirements, best practice, industry guidance and internal policies and procedures. Fig 4.4d depicts the existing Phoenix Corrective Action Request Management System.

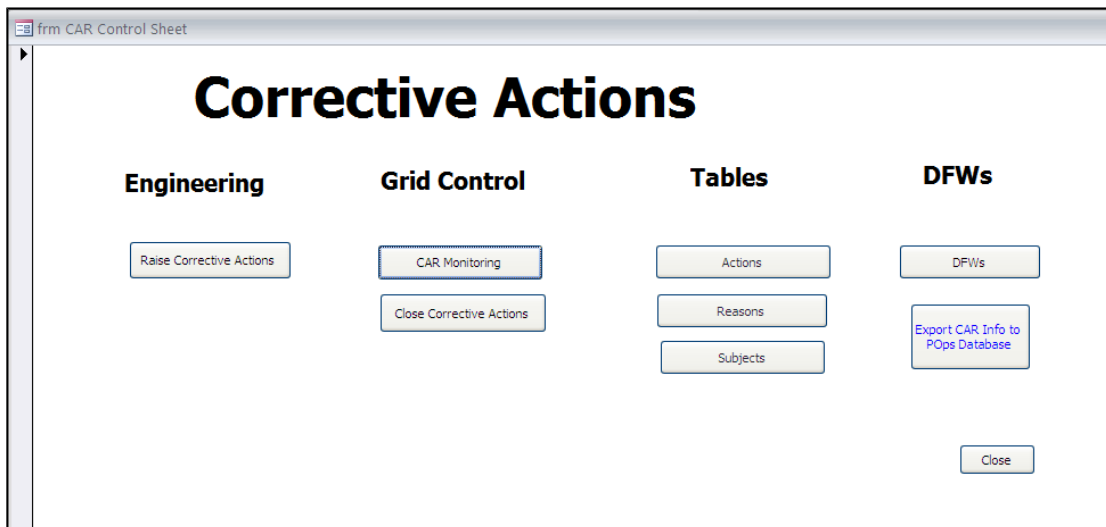


Figure 4.4d - Phoenix Corrective Action Request Management System.

All CPARs are raised and formally approved by Phoenix. Once the agreed CPAR has been completed in full (including evidence of the completed action presented to Phoenix), the CPAR will be formally accepted as closed by Phoenix. Figure 4.4e is an example of a closed CPAR.

frm Corrective Actions

Phoenix Operations - Corrective Actions

Closed

BDSA Number: 3722 Priority: High Date Raised: 07/06/2013
 Site Location: Post Code:
 Original Job Number: IP140 DFW/C Req'd: Yes DFW/DFWC Job Number: DFW13-DC02-029

Originated: Other Subject (fill in as applicable):
 Job Type: Mains Laying - DFW 1 Damaged Service/Sewer 3 4
 Contract: DC02 2 4

Reason For Corrective Action (brief Description):

Issue	Reason for Corrective Action
1	Sewer damaged by directional drill.

Record: 2 of 2 No Filter Search

Agreed Action to be undertaken (list below)

1

Investigate 2 Remedial Action 3 4

Number	Action
1	Investigate team responsible for construction
2	Carry out remedial action as per attached DFW

Record: 1 of 2 No Filter Search

Report on action undertaken (Attached addition sheets/Reports/Training & assessment records)

Team: Supervisor: Date Original work undertaken:

PNG Engineer to be present at investigation interview: Y/N

CAR Raised By: Signed: Date:
 CAR Issued to: Signed: Date:
 Copy of CAR issued to Team/Supervisor/Other(specify): Date:

Generate New DFW/DFWC
 View or Edit DFW/DFWC
 Close

Figure 4.4e - Closed Corrective Action Request

The status of all corrective actions raised and closed out each month will be presented at the monthly QuEST meeting. Figure 4.4f is an example of the monitoring of CPAR status at QuEST meetings. The details of all CPARs completed will also be reviewed at this forum.

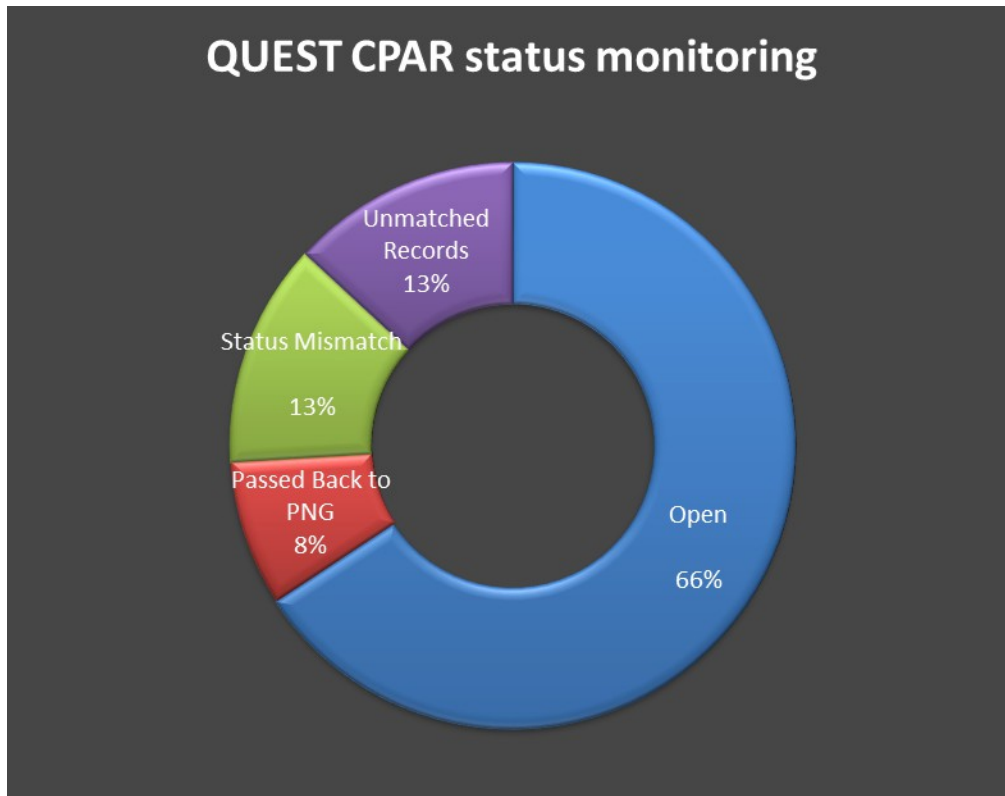


Figure 4.4f - CPAR status monitoring

The QuEST group will also:

- review the priority level of all CPARs raised but not closed; and
- monitor the percentage of CPARs actioned and closed with agreed timescale.

Figure 4.4g is an extract from Phoenix's annual HSEQ review showing all CPARs raised in 2013 grouped according to trends.

NATURE OF NON-CON 2013	Total 2013
Issue with layout of signage onsite	42
Issue with courtesy boards	8
Insufficient barriers used in private	1
Yellow Sticker not complete (meterbox)	7
No Barriers around excn in private	
Damaged footway board onsite	1
Vent hose not fitted in meterbox	3
Service pipe left uncovered	
Incorrect meterbox fitted	1
Issue with tools and equipment	7
Issue with welfare facilities onsite	
No spill kit on vehicle	
Daily risk assessment not completed	2
Fire Extinguisher to be replaced	
GRP Sleeve not fitted correctly	
Footway blocked	
No weils card onsite	
Exposed PE	1
Insufficient pedestrian access	5
Rubbish left onsite/untidy site	1
Security clips not fitted to meter	2
Backfill not compacted properly	
Meterbox not secured properly	
lack of anti tamper paint on steelwork joints	
Failure to wear PPE	8
Issue with meter box location - proximity	2
Utilities not marked up beyond exc'n	6
TOTAL	97

Figure 4.4g - Trends of non-conformance identified through HSEQ site inspections in 2013

Arrangements for feedback into review of policies and procedures

As noted, all CPARs raised are discussed in detail by QuEST group representatives of both Phoenix and the construction contractor. At the QuEST forum a decision will also be taken if the review of a non-conformance, and specifically an agreed preventative action, requires a review of any existing policy, procedure, method statement or risk assessment. The review will be allocated to the person responsible for the identified document and monitored to close out.

During periodic reviews of all HSEQ critical documents the following data will also be evaluated:

- changes in statutory requirements;

- industry guidance and recommended best practice;
- near miss data available;
- high potential incidents;
- accidents/incidents investigation reports;
- trends of failures during inspections and audits;
- CPARs raised;
- internal audit findings; and
- external audit findings.

In certain instances joint working improvement groups will be established to implement the measures identified with a CPAR which may include a review of all associated documentation.

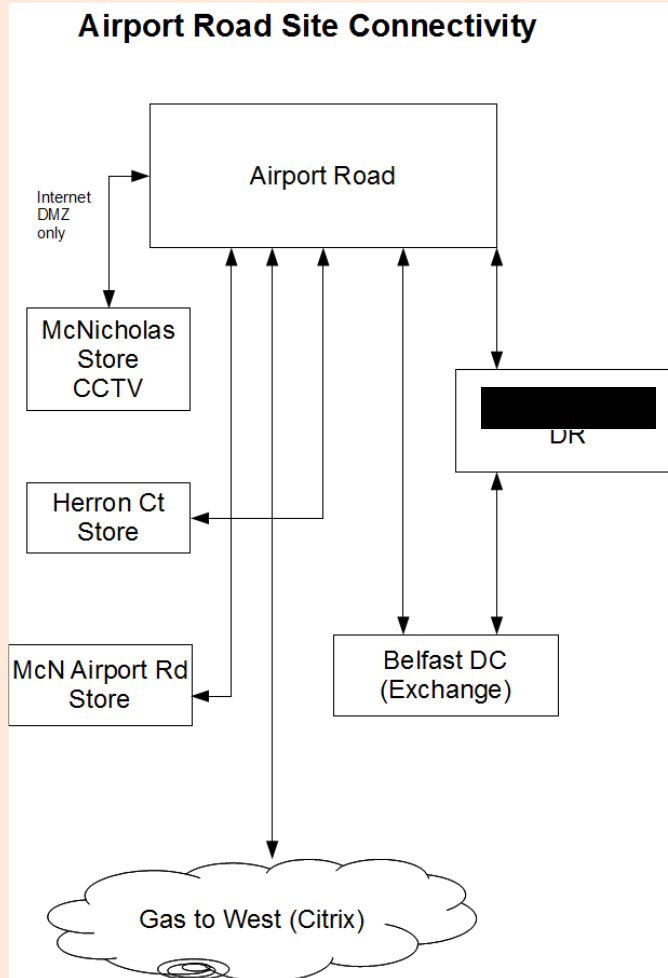
4.5 INFORMATION SYSTEMS

IT systems proposed to provide management information

Phoenix operates as an internal service provision where all information systems are managed, installed and run by a centralised IT department providing services to the whole Phoenix Group.

The core systems within Phoenix are Concerto, which records and manages assets and a GIS which provides a graphical record of the network and in conjunction with SynerGee enables effective management of the distribution network (see boxes below). Remote access is provided using either Citrix based Secure Sockets Layer Virtual Private Network technology, a secure and reliable solution currently deployed by Phoenix, on laptops or via Good Technology Solutions. Phoenix runs its own BlackBerry Enterprise Server (“**BES**”) and Good Technology BES integrated into the host exchange server for this purpose. It is proposed to use the existing Citrix based system to provide remote access to the network in the GTW Licensed Area. As the infrastructure is already in place, deployment will be straightforward and will ensure quick and easy access to all the required systems e.g. from the operations depot in Omagh, thereby providing office services, such as access to Concerto, for asset management and meter issue/stock control as well as other core desktop office products.

Concerto



Concerto is a unified asset register system which records and manages all connections to the network and holds information about every supply point and work carried out there. It also includes systems to manage supply point administration, domestic customer switching and meter stock control.

In addition, a siteworks scheduling system allows various jobs to be booked by Gas Suppliers via a web interface. This web interface also allows suppliers to check certain asset register information and to confirm details about supply meter points.

Further detail is provided in sections 5.4 and 5.6 and in Phoenix’s Innovation and Technology Transfer submission (“Systems” section).

Graphical Information System (“GIS”)

An ESRI based GIS which provides a graphical record of the network and contains all physical assets. The GIS is used in conjunction with Concerto to manage and design the distribution infrastructure and integrates with SynerGee to provide modelling to ensure that the network meets the performance criterion set by Phoenix’s engineering team.

Detailed information on GIS is provided in sections 3.5 and 5.6.

These systems coupled with those used in Finance (Task), Contracts and Procurement (6 over 6) and HR/Payroll (ICS Unicom) will be used to support the provision of management information across the GTW distribution business, with the same mail, internet, and office desktop solutions made available as for current users within Phoenix.

Disaster Recovery

As detailed within “Business Continuity Arrangements” in section 4.1, Phoenix has a dedicated remote disaster recovery suite at [REDACTED] with various systems in hot or warm standby. This includes facilities for the operation of the Control Room. Efficiencies can be achieved by consolidating the disaster recovery sites for Phoenix and GTW distribution business. These facilities at [REDACTED] will offer the necessary business resilience for the operations depot at Omagh.

Proposed approach to provide and disseminate operational activity based cost information

As noted in section 3.7, it is envisaged that these existing robust information systems would simply be extended through the addition of additional data sets to enable processing for the GTW Licensed Area. The existing hardware is stable and the processes robust so extrapolation across the GTW Licensed Area will be straightforward. This approach will ensure that Phoenix has the same ability to disseminate operational activity based cost activity in the GTW Licensed Area as has been proven, not least at the time of each price control review, for the existing Licensed Area. As noted in section 8.4, dissemination of information will be undertaken at Group level and within Phoenix’s finance function. In summary:

Group level

The Phoenix Group exercises strong financial and management accounting controls through the consolidation of all financial and treasury requirements within the finance function within common services in Phoenix.

Long-term business plans and shorter term budgets and forecasts are tracked monthly against actual performance at both a company and consolidated group level in line with obligations under financing agreements, thereby enabling financial requirements to be monitored against the cash resources available to both the Group as a whole and its constituent parts.

Phoenix's finance function

Phoenix's Business Planning and Regulation Departments support management of business plans and forecasts, collation of data and statistics, liaison with key agencies and other third parties.

Phoenix's Contracts and Procurement Department is responsible for the management of all contracts and services, provision of facilities and fleet requirements and the effective operation of the office.

Phoenix's Finance Department is responsible for accounting and treasury functions. This incorporates financial reporting to meet all statutory, regulatory and financing requirements, internal management accounting and reporting, audit and review of costs under the McNicholas contract arrangement, bank and other treasury management functions, tax management and compliance, stock and asset management, purchase and sales ledger control.

As detailed in section 2.2, Phoenix currently provides centralised corporate services to the whole Phoenix Group. Similar efficiencies can be achieved by consolidating some of the functions within Phoenix for the existing and the GTW Licensed Areas. Phoenix departments will therefore be expanded to support cost monitoring and control, including operational activity based cost information, across the GTW Licensed Area. This will ensure that the GTW distribution business benefits from the knowledge and experience of existing FTEs (including Senior Managers and the Directors) and the strong financial and management accounting controls already in place.

Support services requirements identified and resourced

Phoenix has identified its support systems requirements above.

Phoenix will resource its IT Department to ensure that it is capable of providing technical support to meet the demands of both its existing and the GTW Licensed Areas. Section 2.2 sets out the manpower resource requirements.

5. TECHNICAL

5.1 SAFETY CASE

Proposed process and timetable for development

The Gas Safety Management (Northern Ireland) Regulations 1997 (“**GSMR**”) requires gas conveyors to prepare a safety case containing the requirements defined in Schedule 1 and to have this formally accepted by HSENI before conveying gas.

Phoenix prepared the Phoenix Natural Gas Safety Case (the “**existing Safety Case**”) prior to the distribution of gas in the existing Licensed Area. This first issue of the existing Safety Case was accepted by HSENI as have each of the subsequent four revisions which followed thorough reviews undertaken by Phoenix. The history and progress of the existing Safety Case is outlined below:

Safety Case Issue number	Reason for creation/ review
1	Initial Safety Case
2	3 year review
3	Sale of Belfast transmission pipeline
4	3 year review
5	3 Year review

Issue 5 of the existing Safety Case is dated April 2012.

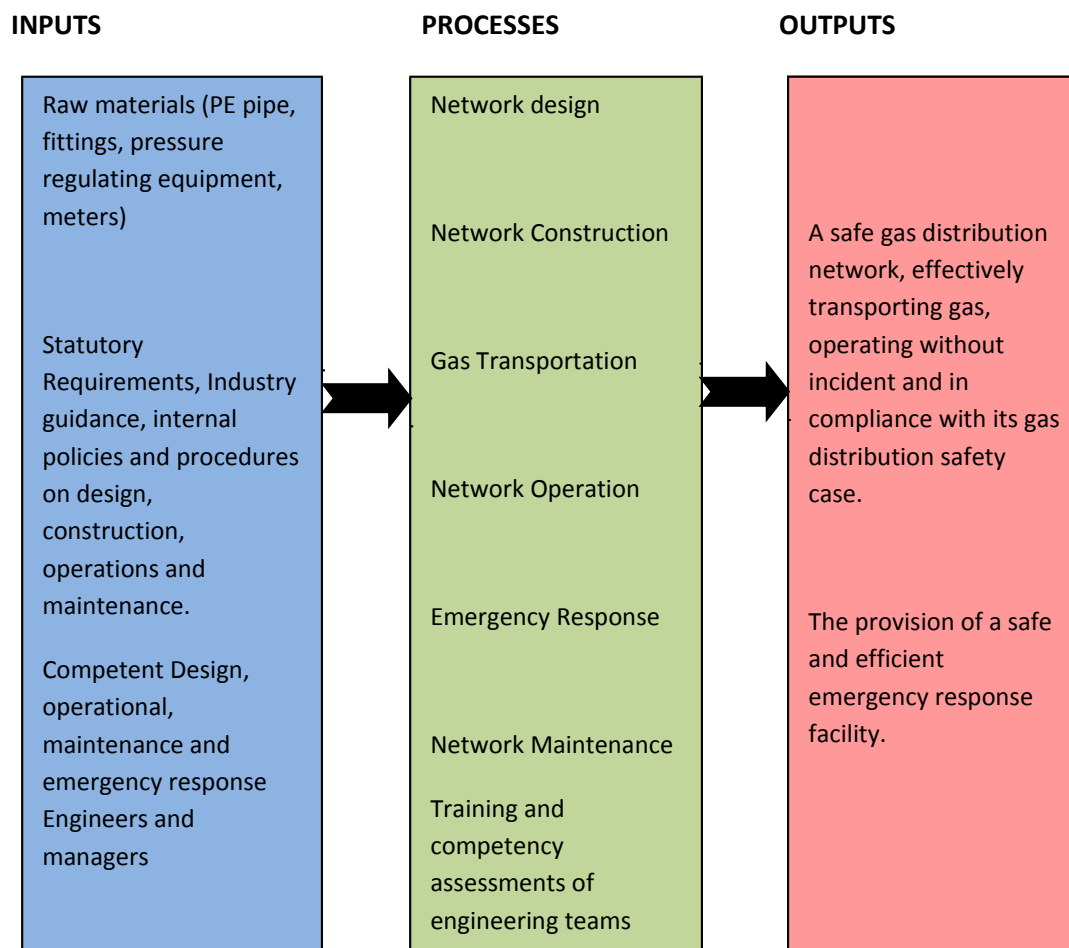
Phoenix has fulfilled the role of Northern Ireland Network Emergency Coordinator (“**NINEC**”) since 1996 and has a sound technical knowledge and understanding of the overall Northern Ireland natural gas supply system, structures and operating capabilities. As part of this role, Phoenix is responsible for preparing, updating and implementing the NINEC Safety Case which has been accepted by HSENI. Further detail is provided in section 5.8.

In conjunction other Distribution Network Operators, Transmission System Operators and statutory bodies, Phoenix will review the existing NINEC Safety Case for the inclusion of the GTW transmission and distribution systems. Phoenix will also submit the NINEC Safety Case to HSENI for acceptance.

Phoenix will use the skills and experience of its key members of staff in developing the existing Safety Case to prepare and submit a Safety Case for the GTW Licensed Area (the “**GTW Distribution Safety Case**”):

The development and submission of the GTW Distribution Safety Case will require the HSE Manager (who will lead the Safety Case Development Team) to work closely with all engineering Senior Managers defined as being “responsible for the safe flow of gas”. This Safety Case Development Team, through a series of group and individual forums and meetings, will identify the processes which must occur to construct and operate a gas distribution network safely, without incident. As is the case with the existing Safety Case, Phoenix will ensure the GTW Distribution Safety Case addresses the requirements defined in Schedule 1 of GSMR.

Phoenix reviews all inputs and processes required to operate a natural gas network safely when undertaking each review of its existing Safety Case e.g.



Section 4.1 provides full detail on risk management including the elements contained in the Operational Risk Register and the role and responsibilities of the Risk Review Committee. All significant network hazards have been identified by the Risk Review Committee in order to prepare the Operational Risk Register which underpins the risk management element within the existing Safety Case.

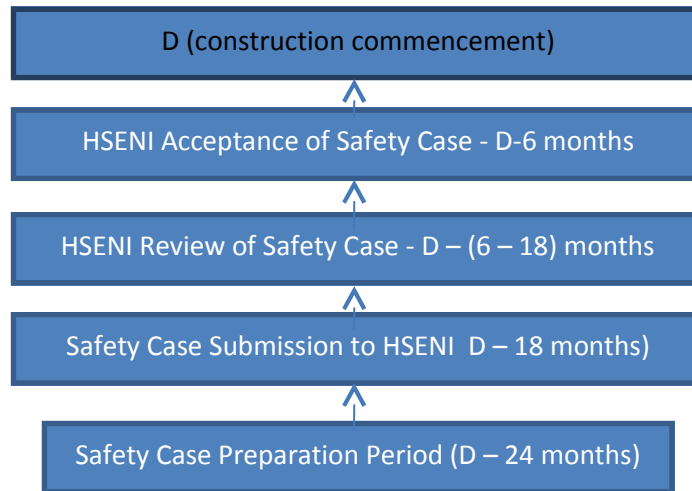
Phoenix would propose to mirror this approach in the GTW Licensed Area i.e. where all foreseeable risks associated with constructing and operating a natural gas distribution system are identified and risk assessed (using both quantitative and qualitative techniques) and suitable controls identified to reduce the risk to as low as reasonably practicable.

The HSE Manager must be satisfied that all risks which could affect the safety and integrity of the network are adequately assessed and controlled through the implementation of risk assessments (see “Risk Assessments” in section 4.1), safe working procedures, method statements and safe systems of work and that these are appropriately documented within the GTW Distribution Safety Case.

Phoenix would propose to initiate preparation of the GTW Distribution Safety Case not less than 18 – 24 months prior to the proposed date of commencement of construction (“D”). This time period allows for an adequate development period and a sufficient liaison and consultation period with HSENI in relation to their acceptance process. The proposed arrangements for liaison with and submission to HSENI are detailed below. The GTW Distribution Safety Case will need to be in place and accepted by HSENI six months before construction begins.

Proposed arrangements for liaison with and submission to HSENI

Phoenix would seek clarification from HSENI at the earliest opportunity on an appropriate period to enable it to conduct its review. Phoenix’s proposed timetable (18 – 24 months) estimates HSENI’s review period at between three and six months as defined within HSE’s gas safety case assessment manual, however the flow chart below allows for the maximum review period by HSENI of 12 months:



Phoenix is experienced in this stage of a safety case acceptance process. Previous submissions of revisions to the existing Safety Case resulted in questions or clarifications being raised by HSENI which required prompt responses. Furthermore in 2011, a three-day verification inspection was conducted by HSENI to ensure the contents of the existing Safety Case were being implemented by Phoenix and to further support their acceptance process.

Phoenix has a positive and pro-active relationship with HSENI. Engineering decisions are made via a formal risk based approach where HSENI’s views are often invited and considered in the overall risk management process. Phoenix will often present safety related engineering topics to HSENI, including the proposed risk control measure, to add value to the overall risk management system.

Phoenix’s HSE Manager is an active member of the Northern Ireland Gas Safety Forum and the Northern Ireland Carbon Monoxide Awareness Group, both of which are chaired by HSENI.

Proposed process for management of change in operational practices

Phoenix considers a safety case to be a “living document” which must be maintained in order to reflect any changes that would be considered either material or non-material.

Phoenix has also produced a responsibility matrix for the existing Safety Case (see example below) which identifies the main requirements against each responsible person defined within the existing Safety Case. This ensures that each responsible person defined within the existing Safety Case is clear as to what their responsibilities are. The responsibility matrix also aids regular compliance reviews of the existing Safety Case. Phoenix would adopt the same responsibility matrix approach for all future revisions of the existing Safety Case and for the GTW Distribution Safety Case.

Safety Case responsibility matrix

Section	Area	Responsibility	Responsible Mgr	Compliance check
3.0		SYSTEM DESCRIPTION		
3.4	Design	Ensure all design operations and associated policies are based on IGEM guidance documents. (Historical designs should comply with design policy at that time)		
		Where deviations exist the following must be implemented <ul style="list-style-type: none"> - Generic risk assessment must be undertaken and documented by appropriate manager to support any deviation from IGEM recommendation with general PNG design policies. - Design specific risk assessments must be undertaken and documented by design engineer and senior manager where proposed design deviates from IGEM recommendation or PNG policy 		
		Ensure PNG design policies are clearly communicated and enforced to all involved in the network design and build process.		
3.4.3.2		Ensure transportation of firm load to meet max. demand conditions and minimum network pressure are maintained as per IGE/GL/1		
		Monitor pressures of large users, prs's and system extremities to predict low pressure extremities of the network. Compare in service performance with design performance through live pressure modelling.		
3.5	Communication and Control systems	Ensure continually manned systems and procedures are in place to enable distribution network monitoring. (including escalation of alarms)		

All proposed changes to the management or operation of the network in the existing Licensed Area are assessed via the Risk Review Committee to identify the potential impact on the existing Safety Case.

Phoenix classifies “changes” as follows:

1. Minor changes; and
2. Material Changes.

HSE define a material change as: *“A material change is one that is likely to change the basis on which the original safety case was accepted. In other words changes that merit reappraisal of the risk control arrangements, whether or not they require the adjustment of measures to be taken.”*

Changes are likely to be considered material if they have the potential to affect the major risks identified in the Operational Risk Register or their controls, either directly or indirectly. Phoenix would propose to consult with HSENI as to whether a change should be recorded as minor or material at the earliest opportunity. A material change will require a revision to the Safety Case (the GTW Distribution Safety Case or the existing Safety Case as appropriate).

The proposed change would therefore be risk assessed by the Risk Review Committee for impact on the Safety Case and appropriate controls identified. The assessment of impact and implications would be formally presented to HSENI and their contributions incorporated into the revision of the Safety Case. The revised Safety Case would then be submitted to HSENI for acceptance. On acceptance, the revised

Safety Case would be issued to registered Safety Case holders who would also be briefed on the relevant changes and impacts before a pre-agreed implementation date.

Any change which, following risk assessment and consultation with HSENI where appropriate, is deemed minor shall be recorded and maintained within the safety case modifications log. This ensures that all minor changes are incorporated into future revisions of the Safety Case and monitored should they have a cumulative effect which warrants immediate revision of the Safety Case.

Phoenix also ensure that regular internal and external audits are undertaken in relation to the implementation and compliance with the existing Safety Case (see “Health and Safety Audits” in section 4.1). The last independent audit was carried out on the existing Safety Case in 2010 followed by a HSENI verification inspection in 2011 as noted above. Again Phoenix would propose to mirror this approach for the GTW Distribution Safety Case.

5.2 TECHNICAL POLICIES, PROCEDURES AND REFERENCE STANDARDS

Proposals to have policies covering all operational business activities

Within the existing Licensed Area, Phoenix undertakes a diverse range of operational activities necessary to satisfy and comply with safety, regulatory and business obligations and responsibilities incumbent of a Distribution Network Operator and asset owner. Examples of core operational activities include:

- Health, Safety and Environment;
- Risk Management;
- System Design and Network Analysis;
- Design, Planning and Costing:
 - Mains Extensions;
 - Customer Connections and Metering; and
 - Pressure regulating equipment;
- Network Construction;
- Asset Management and Records;
- Operation and Maintenance;

- Emergency and Incident Response;
- System Monitoring; and
- Management of Network Code, System Access by Shippers and Gas Supplier Interface.

A suite of policies and procedures have been developed and implemented to cover these activities and are fundamental to providing an operating framework that aligns business objectives and rules with clear guidance on requirements for delivery and accountabilities for execution and enforcement. Personnel are provided with access to policies and procedures via the Phoenix intranet web pages.

Policies and procedures are regularly reviewed and amended to take account changing legislation, regulations, IGEM guidance and to encompass industry best practice, innovation and changes introduced to address previously encountered problems.

Further detail on Phoenix's:

- process for development of policies and procedures;
- process for maintenance/review of policies and procedures;
- organisational arrangements for personnel access to current documents; and
- proposals for communication of changes

is provided in section 4.3.

In addition to streamlining practices and providing uniformity and consistency for staff engaged in business activities, Phoenix's policies and procedures provide an auditable trail and are key to compliance and risk management processes.

The business model proposed for the GTW Licensed Area is founded on the proven practices currently delivered by Phoenix in the existing Licensed Area. Existing policies and procedures will therefore be replicated across the GTW distribution business, subject to amendment where considered necessary.

Proposals for training of personnel to ensure understanding

It is imperative that all staff and personnel engaged in operational activities are competent to deliver the duties and responsibilities associated with their job role and are given sufficient training, instruction, knowledge, experience and mentoring to fulfil this requirement.

The understanding of Phoenix policies, procedures and reference standards and, more importantly, compliance and correct application is a critical factor leading Phoenix's ability to successfully operate a safe and efficient distribution system.

Phoenix has a structured approach to competency and training aligning HSE and technical competencies with job roles and positions.

Training of personnel to ensure understanding comprises the following examples:

- external training by an approved training provider;
- internal training delivered by authorised Phoenix staff;
- on the job training with mentoring/instruction from more experienced/senior staff;
- technical briefings from Senior Managers;
- attendance at IGEM seminars.

Methods for ensuring understanding include but are not limited to;

- desk top assessments/questionnaires;
- verification of successfully completed tasks and assignments;
- witness testimonies from experienced/senior staff;
- submission of portfolio type evidence;
- site audit;
- review and authorisation of submitted work.

Where there is to be a new procedure developed or amendment made to an existing document, this is reviewed and agreement on content is made through Phoenix's Risk Review Group (see sections 4.1 and 4.4) before sign off and implementation.

The steps for introducing a new or revised document consist of:

- document control;
- communication with staff;

- posting of document on Phoenix intranet;
- staff briefing/presentation;
- questions and answers;
- implementation and enforcement;
- further mentoring/instruction as required; and
- audit and review.

5.3 COMPLIANCE WITH RELEVANT LEGISLATION, INDUSTRY STANDARDS AND BEST PRACTICE

Proposals to incorporate into all policies, procedures and practices

To be a legally compliant, safe, efficient and cost effective Distribution Network Operator delivering value to gas consumers within the existing Licensed Area, Phoenix has ensured that legislation and regulations, industry guidelines and recognised best practice applicable to operational activities, underpin all company policies and procedures and that a culture exists throughout the organisation to 'do things right'.

Phoenix has been innovative in such areas as system design (operating pressures and polyethylene materials), domestic meter box design and solutions for compliance with Dangerous Substances and Explosive Atmosphere Regulations ("DSEAR"). Further detail is provided within Phoenix's Innovation and Technology Transfer submission.

Phoenix has been closely involved with IGEM, which is the recognised authority on technical standards for the gas industry, to have practices in Northern Ireland recognised in IGEM guidelines and has also raised a number of technical queries and challenges which have been upheld in the pursuit of driving forward better practice and delivering cost effective practical solutions.

Phoenix undertake periodic reviews of policies and procedures to verify currency and applicability and health check these through a combination of internal audit and external verification (e.g. the British Safety Council Five Star Audit) and have also recently undergone a successful due diligence exercise associated with change in company ownership.

The above philosophy will remain for the GTW distribution business.

Process to maintain awareness of industry practice

Phoenix have a legal compliance procedure that requires an annual review to be completed to ensure the requirements and obligations of relevant legislation and regulations are being met and a register recording these reviews is maintained.

Sources used for this legal compliance review include:

- www.hmso.gov.uk Lists all new legislation each year in Northern Ireland
- www.hseni.gov.uk HSE legislation and the Approved Code of Practice
- www.croner-i.croner.co.uk Health and Safety updates
- www.nibusinessinfo.co.uk Environmental updates
- www.doeni.gov.uk/niea Environmental Agency
- <http://standards.igem.org.uk> Phoenix subscribe for access to all IGEM standards

Phoenix retain sight of industry best practice through relationships with IGEM, Pipeline Industries Guild, other network operators, manufacturers, suppliers and contractors, websites, attendance at industry conferences and updates from gas consultants with whom we engage for specific services. Further detail is provided within Phoenix's Innovation and Technology Transfer submission ("Knowledge Sharing" section).

Phoenix will adopt relevant industry best practice where practical for the GTW distribution business.

5.4 NETWORK CODE

Timetable for completion of the network code and any other appropriate contractual arrangements

Phoenix has successfully facilitated the delivery of a competitive retail market in the existing Licensed Area. In fact the Phoenix Distribution Network Code (the "**Code**" or the "**Network Code**") and its key Code processes is the blueprint for expanding the competitive arena to other Licensed Areas in Northern Ireland. Phoenix is therefore confident that its success in delivering a competitive retail market in the existing Licensed Area can be extended, and with relative ease, to any new distribution network Licensed Area and in particular the GTW Licensed Area, thus creating a more unified, uniform distribution regime throughout Northern Ireland.

Phoenix expects to deliver the network code and associated processes for the GTW Licensed Area detailed in this section 5.4 during mobilisation given that these are already in use in the existing Licensed Area and only minor or administrative amendments will be required. The timetable for the overall delivery of the network code and associated processes for the GTW Licensed Area is provided at Figure 3.1.

An essential element in delivering and supporting a competitive retail market has been Phoenix's ability to interact with all industry stakeholders and develop in particular strong professional working relationships with Gas Suppliers, UR, CCNI and other Network Operators. Phoenix has played a key role in the development of industry forums and now forms an integral part of the Gas Market Opening Group, Gas Supplier Forum, Distribution Network Operators' Forum and Northern Ireland Stakeholder Group for EU Gas Network Codes.

Phoenix has utilised these forums to ensure all Network Code, Licence and other relevant legislative requirements are identified and appropriate solutions discussed with the resulting robust processes developed in a timely manner to meet industry expectations and legislative requirements. Examples of this are:

- Phoenix project managed and delivered on behalf of Gas Suppliers a Pay as You Go ("**PAYG**") meter switching solution with Paypoint which was low budget and delivered on time. The resulting automated solution has also been proven to be extremely cost effective as the only alternative was to organise a Phoenix Engineer to attend site at the time of each switch to re-commission the gas meter with the correct gas supplier identification code. Further detail is provided in section 9.2 and within Phoenix's Innovation and Technology Transfer submission ("Technical and Construction" section).
- Phoenix provided significant input into the development of the Gas Suppliers' Supply Meter Point ("**SMP**") Agreement and its many schedules ensuring Gas Suppliers not only met their licence obligations but ensured consistency and compliance with the Network Code requirements. This process included making many amendments to the Phoenix Customer switching system during its development stage as well changes to the Phoenix Network Code to ensure gas supplier processes could be accommodated.
- Phoenix brought forward and implementing a cost effective solution for managing the meter inspection process, allowing Gas Suppliers to meet their licence obligation.
- Phoenix identified operational issues to be considered for a Supplier of Last Resort event as well as proposing simple, effective solutions for dealing with this type of incident. Phoenix now forms part of the working group which includes Gas Suppliers and UR to develop a robust cost effective solution for the Northern Ireland natural gas industry.

- Phoenix developed a process for dealing with meter mix ups, a requirement of the new Individual Standards of Service regulations, by utilising and building upon the existing Phoenix and Gas Supplier interface system and siteworks process, again delivering a simple cost effective solution for the Northern Ireland natural gas industry.

Phoenix works closely with Gas Suppliers throughout the accession process and beyond to ensure they can contribute to the realisation of a competitive retail market. This includes, upon request to enter the market, providing Gas Suppliers with an extensive training programme which ensures that they are fully aware of their Network Code obligations and the processes Phoenix has in place to facilitate this. Phoenix also regularly facilitates bi-lateral meetings to discuss any issues specific to individual Gas Suppliers when required.

Phoenix has led the way and contributed significantly to the planning and development of a competitive retail market in Northern Ireland and strongly believes that all of the processes developed can be utilised in any new distribution network Licensed Area with little or no amendment. The work already undertaken by Phoenix and the ability to extend this to any new network would support the requirement for immediate introduction of a competitive retail market upon completion of the network construction phase within the GTW Licensed Area.

Given that the licence for the GTW Licensed Area will not contain an element for supply exclusivity, Phoenix believe that one of the key requirements during the network construction phase will be to encourage existing Gas Suppliers and to identify potential new market entrants who can assist Phoenix in delivering its business plan. As mentioned above, Phoenix has already established strong working relationships with the Gas Suppliers currently operating in the market and has in place a detailed market entry programme (detailed below) to support new market entrants.

Phoenix would propose to put in place a work plan for communicating with Gas Suppliers within the GTW Licensed Area during the mobilisation phase to ensure an organised approach to delivering a competitive retail market is achieved similar to that delivered for the existing Licensed Area. Phoenix would propose to use the established industry forums such as the Gas Market Opening Group and Gas Supplier Forum to liaise and communicate with Gas Suppliers on network development and gas availability. It will also be essential for Phoenix to work with Gas Suppliers to identify a party willing to undertake the Commissioning Supplier¹⁸ role to ensure a connection process, similar to that undertaken in the existing Licensed Area, which provides the potential customer with all necessary support to switch to natural gas is delivered in a cost effective way.

¹⁸ The Commissioning Supplier will ensure that once a consumer connects to the natural gas network they can be provided with a gas supply from the point of connection.

Network Code and Customer Switching

Phoenix notes that one of the key requirements for the GTW Licensed Area is that the Distribution Network Operator must be able to deliver a single Network Code for Northern Ireland and a consistent switching system and processes. The following section demonstrates Phoenix's ability to deliver this effectively and other aspects of retail competition already undertaken in the existing Licensed Area which can be utilised in the GTW Licensed Area.

The current Phoenix Distribution Network Code received UR approval in 2005 and came into effect in September of that year¹⁹. It was developed using many of the key Code processes already utilised in the Great Britain gas market i.e. it used these tried and tested processes and simplified them to meet the requirements of the Northern Ireland natural gas market.

In relation to the timescales for delivering a Network Code for the GTW Licensed Area, this will commence almost immediately from the date the licence is granted. Phoenix will establish all key Network Code and retail competition processes and develop all necessary supporting systems.

Phoenix proposes to utilise its existing Network Code for the GTW Licensed Area with only minor amendments required to facilitate its introduction.

Phoenix has also developed ten side agreements which support the Network Code:

1. Framework and Accession Agreement;
2. Network Code Modification Rules;
3. Network Code Credit Rules;
4. Network Code Meter Reading Validation Rules;
5. Isolation Siteworks Agreement;
6. SMP Confirmation Statement;
7. SMP Response Statement;
8. Meter Bypass Utilisation procedure;

¹⁹ Prior to September 2005 the Phoenix Network Code was a combined Transmission and Distribution Network Code and therefore due to the sale of the Phoenix transmission network it was necessary to develop a single Distribution Network Code.

9. I&C New Connection Process Memorandum of Understanding; and

10. Domestic New Connection Memorandum of Understanding.

Each of these side agreements is appropriate for use in the GTW Licensed Area.

For Gas Suppliers already operating in the existing Licensed Area Phoenix would envisage that, assuming they have demonstrated their ability to operate effectively in the market, consideration should be given to granting exemptions to some elements of the market entry process. This will facilitate commencement of a retail market at the earliest stage.

Network Code and Retail Competition Processes

All key Network Code and retail competition processes are well established within the existing Licensed Area with all necessary supporting systems developed and fully operational. These include the following processes and supporting systems

- Market Entry;
- Supply Point Administration;
- Customer Switching;
- Gas Nomination, allocation and reconciliation processes;
- Non-Daily Metered (“**NDM**”) Demand models and demand forecasting methods;
- Daily Metered (“**DM**”) demand determination and allocation;
- Annual Quantity and Supply Meter Point Capacity determination processes;
- Emergency handling;
- Network Code Credit Support determination and review processes;
- Distribution Network Charging determination and Invoicing processes;
- Siteworks Handling processes;
- Postalised Capacity processes;

- Priority Consumer and Vulnerable Consumer identification processes; and
- Revenue Protection.

The following section describes in more detail these key Network Code processes and Phoenix's assessment of whether these processes, together with their supporting systems, could be utilised in the GTW Licensed Area.

Market Entry

Phoenix has a detailed market entry readiness process developed in conjunction with UR to facilitate a Gas Supplier's entry into the natural gas market in the existing Licensed Area. This readiness process has been designed to provide assurance to Phoenix and UR that the new market entrant is aware of all obligations it has under the Network Code, Gas Supply licence, relevant regulations as well as other industry legislation. As described earlier in this section, this process requires the Gas Supplier to attend training with Phoenix on all key Network Code processes and ensures they can demonstrate their ability to effectively operate in the natural gas market. This robust entry process ensures integrity of the gas market is maintained.

To date Phoenix has facilitated the market entry of five Gas Suppliers with a further three Gas Suppliers' accession processes currently being completed.

This Phoenix market entry process was also considered appropriate for use for other Distribution Network Operators' networks and Phoenix believes it could be replicated in the GTW Licensed Area.

Supply Point Administration

Phoenix has all necessary processes and a Supply Point Administration ("SPA") system to effectively manage all Licence and Network Code requirements for Supply Point Administration.

The Phoenix SPA system has been developed to manage several key aspects of Supply Point Administration and its functionality includes:

- Assignment of a gas supplier to each individual supply meter point – This is essential for undertaking many of the key Code processes including the inputs for gas nominations, allocations, reconciliations, distribution charges determination and emergency handling.

- Annual Quantity (“AQ”) and SMP Capacity determination - The SPA system also holds details of the applicable AQ and SMP Capacity for each SMP on the Phoenix Network and is a key tool in the determination of these values as well as determining the End User Classification used for demand forecasting and distribution network charging.
- Supplier of Last Resort (“SoLR”) – The SPA System will be used by Phoenix to manage elements of a SoLR event with functionality being developed to allow for the mass transfer of SMPs from a failing gas supplier to the appoint SoLR.

Customer Switching

Phoenix has developed an SMP Confirmation System to manage all processes associated with customer switching. Further detail is provided within Phoenix’s Innovation and Technology Transfer submission (“Systems” section). This web based interface has been developed to facilitate the requirements of the Network Code and the licence obligations of both Gas Suppliers and Phoenix.

The system design accommodates any level of customer switching with the only limitation on the number of switches that can be processed in any given day being the resources of Gas Suppliers and Phoenix to process inputs and manage system outputs. The system development was low cost, particularly when compared to comparable switching systems utilised by other gas and electricity operators, was delivered on time and on budget and was enhanced significantly throughout the development process to include many aspects of the Gas Suppliers’ SMP Agreement which was being developed in tandem.

Given that the system has been designed to ensure there is no upper limit on switching capability on any given day, and assuming the Phoenix Network Code is utilised, this system could be replicated in the GTW Licensed Area with little amendment.²⁰

In addition to the SMP Confirmation system facilitating a customer switch, the system allows the Gas Supplier access to the Phoenix Asset Register to verify SMP details held for any consumer address as well as notifying Phoenix of any potential data issues. This facility ensures the accuracy of data held by Phoenix and improves the customer experience of switching from one Gas Supplier to another given that rejected or objected to switches are minimised. Again this system functionality could be replicated in the GTW Licensed Area once this information is included in the Phoenix Asset Register.

²⁰ The system is supported by the Phoenix Asset Register and can only operate in conjunction with this system. This also assumes that the current Phoenix Network Code provisions for customer switching are utilised in the GTW Licensed Area.

Gas Nomination, allocation and reconciliation processes

Phoenix has developed and utilised a suite of models to facilitate the requirements of its Network Code with regards gas nominations, allocations and reconciliation processes. Based on the assumption that the existing Phoenix Network Code would be extended to the GTW Licensed Area, these models could be easily replicated to accommodate the requirements of the new network.

NDM Demand models and demand forecasting methods

Phoenix has utilised demand forecasting methods since the inception of the network in the existing Licensed Area. The methods employed have been proven over time to provide accurate and robust forecasts for use at both distribution and transmission network level. Phoenix has also established relationships with Great Britain Network Operators and has been able to avail of NDM demand data to assist in its demand forecasting methods, allowing the necessary time for its own network to grow and retail competition to develop. Phoenix has undertaken significant work in the last 18 months on NDM demand profiling and has put forward to industry plans for a NDM demand project specific to its own network and one which could provide a Northern Ireland solution. Phoenix continues to liaise with key stakeholders including other Distribution Network Operators, Gas Suppliers and UR to make this project viable on a Northern Ireland wide basis and therefore readily transferable to the GTW Licensed Area.

AQ and SMP Capacity Determination processes

As detailed above, Phoenix's SPA system has been designed to calculate an AQ and SMP Capacity for every SMP on its Network. The process uses meter reading data provided by Gas Suppliers and has automated processes for processing and validating large batches of meter reads to determine the necessary AQ and SMP Capacity values which are essential to many of the other key Network Code processes e.g. demand forecasting, gas nominations, allocations and distribution network charging. These processes could be replicated for use in the GTW Licensed Area.

Emergency Handling

Phoenix has also developed processes and supporting systems to manage the requirements of its Network Code specifically in relation to emergency preparedness and steps to be undertaken in the occurrence of an emergency event. In preparing these emergency handling processes, Phoenix has

liaised extensively with Transmission System Operators to understand their requirements in the event of an emergency and included their requirements in the Phoenix processes and systems.

Phoenix has also included, as a prerequisite to market entry, the requirement for a gas supplier to develop emergency procedures which demonstrate compliance with the Network Code and support Phoenix's own emergency procedures and those of the Northern Ireland Network Emergency Coordination group. Phoenix also liaises regularly with Gas Suppliers (i) to ensure the accuracy of the 24 hour contact detail information on record and (ii) uses emergency exercises to ensure proper lines of communication exist between Gas Suppliers and Phoenix should an emergency be declared. All current processes and system in place for handling emergency events could be replicated for use in the GTW Licensed Area.

As part of its emergency handling procedures, Phoenix has agreed processes with Gas Suppliers to ensure that any carbon monoxide incident is identified, immediately communicated to the gas supplier and properly investigated in line with GSMR requirements. Again Phoenix would propose that the current Carbon Monoxide processes are replicated for use in the GTW Licensed Area.

Code Credit Support determination and review

Phoenix manage the risk of gas supplier default by having in place robust credit support arrangements which require a gas supplier to provide sufficient credit to cover an estimated 62 peak days of indebtedness. The gas supplier is offered a number of credit options by which this cover can be provided including:

- parent company guarantee;
- letter of credit;
- company credit ratings;
- prepayment; and
- deposit deed.

Phoenix further manage this risk by having in place procedures and a supporting credit support determination model for quarterly and annual reviews of each gas supplier's credit support arrangements, which take into account changes in customer portfolio. This includes making estimates for new connections together with known and potential switches to and from a gas supplier in the following 12 month period. This suite of credit options, the credit review procedures and supporting system could be easily replicated for use in the GTW Licensed Area.

Distribution Network Charging determination and Invoicing

Phoenix has developed detailed processes and supporting systems for the determination and invoicing of Gas Suppliers for the use of the Phoenix Distribution Network. All determined charges are verified and authorised by a Phoenix Senior Manager before issuing to Gas Suppliers. The process in place could be easily replicated for use in the GTW Licensed Area with the Distribution Charging system requiring only minor amendment.

In addition to the development of Distribution Charging processes, Phoenix has also developed a monthly charging process with Transmission System Operators for the exchange of volume data which allows more accurate transmission charges to be determined for the Gas Suppliers operating in the existing Licensed Area. Phoenix would propose that this process should be expanded to the new transmission and distribution regime in the GTW Licensed Area.

Siteworks Handling Procedures and Connection Policy

Phoenix has developed detailed procedures for Gas Suppliers to outline the process for siteworks activities that it undertakes on their behalf. While the competitive retail market was developing, Phoenix utilised manual processes (pro-forma and email) for the necessary communications between Gas Suppliers and Phoenix. This manual system has recently been replaced by an automated solution to deal with gas supplier requests for the key siteworks activities including:

- meter exchanges;
- isolation requests; and
- reconnection requests.

These represent the majority of siteworks activities however Phoenix proposes further development of this automated siteworks system over the coming 12 months to include all siteworks activities including providing facilities for the exchange of information on:

- meter queries and testing;
- meter inspections;
- meter mix ups;

- meter and associated equipment repair requests;
- meter location alterations;
- telemetry issues;
- elevated pressure requests; and
- volume monitoring equipment requests.

The Phoenix siteworks processes and system have also been developed to support the Individual Guaranteed Standards of Service regulations.

Also, as required under the Licence, Phoenix has in place a Connection Policy which details the costs associated with any siteworks it undertakes on behalf of Gas Suppliers or their customers.

The Phoenix siteworks procedures and supporting system²¹ and Phoenix's Connection Policy could be easily adapted for use in the GTW Licensed Area with only minor amendment.

Postalised Capacity Processes

Phoenix currently undertakes, on behalf of Gas Suppliers all processes associated with the booking and holding of capacity on the Postalised Transmission Network. Phoenix's acceptance of this obligation for which it receives no financial benefit, ensured retail competition was allowed to develop in the existing Licensed Area by preventing capacity hoarding or the double booking of capacity by Gas Suppliers. The processes undertaken by Phoenix include:

- determining levels of capacity required;
- consultation with Gas Suppliers on capacity requirements;
- liaison with Transmission System Operators on capacity booking;
- determining and publishing a Postalised Capacity Charge for the existing Licensed Area;
- calculating and invoicing Gas Suppliers for monthly Postalised Capacity Charges;
- providing credit support and making monthly Postalised Capacity payments to the Postalised transmission regime on behalf of Gas Suppliers; and

²¹ The system is supported by the Phoenix Asset Register and can only operate in conjunction with this system.

- undertaking an annual reconciliation process for Postalised Capacity.

Assuming that a similar obligation would be extended to the Distribution System Operator within the GTW Licensed Area, Phoenix believes that the current processes and systems it has developed could be replicated for the GTW Licensed Area.

Priority Consumer and Vulnerable Consumer identification processes

Phoenix has developed appropriate criteria for the identification of Priority Consumers i.e. priority I&C consumers as required under condition 2.8.7, “Priority for maintenance of supply”, of the Licence. It also has in place processes for ensuring that both this Priority Consumer list and the vulnerable domestic consumer lists prepared by Gas Suppliers are accurately maintained. Both of these processes are essential to ensure Network Code and Licence obligations can be met in the event of an emergency event occurring on the Phoenix Network.

Phoenix would propose that existing Priority Consumer criteria are expanded to the GTW Licensed Area together with the current processes for ensuring accurate data is maintained, therefore ensuring licence compliance.

Revenue Protection

Phoenix has in place robust procedures for dealing with meter tampering and stolen meter issues. The current Phoenix processes ensure that the safety and integrity of the network is maintained as well as providing a uniform and consistent approach for dealing with revenue protection issues with all Gas Suppliers.

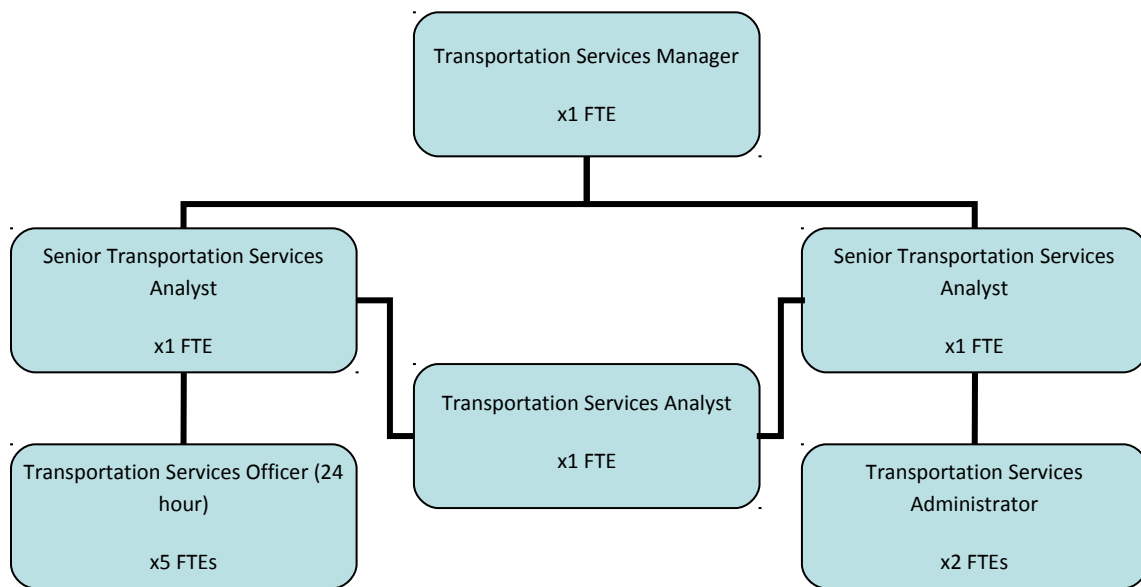
In developing its procedures, Phoenix has invested a significant amount of time on engagement with all key stakeholders, both inside and outside the gas industry, to aid understanding on the potential impacts of meter tampering. Phoenix believes this approach continues to minimise the number of instances which occur despite the significant increase in the number of connections to the gas network.

The approach employed by Phoenix to this important area of asset management is also viewed by Network Operators in Great Britain and Ireland as extremely effective and is seen as possible best practice for dealing with these types of events. Indeed Ofgem’s proposal for Gas Suppliers in dealing with revenue protection issues suggest utilising one of the key aspects of Phoenix’s policy whereby confirmed multiple tampering events result in permanent disconnection from the natural gas network.

Phoenix would propose a similar approach to the development of revenue protection and meter tampering processes in the GTW Licensed Area using the approach of educating all relevant parties and forming strong relationships with Gas Suppliers to ensure that the process works effectively.

Phoenix Transportation Services Operation

Phoenix’s Transportation Services Department provides a 24 hour Transportation Services operation to manage all Network Code activities. The current Transportation Services management and analytical team have, between them, over 44 years experience in managing Network Code activities and have been responsible for delivering the many systems and processes required to deliver a competitive retail market in Phoenix’s Licensed Area. Phoenix would propose to utilise this existing team to manage the Network Code requirements and to deliver a competitive retail market in the GTW Licensed Area.



Current Transportation Services Department Structure

Accountability for management of processes/compliance/issues identified in the organisational structure

The Transportation Services Manager has overall responsibility for ensuring that Phoenix is Network Code compliant and meets its obligations under Licence and other relevant legislation with respect to delivering and operating in a competitive retail market.

The Transportation Services Manager reports directly to the Commercial Operations Director and through regular meetings and briefing notes ensures the Directors are fully aware of all retail market activities relevant to their directorate. This includes the Transportation Services Manager presenting biannually to Phoenix's Directors details of:

- all competition activities undertaken and ongoing; and
- the operational business plan for the Transportation Services Department for the next six to twelve months.

The Transportation Services Department also provides monthly management information to the Directors including details of customer switching activity, market share and supplier choice during new connection processes.

In addition the Transportation Services Department has documented processes, procedures and policies covering all aspects of Network Code and retail competition activities. All documents are subject to regular review to ensure ongoing compliance. The Transportation Services Department also has a robust change control process for the amendment of key systems to ensure any system enhancement is properly specified and tested before implementation.

Phoenix intends to duplicate its current management reporting structures, compliance assurance and communication processes across the GTW Licensed Area.

Phoenix has also developed reporting tools to support many of its Network Code systems and uses the reporting function to ensure it can monitor and report on key activities. These tools are used particularly for provision of retail market data to UR thus ensuring compliance with the licence conditions relating to Network Code and retail market competition. Again Phoenix believes that these reporting tools can be duplicated across the GTW Licensed Area.

Amendments to Phoenix's Network Code are facilitated using Code Modification rules, a side agreement of the Network Code. These rules allow the Network code to be amended in a planned and coherent manner which requires both consultation with industry participants and approval by UR. Phoenix intends to use the existing Modification Rules in the GTW Licensed Area ensuring any Code amendment is subject to full consultation and delivered in a structured, controlled manner.

5.5 SYSTEM PERFORMANCE MONITORING, SYSTEM CONTROL ARRANGEMENTS

System Control Arrangements

Phoenix own and operate a dedicated Network Control Room (“**the control room**”). A team of five Grid Controllers operate on a 24 hour/seven days a week shift pattern and fall under the remit of the Asset Manager.

The control room has been in operation for more than nine years. It has a proven record of monitoring the current distribution network and the previous transmission network in the existing Licensed Area. It enables the control and delivery of several other vital risk, operational and maintenance processes whilst assisting the engineering team in areas such as network design and database development.

The Phoenix Distribution Network (i.e. the natural gas network in the existing Licensed Area) has telemetry installed in all district PRSs. This telemetry links into a central system in the control room and allows Phoenix to monitor each district PRS’s operational status, performance and security status 24 hours a day seven days a week. The system achieves this by monitoring:

- inlet and outlet pressure against a given set of high/low parameters,
- safety device status (slam shut open or closed)
- security door status (lid open or closed)

The control room’s main responsibility is to respond to any alarms the systems provide from the Network. Each PRS location has a site specific action plan, updated at regular intervals or upon material change by the Asset Manager, which the Grid Controller will refer to during an alarm event to ensure the correct steps are taken to resolve the situation. These same proven systems, alongside the development of new site specific action plans, will be capable of handling the additional requirements of monitoring the extra district PRSs required for the natural gas network in the GTW Licensed Area. Phoenix will consequently use the control room and its existing resource to monitor the gas network in the GTW Licensed Area.

Each PRS in the GTW Licensed Area will have the same telemetry systems installed and the constant monitoring and alarm feeds would be tied back into the control room.

The district PRSs in the GTW Licensed Area will be connected to the same telemetry system, with monitoring and alarms being fed back into the control room. Phoenix has evaluated the projected increase in PRS sites monitored by the control room and is satisfied that this can be catered for within the existing resource.

The control room successfully carries out several other key functions which would also be provided across the network in the GTW Licensed Area. These functions include:

- *the role of Network Controller within the Safe Control of Operations (“SCO”) Procedure.* This enables Phoenix to comply with GSMR (see section 5.1) and provides safe systems of work on Permit to Works, routine and non-routine operations on the network in the existing Licensed Area. The SCO Procedure will be used in the same way to safely control operations on the network in the GTW Licensed Area.
- *the central point of contact between Phoenix and the Northern Ireland Network Emergency Coordinator* during a national gas supply emergency and during all network emergency scenario exercises.
- *the Mains Commissioning Process Controller* – checking pressure test results before a new main can be commissioned and updating live main records, a key element of compliance with PSSR.
- *the Governor Maintenance Monitor* - as part of PRS maintenance processes (in compliance with the Asset Management Policy) the control room logs technicians on and off site and inputs data on new parts required into the PRS maintenance database. This enables Phoenix to improve personnel security and productivity and the detailed maintenance data received is critical to the ongoing RCM program.
- *the Fleet Location Monitor* – as part of the Phoenix Security Policy the control room keeps a constant location and status monitor on all vehicles using the Masternaut system. The control room provides location information to a Manager or Supervisor who has received a panic alarm notification from one of their operatives. The control room assists in the coordination of resources attending an emergency incident by providing the closest operative locations.
- *the central point of contact for the reporting of incidents/attempted incidents (security related)* – The control room is then responsible for the dissemination of this information to relevant parties e.g. on-call managers, engineering supervisors, PES.
- designing and costing all new build gas installations and numerous infill mains networks.
- digitising all new build geography onto GIS (see section 3.5, 4.5 and 5.7).
- developing databases for different processes within Phoenix.
- scanning paper based records to provide easy to access, digital-based backup copies. This will be particularly beneficial for the remote working procedures required in the GTW Licensed Area i.e. at the operations depot in Omagh.

Furthermore the control room has become a key recruitment resource within Phoenix’s Commercial Operations department and has provided 10 out of the 13 Engineers recruited in the last nine years - all

with relevant experience in gas network design and operations. Further detail is provided within Phoenix's Innovation and Technology Transfer submission ("Resources" section).

The control room also monitors and records volume and pressure information at the four main AGIs (Knocknagoney, Torytown, Larne and Lisburn) by obtaining the information from the SCADA system. Between 2005 and 2008 the control room also acted as the Phoenix Transmission Site Controller, where they monitored and responded to alarms coming in, via the SCADA system, from the HPRS sites.

Phoenix will use the control room and its existing resource to monitor the gas network in the GTW Licensed Area.

As part of the company's BCP, a dedicated room has been allocated at the DR site in [REDACTED] where the control room staff can be evacuated to and be operational immediately. The control room has DR procedures in place which are tested via exercises throughout the year.

System Performance Principles and Arrangements

System performance in the GTW Licensed Area will be checked using the same proven processes currently employed on the network in the existing Licensed Area and in compliance with IGEM GL1. The SynerGee theoretical flow model (see section 3.5) will be verified using actual measured pressure and flow information. This will be done by carrying out pressure and flow surveys during cold winter peak flow periods. The flow data will be obtained from each HPRS's flow meter and the pressure data will be obtained by logging the PRS inlet and outlet pressures, manually carrying out on-site pressure surveys and by installing temporary remote pressure loggers at various relevant extremity locations.

An innovation which Phoenix is currently considering is the installation of flow meters for each PRS to enhance the quality of data provided for network analysis models. Any benefit derived there from would be transferable to the GTW distribution business.

Figure 5.5a is a typical GIS map showing a pressure survey investigation:

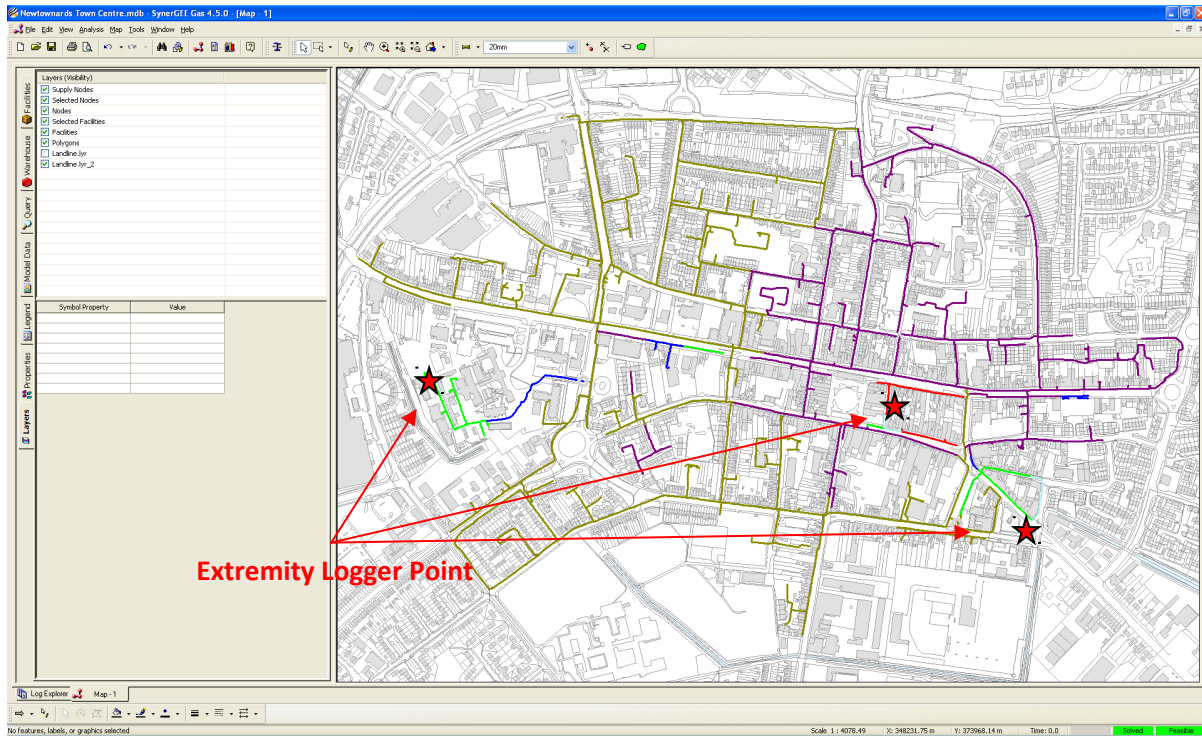


Figure 5.5a

On a daily basis the control room completes regular data downloads which provide information describing each PRS's performance statistics. The performance information of key sites is then collated and sent to all relevant engineering managers. Figure 5.5b provides an example of this data:

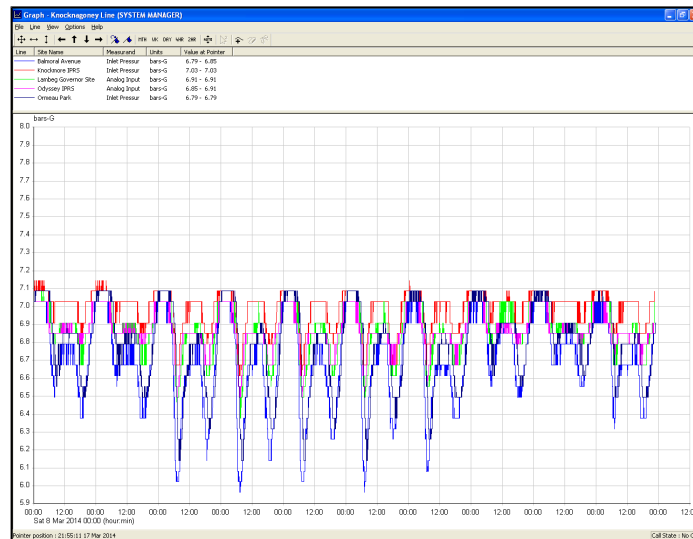


Figure 5.5b

5.6 ASSET RECORDS

Key Records

Maintaining comprehensive, accurate asset records is crucial to the successful operation of any gas distribution network. Phoenix therefore, already captures and maintains a large number of asset records and this same process of data capture and retention will be used whilst constructing and operating the network in the GTW Licensed Area.

The key asset records retained by Phoenix include:

- *Customer Supply Point Data* which is recorded in the Concerto Database. This system holds all the key meter asset information about each domestic and commercial property located in the existing Licensed Area;
- *Original design files* created prior to construction are stored in an access database and hard copies, with authorising signatures etc., are kept in a filing system divided into project type. The hard copies that are kept (depending on project type) will potentially include design drawings, target costing, applications for package approval (original signed copies), official documentation to proceed, document register, investment evaluation and approval form, street lists, engineering modification/repair procedure, third party utility information, customer contact information, special customer requests, customer/utility correspondences, etc.;
- *As-Laid records* documenting the exact location, size, method laid etc. of mains and plant as they are constructed in the ground. These are marked up in relative location to the permanent geography and include details such as depth of cover and distances from surrounding geographical features. These records are logged on databases and then updated on GIS (see sections 3.5, 4.5 and 5.7). Hard copies of hand drawn sketches and printed digitised maps are filed with original design documentation;
- *Mains and Commercial Service Records* including design, as-laid and new build data are saved digitally onto GIS. The information is then shared on a weekly basis with the other key utility operators, thus protecting the Phoenix asset by informing other utility contractors of the network's exact location;
- *Pressure Systems Safety Regulations Packs* – Receipt of packs are logged onto databases, completed documentation scanned and hard copies of paperwork filed according to project number after being signed off by the authorising engineer and verified on the Written Scheme of Examination by the Competent Person (currently DNV GL). These packs include critical records such as pressure test data, commissioning data, welding joint data, etc.;

- *Easement/Wayleaves Documentation* are referenced on an access database containing details of all easements/wayleaves and potential easements/wayleaves, hard copies of all correspondence filed and official documentation scanned and saved on a network drive. The specific areas covered by each easement/wayleave are also digitised onto GIS;
- *Site Direction Instructions* detailing design changes, agreed onsite between Phoenix and their contractor, are filed with the original job instruction documentation;
- *Service Alterations and Defective Works Instructions* are logged onto a database. The original paperwork is retained, the as-built GIS records are updated and an as-built paper copy is stored with original paperwork;
- *PRS maintenance and fault data* is stored in the Governor Maintenance database. This database retains records on maintenance dates, technician on-site/off-site times, parts used, safety device settings, corrosion levels, failures discovered etc.; and
- *Network Design and Performance Models* are stored digitally in a dedicated drive.

Record Quality

Phoenix will use its existing controls to maintain the quality of its Asset Records in the GTW Licensed Area. These controls include:

- the Records Officer details the accuracy of data captured against a stringent set of targets;
- regular audits are carried out comparing the date the Records Officer was onsite against the commissioning reports;
- a desktop auditing process operates continuously which checks recently digitised mains against internal standards and hand drawn design drawings. This process also ensures any proximity issues, depth issues or significant design alterations are highlighted to the relevant responsible engineer;
- an onsite auditing process is also in place whereby sites are visited during time of construction. Photos are taken and additional mark ups completed to the standards expected of Records Officers. The data collected is then assessed against the as-built records submitted by the Records Officers.
- a Pressure Systems Safety Regulations Process where the Construction Manager from the contractor checks each project and signs it off to confirm the relevant details are present. The paperwork is then passed to Phoenix and the responsible engineer checks and signs off. Each job is then updated on the database and the hard copy is filed away.

Arrangements for Collection of Key Records

All the key records outlined above are collected as part of proven processes currently in use by Phoenix in the existing Licensed Area. The GTW distribution business will use these same processes to collect the required records and Phoenix will ensure that all new operatives working in the GTW Licensed Area are fully trained and compliant with these processes and their related information systems.

Arrangements for Retention of Key Records

Phoenix has robust offsite storage procedures in place for the various systems including the digital asset information. These same storage procedures would be applied to the GTW distribution business meaning that all the key records would be retained in the event of major incident or equipment failure at Phoenix HQ. Key paper records (see section 5.5) are scanned as well as filed which means they can be readily retrieved.

5.7 ASSET MANAGEMENT SYSTEM

Phoenix currently operates an effective Asset Management System in the existing Licensed Area. This ensures that a wide range of information is being collected and analysed to ensure sound management decisions are being made. Information is being gathered through a range of audit, monitoring, reporting and review functions essential for day-to-day operation and maintenance activities. The Asset Management team ensures that Phoenix has and maintains the required asset management processes, knowledge and expertise.

The Asset Management System within Phoenix controls strategies and expenditure to ensure a safe, reliable and sustainable supply of gas in line with:

- legislative obligations such as PSSR and GSMR;
- effective risk management via structured processes and forums such as Safe Control of Operations, Risk Assessment, Quest and the Risk Review Committee (see sections 4.1 and 4.4);
- financial business parameters outlined in each UR price control determination; and
- lowest lifecycle costs via continuous improvement, the application of RCM, lifecycle cost driven procurement, and an in depth understanding of how to maximise the lifespan of the entire Phoenix asset.

This existing Asset Management System will be further developed by Phoenix over the next 18 months in order to achieve the new ISO 55000 Standards for Asset Management accreditation. This will ensure that Phoenix has an ISO accredited Asset Management system in place to manage each phase of the development of the network in the GTW Licensed Area from procurement and construction through to maintenance operations and maximising the assets lifespan.

Proposed Approach to Implement an Asset Management System

Summary

Phoenix has been working over the last four years on a project to introduce a formal Asset Management System in line with the philosophies of PAS 55. Originally a detailed gap analysis was carried out, in conjunction with external consultants, highlighting the areas where Phoenix needed to improve. Detailed asset management plans were then developed based on thorough examinations of the policies and procedures in operation at Phoenix.

To date Phoenix has concentrated its efforts into ensuring compliance with the spirit of the requirements of PAS 55, though Phoenix does not intend to proceed with achieving formal PAS 55 Certification. ISO 55000 was released in January 2014 and Phoenix will aim to achieve ISO Certification by late 2015. These existing Phoenix Asset Management processes will all be applied in the GTW distribution business.

Considerable work has been undertaken since Phoenix began the asset management process, with all the actions from the Short Term Plan and the majority of the actions from the Long Term Plan now completed.

Phoenix is more than four years down the route of developing and implementing a formal Asset Management System for the maintenance and operation of the network. This is a long term project which has required considerable resource and effort. Phoenix has committed these resources to the future of its current Network and will ensure that the Asset Management System is also fully implemented across the GTW distribution business.

Phoenix's development and implementation of a formal Asset Management System

Phoenix initially completed an Asset Management Policy and an Asset Management Strategy:

Asset Management Policy

The objective of this policy is to set out the asset management framework which will support the compliance with the Phoenix price control review, Group Development Forum process (see section 7.1),

operational processes and associated information/administration systems to ensure that the physical asset delivers the required level of:

- operation;
- safety;
- environmental performance;
- security of supply; and
- customer service

at an optimum whole life cost.

Asset Management Strategy

Phoenix's Asset Management Strategy was developed in accordance with the guidelines detailed in PAS 55. It has been reviewed by external consultants, ESS Ltd., engaged by Phoenix.

The strategy document incorporated:

- a short term (12 month) plan including gas analysis taking into account risks, drivers, procedures, processes and PAS 55 Assessment Methodology; and
- a long term (five year) plan to implement and operate an integrated management process to effectively and efficiently deliver the company's Asset Management Policy.

Short Term Plan

The Short Term Plan detailed a number of 'quick wins' along with the basic actions required to begin implementing an Asset Risk Management System. These actions are now all complete.

They have included the creation of an Asset Management Department, the appointment of an Asset Manager, the development of an Asset Management Review Group (titled the Risk Review Committee, see sections 4.1 and 4.4), a review of the physical infrastructure asset maintenance philosophy and the development of a RCM system.

Long Term Plan

The Long Term Plan outlined the actions required to fully implement an Asset Risk Management System for Phoenix, working up to now in accordance with the philosophy of PAS 55 and now presently moving forward using ISO 55000. All the work that has been completed to date following the PAS 55 route is still relevant to the ISO 55000 standard and Phoenix is consequently well along the route towards ISO 55000 accreditation.

Many of the actions within the Long Term Plan were to implement new processes and procedures, with a major emphasis on continual review and amendment/improvement. The majority of these have been implemented.

At present, the Asset Management Policy and Strategy are being updated to align Phoenix with the principles outlined in ISO 55000– released in January 2014.

An RCM process is currently underway and is a long term project. Phoenix identified the key items of infrastructure to be assessed and the majority of the equipment has now had a full RCM review carried out. Phoenix has entered the data gathering phase of the RCM implementation process, with design improvements and revised maintenance schedules currently being developed based on the results of the data gathering.

Phoenix is currently engaging a consultant with a view to completing the following tasks by May 2014

- ISO 55000 training for all relevant staff members; and
- gap analysis based on the new standard.

Demonstration that asset records are integrated / aligned with work and financial management processes

Asset Records

Phoenix maintains three key Asset Records and Work Issue Systems: GIS, Concerto and the Governor Maintenance Database.

GIS

GIS is used to capture details of all items of Phoenix equipment and plant that is installed in the ground e.g. pipe, PRSs, valves etc. Each item of asset is assigned a unique referenced number in GIS – a GIS ObjectID. This ObjectID is used to identify the asset from a maintenance point of view and provides a link to the Governor Maintenance Database.

GIS is not used to capture maintenance details or to schedule maintenance, rather it provides a spatial representation of the item of plant relative to other parts of the network.

Further detail is provided at sections 3.5 and 4.5.

Concerto

Concerto is used to capture information regarding all Customer Supply Points (“**CSP**”) data held including the customer details, the Supply Meter Point Reference, the meter make, model and serial number as well as meter housing details.

Concerto is also used to schedule all work associated with meter maintenance as well as all work associated with regulators for supplies <65 scmh. The details of the work carried out at each CSP, including the operative, date work carried out etc. is captured in Concerto.

Parts used in maintenance work on meters/small regulators are captured within Concerto. Reports quantifying the work done and parts used for each of the tenures are generated and used to report on costs for the Asset Maintenance team who have responsibility for this work.

Governor Maintenance Database

The Governor Maintenance Database (“**GMD**”) is used to issue all work associated with District and large (>40 scmh) I&C meters/regulators. This is a bespoke database that has been developed to capture asset records for all district PRSs and large (>40 scmh) I&C installations. It also holds details of bridge crossings that are subject to maintenance/risk reviews and for Network Critical Valves.

The GMD captures the commissioning details of each item of plant and schedules routine maintenance and Pressure Systems Safety Regulations inspections. It also captures all non-routine and breakdown jobs that are carried out on these regulators.

With the introduction of RCM, the GMD has been enhanced to capture fault data in a format that allows detailed analysis to be carried in support of changing of maintenance intervals/practices.

All PRSs and regulators within GIS are linked directly via the ObjectID to the GMD. This integration of GIS and GMD ensures the GMD also captures details of all parts used in routine

and non-routine maintenance. Parts Used reports based on job tenure (Large I&C, Intermediate PRSs, Medium PRSs, Small District PRSs etc.) are generated and used by the Finance Department as part of financial cost reporting for the Operations and Maintenance team who have responsibility for this work.

The Asset Records Systems in place at Phoenix are designed to operate in tandem with the work management processes, ensuring the timely scheduling of work driven by the underlying maintenance strategy for the given item of equipment/asset. This allows for consistent production of accurate financial information and for comprehensive management reporting on work activities. In turn this allows for greater control of the costs associated with non-routine and routine maintenance.

For the GTW distribution business Phoenix will employ the Asset Records and Work Management Systems that are currently in place. This will ensure a consistent approach across the two Licensed Areas, allowing for direct comparisons or work and financial data to be made.

Proposals for asset life cycle management

This section describes the key processes, procedures and controls associated with the life cycle management of the Phoenix network assets. The same approach would be used in the GTW distribution business.

Figure 5.7a details the three main phases of an asset's life cycle.

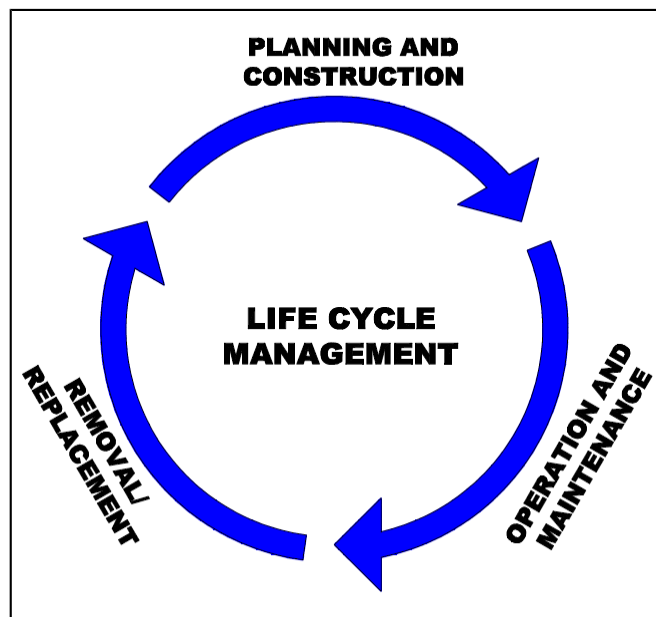


Figure 5.7a

1. Planning and Construction Processes

Planning and Construction looks at current and future customer growth and load demands, asset performance and service needs and secures the necessary approvals for network capital expenditure.

Long Term Financial Planning Schedules typically consist of:

One Year - Annual network operating and capital expenditure budgets are prepared. These represent relatively firm requirements for the next year based on actual performance of the network, asset condition, asset age and forecast growth for the coming year.

Three/Five Year - Strategic operating and capital expenditure forecasts are prepared for a three/five year period, as driven by each UR price control determination.

Cost benefit analysis of network extensions (domestic and I&C) are based on business plan forecasts.

The following controls ensure quality and prudence in the planning and construction of assets:

- engineering procedures for planning a gas distribution system;
- project process control for design, construction and commissioning;
- asset management policies and procedures;
- standard materials and component specifications;
- testing, inspection and commissioning policies and procedures; and
- appropriately skilled and competent personnel.

Key Financial Controls

Network asset construction, like in any business, must be subject to appropriate cost controls. The following financial controls ensure that creation of assets only occurs in accordance with established prudential approval processes:

- all domestic mains extensions, I&C connections and mains replacement projects are evaluated using a model that compares cost and benefit over time;
- all large capital projects, outside the scope of the price control determination, are subject to the preparation of a formal business case/justification to UR;

- all projects require approval from a Manager/Director with a suitable level of Delegated Authority. This process requires authorisation for expenditure to be provided by both financial and operational departments within Phoenix; and
- Phoenix carries out a monthly report comparing actual costs and budget costs to identify any underperforming areas which are then analysed and brought back in line with the annual capital expenditure budget.

Further detail is provided in section 9.3.

Material and Equipment Procurement

Any potential new piece of equipment is proposed at the Phoenix Design and Supply Chain Committee. This forum employs a structured process which ensures that the whole life cost of a piece of equipment is considered before purchase rather than just focusing on the initial purchase price. A detailed analysis on the projected life span, required maintenance regimes and spare parts costs is carried out to calculate an actual cost per year of operational status. This same approach will be used when forming a final decision on what equipment is best placed to meet the requirements for the GTW distribution business.

2. Operation and Maintenance

The Phoenix approach to network operation and maintenance is detailed in the Safety Case (see section 5.1) and the Plant and Equipment Maintenance procedure.

Operation and Maintenance involves three principal sub-processes:

- i. Surveillance and Monitoring;
- ii. Preventative Maintenance; and
- iii. Corrective Maintenance.

The following data collection occurs in each sub-process to assist in making Asset Management decisions:

- i. Surveillance and Monitoring:
 - telemetry pressure point monitoring;
 - pipeline inspection;

- cathodic protection monitoring;
 - inspection of special crossings;
 - odorant monitoring; and
 - leakage surveys.
- ii. Preventative Maintenance:
- regulator maintenance;
 - valve inspection and maintenance;
 - cathodic protection maintenance;
 - telemetry system maintenance;
 - meter maintenance (I&C); and
 - maintaining a “Dial Before You Dig” service.
- iii. Corrective Maintenance:
- repairing leaks;
 - repairing third party damages;
 - providing standby and emergency callout;
 - resolving metering problems/failures;
 - repairing cathodic protection system faults; and
 - fault-finding on PRS.

Maintenance of assets is undertaken to ensure that their intended functionality i.e. performance level, is maintained for the duration of their expected lifetime. To ensure suitable performance, maintenance standards for differing asset types are determined using the following criteria:

- manufacturers recommendations;
- RCM analysis;

- asset type;
- location and operating environment;
- system criticality; and
- asset history.

3. Removal/Replacement

Examples of the processes associated with assets that have reached the end of their technical or economic lives (including removal from service and disposal or refurbishment to extend their useful lives) include:

- replacing or refurbishing meters and meter assemblies;
- replacing or refurbishing pressure regulating installations; and
- replacing or refurbishing ancillary equipment (telemetry).

The process of network asset replacement is driven by the prudent balance between ‘avoided future cost of maintenance’ and current replacement cost. Those assets which are approaching the end of their technical lives or experience unanticipated deterioration in condition are identified for replacement and prioritised in a manner that ensures an efficient and cost effective allocation of resources.

Proposal to Identify and manage developing risk issues

Risks are identified and controlled by three existing management forums within Phoenix:

1. Network Safety Group;
2. Risk Review Committee; and
3. QuEST.

These forums will be used in the same way to identify and manage risk issues associated with the GTW distribution business. Full detail on each group is provided in section 4.4.

Other systems in place which identify and manage risk issues include:

- *Risk Assessment process*

A Qualitative Risk Assessment process formally identifying hazards and controls requiring Senior Engineering Manager and Health and Safety Manager approval (see section 4.1).

- *Near Miss reporting process*

This process allows all members of staff to report any potential hazards that they have become aware of during whilst completing their daily tasks.

- *Safety Alert process*

A formal process which notifies all relevant members of staff should an accident or an incident occur on the Phoenix Network or another gas operator's network.

- *The Engineering Update process*

A quarterly forum where any relevant information on operational issues or risks is presented to the engineering team

- *Safety Tour Inspections*

These are safety based inspection which are carried out on a range of Phoenix operational functions such as maintenance activities, emergency response and live gas operations.

Application of RCM principles to optimise activity

The formal definition of RCM is:

Reliability-centred Maintenance: a process used to determine what must be done to ensure that any physical asset continues to do what its users want it to do in its present operating context.

RCM is a risk based process developed to manage the maintenance and operation of assets in order to minimise cost and to maximise useful life.

RCM involves using a systematic approach to analysing each item of equipment/process in order to identify Failure Modes and Effects. From this detailed understanding of the equipment it is possible to develop optimised maintenance regimes, ultimately reducing cost and increasing efficiency. These efficiencies/savings are achieved by ensuring that only the correct maintenance is carried out at the correct intervals.

As mentioned, the RCM process involves a systematic approach to analysing each item of equipment. It involves asking the following seven questions about the asset or system under review:

- what are the functions and associated performance standards of the asset in its present operating context?
- in what ways does it fail to fulfil its functions?
- what causes each functional failure?
- what happens when each failure occurs?
- in what way does each failure matter?
- what can be done to predict or prevent each failure?
- what should be done if a suitable proactive task cannot be found?

For each item of plant under review an Operating Context is drawn up. This gives the details of the item, its functions, operating condition/environment and design parameters/limits.

In each case the Failure Modes and Effects are identified and, where applicable, suitable maintenance tasks developed. The reviews also identify design issues with each of the different installation types. As the process examines each part of the equipment in detail and in a very systematic fashion, a much greater understanding of the operation and failure characteristics is gained. In some cases, compulsory redesigns may be required for issues that may not have been previously identified.

At a basic level the review involves the following processes for each item of equipment of plant:

- carry out RCM review;
- identify failure modes (hidden/evident) and effects (safety/environmental operational);
- identify maintenance tasks, if appropriate;
- identify compulsory redesigns (physical/procedural);
- identify the fault data gathering requirements;
- implement the RCM recommendations;
- review the results; and
- audit the process and carry out periodic reviews.

RCM at Phoenix

Starting in 2011, Phoenix started on the journey to implementing RCM. This involved setting up a RCM team, employing external consultants to provide familiarisation training, setting up an Asset Management Department, getting two Engineers trained as RCM Facilitators, carrying out RCM Reviews on key items of Phoenix Asset and gathering maintenance/fault data.

The current position for Phoenix with RCM is that, for the sites for which RCM Reviews have been completed, we are collecting the fault data. As RCM is, for a large part, statistically based it is necessary for sufficient data to be gathered in order to inform any decisions that are to be made. This is particularly true when reviewing maintenance intervals.

What has become clear to Phoenix, and is often quoted in the training courses and RCM literature, is that implementing RCM gives the operator a better and more thorough understanding of the operation of the equipment. This allows the operator to modify the operating context of the equipment, either by changing the parameters within which the unit operates; changing/improving elements of the unit's design; or opting to employ a different unit.

For the GTW Licensed Area, Phoenix will draw on the significant amount of work done and experience gained in implementing RCM in the existing Licensed Area. The GTW distribution business will immediately benefit from Phoenix's work to-date, both in terms of changes to the Governor Maintenance Database and in terms of the regulators/equipment to be installed.

Regulators that are installed will either have had the design influenced by the RCM Reviews already completed or will have RCM Reviews carried out in advance of introduction to the project. These principles are already in operation in the existing Licensed Area and managed by the Asset Management Department through the Design Review Group.

5.8 EMERGENCY RESPONSE

This section, 5.8, sets out and explains Phoenix's provision for emergency response including:

- emergency procedures development during mobilisation stage;
- Standards of Performance and rationale;
- resource arrangements;
- arrangements for personnel training and simulation exercises;

- compliance with single Gas Emergency Number and interaction with other parties within the Utility Industry; and
- references - this details the primary legislation, regulations, procedures and industry standards relevant to Phoenix's gas emergency arrangements and resource provisions including a list of the key reports used by Phoenix in managing the current gas emergency service for the existing Licensed Area.

Explain emergency procedures development during mobilisation stage

This subsection begins with an overview of Phoenix's current emergency response framework for the existing Licensed Area and then provides proposals for adoption and adaptation of this framework for the GTW Licensed Area.

To comply with the requirements of legislation and regulations applicable to the transportation of natural gas and the responsibilities placed on a Distribution Network Operator, Phoenix will have in place emergency arrangements to adequately deal with incidents, gas supply emergencies, gas escapes and other emergency situations prior to the conveyance of first gas through the system in the GTW Licensed Area.

Phoenix has been a Distribution Network Operator for c.17 years and has successfully developed and implemented emergency procedures, processes and systems to deal with such scenarios from a starting point of zero natural gas customers to one handling 16,000 emergency calls per annum, transporting gas on behalf of five Gas Suppliers to a customer base of c.171,000 consumers.

This has been achieved through careful planning, training, mobilisation, audit and review that has delivered a robust and safe emergency response service whilst accommodating changes to ensure continual improvement, where opportunities are identified.

As detailed in section 5.1, over this same period Phoenix has fulfilled the role of NINEC and has a sound technical knowledge and understanding of the overall Northern Ireland natural gas supply system, structures and operating capabilities.

Phoenix will extend the use of the existing emergency response framework to the GTW Licensed Area to ensure that customers are afforded the same level of professional service as that provided to consumers and other parties in the existing Licensed Area.

This emergency response framework is outlined in Figure 5.8a.

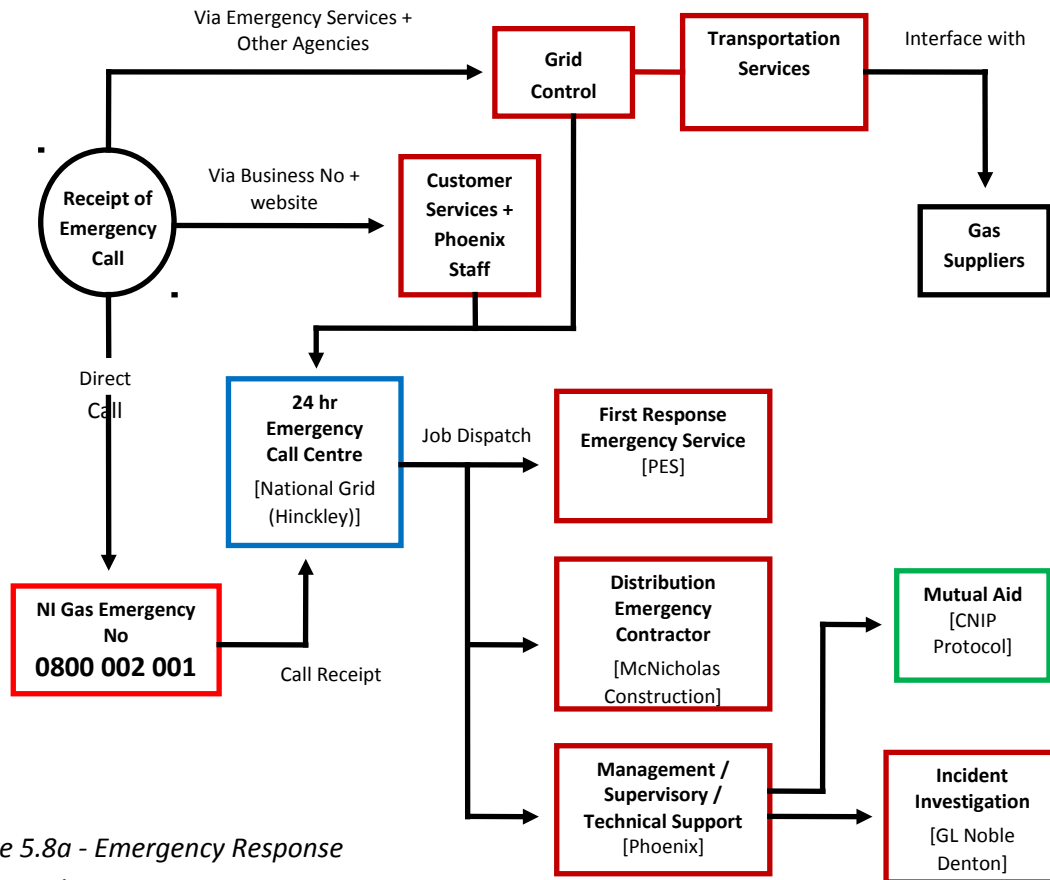


Figure 5.8a - Emergency Response Framework

The key parts of this framework are:

- provision of a dedicated gas emergency number;
- provision of a continually manned 24 hour emergency call centre;
- preparation of safety cases and provision of procedures and processes;
- provision of personnel, equipment and support to receive, action and complete emergency work and provide technical/specialist support; and
- agreeing mutual aid where practicable.

Further detail on each is provided below.

Dedicated Gas Emergency Number

In the 17 years since natural gas was introduced to Northern Ireland, Phoenix has established the 0800 002 001 emergency number (“**the emergency number**”) for Northern Ireland - a continuously manned free phone number that has been set up and managed by Phoenix and provided for use by the public, consumers and emergency services. This emergency number is shared with another natural gas distribution network operator and gives direct access 24 hour seven days a week 365 days a year to the National Grid Emergency Control Centre based in Hinckley, England. This same emergency number will be used to receive safety related calls within the GTW Licensed Area ensuring consistency for all natural gas consumers and other parties throughout Northern Ireland.

24 hour Emergency Call Centre

National Grid is Phoenix’s service provider for delivering a 24 hour emergency call centre (“**ECC**”). This call centre also deals with emergency calls on behalf of Network Operators in Great Britain but has in place a Northern Ireland desk and core staff specifically handling phone traffic to the emergency number. These staff are responsible for:

- call receipt, log and initial report classification;
- issuing of safety advice to caller/consumer;
- call dispatch to first response engineers and other personnel as dictated by Phoenix procedures;
- requesting additional support as instructed; and
- recording of job progress, completion, final classification and any necessary follow up work.

National Grid has the facility to increase call handling and dispatch with mechanisms in place for Phoenix Customer Services to handle non gas escape reports should call levels necessitate. National Grid has business continuity contingency arrangements allowing for calls to be diverted to an alternative call handling facility in Leicester and back up communications.

From current emergency operations Phoenix has full visibility and a clear understanding of the number of emergency calls, enquiry calls, calls per job etc. relative to the length of mains infrastructure and number of natural gas consumers. Based on the total number of additional connected customers associated with the GTW Licensed Area the anticipated call volumes do

not add significantly to the current workload handled by ECC and present arrangements and standards of service shall be retained.

Safety Cases and Procedures

As detailed in section 5.1, under GSMR Phoenix has a responsibility to prepare a Safety Case (submitted to and accepted by HSENI) detailing all aspects of its business operations and responsibilities as a distribution network operator. An important part of this is emergency provisions for dealing with and managing gas escapes and supply incidents.

The key procedural documents covering Phoenix’s emergency arrangements are outlined in Figure 5.8b and detailed below:

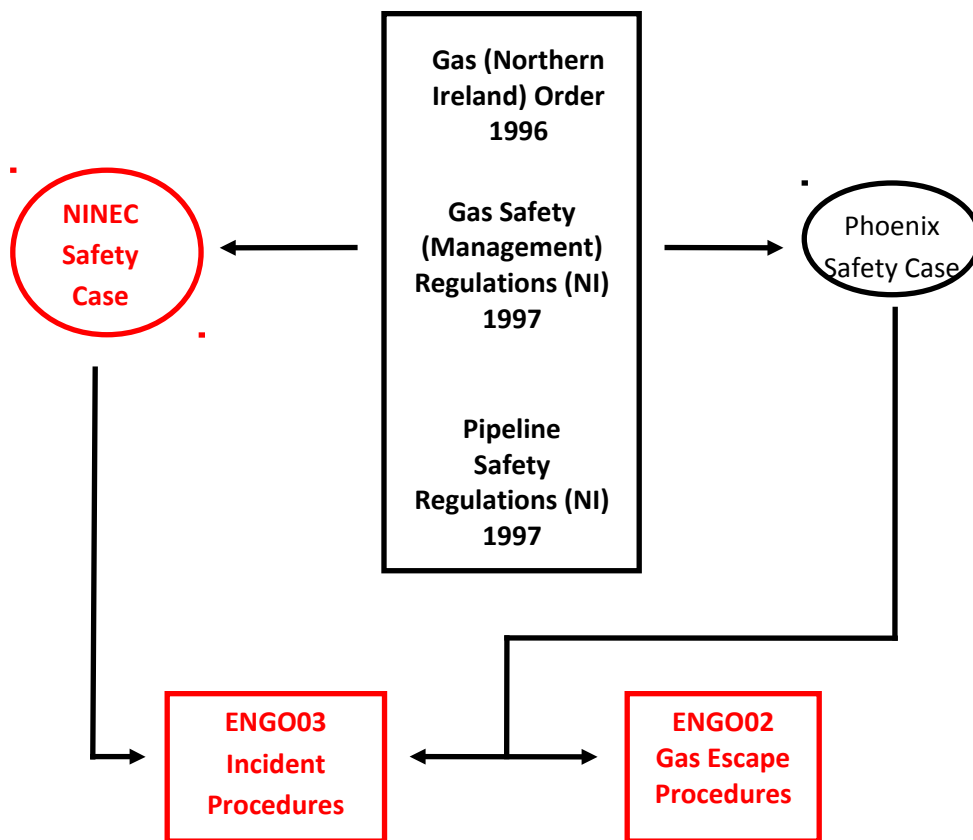


Figure 5.8b

NINEC Safety Case

The NINEC Safety Case, written by Phoenix, details the steps and actions to be taken when dealing with an actual, developing or potential network gas supply emergency (“NGSE”) arising due to a situation where gas demand exceeds gas supply and which cannot be corrected by normal balancing actions permitted under Network Codes.

NGSEs can arise due to:

- insufficient gas supplies being available to the Northern Ireland supply network;
- a critical transportation constraint occurring within the Northern Ireland transmission network; or
- issues either on the Scotland to Northern Ireland pipeline (“SNIP”) or within the Great Britain system from which both Northern Ireland and Republic of Ireland are supplied.

The Northern Ireland network is classified into primary, secondary and supplementary systems with associated responsible operators and is used to assist NINEC in conjunction with the primary system transporter to develop and implement emergency strategies and plans and issue instruction accordingly.

NINEC has a duty to avert a NGSE or minimise the impact of a NGSE by taking all necessary actions to maintain minimum system pressures and secure supplies to firm load customers, particularly domestic consumers.

Emergency actions may include the use of system line-pack, emergency interruption and firm load shedding which will be enforced equitably across all Network Operator systems and Gas Suppliers.

Phoenix (as NINEC) is also accountable for ensuring communication channels are established between parties including DETI, UR and HSENI and convening of Joint Response Groups.

The role of NINEC is carried out by both Senior and Operational Managers working within Phoenix’s Commercial Operations department.

ENG003 – Phoenix Incident Procedures

These incident procedures detail the arrangements and actions to be taken to safeguard life and property, to minimise the overall effect and impact on the gas distribution system and gas end users resulting from an incident and to prevent, where possible, local gas supply emergencies from occurring.

The procedures are implemented to deal with an incident on the Phoenix distribution network or to manage the effects of an upstream NGSE.

The procedure outlines the requirement for setting up an incident control room and the mobilisation/formation of an Engineering Action Group (“EAG”) comprising key operational personnel and managers fulfilling specific roles and responsibilities as detailed on individual task cards.

This EAG is supported by other core functions such as Customer Services, Sales teams, PR, Transportation Services and the control room.

The EAG acts at a Silver command level having prime responsibility for successful management of the incident. The EAG provide clear and concise instruction to operational teams on the ground and relevant information/updates to the Directors sitting at Gold command.

ENG002 – Phoenix Gas Escapes

This document outlines the operational and administrative processes for dealing with reported gas escapes and other emergencies. It outlines the steps that all parts of the business, including service providers, must comply with to carry out emergency works in a safe, timely and efficient manner so that standards of service are achieved at all times. It is based on IGEM standards and reflects the company’s ASHES safety policies (see chapter 4). Process charts are provided detailing the actions and steps to satisfactorily progress an emergency response activity through to an agreed and acceptable conclusion.

ENG002 Document Headings are:

- Policy and Responsibility for Dealing with Gas Escapes;
- Administration and Training Procedures;
- Public Reported Escapes / Emergency Control Centre;

- Initial Attendance / Assessment of Emergency Job;
- Upstream Escape;
- Downstream Escape;
- No Trace;
- Fumes;
- No Access;
- Loss of Supply; and
- Special Situations.

The above safety cases and incident/gas escape procedures will be amended and adapted so that the GTW Licensed Area will be covered entirely by the same stringent and well proven gas emergency provisions used in the existing Licensed Area.

Provision of Personnel, Equipment and Support

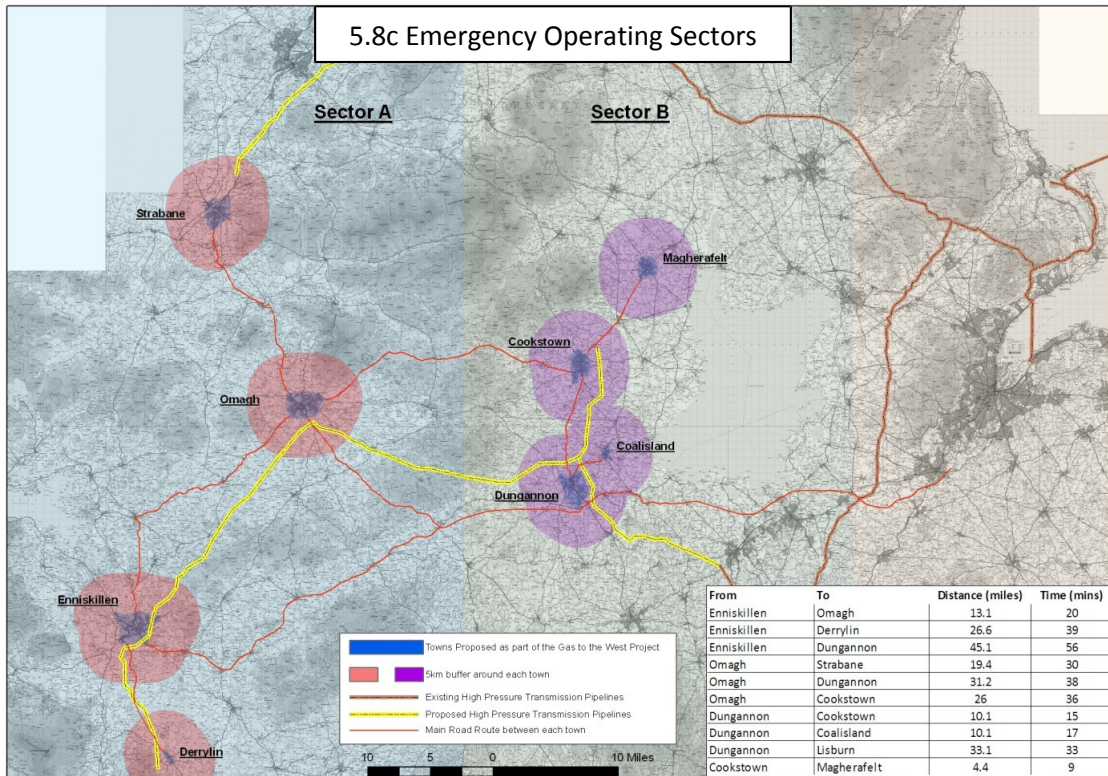
Phoenix's delivery of an effective emergency response service requires the cooperation of a diverse range of personnel. All Phoenix staff are capable of taking receipt of gas emergency calls and issuing standard safety advice. Within Phoenix HQ, Customer Services staff routinely handle emergency reports received through the company business line and website and are competent to raise, plan, issue and close work, essential for handling non gas escape work where necessary.

Transportation Services act as the interface between Phoenix as the Distribution Network Operator and Gas Suppliers (see section 5.4). During incidents Transportation Services are essential to the load shedding process and work in conjunction with the control room staff responsible for monitoring system pressures and providing feedback on the effectiveness of load reduction.

Operational response personnel are core to the emergency service and are drawn from three main parties; Phoenix providing management, supervisory and technical support (Phoenix Governor Technicians), PES providing first call operatives (PES Service Engineers) and Phoenix's construction contractor (McNicholas) providing engineering teams and back up support.

For the GTW Licensed Area these same arrangements will apply. Phoenix HQ functions will remain in Belfast but due to the large geographical area associated with the GTW Licensed Area,

a core team of operational response personnel will be based in the operations depot in Omagh operating in two distinct sectors as shown in Figure 5.8c.



Given the GTW Licensed Area is geographically dispersed it must be divided into two sectors:

- Sector A covers Derrylin, Enniskillen, Omagh and Strabane; and
- Sector B covers Dungannon, Coalisland, Cookstown and Magherafelt.

In the event that expert incident investigation is required, Phoenix has secured the specialist services of DNV GL to undertake such work and this service will be extended to the GTW distribution business.

Phoenix have invested in an inventory of emergency stock and equipment over and above the standard pipe and fittings readily available from stores, to ensure that network repairs, particularly on larger diameter pipe and those requiring specialist fittings, can be undertaken without delay thus minimising the impact of any damage or system failure and the resultant loss of supplies. This emergency stock will be made available for the GTW distribution business. The operations depot in Omagh will have pipe, fittings, valves etc. required for construction and it is

anticipated that these provisions will be available for network repairs in the GTW Licensed Area during the network construction phase.

Mutual Aid

Phoenix is one of four Critical National Infrastructure Providers (“CNIP”) in Northern Ireland along with BT, Northern Ireland Electricity and Northern Ireland Water who, under a mutual aid protocol, have entered into a Memorandum of Understanding whereby each party will, on a reasonable endeavours basis, provide support to another CNIP where they have difficulties maintaining delivery of service to end users.

This arrangement will be invaluable in instances such as incident resolution and supply restoration where support may be required in areas such as providing excavating teams, temporary heating etc. This support will be similarly afforded to customers within the GTW Licensed Area.

Adapting the existing emergency framework and procedures to the GTW Licensed Area during mobilisation stage

Phoenix’s current emergency service is driven by detailed and robust procedures to give consistent information and guidance to all in-house personnel, contractors and service providers enabling such parties, using competent staff to contribute to the effective and safe delivery of this service on a continuous and ongoing basis.

Communication between all parties, a thorough understanding of procedures and the specific deliverables of each party are key to ensuring the continued high standard of emergency provision.

To adapt the existing emergency framework and procedures to the GTW Licensed Area the following actions will be undertaken during mobilisation:

- review, update and sign-off of revised procedures;
- consultation with all parties to identify required amendments to existing processes to accommodate procedural changes;
- negotiation of revised contractual terms for service delivery (where necessary);
- briefing of revised processes to staff/operatives and issue of amended documents;

- testing of revised processes through desk top exercises to identify anomalies or improvements;
- agree arrangements for additional staff mentoring and monitoring;
- receive regular feedback / reporting on performance; and
- implement mechanisms for escalating unforeseen problems encountered.

Additional actions include:

- ongoing briefings to Phoenix's operational staff on the developing live network, new district governor installations etc.;
- introduction of SATNAV systems and street plans for the GTW Licensed Area;
- purchase of postal address data and GIS tablets for the GTW Licensed Area;
- development of emergency protocols with emergency services;
- presentations to Councils / Agencies and provision of information to assist development of their Emergency Plans;
- use of scratch and sniff cards for public / consumer identification of natural gas odour;
- Carbon Monoxide ("CO") Safety Awareness and promotion of HSENI guidance;
- information to new customers;
- basic guidance on gas utilisation;
- identification of meter installation and meter (emergency) control valve;
- Northern Ireland Emergency number and safety advice to be followed;
- Phoenix website details;
- advertising campaigns / road shows;
- introduction of Dial before you Dig to local contractors promoting safe digging around gas apparatus;
- provision of mains/service information to utilities and their contractors;
- implementation of plant protection; and

- leakage survey of distribution system and installations on first gas commissioning.

Set out Standards of Performance and rationale

Standards of Service and other activities core to the provision of the emergency service that will be delivered for the GTW Licensed Area are based on satisfying requirements of gas licences, legislation, IGEM guidance, industry recognised best practice and the Guaranteed Standards of Service legislation (see section 7.2).

These requirements are outlined below:

• Controlled Gas Escape	} 97% Target	2 hours
• Uncontrolled Gas Escape		1 hour
• Loss of Gas		2 hours
• Other issues (meters)		4 hours
• Secure an escape of gas		12 hours (unless deferral can be defended)
• Carry out work to repair an escape (downstream)		30 minutes (max)
• Supply restoration following interruption		24 hours (otherwise compensation due)

Reports of smells of gas and other emergency situations take precedence and priority over all other work and attendance of first gas emergency personnel to site is required as soon as reasonably practical within the timescales outlined above.

The prime objectives of Phoenix as a responsible and diligent Distribution Network Operator are to safeguard life and property and make safe the situation without undue delay.

Thereafter repair work, final site investigation and supply restoration will be undertaken as soon as reasonably practical having taken into consideration factors such as safety, loss of customer supplies (numbers and type), environmental aspects such as noise, working at night, traffic management, welfare of emergency staff and other emergency priorities that may also be present.

Priorities for attendance by job classification are based on risk and hazard and aimed at providing a reasonable and practicably achievable standard of service for response; ensuring persons and property are not unnecessarily endangered and commensurate with delivering a safe, efficient and cost effective 24 hour/seven days a week emergency response.

Delivery Standards

Further explanation regarding the rationale behind Standards of Service follows:

Controlled Gas Escape

A controlled gas escape is defined as that occurring on the meter installation/consumers' side of the meter (emergency) control valve and which has been **stopped** by closure of this same valve.

The immediate risk from gas leakage has been mitigated by confirmed closure of the emergency control valve from the consumer/person reporting and that the gas smell has subsequently ceased. Whilst action has still to be taken to permanently secure the leak, adequate risk reduction actions including following of safety advice to ventilate property etc have been carried out enabling a longer site response time to be accepted.

Uncontrolled Gas Escape

An uncontrolled gas escape is defined as one that cannot be confirmed as controlled and that may also be attributable to a leak on the upstream transporters network (transmission) or from another system (LPG or other natural gas network) or other gas source (e.g. landfill or sewers).

Whilst safety advice to ventilate property and stop the use of potential sources of ignition will have improved the situation, the extent, severity and source of the actual or suspected gas leak is unknown and a prompt response to site is necessary to investigate and undertake priority actions to safeguard life and property. A one hour response allows for attendance whilst observing speed limits etc.

Loss of Gas

Loss of gas may be attributable to a number of causes including Phoenix equipment failure, operation of a pressure protective device or a fault on consumers' equipment or appliances.

Whilst the incidence of a loss of gas to a consumers premise is not a life threatening situation Phoenix endeavour to minimise the period of interruption wherever practical. Priority will be given to vulnerable customers, priority customers and process critical loads and systems identify multiple calls indicative of a wider network issue so that this may be escalated and appropriate action taken.

To confirm whether loss of gas is a Phoenix problem or appliance issue, Phoenix staff contact domestic customers to ascertain if the problem can be resolved over the phone or the issue transferred to

another responsible party e.g. customers installer, thus avoiding unnecessary visits. A two hour response will ensure that such problems are investigated within a reasonable timescale that will avoid consumer complaint.

Other Meter Calls

Other meter calls include reports of issues with the use of payment cards or fault codes on electronic PAYG meters where the consumer has not reported a problem with loss of gas.

A four hour response is provided to address customer concerns and rectify nuisance faults.

Secure an Escape of Gas

GSMR require that a gas escape be prevented within 12 hours of the initial report.

It is Phoenix's aim to locate, secure and repair gas leaks as soon as possible and will only exceed the 12 hour period in exceptional circumstances that may arise due to factors such as unforeseen demand on emergency response personnel, resources being diverted to other more serious escapes/situations or due to difficulties arising in locating and dealing with the escape e.g. frozen ground, access issues or complexity.

Carry out Work to Repair an Escape (Downstream)

As a current licence condition Phoenix will always make safe an actual or suspected gas escape and will undertake simple repair work to customer appliances or installation pipe work where the trace and repair work can be completed within a 30 minute period.

Supply Restoration

Phoenix will not delay unnecessarily the restoration of supplies but will only do so on completion of all pressure tests, purging operations, re-pressurisation and equipment functional checks as may be necessary. Failure to restore within timescales will require payment of compensation as outlined within Phoenix's Guaranteed Standards of Service.

Other Factors

Other factors and aspects of current processes which will apply to the GTW Licensed Area and which positively contribute to achieving targeted standards of service are:

- the use of standard scripts by ECC and Phoenix staff enabling the nature of the emergency to be determined and the correct initial classification to be applied;
- performance targets for ECC call handling and overspill facility;
- hourly job updates to ensure sufficient emergency resource available;
- review of long and short term weather forecasts to predict increase in call volumes and revise allocated resource numbers;
- vehicle tracking to ensure the most efficient deployment of emergency personnel to site;
- trigger points for escalation, management intervention and action;
- facility to redirect non gas escape calls to Phoenix for dispatch locally;
- use of text messaging for job reporting; and
- implementation and testing of Business Continuity Plans.

Explain how resource arrangements align with progressive development of business

In determining the emergency personnel resource levels for the GTW Licensed Area, their designated work locations and mechanisms for providing support to locally based staff, Phoenix will draw on data and experience gained from operating a gas emergency service and information that has been established from pre-survey work completed within the GTW Licensed Area.

Factors/information that will be considered will include:

- number of PRE/meter type calls received per customer connected and length of main laid;
- the rate of network construction and in particular the rate of new customer connections;
- geographic areas and travel times between and through towns;
- seasonal, daily and hourly variations in work load;
- standby rotas and home residences of standby personnel;

- compliance with standards of service;
- provisions for escalation to cover larger emergencies / incidents;
- provisions for holiday, sickness and welfare cover;
- roles and responsibilities of emergency personnel; and
- additional training.

The current emergency structure for both daytime and out-of-hours response has a hierarchy of distinct roles held by operatives and staff having sufficient knowledge, experience and competency to fulfil the requirements of the position as detailed in the following table:

Gas Escapes		Incidents		Position Fulfilled by	Qualifications / Experience
Position	Role	Position	Role		
Engineering Manager	Overall responsibility for dealing with gas escapes necessitating escalation (high volume, high impact escapes, fire and explosion) and network system alarms. Liaison with emergency services, outside agencies, management of site safety, repair and supply restoration	EAG Controller	Set up an incident control, assess the situation and develop emergency plans and accept responsibility for the overall coordination and management of the incident.	Phoenix Senior Commercial Ops Managers Network Operations Managers (NOMs)	As per Engineering Officer but with 5 years operational, emergency and incident response experience obtained at a middle / senior management position with Phoenix Commercial Operations (Engineering). Responsible for daily management of operations, asset management or mains / connection work with sound knowledge of Phoenix distribution supply network and having strong relationships with emergency service providers. Completed Engineering Manager development / assessment including NINEC training, system monitoring and incident management including load shedding and sector isolation. SCO(NI) – Authorising Engineer Minimum Incorporated Engineer - IGEM but typically Chartered status.
		Eng Ops Controller	Implement emergency plan in conjunction with Customer Ops Controller and support site operations ensuring availability of resources.		
		Incident Site Manager	Implementation of action plan and overall control of site activities to ensure safe and successful resolution of emergency.		
		NINEC	As per 5.8.1.3a		
Engineering Supervisor	Assigned to respond to reported gas escapes either by personal attendance or delegation to another competent person. Where engineering response required responsible for initial liaison with emergency services and overall control, supervision & coordination of site safety, tracing and repair works on the network	Incident Site Manager	As above.	Phoenix NOMs Engineering Officer	HNC / HND with relevant industry experience or degree qualification in an engineering discipline + NVQ Level 4 Gas Network Engineering Management Minimum 2 years gas engineering experience + 1 year mentored emergency experience day time / out-of-hours (minimum 25 jobs + further emergency assessment) Gas Escapes and SCO (NI)–Competent Person – EU Skills RLP
		Eng Supervisor	As per Gas Escapes		

					Normally Incorporated Engineer - IGEN
Customer Liaison Manager	Responsible for the safety of life and property, liaison with Police, customers and members of the public, initial handling of press and media issues / enquiries and dealing with downstream activities	Customer Ops Controller CLM – Incident Site	Liaise with Eng Ops Controller to agree strategy for resolution and manage make safe of customer installations and restoration of same. As per Gas Escapes	PES Ops Manager Technician	As per PES Service Engineer but with 5 years operational / emergency experience including loss of supply and management of customer restoration. Level 3 award in First Line Management Incident Investigator in accordance with IGE/GL/8
Governor Technician	Direct support of emergency site operations. Responsible for diagnostic investigation, repair and replacement of pressure regulating equipment and telemetry, undertaking control and adjustment of pressures / flows and system monitoring activities.	As per Gas Escapes		Phoenix Gov Tech	NVQ Level 3 – Gas Engineering / Maintenance Operations Gas Safe Registered - Minimum CCN1 / CODNCO1 / MET4 / CMET1 / CMET2 / TPCP1 / ESP1 Gas Escapes and SCO (NI)–Competent Person – EU Skills RLP Minimum 2 years operational experience with external assessment + min 6 months mentored emergency response
Engineering Emergency Team	Response to upstream gas escapes and network problems. Responsible for execution of external investigative works involving excavation, bar-holing, preventing gas ingress to properties, securing site, undertaking flow stopping and valve operations and completing repairs to mains, services and risers.			McNicholas Engineering Team (Mains / Services)	GNO NVQ Level 2/ NCO (Gas) Level 2 Service Laying or Main Laying ELR – Escape, Locate and Repair Competent Person Level 2 – SCO (NI) Typically 2-3 years gas experience construction, testing and commissioning + gas emergency response (team mate – minimum 6 months)

<p>PES Service Engineer</p>	<p>Providing first line response to all reported gas escapes and emergency situations having initial responsibility for making safe the immediate situation through priority actions to safeguard life and property. Prime role to investigate and check customer meter installations, downstream pipe work and appliances / equipment to ensure continued safety of people and property</p>		<p>PES Service Engineer</p>	<p>NVQ / QCF Level 3 – Gas Engineering / Utilisation Gas Safe Registered - Minimum CCN1 / MET1 / ESP1 / CEN1 Gas Escapes – EU Skills RLP 3 years operational experience delivered as a staged process involving mentoring and assessment to verify competency.</p>
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It is proposed by Phoenix to have an operations depot in Omagh within which there will be a core team of design and planning staff comprising one Network Operations Manager and three Engineering Officers who will also take responsibility for dealing, at a supervisory/management level, with day-to-day emergency calls (see figure 5.8d).

First response to emergency calls will continue to be met by PES Service Engineers who will be operating within specific geographical work areas i.e. Sector A and Sector B as illustrated in figure 5.8c, overlapping as necessary to meet call demands. Three PES FTEs will provide the initial emergency response across these two sectors.

To make most use of emergency personnel, PES Service Engineers within the existing Licensed Area are also engaged in undertaking low priority asset work that can be deferred when emergency workload dictates. This same basic operating philosophy will be adopted for the GTW Licensed Area and will be expanded in the early stages for PES Service Engineer duties to also include:

- plant protection;
- agreeing customer meter positions; and
- first fix meters.

Phoenix also proposes to upskill Engineers to enable them to carry out the operations of other colleagues where the level of work does not constitute the employment of a full time resource. Examples will include PES Service Engineers being capable of undertaking specific areas of work normally performed by Phoenix Governor Technicians and vice versa and the role of PES Service Engineers being expanded to cover external leakage detection and classification with consideration being given to the deferral of permanent leak repair by engineering teams subject to development of a robust risk assessment process.

Where an engineering team response is required, resource will be drawn from mains or service construction teams operating in the GTW Licensed Area until such times as the situation has been made safe. Local Phoenix management will review options for undertaking permanent repair which may involve deployment of alternative teams.

Emergency standby rotas as used for the existing Licensed Area will be replicated for the GTW Licensed Area.

Where emergency demands within the GTW Licensed Area exceed normal resource provisions, back up support for first response PES Service Engineers will be made available from Belfast and where necessary, use made of subcontractors and Gas Safe Registered installers with whom Phoenix have existing relationships/contact.

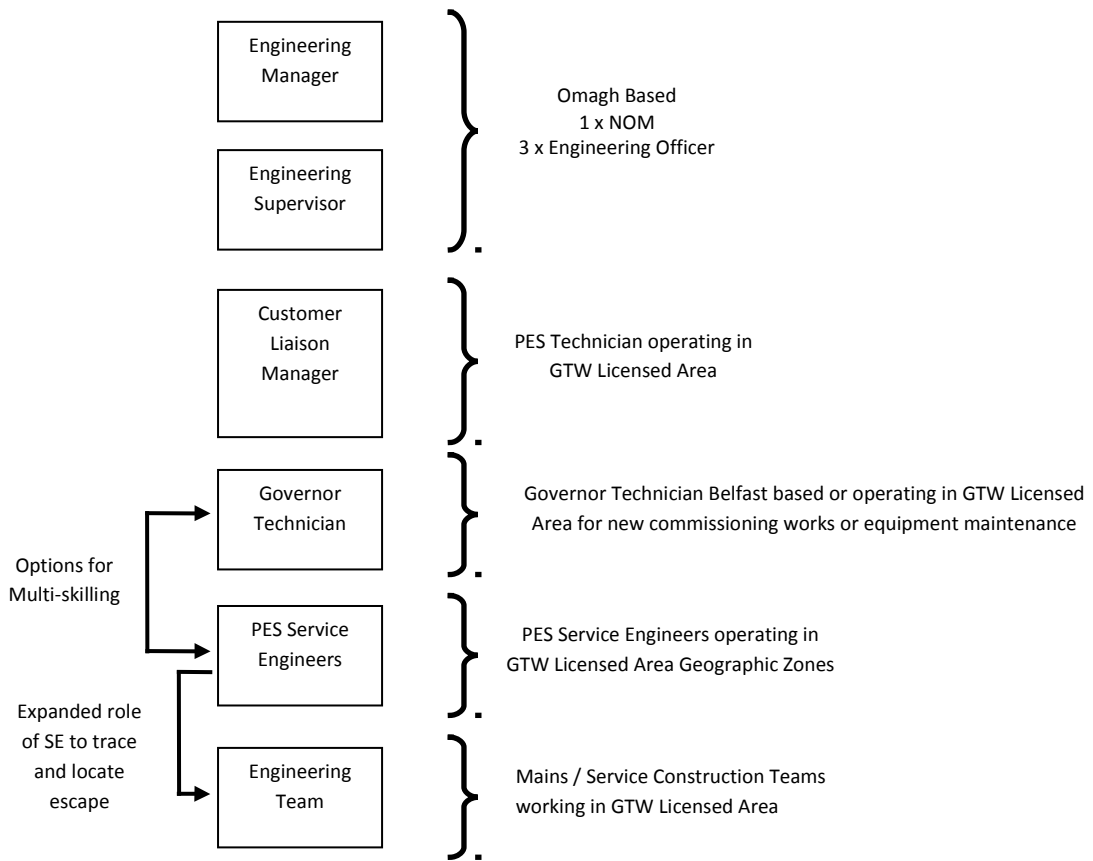


Figure 5.8d Emergency Resource Structure

Arrangements for personnel training and simulation exercises

Phoenix recruit, train and develop staff through a number of recognised streams including:

- apprenticeships;
- adult trainees with previous relevant industry experience;
- graduate recruitment; and
- internal promotion within engineering/operational functions.

The principle behind apprenticeships and trainee routes, which are the basis for development of PES Service Engineers and Phoenix Governor Technicians, is the attainment of key skills and underpinning knowledge achieved through attendance at college and training centres. Further specific skills, key operational knowledge and experience of Phoenix processes and procedures are gained through involvement in day-to-day business activities with mentoring, instruction, audit and assessment being undertaken by appropriately qualified Phoenix staff and/or external bodies

culminating in achieving an EU Skills accredited NVQ Level 3 qualification. Further detail is provided in the Innovation and Technology Transfer submission (“Resources” section).

Both the PES Service Engineers and the Phoenix Governor Technicians are Gas Safe Registered with appropriate qualifications for their role and in compliance with the Gas Safety (Installation and Use) Regulations (NI) 2004 and meeting the requirements as ‘a member of a suitable class of persons’.

The role of Engineering Supervisor is predominantly fulfilled by Phoenix Engineering Officers who work within the Design/Planning, Asset Management and Operational parts of the business and who have completed a minimum two year IGEM structured development programme covering all aspects of engineering.

Prior to personnel being engaged in emergency response work they undergo:

- a three-day Gas Escape Course (EU Skills RLP);
- a minimum period of shadowing and emergency operational experience (40 hours/25 jobs); and
- further detailed assessment.

Performance is regularly monitored through audit and review.

Phoenix maintains a close working relationship with the emergency service providers, which are both based within Phoenix offices. A culture has been engrained in all parties to ensure continual improvement in emergency response and to maximise benefit through learning experiences. Through structured monthly meetings such as QuEST and Public Reported Escapes (“PRE”) Operations, points of learning/improvement are identified. Safety Committees and the Risk Review Committee are responsible for formalising these learning points by:

- developing additional technical advice notes;
- amending risk assessments and procedures;
- producing safety alerts; and
- delivering briefing updates.

Further detail is provided in section 4.4. Refresher update/training briefings are also completed annually to reinforce the key aspects of Gas Escape procedures and this will be further supported by production of summary field procedures.

Day-to-day emergency operations demonstrate compliance with procedures in core aspects of leakage tracing, making safe and escape repair.

Simulation exercises are undertaken at frequencies not exceeding two years and focus on testing aspects of emergency and incident response that occur less frequently:

- load shedding;
- arrangements for reduction in gas use;
- PR activities;
- sector isolation; and
- large scale supply restoration.

For example through testing of the NINEC Safety Case Phoenix engages with other network Operators (Transmission System Operators and Distribution Network Operators) and outside agencies and also interacts with other utilities and councils in developing and testing emergency plans and processes.

Compliance with Single Gas Emergency Number and interaction with other parties within the Utility Industry

As noted above, in accordance with GSMR Section 7 and Condition 2.8.1 of the Licence, Phoenix has delivered a single gas emergency number (the emergency number) and continuously manned telephone service for Northern Ireland (see box below).

Phoenix promotes the single gas emergency number on all its paperwork, websites, sales literature and company branded vehicles. It liaises with HSENI, CCNI, DETI, NIHE, Gas Suppliers and other Distribution companies in relation to promotion of the number.

In order to successfully deliver a safe and effective emergency service through the emergency number, Phoenix has negotiated contracts with National Grid to answer, record and dispatch all Northern Ireland gas related emergency jobs reported on the emergency number having developed processes and procedures in line with best practice and relevant IGEM guidance.

All Gas Suppliers and Distribution Network Operators throughout Northern Ireland use the Northern Ireland gas emergency number for dealing with gas related incidents. To ensure that National Grid correctly dispatches jobs to the responsible Distribution Network Operators, a post code location address system is employed to ascertain the correct Licensed Area. Alongside this model there is an agreed protocol for handling unclear addresses or disputed postcode areas that border different Licensed Areas so that all jobs get handled and dispatched appropriately. The same procedures and control mechanisms will be utilised in the GTW Licensed Area.

Phoenix also maintains close liaison with the Police Service of Northern Ireland and the Northern Ireland Fire & Rescue Service to agree and formalise response protocols to ensure a safe and consistent response to all gas related emergencies.

Through testing of the NINEC Safety Case Phoenix engages with other Operators (Transmission System Operators and Distribution Network Operators) and outside agencies and also interacts with other utilities and councils in developing and testing emergency plans and processes.

As noted above, Phoenix has an emergency protocol agreement with other major utility operators in Northern Ireland to provide mutual support in the event of a major incident requiring additional resources (manpower/ equipment/transport/other facilities).

In addition Phoenix has a support network agreement with downstream installers to provide qualified/competent downstream response in the event of a local gas supply emergency.

Joint Call Centre Contract

The procurement of the emergency service was carried out solely by Phoenix with a provision incorporated into the Scope of Services to facilitate other Distribution Network Operators “piggy-backing” onto the final arrangement. In effect, the services were procured in a manner which meant that there was no duplication of procurement costs between Phoenix and other Distribution Network Operators, albeit other Distribution Network Operators are made aware, and sign onto, the scope/standards of service which are specified and ultimately agreed.

As part of the tendering process, the servicing party is fully aware of the magnitude of the operation and as such provides a tender response and cost proposal on that basis. The economies of scale of each company’s operations are fully considered by the servicing party at the time of tender and as such are reflected in the cost proposals provided. As the tender has been undertaken so as to provide the same standards of service to all Distribution Network Operators, the successful bidder is already accountable for the standards of service for all Northern Ireland calls received.

This approach was a condition of the initial invitation to tender and ultimately the Contract itself:

“2.3 Other Gas Suppliers and Transporters

2.3.1 Note, that due to the emergency aspect of this service that is being afforded to the public, the appointed Service Provider will be required to confirm that that the terms of any subsequent Contract entered into by Phoenix Natural Gas Ltd. will also be offered for acceptance by other licensed natural gas suppliers/ transporters who operate – or propose to operate – within the Northern Ireland region of the United Kingdom.

2.3.2 As part of the safety management of gas related incidents the emergency contact free-phone number (0800 002 001) shall therefore be made available to gas customers etc. throughout Northern Ireland – albeit only those calls relating to the Phoenix network shall be reported to, invoiced and paid by Phoenix Natural Gas Ltd. Other calls to this number in relation to non-Phoenix networks, shall require to be reimbursed by the appropriate network operator.”

The transition for including the GTW Licensed Area will therefore be seamless as no change of contract would be required.

References

Legislation and Regulations

Health and Safety at Work (NI) Order 1978

Gas (Northern Ireland) Order 1996

Gas Safety (Management) Regulations (NI) 1997

Pipeline Safety Regulations (NI) 1997

Gas Safety (Installation and Use) Regulations (NI) 2004

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (NI) 1997

Working Time Regulations (NI) 1998

Institution of Gas Engineers and Managers Standards

IGEM/SR/29 Dealing with Gas Escapes

IGE/SR/18 Ed2 Safe Working Practices to ensure the integrity of Gas Pipelines & Associated Installations

IGE/GL/8 Ed2 Reporting and Investigation of Gas Related Incidents

IGE/GL/9 Guidance for large gas consumers in dealing with Natural Gas Supply Emergencies

IGEM/TD/102 Competency Framework

External Guidance

Gas Safety Unsafe Situations Procedure Edition 6

Utility Regulator Guaranteed Standards of Service

OSHAS 18001

Procedures

Phoenix Safety Case (see section 5.1)

NINEC Safety Case

Phoenix ENGO02 Gas Escapes

Phoenix ENGO03 Incidents

Phoenix ASHES Safety Management System (see section 4.4)

Phoenix Business Continuity Plan (see section 4.1)

Northern Ireland Critical National Infrastructure Provider Mutual Aid Protocol V2.6

Reports

- *Phoenix Monthly Emergency Job Classification Report*

Provides a detailed listing of all emergency calls including date, emergency job no, address, summary of actions taken/work completed and final job classification. Data is used to generate monthly summaries, yearly comparisons and cost information for use by management teams at both operational and corporate levels.

- *Phoenix Monthly Fumes Report*

Provides a detailed summary of all fumes jobs attended, the outcome of site investigations and actions taken. Each job is classified with a code representative of findings, identified risk and requirement for follow up work if necessary. All information is passed to relevant Gas Suppliers.

- *Phoenix Monthly Standards of Service Report*

Provides standard of service figures for attendance at uncontrolled, controlled and fumes jobs, numbers of supply restorations completed within 24 hours and details of warning notices and Reporting of Injuries, Diseases and Dangerous Occurrences Regulations ("**RIDDORS**") issued.

- *ECC Monthly Standards of Service Report*

Provides details of delivered standards of service for call handling and response to controlled and uncontrolled escapes.

6. PROCUREMENT

6.1 PRINCIPLES

Identify accountability for development and management of processes in the organisation structure

The process to be applied, and principles to be adopted, with regards to the procurement of works, supplies and services are set out in Phoenix's Procurement Procedure (FINP04, "**the Procurement Procedure**"). Phoenix would propose to apply the Procurement Procedure to the GTW distribution business.

The Procurement Procedure has been drafted by, and has the ownership of, the Contracts and Procurement Manager with authorisation for implementation coming from the Finance Director.

Any proposed amendments to the Procurement Procedure are incorporated by the Contracts and Procurement Manager upon authorisation by the Finance Director.

The Procurement Procedure sets out authority levels with regards to limitations on budget spend along with the path to be followed when considering potential suppliers for selection. The placing of orders and award of contracts are also addressed.

Budget holders are made aware of their obligations with regards to levels of expenditure and associated accountability and are required to acknowledge this responsibility in this regard by way of appropriate sign-off.

The exact nature of the processes surrounding supplier selection is dependent upon the materiality and criticality of the goods/services being procured. The higher the value and/or the more critical the item is to the operation of the business, the more likely that additional company resources will be employed in the process and therefore the more detailed that the procurement process may be. The exact resources and timetable required will be determined following a regular review process which monitors spend-to-date as well as projected requirements. This review is being carried out by the Contracts and Procurement Department – the outcome of which is notified to senior management accordingly.

The Procurement Procedure has been briefed to all relevant personnel within the business to whom budget holding responsibility has been assigned. This briefing being carried out by both in-house procurement and external legal personnel.

Proposed policies and procedures to ensure compliance with EU requirements

Phoenix has tendered a number and wide variety of different projects in accordance with the requirements of the Utilities Contracts Regulations.

Not all works, supplies and services procured in connection with the GTW distribution business will be captured by the Utilities Contracts Regulations – applicability largely depending upon the value and nature of any contract to be awarded. With regards to value, the Utilities Contracts Regulations currently place a threshold spend of £345k for services/supplies and £4.32m for works. Phoenix's Procurement Policy (POL.BS.42, "**the Procurement Policy**") and the Procurement Procedure addresses activity both above and below these thresholds.

The Procurement Policy and the Procurement Procedure specifically address projected contract values in accordance with budget holder spend. Any proposed contract (singularly or in the aggregate) with an annual spend of £50k or more may be subject to a full EU tendering process albeit this may be further dependent upon the nature of the service. For example, not all services (those defined as "Cat. B") are subject to the full Utility Contracts Regulation Procurement Procedure. Note, however, we are aware that proposed amendments to the Utilities Contracts Regulations scheduled for late 2014 may alter the current Cat. B part exemption.

In order to ensure compliance, actual and projected spend are monitored on a monthly basis in order to ensure that a previously determined non-captured spend item does not exceed forecast. Should it exceed, then an EU tender process will be required.

Processes, authority levels and financial controls

The Procurement Procedure details the process to be followed with regards to the acquisition of works, supplies or services for the business. The Procurement Procedure addresses matters such as: raising and authorising a purchase requisition; the selection of suppliers and nomination onto the Phoenix supplier database; the process for ascertaining the suitability of suppliers and the procedure for instigating a formal tendering process. All aggregate spend items above █████ per annum are subject to a formal tender which may be carried out by a Phoenix approved budget holder in conjunction with the Contracts and Procurement Manager. All aggregate spend items above █████ per annum may also be subject to EU tendering arrangements. The procurement process associated with such items would be managed by Contracts and Procurement.

As noted in section 4.1, Phoenix utilise a financial authority matrix to assign procurement spending limits to budget holders. The authority matrix is reviewed and approved by the Finance Director on annual basis. Authority levels, with regards to expenditure, are determined by the level of seniority with the company and designation of appropriate financial authority levels. Financial authority commences at Senior Manager level with designated managers being able to authorise a maximum expenditure of █████ per transaction. Directors and the Chief Executive Officer may authorise levels of

expenditure in excess of this albeit in all instances the item of spend and supplier selection will be determined by the application of the Procurement Policy and the Procurement Procedure. All personnel assigned with financial authority levels may also be referred to as budget holders.

Budget holders are designated in line with business requirements and are required to acknowledge, by way of signature, their responsibilities in this regard. Actual expenditure is monitored by the Finance Department and monthly reports prepared summarising budget holder expenditure in connection with their specific area of responsibility. This expenditure is then monitored by way of regular budget panel meetings attended by both budget holder and Finance Department representatives.

Competitive tendering arrangements and timetable for these

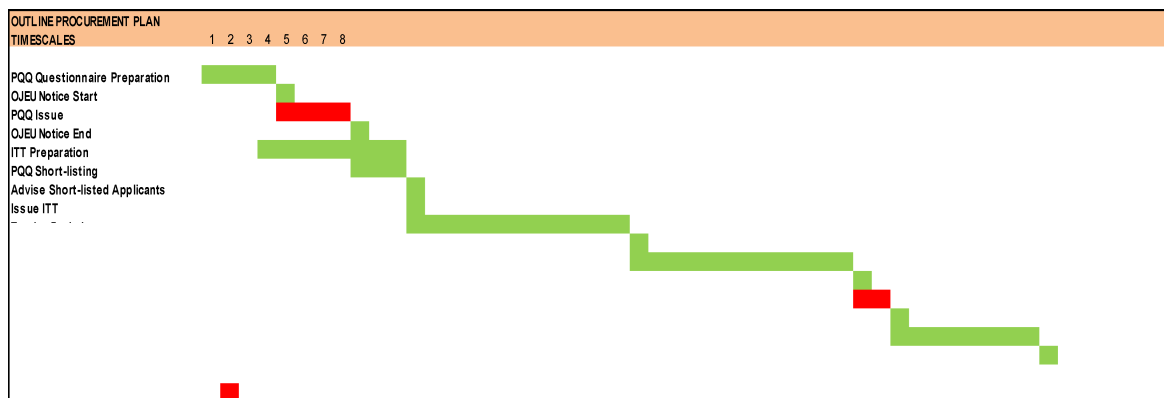
Bringing natural gas to the GTW Licensed Area would involve a wide variety of tendering projects many of which will be captured by EU tendering arrangements but all of which shall be subject to EU treaty principles of equal treatment, non-discrimination and transparency.

Tendering arrangements would follow a project plan, the exact nature of which and critical path to be followed would be dependent largely upon the complexity of the works, supplies or services being procured. In general, however, the main steps in the tendering arrangements would be as follows:

- i. contract strategy development;
- ii. Pre-qualification Questionnaire (“PQQ”) preparation;
- iii. placing of tender advertisement (OJEU, local press etc);
- iv. prepare Invitation to Tender document;
- v. PQQ return and short listing;
- vi. notify successful/unsuccessful applicants;
- vii. issue Invitation to Tender document;
- viii. record and evaluate tender return;
- ix. tender presentation/negotiations;
- x. complete tender report for Board approval;
- xi. notify successful/ unsuccessful tenderers;

- xii. standstill period - if EU - and debrief (if required);
- xiii. preparation of contract documentation;
- xiv. mobilisation (if required);
- xv. contract start; and
- xvi. place award notice – if EU tender arrangements apply.

With regards to a timetable, again this would be dependent upon the nature of the item being procured. Where the Utility Contracts Regulations apply and therefore an EU tendering arrangement is followed, the overall procurement process may take up to almost one year for the more complex contracts that are to be awarded. A typical timetable may be made up as follows:



6.2 MATERIALS

Proposals for contract development

The principle materials that will be required as part of the project to bring gas to the GTW Licensed Area shall be those utilised in the construction project (gas engineering and civil engineering type materials) as well as miscellaneous parts to be incorporated into meter point equipment and downstream engineering works – servicing and heating industry.

As part of operations within the existing Licensed Area, many of these materials are sourced from local suppliers/distributors – where possible – through development of a supply chain that has embraced our overall business model from the early days of the natural gas industry within this particular area of Northern Ireland.

Phoenix would propose to roll this model out to encompass potential suppliers within the GTW Licensed Area. The maximum benefit of which should be felt by suppliers of civil engineering materials and distributors of the miscellaneous parts required for the downstream, servicing and heating, industry.

Proposals for contract awards during mobilisation period

Taking gas to the GTW Licensed Area shall entail the award of a number of new contracts albeit some supplies and services required may be bolted on to current agreements already entered into by Phoenix to which such a variation would not constitute a material change. New contract awards would include the construction of the distribution network (including engineering and non-engineering material supply) whilst gas metering equipment and the ECC contract, for example, could - during the mobilisation phase - be delivered through existing Phoenix contracts which have previously been tendered through EU procedures and to which the entire Northern Ireland region was cited as the area for delivery. It would only be when the value or nature of services required constitutes a material change to the original award that such services would require to be tendered in order to achieve delivery through a separate contract.

The actual procedure associated with the award of any contract has been addressed in section 6.1.

Requirements planning arrangements proposed

With regards to procurement of materials, the necessary planning arrangements would largely centre on the development of an overall project delivery strategy of which the contract strategies for the various works, supplies and services would be determined.

Upon determining what is required, Phoenix's strategy development would then focus upon how Phoenix would propose to deliver this, by whom, under what terms and when.

The nature and timescales for delivery of each contract to be awarded would be critical as a large proportion of the services required, and hence material requirements, would be outsourced. Delivery from a number of third parties from different industries and backgrounds would entail several varying approaches to the procurement route chosen as well as the terms to be employed and timescales for delivery.

With regards to the construction of the proposed gas network, an outline scheme design would identify specific material requirements, the lead-times for supply being ascertained from Phoenix's previous experience in this regard. Through effective advertisement of the project, appropriate specification writing in the Invitation to Tender documentation and sound supply chain management Phoenix would, throughout the process, keep all stakeholders informed of what materials may be required and when so that the necessary planning decisions may be made.

Stock holding arrangements proposed

In constructing and maintaining a natural gas network along with the associated downstream engineering support requirements, a degree of stock holding would be required - the actual amount of which would be balanced between what anticipated demand would be whilst also taking into account lead times and cost of supply/ stock holding.

Current contract arrangements held by Phoenix places a requirement on its appointed construction contractor to be in a position to meet a number of Key Performance Indicators. The achievement of these can only be obtained through a high level of sound supply chain management. This management is delivered through a close level of cooperation throughout the supply chain, the result of which is that a sufficient level of stock holding is carried out by various parties. From a commercial perspective, delivery to site is best achieved on a just-in-time basis.

Whilst the above delivers a sound commercial solution, there will remain a need to hold a degree of stock to meet the demands of unplanned maintenance work e.g. in response to third party damage to the network. Stock holding will therefore be kept at a level to meet the demands of fast moving, regularly utilised plant and equipment - the cost of which shall be taken into account along with the lead times for supply.

Phoenix also regularly tenders for a large variety of small engineering parts – most of which are incorporated into meter point locations and downstream equipment. In doing so we establish framework agreements with a number of preferred suppliers – each of which shall be required to hold stock, deliver to designated supply points and/or make available for collection by appropriately authorised personnel. As part of the project to bring gas to the GTW Licensed Area Phoenix would propose to extend this network of preferred suppliers to take into account the geographical location involved.

Where Phoenix is required to hold stock, the operations depot in Omagh would act as a delivery point and distribution hub. The exact location would be central to the infrastructure servicing the geographical area involved. This model, currently deployed by Phoenix in the existing Licensed Area, would be replicated in the GTW Licensed Area.

6.3 CONSTRUCTION, MAINTENANCE AND SPECIALIST SERVICES

Proposals for Services contract development

Phoenix recognises the benefits of developing the gas engineering services industry. The model developed within the existing Licensed Area would be replicated in the GTW Licensed Area.

A development of the local resources within the gas servicing industry will compliment that which Phoenix would propose to deliver both from a potential subcontracted perspective as well as direct

employment within the marketplace from those customers who ultimately convert to natural gas and therefore require the necessary installation and servicing of their natural gas appliances.

Via the services division of Phoenix, PES would propose to subcontract a proportion of its servicing and maintenance requirements which, in turn, would assist in developing the local skill-set in this regard. As with current subcontracted servicing contractors, PES would also provide gas-specific training – both formal as required by legislation and less formal as has been gleaned from their experience within the industry.

Under EU Procurement Regulations, PES are regarded as an “Affiliated Undertaking”, therefore whilst Phoenix may directly award a contract to PES, any subcontracted services employed by PES may be subject to EU tendering arrangements should the required criteria, such as threshold levels be met. Any tendering and subsequent contract documentation would be drafted to reflect the exact nature of the services required as well as the commitment that Phoenix would make in consideration of the services provided.

PES currently engages a number of subcontractors by way of both emergency-related and non-emergency related support services. The level of training and development provided to such subcontractors is in direct correlation to the nature of the subcontracted service that is provided. This model, by way of the development of the services network, would be reproduced within the GTW Licensed Area.

Proposals for contracts award during mobilisation period

Whether a proposed contract award is in connection with construction, maintenance or specialist services, all tender offers received would be suitably evaluated in line with predetermined criteria prior to completion of the tender process and ultimate award of contract. All awards would follow an evaluation based upon such criteria in line with associated weightings which will have been advised to participating tenderers as part of the process. Award will be recommended to the “most economically advantageous tender” as determined by the award criteria. Sign off of the award recommendation will be at Director/Board level upon presentation of a full tender report.

Such practice would be in line with the requirements of the Utilities Contracts Regulations. Whether the procurement and award process is advertised in the OJEU or local press, the principles of transparency, non-discrimination and equal treatment shall be applied throughout. The timing of each contract award shall be determined by the required lead times and inherent critical path as dictated by both industry factors and ultimate customer needs.

The initial project and therefore various contract strategies will have identified a critical path which will subsequently highlight the priority with regards to contract awards and dates for commencement. It would be envisaged that first priority would be given to any proposed construction agreement, with any services agreements taking second place with regards to order of

preference. Provisions for a degree of planned and response maintenance requirements may be contained within the construction agreement thereby minimising the priority with regards to an immediate award of such a Contract. The mobilisation of any maintenance agreement(s) would therefore follow the implementation of the aforementioned construction and services agreements.

Throughout Phoenix's time managing and awarding construction contracts for gas network distribution systems, Phoenix has always adopted an Alliance approach in our relations with the appointed contractor (see section 2.1). Whilst relations remain on a client/contractor basis, the philosophy is one of mutual understanding and collaborative working – where feasible to do so. Risk remains with the party best placed to manage it, however if the other party understands the nature and degree of risk undertaken, then they can mitigate any unnecessary demands that may make such risk disproportionate.

The level of mutual understanding that comes from the Alliance approach shall facilitate an efficient and commercially viable mobilisation period.

7. BUSINESS DEVELOPMENT

7.1 PLANS AND PROCESSES TO ACHIEVE TARGETS FOR GROWTH IN DEMAND/CONNECTIONS

Explanation of how Phoenix will meet the pattern of connections set out in the FMA Development Plan

Justification

Delivering an energy infrastructure for natural gas in Northern Ireland which delivers social, environmental and economic benefits to both industry and citizens has already been achieved by Phoenix in the existing Licensed Area.

Unfortunately only a fraction of the Northern Ireland population currently enjoys access to the natural gas network and the justification for bringing natural gas to the GTW Licensed Area is based on the achievement of Phoenix, who has a proven track record in the natural gas market in Northern Ireland, having developed a natural gas industry in the existing Licensed Area over the last c.17 years.

There is still much to be done to displace oil as the “fuel of choice” in Northern Ireland, and to achieve the level of market penetration achieved by natural gas in Great Britain (which is at approximately 90 per cent. of homes and businesses, compared with only approximately 20 per cent. in Northern Ireland). Notwithstanding the challenges that remain, the development of a natural gas network is recognised as having brought considerable environmental, economic and social benefits to Northern Ireland. These successes are a function of investment, effective business decisions and efficient execution of those decisions that were made in the context of the regulatory environment that was designed in 1996 and enshrined in the Licence, and the expectations of investors that flowed from it.

The Licence included a mandatory development plan which specifically required Phoenix to develop a sustainable network through which natural gas was available to no less than 81 per cent. of all properties within the existing Licensed Area within a fixed rolling timescale. This meant that the vast majority of industry, businesses, private homes, public sector housing and new housing developments would be provided with the opportunity to make the switch to natural gas.

At the time of its launch, the Phoenix project was one of the largest greenfield, private sector-led integrated gas transmission, distribution and supply investments in Western Europe. It is the only recent example, of which Phoenix is aware, of a gas distribution network being retro-fitted into a major, developed city.

Development of the existing Licensed Area was therefore driven by Phoenix’s obligation under the Licence to make gas available (i.e. to pass properties with a gas main to which connection can be made) to a high proportion of the population within the existing Licensed Area. Initial development

of each part of the network centred on constructing large diameter ring mains to take gas around the existing Licensed Area, particularly where large potential users existed and could be connected to the gas network quickly. This was followed by construction of smaller diameter feeder mains to connect industrial and new build sites where initial utilisation of gas would be greatest (provided the feeder mains were available when the relevant site was being developed).

At the same time, Phoenix was also required by the Licence to make gas available to existing domestic energy users through the construction of infill mains (i.e. gas pipelines to which domestic customers can be directly connected) in individual streets. This resulted in gas connections to (i) NIHE properties as they were refurbished and existing fuel supplies were replaced with gas as part of the NIHE refurbishment programme and (ii) individual owner occupier properties. Phoenix has developed a marketing plan to increase penetration of this key customer segment in the existing Licensed Area.

Phoenix has always met (and in fact exceeded) its Licence obligations in respect of coverage of the network and has also successfully extended the existing Licensed Area to make gas available in Comber and to several large commercial premises.

Phoenix's development of the market in the early years focused mostly on the I&C sector, where greatest volume of gas was consumed per customer. In fact penetration of the I&C sector is approaching saturation.

Network development in the most recent years has focused on extending the network to take gas to new private residential and I&C developments and on completing the development of existing private residential areas where there is expected to be greatest demand for gas. In addition, network development has been targeted at increasing the penetration of customers connected to the network in areas where the mains has already been constructed e.g. the GD14 determination includes a target of increasing connections to the network by c.10,000 per annum.

Phoenix has expanded rapidly since 1996, through significant investment, careful, efficient and effective management of operational risks, and through a successful and ongoing strategy to encourage customers and those responsible for housing stock (such as the NIHE) to switch to gas. As at 31 December 2013, Phoenix had made gas available to c.301,000 properties within the existing Licensed Area, of which c.171,000 (57 per cent.) have been connected to the network.

Environmentally over 3m tonnes of carbon dioxide ("CO₂") has already been prevented from entering the local atmosphere by natural gas consumers in the existing Licensed Area, with continued savings of c.270,000 tonnes of CO₂ per annum (or the equivalent of removing almost 100,000 cars off Northern Ireland's roads every year). Phoenix have also promoted the installation of the latest high efficiency technologies and through its teams of highly trained Energy Advisors have established natural gas as the energy source to replace more polluting fuels like oil and coal. Jobs have been created, new opportunities for businesses developed and brand new enterprises established.

The existing Phoenix model has a proven track record of delivering connections in line with the FMA development plan. Phoenix has proven that development of a natural gas network in Northern Ireland is successful where the regulatory environment targets are set making natural gas available to the maximum number of properties, where it is economically viable to do so.

Phoenix will therefore meet the pattern of connections set out in the FMA development plan using the proven plans and processes it developed to make gas available to over 301,000 properties and to connect over 171,000 properties in the existing Licensed Area. Phoenix has significant experience and expertise in all tenures and a thorough understanding of each of the markets to ensure that the connections forecast within the FMA development plan are achieved.

Phoenix believes that the shift in dependence on coal and oil for household heating and commercial heating and process in the GTW Licensed Area can be achieved by replicating the proven plans and processes it employed during the development of the network and the development of connections in the existing Licensed Area. The following plans will therefore need to be established for the GTW distribution business:

1. Stakeholder Engagement Plan;
2. Communication Plan;
3. Recruitment and Training Plan;
4. Marketing Plan;
5. PR Plan;
6. Trade Development Plan; and
7. Sales Plan.

As detailed in section 7.4, Phoenix has established and continues to maintain good relations with its stakeholders, third parties and consumers. Phoenix has established a strong and trusted brand and has a world class reputation as a responsible business. Furthermore Phoenix is recognised as the leader in its field in being a good corporate citizen. This ethos will permeate all the activities, plans and processes employed to develop the network in the GTW Licensed Area and ensure that the pattern of connections set out in the FMA development plan are achieved in line with that already achieved in the existing Licensed Area.

Accountability in the organisation structure

Phoenix has considerable experience of the organisational structure required to successfully achieve the pattern of connections set out in the FMA development plan.

As with the existing Licensed Area, accountability for the GTW Licensed Area would rest at Director level.

Group Development Forums (“GDFs”) are an important approach to delivering continuous improvement. The culture within Phoenix largely sees each Senior Manager as responsible for their ‘own business’ i.e. their own department. At the start of each financial year, each Senior Manager must produce and present to the Directors a business plan for their department. This business plan must:

- be aligned with the overall targets and objectives of Phoenix;
- detail the department’s contribution to the overall company targets i.e. where efficiency improvements and cost reductions have been identified; and
- outline how these will be delivered.

The Directors, including the appropriate Senior Managers’ own Director, can challenge the business plans and/or suggest new initiatives for further enhancing performance. These business plans are continuously evolving and are reviewed:

- monthly by the Chief Executive Officer and the Finance Director at budget panel reviews to establish if targets are being met; and
- mid-year when Senior Managers must present to the Directors an update i.e. performance against target, and further initiatives under consideration and/or implemented.

GDFs give all Senior Managers ownership of their own activity and ensure focus is targeted at the key areas of the business by both Directors and Senior Managers. GDFs are vital to delivering further value enhancements within Phoenix and would therefore be replicated for the GTW distribution business.

At an individual level, each employee or contactor will be recruited on an individual contract basis. As in the existing Licensed Area, their job description will clearly set out the terms of their employment and what they are expected to achieve. Annual targets will be given to all staff and contractors with remuneration linked to the achievement of these targets.

A number of key issues will need to be established to ensure that the organisational structure within the GTW distribution business operates effectively. These are detailed on a departmental basis below. To facilitate this the GTW distribution business will largely be managed from Phoenix HQ e.g. as noted in section 3.1, the engineering team for the GTW Licensed Area will be integrated into the overall Phoenix engineering team and, as such, supported by experienced Senior Managers who will have overall responsibility for project delivery. This will also ensure that the ethos which has been successfully applied in the existing Licensed Area is replicated in the GTW Licensed Area.

Sales

The plans and process are discussed in more detail in section 7.2 however the key principles regarding the structure will include:

- i. sales recruitment and selection;
- ii. sales training;
- iii. sales literature and sales processes;
- iv. sales management; and
- v. sales rewards.

Management of the Energy Advisors working in the GTW Licensed Area will be controlled through a reporting mechanism similar to that established in the existing Licensed Area i.e.

- i. daily morning sales clinic;
- ii. daily submission and return of paperwork;
- iii. twice daily report on connections and appointment success rate;
- iv. daily sales targets;
- v. daily targets for self generation and recommend a friend;
- vi. monthly performance meeting; and
- vii. additional training/clinics.

Construction

The network construction phase will be an important opportunity to get homes and businesses to register their interest in natural gas. All construction vehicles (Phoenix and construction contractor vehicles) will carry company branding and display clear details on how to register interest. Construction teams will undergo sales training and be placed on a reward scheme to actively encourage homes and businesses to register their interest in natural gas and help the business to achieve the pattern of connections set out in the FMA development plan.

Construction teams will also work within the Standards of Service (see section 7.2) to facilitate connection to the natural gas network whilst minimising disruption to individual customers thereby maximising customer satisfaction levels and customers recommending natural gas to others.

Administration

As noted in section 3.7, Phoenix has an established Customer Services team responsible for generating initial leads and thereafter managing the customer up to and throughout the connection process to becoming gas customers. In addition this team is responsible for handling all calls and other queries arising from customers and other third parties once they get connected alongside any other business type contacts.

Phoenix's Customer Services team are also responsible for the planning and coordinating of work including the obligations under the notification system operated by the roads service (Symology), work scheduling and resource and plant management for the contract.

Phoenix will resource its Customer Services team to ensure that it is capable of servicing both its existing and the GTW Licensed Areas.

Phoenix will duplicate the policies and procedures from within the existing Licensed Area across the GTW Licensed Area, where appropriate, to achieve the growth in demand/connections set out in the FMA development plan. Some of the administrative processes currently in place include:

- i. appointment setting;
- ii. database management;
- iii. gas availability notification;
- iv. sales appointment setting;
- v. recommendations on installers;
- vi. pre planning check including choice of supplier;
- vii. proximity issues and pre planning checks;
- viii. wayleaves and easements;
- ix. payment of any additional charges in advance;
- x. letter and confirmation of installation date;
- xi. day before customer reminder;
- xii. reinstatement plan;
- xiii. post connection survey; and

- xiv. system updates.

Trade

Phoenix has established a downstream natural gas industry that has embraced a similar set of objectives to those of the Phoenix organisation. Independent installers, retailers and merchants align their businesses with the growth objectives set by Phoenix.

Phoenix recognises the importance of an independent downstream natural gas industry and the benefits this can deliver e.g. improved customer service, additional investment, competitive prices and an ability to respond quickly to opportunities. Phoenix will play a key role in establishing the downstream natural gas industry across the GTW Licensed Area using the proven approach it adopted to establish a downstream natural gas industry across the existing Licensed Area.

Phoenix's Trade Development team will have responsibility for managing the downstream natural gas industry across the GTW Licensed Area with existing experienced Senior Managers being accountable for overall delivery.

Some of the processes to achieve this include:

- recognisable branding on vehicles;
- development of a Northern Ireland Natural Gas Association 'West' branch, associated website etc. (see section 7.2);
- establishing the Phoenix Register of Listed Installation Companies (see section 7.2). Whilst Phoenix does not contract for goods and services relating to the downstream natural gas industry with individual customers, Phoenix does produce standard specifications, standard quotation forms and sets minimum standards of customer service that independent companies must comply with to remain on this register;
- standard specification;
- quotation pads;
- marketing literature;
- inclusion in the Natural Gas Directory; and
- sales and customer service training.

Specific accountabilities are detailed in section 7.2. In summary:

- the engagement with and connection of customers to the natural gas network in the GTW Licensed Area would be carried out in compliance with the Gas Distribution Marketing Code version 1.0 as approved by UR; and
- the Standards of Service which would be adhered to in the GTW Licensed Area are detailed within the Gas (Individual Standards of Performance) Regulations (Northern Ireland) 2014 i.e. the standards of performance measures which must be provided for consumers and compensation for those consumers should performance fall short of target.

Interaction with operations activities planning

As noted above, the operations and planning activities within Phoenix are managed by the Customer Service and Commercial Operations teams. Overall responsibility for day-to-day achievement of operations activities planning rests with the Customer Service team which is broadly split into the following activities:

- Outbound team responsible for generating interest with unconnected customers, market research, cold calling, follow up calls with potential customers and expediting of new connections.
- Inbound team responsible for handling calls from potential customers to the point where a connection has been made plus enquiries, business contacts, complaints and general advice about natural gas.
- planning and scheduling jobs for construction teams including coordinating activities with customer from application to connection, scheduling new connections for each of the customer sectors and handling on a daily basis connections, failures and problems arising thereon.
- Customer Services and Administration team responsible for updating records from sales information through to connection details plus providing information on installers.

Staff and contractors involved with operations and planning are located alongside each other. As noted in section 2.1, IT systems are shared with all those involved having access to the same systems, processes and procedures. No distinction is made between administrative staff employed by Phoenix or operations staff employed by the construction contractor - each operates as part of the team focused on connecting customers in line with agreed targets. Phoenix will resource its Customer Services team to ensure that it is capable of servicing both its existing and the GTW Licensed Areas.

As noted above, Phoenix operate to legislated Standards of Service which, as a minimum, have required establishment of a number of interactions e.g. daily and live reporting. Phoenix has introduced systems and process that track, in real time, the progress of every job. This involves

contractors and staff updating the Planning team with the specific progress on each job on a regular basis e.g. arriving onsite, finishing a job, outstanding issues etc. In this way Phoenix has visibility of the entire job from planning through to operations and completion.

Interaction with customers

Phoenix has established a strong consumer-focused brand and interacts with customers across a wide range of media and platforms. These are discussed in more depth in section 7.2.

Phoenix has developed a highly recognisable brand - independent research suggests that brand recognition in the existing Licensed Area is over 98 per cent. Phoenix will use the same strong brand to interact with customers in the GTW Licensed Area. The engagement program will include.

- user friendly website;
- social media;
- PR activity;
- The Energy For Children Charitable Trust;
- roadshows;
- seminars for customers;
- dedicated call centre with customer friendly hours;
- show homes showing live gas appliances; and
- retailer open days.

7.2 PLANS TO MAXIMISE THE NUMBER OF PREMISES CONNECTED TO THE GAS NETWORK

Arrangements for engagement and development of relationships with businesses, social landlords and potential customers

Phoenix's existing business model has facilitated the successful development of the natural gas industry across all sectors (private and public sector housing (including new build developments) and private and public sector I&C). Since its introduction natural gas, as a product, has gained a strong reputation amongst consumers, stakeholders and wider society within the existing Licensed Area which is slowly eroding the strong oil fuel culture in Northern Ireland, established over the past 30/40 years.

Although the vast majority of Phoenix’s market development and engagement activity has been concentrated on the existing Licensed Area, the relatively small geographic profile of Northern Ireland and the product specific nature of the brand will enable Phoenix to effectively utilise its strong existing relationships to, firstly, communicate with a wide range of groups during the network construction phase of the natural gas network in the GTW Licensed Area, and secondly, maximise the number of premises connecting to the natural gas network in the GTW Licensed Area thereafter.

Overview of the market in the existing Licensed Area

As at 31 December 2013, Phoenix had made gas available (in accordance with the terms of its Licence) to c.301,000 properties within the existing Licensed Area, of which c.171,000 (57 per cent.) had been connected to the network.

Phoenix has shown an ability to engage and stimulate interest across all sectors:

<i>As at 31st December 2013 (000's)</i>	Gas Available	Properties Connected	per cent.
Owner Occupier, inc. New Build *	234,000	119,000	51
Public Sector	48,000	40,000	83
I&C	19,000	12,000	63

* The total number of new build homes that have chosen natural gas since 1996 is c.40,000

Through its market development approach Phoenix has been able to encourage large commercial as well as industrial businesses to install some of the latest energy efficient technologies available to their competitors in other countries and regions.

Through its work in the existing Licensed Area Phoenix has developed strong links to the business community including:

- Confederation of British Industry (“**CBI**”)
- Northern Ireland Independent Retail Trade Association (“**NIIRTA**”)
- Federation of Small Businesses (“**FSB**”)
- Institute of Directors (“**IoD**”)
- Large Users Group
- United Dairy Farmers
- Manufacturing NI

In the early stages of its development, Phoenix identified the significant contribution that Government could make to the success of the natural gas industry; Government owned and run properties make up a significant proportion of the total properties within Phoenix’s existing Licensed

Area and it was therefore essential that Phoenix worked effectively with local Government to convince them of the benefits of converting to natural gas.

The NIHE is the single public sector housing body in Northern Ireland. Phoenix established a professional working relationship with the NIHE and in 2001 persuaded them to adopt the policy that natural gas would become its fuel of choice (where natural gas was available) for all heating replacements on its 15-year replacement cycle. This was an important milestone in Phoenix's and the Northern Ireland natural gas industry's development; the NIHE has over 50,000 properties within Phoenix's existing Licensed Area and to date over 40,000 have converted to natural gas. Whilst this is the current policy, each tenant must then be persuaded of the benefits of natural gas otherwise they can choose to convert to oil or biomass; NIHE will not insist that a tenant in their property install a natural gas heating system. Continued market development is therefore required to persuade tenants that natural gas should be their preferred option. Phoenix is therefore conscious that engagement with NIHE tenants is a vital part of our maximisation of connections in this sector. Phoenix is also aware that many NIHE properties in the GTW Licensed Area will have had an oil boiler installed within the last 15 years due to the unavailability of natural gas at that time.

The close and trusted working relationship between Phoenix and the NIHE means that the number of natural gas conversions are maximised each year. Joint planning of operations means that in some instances network construction is rescheduled to meet the NIHE's timescales and in other instances heating system replacements are delayed to allow Phoenix time to construct the network. This approach has been essential in delivering a successful industry in Phoenix's existing Licensed Area; almost one-in-four properties connected to the natural gas network are NIHE properties and eight out of ten NIHE properties are using natural gas. The total cost of the heating system conversions undertaken by the NIHE is c.£100m and is funded by Government. This has significantly reduced the cost of natural gas for all consumers by increasing the volumes of gas transported by Phoenix through its network and by preventing the need for Phoenix to provide a financial incentive to NIHE tenants to connect to natural gas.

Phoenix has adopted a similar approach with all local Government agencies e.g. Health Trusts, schools, the Police Service of Northern Ireland, the Ministry of Defence, and Government own property management departments. Phoenix has convinced each of these agencies that natural gas is the way forward and that a conversion programme should be established for their properties. This has proven successful with the vast majority of local hospitals, primary and secondary schools, police stations, Ministry of Defence bases and Government buildings converting to natural gas. This has significantly reduced the cost of natural gas for all consumers by increasing the volumes of gas transported by Phoenix through its network and by preventing the need for Phoenix to provide significant financial incentives.

Phoenix will continue to build on these relationships and work closely with such agencies to coordinate network construction and consumer conversion programmes to ensure that the roll out of natural gas in the GTW Licensed Area is as successful as in its existing Licensed Area.

Brand awareness

The brand awareness that Phoenix has is well established in the existing Licensed Area and with over 95 per cent. of those connected saying that they would recommend the benefits of natural gas to a friend, there is a high level understanding of the benefits of natural gas amongst homeowners.

Although an element of this brand awareness may transfer to the GTW Licensed Area, Phoenix is mindful that homeowners in the GTW Licensed Area will not have had regular exposure to Phoenix marketing that has been concentrated in the existing Licensed Area. There is likely to be limited firsthand experience of using natural gas resulting in even less exposure to friends and families positive experience of natural gas.

Across all sectors Phoenix sees its relationship with potential customers in the GTW Licensed Area starting at the mobilisation phase when it will (i) engage with local communities to offer detailed guidance on the extent and timescales of any disruption as natural gas is introduced into their area (as detailed below); and (ii) use this opportunity to collect contact details of those homeowners interested in finding out more about natural gas. Specific detail on the relationships which will be nurtured in relation to natural gas prepared homes and public realm schemes detail is provided within Phoenix's Innovation and Technology Transfer submission ("Natural Gas Prepared Homes and Local Councils" section).

As the network expands to each new town in the GTW Licensed Area, Phoenix will host information events with each community to offer customers the opportunity to find out more about natural gas and the construction programme in their area.

Phoenix sees these events taking place in easily accessible community areas that will attract homeowners, key stakeholders and community representatives and will cover issues such as:

- timescales of gas availability;
- mains construction techniques;
- safety of natural gas;
- price comparisons;
- connection process; and
- the role of a Gas Safe Registered Installer.

Engagement with key stakeholders across the GTW Licensed Area

Strategy

- to build upon Phoenix's continued growth and market share in each of its chosen market sectors; and
- to position natural gas as a clean, flexible, contemporary and value for money fuel for the modern home.

The Communication Aims

- position the brand away from price only considerations;
- enhance the potential for the acceleration of the rate of leads for new connections across all sectors;
- engage prospects who have considered natural gas as an option but have not progressed to conversion;
- continue to engage the private homeowner with the natural gas product benefits propositions; and
- get more customers connecting and using natural gas.

Whilst the cost of market development and engagement may vary by market sector Phoenix's experience is that each sector needs a degree of stimulation to persuade homeowners, organisations and businesses, and in some cases tenants, to make the switch to natural gas.

Political Support

Given the significant upfront cost of converting to natural gas, potential gas customers tend to only make the decision to switch once they are convinced by a range of factors including price, convenience and environmental benefits.

Local political representatives are often approached to offer advice with regard to energy options that constituents have. Phoenix has well established relationships with the six main political parties in Northern Ireland and regularly attends political conferences to promote the benefits of natural gas.

Phoenix intends on continuing to develop its political relationships with politicians in the GTW Licensed Area.

Further information is provided in section 7.4.

Arrangements for provision of connections to various categories of premise (owner occupier, NIHE, new build, small I&C, large I&C)

Owner Occupier Connections

As noted in section 2.2, two remote FTEs (Energy Advisors) will be required to manage sales activities within the owner occupier sector and two remote FTEs (Energy Advisors) will be required to manage sales activities within the non-owner occupier sector to achieve the targets for growth in demand/connections in accordance with the LP Business Plan.

Phoenix trains all sales staff on energy efficiency to City and Guild standard. Phoenix's Sales team is therefore able to offer a broad range of energy efficiency advice and promote the benefits of natural gas.

Efficiencies can be achieved if Phoenix's Domestic Sales Manager manages the Energy Advisors working in the GTW Licensed Area. This would require the Energy Advisors to attend twice weekly sales clinics at Phoenix HQ.

The Energy Advisors would be commission-based and Phoenix would use the significant experience it has gained in the existing Licensed Area to select and train each Energy Advisor to successfully complete six customer appointments per day.

Phoenix has developed a process for gaining domestic customers where domestic Energy Advisors would carry out appointments in customer's homes in the GTW Licensed Area in a structured format similar to the effective process in the existing Licensed Area which leads to 90 per cent. of homes visited completing a Gas Connection Application.

A typical Energy Advisor appointment would include:

- whole house energy audit (identifying areas of heat loss inside the home)
- presentation on features and benefits of natural gas
- explanation of the connection process, and
- introduction any Phoenix/social incentive/grant schemes.

Phoenix's vast experience of making over 81,000 owner occupier connections to the natural gas network has allowed it to gain a wide understanding of the typical queries and concerns homeowners have when considering a switch to natural gas and in turn produce an informative

presentation that draws on this experience and presents the core information of interest to homeowners.

Phoenix's experience in the existing Licensed Area has consistently shown that an average of 80 per cent. of customers who contact Phoenix and are visited by an Energy Advisor proceed to connect to the natural gas network within six months of the visit. The primary challenge therefore is the generation of new appointments in the GTW Licensed Area.

Energy Advisors source appointments from three distinct areas:

1. Inbound

Consumers who are stimulated by Phoenix marketing contact Phoenix's call centre to enquire about the availability of natural gas will be encouraged to book an appointment with an Energy Advisor.

The Customer Services team will offer the homeowner a range of appointment times from 10am – 8pm daily.

The conversion rate for inbound appointments are higher than other categories of appointments, perhaps not surprising given the fact these are customer initiated engagements. They are however strongly influenced by marketing activity.

2. Outbound

The Energy Advisor's will be responsible for contacting homeowners who have previously registered interest in natural gas.

These are initially likely to be homeowners who have registered their interest at a local community event promoting natural gas.

As the database continues to develop the contact team will also follow up with inbound contacts that did not proceed to connection to further develop their interest in proceeding with connection or organising a follow up Energy Advisor appointment.

3. Self Generation

One of the key responsibilities of each Energy Advisor will be to develop relationships within the community they are working.

In the existing Licensed Area over 25 per cent. of appointments, and in turn connections, originate from Energy Advisors.

This activity is key particularly in areas of new network development. The Energy Advisors will generate these new leads from a range of targeted activity e.g.

Customer referrals

When an Energy Advisor completes an appointment with a homeowner they will ask the homeowner if they have friends or family that would also benefit from an Energy Advisor appointment.

Phoenix's experience has shown that where the Energy Advisor has built up a rapport with the customer who has received useful energy advice, the customer will see the benefit of sharing friend and family contact details so they too can receive this information

Renovation Work

Homeowners and private landlords that are undertaking refurbishment are ideal prospects to introduce the concept of natural gas. One of the key barriers to connection is the timing for homeowners to carry out the work. The Energy Advisors will be trained to develop relationships with builders working in the GTW Licensed Area who, amongst other advantages, are likely to see the space benefits natural gas offers when renovating a property.

Energy Advisors will also be trained to look out for signals of refurbishment work such as 'skips' in the driveways/footways around houses.

Estate Agents

New homeowners are more likely to carry out work in their new home than existing homeowners. Energy Advisors will work with local estate agents to identify for sale/sold properties that would benefit from considering natural gas e.g. solid fuel, Economy 7 or older oil systems.

Local Community Engagement

Although Phoenix will have a wider engagement strategy across the GTW Licensed Area, the Energy Advisor will play a key role in developing local relationships at ground level. They will be familiar with local neighbourhood groups, local shop owners and will ideally have local knowledge of and a sound relationship with local homeowners.

Field Canvassing

Although marketing activity is designed to both raise brand awareness and prompt action amongst consumers, the majority of consumers will not respond to marketing literature either directly aimed at them or not.

Phoenix therefore envisages Energy Advisors carrying out canvassing activity in areas where natural gas is currently or imminently available. This activity will be primarily designed to raise awareness of natural gas and collect customer contact details where there is an interest so a follow up appointment can be booked.

Developing the Sales Process

When a new homeowner is considering natural gas there is a lot of information for them to consider e.g.

- the role of the network operator;
- the work of a Gas Safe Registered Installers;
- supplier competition; and
- social or utility company grants/incentives.

This can make the connection process seem a complex operation for some customers and as such it is one that Phoenix has fine tuned over the last c.17 years to make connection to the natural gas network as smooth as possible.

Connections incentive

It is critical to remember that natural gas as a product is not only competing with other strong and established fuels such as oil, electricity, and more recently with renewable technologies, but the decision process for a consumer to convert heating systems and appliances to natural gas is the same decision process as to whether to change the kitchen, upgrade the family car or take an annual holiday i.e. it is not an essential purchase for most people as they will already have heating systems, cooking facilities etc. and therefore natural gas can be more easily classified as a discretionary item. It is only through substantial levels of market development activity by Phoenix that consumers even consider the conversion of natural gas alongside these other discretionary items.

Research has proven that promotions, vouchers, Groupons and guarantees on products help consumers to decide to spend. From the largest retailers such as Sainsbury's and Marks & Spencer to the local butcher, all are using some form of promotion to encourage customers to spend.

Phoenix would effectively manage any domestic owner occupier connections incentive to best target those customers most in need of additional encouragement.

Northern Ireland Housing Executive

NIHE recently reported that over 57 per cent. of their households were in fuel poverty and noted the running costs of home heating oil and non-availability of PAYG metering as major contributing factors.

The future availability of natural gas is a key factor in NIHE's Heating Policy. Phoenix was able to persuade the NIHE to introduce two policies in recent years that clearly support natural gas – NIHE's Fuel Policy and NIHE's Heating Replacement Policy. Specifically natural gas remains the only option offered in their heating replacement scheme in natural gas areas.

Although clear policies are in place, engagement and development of relationships is required across a number of different strands of the NIHE to maximise connections. Phoenix has a track record of effectively working across various NIHE departments e.g.

- NIHE Senior Management;
- NIHE Area Managers;
- NIHE District Offices; and
- NIHE Appointed Contractors

in relation to the promotion of natural gas and connection to NIHE tenants.

Phoenix will work with the NIHE and its appointed contractors to ensure gas availability in areas that are eligible for heating replacement programmes. Phoenix will in turn implement its engagement strategy in such areas to include:

- the use of a 'Natural Gas Vehicle' that would be based in the heart of a NIHE districts and would include live natural gas appliances for tenants to view; and
- community information events to educate local tenants and community leaders on both the features and benefits of a natural gas boiler and to inform them of any mains construction programmes in their area.

Phoenix have developed an effective, efficient process that has maximised the opportunities that exist in NIHE areas allowing Phoenix to target its resource at the most needed areas e.g.

- Phoenix sends correspondence to all NIHE tenants who are part of a particular heating replacement programme;
- 60 per cent. of these tenants typically reply to the initial correspondence agreeing to the installation of a gas service and meter to their rented property;

- Phoenix representatives can then concentrate additional effort on the 40 per cent. of tenants who did not respond;
- many tenants will not have responded to the initial correspondence for those same reasons that prove to be barriers for the owner occupier market e.g. fear of disruption, safety concerns, lack of information etc.; and
- following an intervention from Phoenix's NIHE representative who offers the tenant a full presentation in their home and an opportunity to discuss any concern they might have, the majority of tenants opt to change their heating to natural gas.

New Build

Through its market development in the existing Licensed Area Phoenix has established natural gas as the fuel of choice for builders and property developers in areas where gas is available. This has been achieved by developing relationships with a range of people working within the construction sector e.g. consultants, architects, specifiers and builders.

Phoenix representatives will be responsible for maximising gas connections to all new build properties where gas is available, keeping abreast of new planning applications, identifying developments and persuading those decision makers involved of the merits of natural gas.

The benefits of natural gas continue to be challenged and continued engagement and market development of the new build industry is essential to maintain the dominant position that natural gas has commanded in this sector.

In recent years, Housing Associations have accounted for around 50 per cent. of the new build homes in the existing Licensed Area. This will continue to be an important sector and one that almost exclusively constructs homes for social housing. Phoenix's New Build representatives will be responsible for developing relationships with Housing Associations based in the GTW Licensed Area.

Phoenix has also identified an innovative solution to ensure that new developments within its Licensed Area but without access to the natural gas network at the time of construction (largely developments on the extremities of its Licensed Area), would ultimately connect. Phoenix worked with developers to ensure that natural gas infrastructure was constructed and service connections were made to each property and to natural gas standards. Consumers were initially supplied with gas via an underground Calor Gas tank and were converted to natural gas when Phoenix's network reached the development. These "natural gas prepared homes" ensure that Phoenix continues to connect all new build opportunities in its Licensed Area. Further detail is provided within Phoenix's Innovation and Technology Transfer submission ("Natural Gas Prepared Homes and Local Councils" section). Again this solution will be adopted in the GTW Licensed Area to maximise connections in areas where a natural gas network is being developed but not immediately available.

In the last c.17 years Phoenix has developed and maintained a database of homebuilders which now contains over 700 contacts. Phoenix will work with Construction Information Services to monitor all

homebuilding (both multiple and single builds) to ensure all opportunities within this sector are maximised.

Industrial (Large I&C)

Energy costs are recognised as one of the largest overheads for both small and large I&C businesses. The extension of the gas network is seen as a vitally important development in the economic viability of businesses in the GTW Licensed Area.

The vast majority of industry in Great Britain uses natural gas. Phoenix therefore benefits from the research and development undertaken in Great Britain, and indeed Europe and further afield, to refine and improve natural gas products. As a result natural gas technologies are considerably more efficient than competing fuels such as coal and oil. The availability of natural gas will therefore offer businesses in the GTW Licensed Area some of the latest energy efficient technologies available and allow them to compete with businesses in other regions and countries on a more level playing field.

Phoenix have a well established relationship with the trade that services the industrial market, who in turn have a broad skill set and experience of introducing some of the world's leading technologies into Northern Ireland including:

- Combined Heat and Power (**CHP**);
- Decentralisation; and
- Air Conditioning Units.

Natural gas has cost, technological and environmental benefits for industrial users. The decision to introduce natural gas technology into a business is however taken primarily for economic reasons with users typically seeking two to three year payback periods.

Preliminary profile work has already been carried out on I&C businesses in the GTW Licensed Area and there is a clear understanding and focus on the industrial opportunities that exist in each town. Phoenix representatives will target these premises in line with the connection profile determined by UR as detailed in the workbook submission.

The current profile of large industrial loads in the GTW Licensed Area, although diverse, has a number of companies involved in both the quarry and dairy industries. These are two examples of industries that Phoenix has demonstrated an ability to engage with and introduce highly efficient natural gas technology to. The Phoenix representatives working in this sector will use the specific experience, knowledge and training gained in the existing Licensed Area to overcome some of the typical barriers to connection fairly unique to the sector such as:

Typical Barriers to Connection
Capital outlay of measures
Property landlord unwilling to invest
Cash flow issues
Disruption to business



Solutions to Barriers
Case Studies
Invest NI Support
Carbon trust
Factory Visits
Supply Competition

Commercial (Smaller I&C)

The smaller I&C opportunities will be made up from a diverse range of small and medium enterprises (“SMEs”).

Although energy use within these premises will be a significant business overhead, in Phoenix’s experience these businesses need additional stimulation and an approach similar to that taken for the owner occupier market.

These smaller businesses, for example, are unlikely to have any personnel directly responsible for energy use and it therefore can often be met with a certain degree of apathy.

Phoenix have however been responsible for developing the skills of the wider natural gas industry, creating a vibrant service and installation sector that has knowledge and experience on the most efficient and effective natural gas appliances for these commercial businesses.

Phoenix has demonstrated an ability to develop relationships with both private and public sector commercial businesses to consider the benefits of natural gas and in turn connect to the natural gas network. To date over 11,000 commercial properties are connected to the Phoenix network in the existing Licensed Area.

Typical solutions for small commercial premises will focus on space heating, hot water and catering needs:

1. Catering needs:
 - i. Restaurants;
 - ii. Cafés; and
 - iii. Takeaways.

2. Space Heating needs:

- i. Offices (Solicitors/Accountants/Medical Centres);
- ii. Restaurants; and
- iii. Public sector buildings.

3. Hot Water needs:

- i. Hairdressers;
- ii. Cafés; and
- iii. Restaurants.

Specific Proposals for promotion of connections to vulnerable customers

According to the Northern Ireland House Conditions Survey 2009, more than 44 per cent. of people in Northern Ireland are living in fuel poverty.

Although there are a number of social schemes in place to assist these homeowners install energy efficiency measures that include natural gas heating, these groups are often slow at referring themselves onto a scheme (self-referrals) without the encouragement of a third party.

Phoenix sales team currently visits around 15,000 homes per year. Phoenix sales team is highly trained in areas such as energy efficiency and is in a position to offer advice on a range of measures that households can undertake to improve the thermal comfort and energy efficiency of their homes.

During these home visits Energy Advisors establish a rapport with homeowners who in turn feel comfortable about providing information regarding their personal circumstances. Energy Advisors are then able to identify whether the homeowner may qualify for assistance with a range of measures including insulation and replacement heating systems.

A number of schemes operate through the Department for Social Development (“**DSD**”) and through the Northern Ireland Sustainable Energy Program (“**NISEP**”). Phoenix estimates that c.1,000 homeowners are identified and signposted to the various fuel poverty schemes by its sales team each year e.g. Warm Homes.

The types of homeowners who typically qualify for such schemes are elderly and, in many cases, do not want any type of disruption in their home. These customers are best served by one-to-one

contact in their homes where a clear explanation of the processes and the benefits they will enjoy following completion of the measures can be explained.

Phoenix's domestic Energy Advisors undergo specific training modules in how to best engage with vulnerable customers. This training has been developed in-house with support from organisations, such as the Royal National Institute of Blind People, for certain specific training needs.

As a result of the rapport and trust that is established with the homeowners that Phoenix visit, Phoenix is able to gain additional referrals for those who may not qualify themselves but who know of a family member, neighbour or friend who may qualify for these schemes.

Recently the DSD has introduced a Boiler Replacement Allowance to assist those homeowners who are vulnerable but who do not meet the criteria for the more established schemes such as Warm Homes and those offered through NISEP. Like the fuel poverty schemes, Phoenix has been instrumental in identifying homeowners who may qualify for this allowance. The Boiler Replacement Allowance was launched in September 2012 and already over 12,000 homeowners have benefitted. Phoenix ran a pilot Boiler Scrappage Scheme in 2011 which was hugely oversubscribed. The customers who were unable to avail of the scheme at the time were introduced to the Boiler Replacement Allowance in 2012 and this created significant demand at the beginning of 2013.

Age Sector Platform

The Affordable Warmth pilot recently reported that more than 50 per cent. of those most in need are over 60 years old. Phoenix has an 'Older Peoples Strategy' within the existing Licensed Area and works with the Age Sector Platform and its member organisations to provide energy efficiency advice to their members.

Phoenix supports the Age Sector Platform Parliaments in the existing Licensed Area which, as well as offering an opportunity to talk to delegates attending events, allows Phoenix to establish new relationships with other member organisations, often leading to Phoenix hosting focused energy efficiency seminars in local communities.

Social schemes by their very nature target vulnerable groups who are particularly concerned about disruption and therefore, even when they meet the criteria for a funded scheme, they need additional reassurance to proceed.

Proposals for maximising connections for owner occupier and non-owner occupier customers

It is important to remember that, as a product, natural gas will be competing with other strong and established fuels such as oil, electricity, wood burning and more recently renewable technologies.

The effective development of the independent natural gas industry in any new area will therefore be vitally important to ensure maximisation of both the owner occupier and non-owner occupier customer base.

Phoenix has demonstrated its considerable experience at effectively developing the wider support of third parties to the benefit of maximising customer connections.

The availability of experienced and skilled Gas Safe Registered Installation companies operating in the GTW Licensed Area is limited. There are a number of Gas Safe Registered Installation companies in these towns however their skills tend to be in the Liquid Petroleum Gas sector.

The core skills of plumbing and heating Engineers' in the GTW Licensed Area are in the servicing and replacement of oil boilers. Recent figures released by the NIHE on the volume of Boiler Replacement Allowance grants per District Council area confirm that there is no shortage of replacement oil boilers being installed by heating Engineers in these towns. In a 14 month period (figures up until 31 October 2013) these areas have seen 1,091 new oil boiler installations (13 per cent. of total installations under this scheme):

Council Area	Oil Installations
Dungannon and South Tyrone	258
Omagh District Council	249
Strabane District Council	152
Cookstown District Council	184
Fermanagh District Council	248

For natural gas to be considered a viable option for consumers there must be both the skills available locally to service customers' needs and more crucially the wider support of installation companies to embrace natural gas, upskill their workforce and promote natural gas to their client base.

Much has been achieved in terms of establishing a competitive market for the installation of natural gas appliances in homes and businesses in the existing Licensed Area. A total of 520 Gas Safe Registered Installation Companies operate in Northern Ireland. Phoenix has a relationship with 300 (c.60 per cent.) of Gas Safe Registered Installation Companies in Northern Ireland and each feature on the Phoenix Register of Listed Installation Companies. The registration process requires installation companies to not only be adequately qualified but they also must sign up to a Charter that Phoenix has developed to help protect customers. This Charter includes obligations such as providing written quotations, dealing with complaints within standard etc.

Northern Ireland Natural Gas Association

The Northern Ireland Natural Gas Association (“**NINGA**”) has a strong industry brand identity that is owned and operated by Phoenix with installation companies attending monthly meetings of the association. NINGA has been influential in developing the skills base of the local industry, tackling issues of quality, marketing skills, supply chain issues, as well as training.

The monthly events continue to attract up to 200 companies and are particularly useful in the development of new Gas Safe Registered Installation Companies as they enhance their skills to effectively promote and install natural gas to their customer base.

The NINGA brand is well recognised within the wider Northern Ireland plumbing and heating fraternity, regularly featuring in regional trade magazines, lobbying on industry issues and facilitating industry events such as the launch of the Boiler Replacement Allowance.

The development of a NINGA ‘West’ branch is key to establishing a working proactive independent trade in the GTW Licensed Area.



Picture: Nelson McCausland MLA launches the Boiler Replacement Allowance at NINGA

NINGA website

In 2012 Phoenix developed a bespoke NINGA website that offers additional real time support to companies listed on the Phoenix Register of Listed Installation Companies. The information available on this website is multifarious, initially offering functional information installers regularly require such as a real time gas availability checker, a gas vs. oil fuel tracker and key industry contact details. The website also offers such companies a wealth of industry material built up over many years that is designed to assist them with promoting natural gas in their local area. Finally an online shop allows such companies to order items such as promotional leaflets, business cards and advertising boards.

NINGA Committee

In 2012 Phoenix established the NINGA Committee whose membership is made up of a range of personnel representing a range of different industry sectors.

The NINGA Committee have offered the wider industry, which employs up to 3,000 people, a voice not only within the industry but a voice to consumers.

Phoenix envisage the NINGA Committee embracing industry members from the GTW Licensed Area and using their vast years of natural gas experience to play a key role helping to inform stakeholders and consumers and assisting those less experienced companies.

Consumer Finance Options

The owner occupier sector is traditionally the slowest sector to embrace natural gas and choose to invest in a new gas central heating boiler or appliance.

The most typical barrier for homeowners is the significant upfront cost required in order to connect their homes to natural gas. On average a homeowner spends in the region of £2k - £3k to install a central heating boiler alone.

In the existing Licensed Area Phoenix have encouraged 15 installation companies to invest and make an application for a Credit Consumer licence. The facility that these installation companies now make available to consumers has offered thousands of homeowners in the existing Licensed Area the flexibility to spread the cost of installation over a term that suits at a low or 0 per cent. APR.

The availability of a similar scheme from local installation companies will be an important factor in maximising owner occupier connections in the GTW Licensed Area.

Installer Marketing

Although installation companies are not skilled or experienced marketers they have, in recent years, shown an increasing ability to 'piggy back' Phoenix marketing campaigns in their local area.

Through initiatives such as the NINGA website, marketing materials have become more accessible to installers with templates available that are in the style of the wider Phoenix campaign.

This has proved to be the most effective use of installer investment in marketing in that instead of creating their own bespoke, often isolated message, they can very quickly gain recognition because of the consumer familiarity with the Phoenix campaign message.

Although there is a fundamental need for significant investment in market development from the network operator to raise awareness of the benefits of natural gas and build trust in the network brand, it is often the ability of the downstream installation company to engage on a local basis that compels the homeowner to take action.

Phoenix has considerable experience working with the trade on marketing initiatives and would be well placed to continue developing the skills of installation companies based in the GTW Licensed Area on the merits and effective styles of consumer engagement.

Installer Sign-Up

In the existing Licensed Area over 100 installation companies have completed training which allows them to complete a Gas Connection Agreement without the need for an Energy Advisor visit.

Installation companies who actively use this facility report that it allows their business to become a 'one-stop-shop' for customers and allows them greater control of where a gas meter box is sited.

Phoenix would introduce installer sign-ups to the Phoenix Register of Listed Installation Companies in the GTW Licensed Area so they could offer this service to customers from the outset.

Crucially this would allow Energy Advisors to focus their efforts on identifying new leads and allowing the 'low hanging fruit' opportunities to be serviced by the independent trade.

Standards of Service

The Standards of Service which Phoenix adheres to are detailed within the Gas (Individual Standards of Performance) Regulations (Northern Ireland) 2014²². This legislation sets out standards of performance measures which Phoenix must provide for its consumers and compensation for those consumers should Phoenix fall short of their required standards. Phoenix also adheres to the overall Standards of Service and targets. The GTW distribution business will also be subject to these Standards of Service.

Phoenix has also published a Notice of Rights²³ which explains the individual standards of performance customers can expect from Phoenix and outlines the compensation customers could receive if Phoenix fails to deliver these standards. Phoenix would replicate this Notice of Rights for the GTW Licensed Area.

²² http://www.uregni.gov.uk/uploads/publications/2014-03-03_The_Gas_Individual_Standards_of_Performance_Regulations_Northern_Ireland_2014.pdf

²³ <http://www.phoenix-natural-gas.co.uk/help-and-advice/standards-of-service/>

The engagement with and connection of customers to the natural gas network in the GTW Licensed Area would be carried out in compliance with the Gas Distribution Marketing Code version 1.0 as approved by UR²⁴.

All new staff working in the area of consumer marketing will be appropriately trained and undergo a lengthy induction programme so they can carry out their duties in line with the Gas Distribution Marketing Code and the required Standards of Service.

An ongoing training programme will ensure regular refreshment of all standards and include statutory legislation and internal company requirements.

A documented record of all training received will be maintained for each individual.

Standards of Service for companies on the Phoenix Register of Listed Installation Companies

Installation companies making an application to join such a list would be required to satisfy minimum entry qualifications and sign up to a list of conditions that will be specifically designed to ensure that the installation companies featuring on this list would operate their businesses to an acceptable standard.

Within these conditions Phoenix would have the right to remove an installation company should there be a breach of the listed conditions.

7.3 INTERACTION WITH SUPPLIERS

Phoenix would envisage that Gas Suppliers who currently operate in other distribution Licensed Areas of Northern Ireland would be among those first to consider extension of their operations to the GTW Licensed Area. It is therefore worth noting that all of these Gas Suppliers will currently have in place processes and systems which support the Phoenix Network Code and associated systems. Therefore the Phoenix proposal for using existing Network Code, its supporting processes and systems (as detailed in section 5.4), would appear to be the most cost effective solution for the GTW Licensed Area. As a result Phoenix has fully detailed the following in section 5.4:

- *arrangements for engagement proposed* - in summary an essential element in delivering and supporting a competitive retail market has been Phoenix's ability to interact with all industry stakeholders and develop in particular strong professional working relationships with Gas Suppliers, UR, CCNI and other Network Operators. Phoenix has played a key role in the development of industry forums and now forms an integral part of the Gas Market Opening Group, Gas Supplier Forum, Distribution Network Operators' Forum and Northern Ireland Stakeholder Group for EU Gas Network Codes. Phoenix would propose to put in place a work plan for communicating with Gas Suppliers within the GTW Licensed Area during the

²⁴ <http://www.phoenix-natural-gas.co.uk/fs/doc/Marketing%20Code%20-%20Coming%20into%20Effect%20March%201st%202013.pdf>

mobilisation phase to ensure an organised approach to delivering a competitive retail market is achieved similar to that delivered for the existing Licensed Area;

- *explanation of how the applicant will coordinate with supply companies to meet respective licence obligations* - in summary Phoenix will utilise the forums identified in point one to ensure all Network Code, Licence and other relevant legislative requirements are identified and appropriate solutions discussed with the resulting robust processes developed in a timely manner to meet industry expectations and legislative requirements. Specific examples of this are provided in section 5.4;
- *proposals for planning and coordination of activity* - in summary Phoenix has led the way and contributed significantly to the planning and development of a competitive retail market in Northern Ireland and strongly believes that all of the processes developed can be utilised in the GTW Licensed Area with little or no amendment. The work already undertaken by Phoenix and the ability to extend this to any new network would support the requirement for immediate introduction of a competitive retail market upon completion of the network construction phase within the GTW Licensed Area. Phoenix also works closely with Gas Suppliers throughout the accession process and beyond to ensure they can contribute to the realisation of a competitive retail market. This includes, upon request to enter the market, providing Gas Suppliers with an extensive training programme which aims to ensure they are fully aware of their Network Code obligations and the processes Phoenix has in place to facilitate this. Phoenix also regularly facilitates bi-lateral meetings to discuss any issues specific to individual Gas Suppliers when required. These arrangements will be replicated for activity in the GTW Licensed Area;
- *proposals to interact with industry forums as appropriate* – in summary Phoenix would propose to use the established industry forums such as the Gas Market Opening Group and Gas Supplier Forum identified in point one above to liaise and communicate with Gas Suppliers on network development and gas availability; and
- *arrangements, including all relevant systems to support a competitive retail market* - in summary, Phoenix has already established strong working relationships with the Gas Suppliers currently operating in the market and has in place a detailed market entry programme (see section 5.4) to support new market entrants. As noted in section 5.4, it will also be essential for Phoenix to work with Gas Suppliers to identify a party willing to undertake the Commissioning Supplier role to ensure a connection process, similar to that undertaken in the existing Licensed Area, which provides the potential customer with all necessary support to switch to natural gas is delivered in a cost effective way.

7.4 PUBLIC RELATIONS

Phoenix has established and continues to maintain good relations with its stakeholders, third parties and consumers. Phoenix has established a strong and trusted brand and has a world class reputation as a responsible business. Furthermore Phoenix is recognised as the leader in its field in being a good corporate citizen. The activities that Phoenix has engaged in and the stakeholders that that Phoenix has engaged with, in the existing Licensed Area, will form the basis of the PR Plan for the GTW distribution business.

Notably Phoenix has created a number of campaigns which have used the free press to encourage favourable coverage of natural gas. Changing customer behaviour is one of the most difficult challenges in developing any new market or indeed product and consumers trust the press far more than they trust advertisements. Because of this, Phoenix has run a number of successful PR campaigns that have got natural gas and Phoenix into the press. Phoenix is able to demonstrate the overall impact that these campaigns have had compared to a traditional advertisements.

Phoenix has developed a range of integrated and well tested PR activities. Phoenix understands that that a balance has to be maintained between achieving short term goals and sustaining long term benefits. The following are examples of the range of activities undertaken by Phoenix which have achieved these aims:

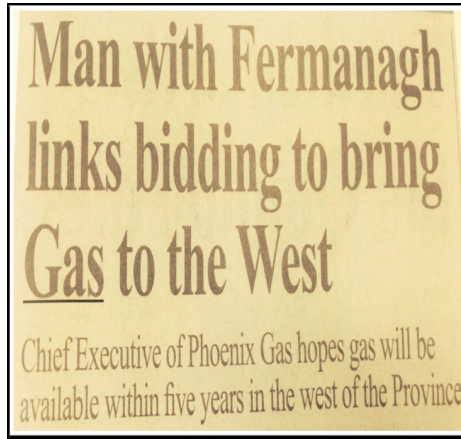
Publicity

The following is a list of headlines from stories printed in a range of daily/weekly newspapers and journals over the last number of months.

- i. Gas Utility Company Grabs Big Tick Record
- ii. Millisle Embraces Fuel choice
- iii. Phoenix Deliver Heating solution to Eco-Village
- iv. Gas company says Old Oil Boilers should be given the Boot
- v. Jail for Gas Meter tamper Crook
- vi. Gas in to the west is good news for consumers with prospect of new form of Energy
- vii. Gas Industry Apprentices continue to shine
- viii. Leading Gas Energy Figure praises Gas Development in Belfast
- ix. Natural Gas and the environment
- x. Gas arrives in Lord Wardens Bangor

xi. Support for Gas Safety Week

The following are examples of PR articles on taking gas to the GTW Licensed Area:



Ulster Telegraph (July 2013)

Business


GAS TO THE WEST PROJECT PICKS UP PACE

Phoenix Natural Gas, Northern Ireland's largest gas distribution company, has been on the ground in Fermanagh as part of a process of assessing demand for the product across the geographic area that is included in the NI Executive's 'gas to the west' plans.

There was confirmation from the NI Executive in 2012 that the project would benefit from government subsidy to help with its cost, and construction work could start as early as next year. It is currently proposed that both gas transmission and distribution pipelines will be built across Mid-Ulster and into Fermanagh going as far as Enniskillen and Derrylin.

The process for deciding how this will be done is currently being managed by the Utility Regulator and the Department for Enterprise, Trade and Investment. It is not yet known which companies will carry out the work, but Phoenix Natural Gas is one of the companies on record as having registered its interest in looking at the project.

Phoenix hosted a seminar in Enniskillen for local business leaders and key stakeholders. Alastair Pollock, Phoenix Business Development Director, reflected: "We had



Tom Elliott MLA (UUP), Alastair Pollock (Phoenix Natural Gas), Lord Maurice Morrow MLA (DUP) and Phil Flanagan MLA (Sinn Féin).

met with political representatives at Stormont to discuss the project and together we believed it was likely that many businesses in the west were not fully aware of the benefits natural gas availability in their areas would bring. We decided to be proactive and were very encouraged by the response we had from businesses on the day. There was a clear demand for more fuel choice to be made available and ultimately everyone present seemed to understand natural gas's key role in providing economic, social and environmental benefits."

Public Information

Phoenix has a proven suite of integrated public information activities e.g.

- retailer open days demonstrating domestic natural gas appliances;
- seminars on new technologies e.g. micro CHP, natural gas air conditioning systems etc.;
- information days in shopping centres, community halls, churches, Local Councils etc.; and
- roadshows involving taking a mobile caravan with gas appliances into housing estates and town centres.

These activities are regularly held in the existing Licensed Area and will be extended across the GTW Licensed Area.

Phoenix understands that a balance must be maintained between achieving short term goals and sustaining/delivering long term benefits. Phoenix has also therefore engaged in a regular campaign of providing the general public with leaflets and fliers e.g. containing (i) general energy efficiency advice; (ii) advice on how to protect their homes against extreme weather; and (iii) advice on who to contact if they have an emergency.

Lobbying

Phoenix has campaigned on a number of issues to the benefit of the wider gas industry and has been successful in persuading a number of organisations, including political parties, of the social and economic benefits of natural gas e.g.

- i. NIHE's Fuel Policy that recommends natural gas is installed where available (see section 7.2);
- ii. NIHE's Heating Replacement Policy that recommends heating systems are replaced every 15 years (see section 7.2);
- iii. The Boiler Scrappage Scheme Pilot (see box, below) which paved the way for the DSD's Boiler Replacement Allowance (see section 7.2);
- iv. DSD's review of the Warm Homes Scheme to include replacement of inefficient boilers more than 15 years old;
- v. Extension of natural gas to more towns in Northern Ireland e.g. Phoenix's application to extend the existing Licensed Area to include Comber;

- vi. Northern Ireland's first ever gas sector skills qualification as accredited by Energy and Utility Skills;
- vii. Phoenix's 'Dial Before You Dig' initiative to highlight the dangers of working in close proximity to gas pipes and to ensure that adequate precautions are taken when digging; and
- viii. Qualification to allow operatives to work to the standard dictated by the Northern Ireland Street Works Order.

Boiler Scrappage Scheme Pilot

Research published in 2011 by the DSD estimated that 100,000 households in Northern Ireland have a D-rated boiler or older and practically all of these were in owner occupier dwellings. This presented a significant market opportunity for Phoenix to promote the benefits of converting to natural gas and in particular the installation of a high-efficiency A-rated natural gas boiler.

The DSD was not persuaded to introduce a government backed boiler scrappage scheme in Northern Ireland and Phoenix launched an independent, privately funded Boiler Scrappage Scheme on a trial basis to provide the DSD with the research that it required and persuade it to undertake such a scheme.

The scheme closed shortly after launch due to the widespread take up of the £400 grant. Whilst the information was compelling and well received by the DSD and the Minister, Nelson McCausland, it took another trial campaign and a further 12 months to persuade the DSD to launch and implement a government backed Boiler Replacement Allowance campaign. The level of funding equated to £12m over a 3 year period and grants of up to £1,000 were made available.

The DSD stated that research into the Phoenix Boiler Scrappage Scheme as well as other boiler scrappage schemes operated throughout the rest of the United Kingdom and Ireland showed that the approach was a proven success and economically viable. After the first year of operation a further £6m was secured to help fund the scheme.

Based upon independent customer research, 73 per cent. of homeowners, on average, were influenced to seriously consider natural gas as a result of the Boiler Scrappage Scheme offered by Phoenix.

The Boiler Replacement Allowance was set up by the DSD and administered by the NIHE. Phoenix worked in conjunction with NINGA members to develop a simple process with the NIHE to allow customers to apply for the grant and complete the installation on a timely basis.

Corporate Responsibility

Phoenix has established itself as a socially responsible company through its award winning integrated CSR programme “LIFE” - Leadership in the marketplace, Investing in our people, Fostering our community and Environmental responsibility. This programme will be extended across the GTW distribution business.

LIFE was developed when Phoenix was first established to provide an overarching framework for the range of ongoing initiatives carried out by Phoenix that positively impact its marketplace, environment and community.

Leadership in the Marketplace

Phoenix has continued to improve, evaluate and show leadership in every area targeted under the LIFE objectives.

In 2013 Business in the Community announced that Phoenix had won their organisation’s Big Tick award more times than any other business throughout the United Kingdom.

Investing in our People

Phoenix continues to invest in its most important asset – its people. Feedback from staff indicates that they view their time spent volunteering as beneficial – even beyond the sense of fulfilment that they gain from the experience. 84 per cent. of staff have indicated, through research, that volunteering has enhanced a number of their job related skills. In 2013 over 180 staff participated in one or more voluntary activities amounting to more than 2,000 hours.

Increasingly, there is evidence that Phoenix’s reputation as a socially responsible organisation is helping to attract customers as well as job candidates who recognise the business as being one with a strong focus on its people and in supporting their development e.g. in 2013 a training and skill development program was provided to over 2,000 local independent gas installers/Engineers which aided opportunities for growth for individual businesses and business start-ups who went on to generate a total turnover for the year in excess of £30m. Phoenix acts as an incubator to these local small independent companies.

Fostering our Community

Phoenix has established a track record of supporting young people and providing them with help in meeting their potential goals. This has involved work with:

- i. Ulster Rugby Academy;
- ii. Gaelic Athletics Association (“GAA”)with the creation of the Phoenix Ulster GAA Elite Academy;

iii. Belfast Grand Opera House; and

iv. Cinemagic.

For example, the most recent Cinemagic initiative involves a group of film students from Queens University Belfast writing, producing, filming and editing a short film on the importance of CSR. As part of the project the students are getting to work with leaders in their field, both in the local film industry and business world.

Impressed with the ongoing partnership between Phoenix and Cinemagic, Arts & Business Northern Ireland also provided further funding for a bespoke film project to focus on what Phoenix does and promote Science, Technology, Engineering and Maths (“**STEM**”) projects i.e. those disciplines that Government has highlighted as key to the nation’s future economic success.

Environmental Responsibility

The strong Health, Safety and Environmental culture throughout Phoenix has been recognised by two British Safety Council Swords of Honour; the processes that underpin this recognition were tested again in 2013 by a detailed ARENA Network survey which saw Phoenix accredited by ARENA Network as being of ‘Quintile One’ standard – amongst the best in Northern Ireland.

Environmentally, over 3m tonnes of CO₂ has already been prevented from entering the local atmosphere by natural gas consumers in the existing Licensed Area, with continued savings of c.270,000 tonnes of CO₂ per annum (or the equivalent of removing almost 100,000 cars off Northern Ireland’s roads every year). Phoenix have also promoted the installation of the latest high efficiency technologies and through its teams of highly trained Energy Advisors have established natural gas as the energy source to replace more polluting fuels like oil and coal.

In 2013 Phoenix was delighted to have, for the ninth year running, received national recognition for its efforts in this area by collecting a Business in the Community ‘Big Tick’ award for CSR excellence.

The Energy for Children Charitable Trust

The Energy for Children Charitable Trust (“**the Trust**”) highlights where the PR activity undertaken by Phoenix has a positive impact on local communities.

Set up as a formally constituted charity to facilitate the charitable interests of the local natural gas industry, the Trust was formed by Phoenix in 2005. Since then it has continued to break new ground and reach deeper into the heart of local communities throughout Northern Ireland in order to really make a difference to disadvantaged children’s’ lives.

The Trust is governed by trustees made up of representatives from Phoenix and local people linked to the communities served by the natural gas industry. It focuses on supporting those needy causes that are slipping through the net of the more established Charity network, and is founded on the principle that ‘all monies raised go directly to local children and young people’. Behind the scenes Phoenix provides all administrative support and funding for the work of the frontline staff that facilitate the funding bids.

Although the Trust was founded initially by the natural gas industry, it is now supported by a variety of different sectors and organisations locally as it continues to grow.

Fundraising is primarily undertaken by Phoenix staff and members of the wider Northern Ireland gas industry e.g. merchants, installers, retailers, distributors, contractors, trade suppliers and training organisations. The Trust is relatively unique in that those who are responsible for raising the money are also those who identify the potential causes it will go towards; the wider natural gas industry who works in homes, businesses and communities every day, are well placed to identify individuals that are in real need.

The Trust transcends Northern Ireland’s traditional religious divide and often it is inner city/extreme rural areas that are most in need. The Trust works alongside public representatives in order to find those most in need and target funding where it is most effective.

To date the Trust has raised close to £500,000, helped over 6,000 local disadvantaged children and continues to help more and more local disadvantaged children every month.

Stakeholder Engagement

Phoenix has an annual program of ongoing engagement with a wide range of stakeholders to support the development of the business.

There are number of channels through which Phoenix communicates with stakeholders. As well as direct meetings, new channels of communication include a Phoenix Twitter account and a bespoke Phoenix You Tube channel. These social media channels are innovative examples of how Phoenix:

- provides advice;
- highlights the benefits of natural gas;
- provides information to consumers regarding grants; and
- highlights the work undertaken by Phoenix in achieving its CSR objectives.

The popularity of social media is evidenced by Phoenix in terms of increasing interactions, followers and views.

The specific reason Phoenix engages with stakeholders varies and, for the GTW Licensed Area, may change as the business develops from the network construction phase to the normal operations/installation phase.

Some examples of the activities Phoenix engages in to facilitate stakeholder engagement include:

- **Community News Magazine:** aimed at MLAs, MPs and Councillors. By promoting the targeted community work of Phoenix, Phoenix actually prevents requests for additional programmes which would require additional expense on activities not identified as beneficial to the consumer.
- **Northern Ireland Business Trust:** 42 meetings per annum. MLAs engage with the business sector to gain an understanding of the issues affecting their operation. In turn, the business community gain an insight into how local government is working and the issues it faces.
- **Membership of Bodies:** Phoenix is a member of a wide range of range of organisation and bodies and through this network seeks to engage with a range of stakeholders to promote the values and benefits of natural gas. These organisations include Confederation of British Industry (“CBI”), Institute of Directors (“IoD”), Northern Ireland Independent Retail Trade Association, Federation of Small Business, Chamber of Commerce, Large Users Group, Manufacturing Northern Ireland and the Northern Ireland Food and Drink Association. Further information is provided in section 7.2. As previously noted, Phoenix continues to engage with fuel poverty organisations such as National Energy Action the Home Energy Conservation Authority as well as Citizens Advice Bureau, the Age Sector Platform (see

section 7.2) and the Pensioners Parliament. Further detail is provided within Phoenix's Innovation and Technology Transfer submission ("Utilisation Support to Consumers" section).

An example of some of the stakeholders Phoenix currently engages with is provided below. Phoenix will continue to engage with these stakeholders in relation to development of the GTW distribution business. These stakeholders provide Phoenix with a better understanding of the impacts that may be felt by an individual or group and allow Phoenix to articulate its own values, strategy, explain its commitments and proactively improve relationships.

- i. DETI, DSD and Department of the Environment Ministers;
- ii. Committee for Enterprise, Trade and Investment;
- iii. MLAs with an interest in the GTW Licensed Area;
- iv. Invest Northern Ireland;
- v. Northern Ireland Farmers Union;
- vi. CBI;
- vii. Manufacturing Northern Ireland;
- viii. Large Users Group;
- ix. Northern Ireland Independent Retail Trade Association;
- x. Federation of Small Business;
- xi. Construction Employers Federation;
- xii. National Energy Action
- xiii. Northern Ireland Federation of Housing Associations;
- xiv. Landlords Association for Northern Ireland;
- xv. Age NI;
- xvi. NINGA;
- xvii. Gas Safe Register;
- xviii. HSENI;
- xix. Local and National Press; and
- xx. All District Councils within the GTW Licensed Area.

8. OPERATIONAL COST FORECASTS

8.1 COST FORECASTS

Background

Phoenix has a proven track record in the natural gas market in Northern Ireland, having developed from scratch a network and a market for natural gas over the last c.17 years.

Phoenix uses bottom-up analysis when preparing any cost forecast to ensure that efficiencies for consumers are captured within each individual cost line:

- Phoenix's operations are streamlined and when preparing any cost forecast, Phoenix considers where improvements can be made and also ensures that Phoenix has a sufficient allowance such that the business can maintain the safe operation of the network, its current level of operations, customer service and drive to increase connections under typical working conditions. Phoenix therefore accounts for potential efficiencies arising as the business grows and develops when preparing its cost forecasts; and
- it is important to recognise that Phoenix's cost forecasts are largely derived from actual costs incurred by the business. This means that Phoenix's cost forecasts capture any efficiency for customers already realised by the business.

Phoenix's price control cost forecasts have been subject to UR's detailed assessment and review on five separate occasions between 1996 and 2013. UR focuses its review on the evidence provided by Phoenix and verifies this from Phoenix's previous experience.

As such, the allowances set by UR at the time of each price control review embed challenging efficiency targets.

Explanation of cost build-up, assumptions used and their appropriateness

UR has recently completed its final GD14 determination.

To assess Phoenix's opex, UR undertook a detailed assessment and review of the larger cost items taking into account Phoenix's current level of expenditure, the impact as a result of changes in outputs and, where appropriate, benchmarking against comparable organisations.

Phoenix's cost build-up in the workbook submission is largely derived from UR's assessment of Phoenix's allowable opex for GD14. This is an appropriate basis for forecasting the opex requirements within the GTW distribution business, given:

- the GD14 determination is the result of UR's detailed assessment and review of evidence provided by Phoenix that has been verified by UR from Phoenix's previous experience;
- the GD14 determination captures any efficiency for customers already realised by Phoenix along with potential efficiencies forecast by Phoenix within each individual cost line; and
- the timely publication of the GD14 determination in relation to this licence application ensures that the allowable opex therein is up-to-date.

The assumptions used in Phoenix's cost forecasts in the workbook submission are therefore largely UR's assessment of Phoenix's allowable opex for GD14 for each individual cost line. Phoenix provides full detail of its identification and application of cost drivers and any assumptions made by it in its workbook submission (i) in section 8.3; and (ii) in the assumptions appended to the workbook submission.

8.2 ALIGNMENT WITH THE BUSINESS PLAN

Phoenix will draw on the strengths, knowledge and experience of existing FTEs including Senior Managers and the Directors who intend to develop the natural gas network in the GTW Licensed Area using the proven policies and procedures in place in the existing Licensed Area.

As noted in section 8.1, Phoenix's cost build-up is largely derived from UR's assessment of Phoenix's allowable opex for GD14 ensuring an appropriate basis for forecasting the opex requirements for the GTW distribution business.

Furthermore Phoenix provides full detail of its identification and application of cost drivers and any assumptions made by it in its workbook submission (i) in section 8.3; and (ii) in the assumptions appended to the workbook submission.

Phoenix's existing management structures, coupled with appropriate policies and procedures on how the business functions, are designed to enable the achievement of the GTW distribution business objectives detailed in chapter 1 while controlling the risks associated with the environment within which it operates (see further "*Identification and quantification of risks*" below).

8.3 ACTIVITY COSTS BUILD UP

The range of opex activities that will be incurred under the GTW distribution licence are:

- mobilisation costs;
- marketing, advertising and PR for non-owner occupier connections (including incentives);
- emergencies and network maintenance;

- manpower;
- office;
- insurance;
- professional and legal fees;
- IT;
- miscellaneous;
- rates; and
- licence fees.

Full detail of each activity along with the rationale follows. Note that mobilisation costs are fully detailed along with their rationale in sections 3.3 and 3.4 and are not repeated here. The activities and rationale detailed below therefore cover “business as usual” opex incurred post mobilisation i.e. opex incurred in years one to ten.

The operating expenditure cost line excludes:

- the costs associated with owner occupier related sales staff covered by the domestic connections incentive cost line; and
- the costs associated with engineering staff allocated from operating to capital expenditure.

Marketing, Advertising and PR for non-owner occupier connections (including incentives and entertainment)

Marketing, Advertising and PR

This cost line comprises costs for market development and corporate affairs attributable to the promotion of non-owner occupier connections i.e. NIHE, I&C and New Build connections. Further detail is provided within section 7.

Corporate affairs costs are incurred to support the existing customer base and development of the natural gas industry as a whole and are not linked to achieving new connections e.g. advertising or informative literature such as Dial before you Dig, market research, internet costs, engaging with key stakeholders, PR etc.

Some costs will also be required to support the development of the non-owner occupier market i.e. to procure new NIHE, I&C and new build connections.

As per section 8.1, UR's GD14 determination for Phoenix's market development and corporate affairs cost lines is an appropriate basis for forecasting the costs associated with market development and corporate affairs in the GTW distribution business.

Based on Phoenix's previous experience:

- the total number of *new* I&C connections to the network gives a reasonable approximation of the main driver of the market development cost line; and
- the total number of connections to the network gives a reasonable approximation of the main driver of the corporate affairs cost line.

Phoenix's cost forecast for market development and corporate affairs in the GTW distribution business is therefore based on this principle as detailed in the assumptions appended to the workbook submission.

Incentives

Based on Phoenix's current experience, the new build and NIHE sectors do not require a financial incentive to install natural gas:

- the benefits of natural gas over other fuels are currently sufficient to maintain the dominant position that natural gas has commanded in the new build sector; and
- Phoenix was able to persuade the NIHE to amend their Heating Policy in 2001 to ensure that natural gas heating systems would be installed where natural gas was available. In its most recent review, NIHE has confirmed that its heating policy remains that natural gas heating systems are to be installed where natural gas is available, with oil or biomass recommended elsewhere. The role of Phoenix's Public Sector Liaison team is detailed in section 3.7. Further detail is provided within Phoenix's Innovation and Technology Transfer submission ("Leverage of Funding" section).

Maximising I&C connections is more challenging. Based on Phoenix's previous experience, a discounted distribution charge has proven to be the most effective method of encouraging I&C consumers to convert from their existing fuel source to natural gas. Phoenix will therefore offer an incentive to the I&C market in the form of a short-term reduction in distribution charges.

Phoenix does not therefore forecast any direct financial incentives for NIHE, I&C and New Build connections.

Staff Entertainment

Phoenix has also included costs for staff entertainment consistent with HMRC guidance on non-taxable employee benefits, based on offering £150 per employee. This has proven to be a reasonable and prudent allowance for staff entertainment and associated CSR functions within Phoenix and is therefore appropriate for the GTW distribution business.

Emergencies and Network Maintenance

Emergencies

In addition to owning and operating the gas distribution network in the existing Licensed Area, Phoenix is required under the Licence to carry out certain associated activities, including establishing and maintaining a 24 hour/seven days a week emergency response, attending to gas leaks as soon as is reasonably practicable, and taking all necessary steps to prevent an escape of gas within 12 hours of receiving a report. The Licence also requires Phoenix to secure adequate publicity for this emergency service and its telephone number. In the 17 years since natural gas was introduced to Northern Ireland Phoenix has established the emergency number (see section 5.8) and developed a brand that is proven to be highly safety orientated, customer focused and recognisable in its own Licensed Area and indeed across Northern Ireland as other licensees have adopted the same emergency service provisions.

Phoenix will therefore follow this same practice and adopt the same emergency service provisions in the GTW Licensed Area as already provided for across Northern Ireland.

This cost line covers costs related to:

- operations of an Emergency Call Centre (“ECC”); and
- provision of first response.

Emergency Call Centre

The safe operation and maintenance of the system was the highest priority of Phoenix under the mandatory development plan detailed in the Licence. To achieve this Phoenix was required to educate the general public and gas consumers on the primary emergency number for Northern Ireland, the emergency number, through years of literature, door drops, media and vehicle livery.

The ECC at Hinckley provides Phoenix’s ECC service and manages incoming calls across the existing Licensed Area. Further detail is provided in section 5.8.

While Phoenix has successfully established the emergency number, there is no general 24 hour contact number for enquiries or other issues faced by consumers. The lack of alternative contact facilities undoubtedly results in the emergency number becoming a default contact number for consumers looking to resolve more general issues that should otherwise be addressed by third parties e.g. natural gas Suppliers. Where they can and within their levels of competency, the ECC will take the time to deal with distressed customers in a professional and helpful manner and, as appropriate, they refer the consumer back to the supplier. Other straightforward meter credit issues can, under Phoenix’s guidance, be resolved over the phone.

The ECC therefore receives calls that require investigation by a first call operative (see below) and calls which can be generally categorised as general enquiries for which no further action is required.

The safe operation and maintenance of the network will be Phoenix's highest priority in the GTW Licensed Area. Phoenix will duplicate the existing policies and procedures of Phoenix across the GTW distribution business and will extend the ECC's remit across the GTW Licensed Area so that the emergency service provisions in the GTW Licensed Area are the same as those already provided for across Northern Ireland.

This cost line covers the cost of providing the ECC.

As per section 8.1, UR's GD14 determination for Phoenix's ECC cost line is an appropriate basis for forecasting the costs associated with the emergency call centre in the GTW Licensed Area.

Based on Phoenix's previous experience the number of calls per 10,000 connections to the network gives a reasonable approximation of the main driver of the ECC cost line. Phoenix's cost forecast for GTW is therefore based on this principle.

As detailed in the assumptions appended to the workbook submission:

- Phoenix has modelled the *total* number of calls in the GTW Licensed Area on the average number of calls:
 - per 10,000 new connections; and
 - per 10,000 existing connections

determined by UR within the GD14 determination.

- Phoenix has assumed that 50 per cent. of the total calls received by the emergency call centre are general enquiry calls as noted by UR in the GD14 determination;
- Phoenix has based the cost per call on the unit rates determined by UR within the GD14 determination.
- Phoenix has taken the annual fixed cost of providing the emergency call centre determined by UR within the GD14 determination and apportioned this equally between the three Licensed Areas i.e. Phoenix's Licensed Area, the firmus Licensed Area and the GTW Licensed Area.

First Calls

This cost line covers the provision of a first call response service.

As detailed in sections 2 and 5.8, PES currently provides the initial 24 hour/seven days a week emergency response to Phoenix's network, under agreement with Phoenix. All calls received by the emergency number that cannot be resolved over the phone or eliminated as enquiries are tasked to PES engineers.

Phoenix will duplicate its existing policies and procedures across the GTW Licensed Area and will extend PES's remit across the GTW Licensed Area so that the first call response service in the GTW Licensed Area is the same as that already provided in the existing Licensed Area.

Phoenix details in section 5.8 the arrangements to provide the initial 24 hour/seven days a week emergency response across the GTW Licensed Area. In summary given the GTW Licensed Area is geographically dispersed, it must be divided into two sectors:

- Sector A covers Derrylin, Enniskillen, Omagh and Stabane; and
- Sector B covers Dungannon, Coalisland, Cookstown and Magherafelt

as illustrated in figure 5.8c. Three PES FTEs will provide the initial emergency response across these two sectors.

To maximise productivity, these three PES FTEs will also undertake other activities such as network maintenance (e.g. meter exchanges) and special meter reading when they are not providing the emergency response.

As detailed in the assumptions appended to the workbook submission:

- Phoenix has modelled the first calls cost line on the workload of the these three PES FTEs dedicated to providing the emergency response; and
- The annual fixed cost relates to the remaining workload of these three PES FTEs i.e. the potential productivity of these three PES FTEs which is not allocated to the capital expenditure cost line or to other operational activities, or dedicated to providing the emergency response.

Network Maintenance

This cost line covers costs related to:

- management and provision of network maintenance services;
- management and provision of repair activities; and
- material and equipment required for maintenance and repair.

As per section 8.1, UR's GD14 determination for Phoenix's network maintenance cost line is an appropriate basis for forecasting the costs associated with network maintenance in the GTW Licensed Area. However we have excluded the costs of meter battery replacements given that these are classified as capital expenditure within the workbook submission.

Based on Phoenix's previous experience the *total* number of connections to the network gives a reasonable approximation of the main driver of both the maintenance and repairs sub-categories.

Phoenix's cost forecast is therefore based on this principle as detailed in the assumptions appended to the workbook submission.

Maintenance

Maintenance activities are those direct activities which are necessary to keep the network in safe working order with the exception of those activities carried out by first call response (see above) and repair (see below) teams. In this context, the activities are broad and include disparate activities from repairing telemetry electronics to the maintenance of district pressure reduction equipment/regulators/meters etc. to the cost of valve chamber inspections.

Phoenix's maintenance intervals are based on manufacturers' instructions. This strategy is incorporated into our Safety Case, as accepted by HSENI. Phoenix embraces the principles of asset management. Phoenix is working in line with the main tenets of PAS 55. ISO 55000 was released in January 2014 and Phoenix will aim to achieve ISO Certification by late 2015 (see section 5.7).

RCM, where appropriate, will form the basis for the maintenance strategy. These philosophies will be duplicated across the GTW distribution business with any benefit derived there from transferable to the GTW distribution business from the outset.

Repairs

This cost line covers repair costs resulting from either gas escapes from main or service pipes due to joint problems (condition problems) or third party interference damage.

Manpower

The manpower cost line comprises three cost elements:

1. Gross Salaries (a detailed breakdown of the costs covered under gross salaries is provided in section 2.2);
2. National Insurance Contributions; and
3. Fleet costs.

These three elements and their cost build-up are detailed in the assumptions appended to the workbook submission.

Table 1 details the manpower resource levels to manage operations across the GTW Licensed Area and further breaks down the FTEs by organisational structure:

- The Directors;
- Commercial Operations (largely engineering FTEs);

- Business Development (largely sales staff i.e. FTEs involved with the customer connection process for domestic (owner occupier, NIHE and new build) and non domestic connections); and
- Finance (FTEs providing corporate services).

In summary, the net resource allocated to the manpower cost line is **6.65 FTEs** in years one to five, growing to **7.30 FTEs** in year 10, given that:

1. “OO activity” i.e. owner occupier related sales staff will be covered by the domestic connections incentive cost line; and
2. “CAPEX” i.e. engineering staff allocated from operating to capital expenditure will be covered by the capital expenditure cost lines.

Section 2.2 specifies the manpower cost build-up to support the cost forecasts entered in the workbook submission. In summary:

Gross Salaries

As detailed in the assumptions appended to the workbook submission, Phoenix has determined gross salaries for:

- remote FTEs using the average unit costs derived by UR in the GD14 determination for each band; and
- consolidated FTEs using the total manpower costs determined by UR in the GD14 determination to derive an average unit cost per FTE.

National Insurance Contributions

Phoenix has built-up from first principles the calculation of NIC and reflects the current charging level. Car NIC costs are 13.8 per cent. of benefit in kind costs, assumed to be £3,664 per mobile employee.

Fleet Costs

An average fleet rate per vehicle has been determined based on the GD14 determination. There are several elements considered in the build up of fleet costs (lease charge, fuel costs, mileage). Whilst the unit rate of lease charges and fuel costs will remain consistent with that assumed in the GD14 determination, it has been anticipated that unit mileage rates will increase due to the geography of the GTW Licensed Area.

Office

This cost line covers costs related to:

- the provision of business premises;
- communications infrastructure and usage (with the exception of IT); and
- stationery.

Buildings

Phoenix HQ is based at Airport Road West, and its stores at Heron Road.

Phoenix currently provides centralised corporate services to the whole Phoenix Group. As detailed in section 2.2, similar efficiencies can be achieved for the GTW distribution business by consolidating some of the functions within Phoenix for the existing and the GTW Licensed Areas and will ensure that the GTW distribution business benefits from the knowledge and experience of existing FTEs including Senior Managers and the Directors.

Section 2.4 states that it would not be practicable or cost effective to consolidate operational activities for Phoenix and the GTW distribution business in Belfast. Instead efficiencies can be achieved by having an operations depot in Omagh. The contractor, once appointed, will be charged with procuring an operations depot in Omagh; the main usage will be a store and yard for construction operations with the secondary function being the provision of office facilities for Phoenix's remote FTEs (i.e. the remote resources deployed to the GTW Licensed Area as detailed in section 2.2) and for Phoenix's construction contractor operating within the GTW Licensed Area therefore providing a more centrally located base than at Phoenix HQ.

Efficiencies can also be achieved by consolidating the disaster recovery sites for Phoenix and the GTW distribution business at Phoenix's current disaster recovery site at [REDACTED] (see section 4.5).

This cost line covers the costs for the provision and maintenance of office facilities for Phoenix's remote FTEs in Omagh and costs for the provision and maintenance of Phoenix HQ in respect of any additional FTEs required to support Phoenix's centralised corporate services functions to ensure that they are capable of servicing both the existing and the GTW Licensed Areas (see sections 2.2 and 3.7).

The costs for the provision and maintenance of Phoenix HQ and the stores at Heron Road include:

- costs for rental of Phoenix HQ;
- costs for rental of Phoenix's stores at Heron Road;
- building repairs and maintenance;

- minor machinery and equipment;
- office facilities at Phoenix HQ (including security, cleaning, waste disposal, canteen);
- photocopiers;
- service charge;
- external facility costs (including general security costs, offsite storage (archival) costs and the costs of Phoenix's disaster recovery site at [REDACTED] detailed within "Business Continuity Arrangements" in section 4.1); and
- utility costs i.e. heating and light.

As per section 8.1, UR's GD14 determination for Phoenix's office costs cost line is an appropriate basis for forecasting costs associated with apportioning the costs of Phoenix HQ and the stores at Heron Road to the GTW distribution business.

Based on Phoenix's previous experience the total number of FTEs gives a reasonable approximation of the main driver for the provision and maintenance of Phoenix HQ and the stores at Heron Road.

Similarly UR's GD14 determination for Phoenix's office costs cost line is an appropriate basis for forecasting costs associated with the operations depot in Omagh, given that costs for the provision and maintenance of the site in Omagh will include each of the cost lines identified above providing that an appropriate unit cost deflator is assumed to account for the reduced rental costs etc. outside Belfast.

Phoenix's cost forecast in relation to the GTW distribution business is therefore based on these principles as detailed in the assumptions appended to the workbook submission.

Telephone, Postage and Stationery

This cost line covers costs related to provision and usage of communications infrastructure (excluding IT) and stationery. The costs classified by Phoenix within the telephone, postage and stationery cost line are:

- costs for provision, maintenance and usage of telephony, including relevant hardware (handsets, car kits etc.), line rental costs and usage costs for both, landline and mobile devices;
- costs for the provision, maintenance and usage of franking and mail stuffing/sorting equipment as well as postage fees; and
- costs for stationery.

As per section 8.1, UR's GD14 determination for Phoenix's telephone and postage cost line and for Phoenix's stationery cost line are an appropriate basis for forecasting the costs associated with telephone, postage and stationery in the GTW distribution business.

Based on Phoenix's previous experience:

- the total number of *new* connections to the network gives a reasonable approximation of the main driver of the telephone and postage cost line (excluding mobile phones);
- the total number of mobile phones gives a reasonable approximation of the main driver of the mobile phone cost line; and
- the total number of FTEs gives a reasonable approximation of the main driver of the stationery cost line.

Phoenix's cost forecast for telephone, postage and stationery in the GTW distribution business is therefore based on this principle as detailed in the assumptions appended to the workbook submission.

In addition a £2,000 fixed cost has been included in year one to cover the increased levels of communication required for establishing business operations in the GTW Licensed Area.

Insurance

This cost line covers costs related to the management of risks and claims.

Business Insurance

This cost line covers the costs of managing the risks that may occur during the normal course of business.

The costs classified by Phoenix within the business insurance cost line are:

- Directors and Officers
- Commercial All Risks Section E - Computer (Material Damage)
- Contractors all Risk
- Computer Breakdown and Loss
- Fidelity Guarantee
- Employers Liability, Public Liability and Products Liability
- Excess Employers Liability

- Excess Public Products Liability
- Group Personal Accident and Travel
- Commercial combined (Marine Pipeline) includes Business Interruption Insurance
- [REDACTED]

As per section 8.1, UR's GD14 determination for Phoenix's business insurance cost line is an appropriate basis for forecasting the costs associated with insuring the GTW distribution business.

Based on Phoenix's previous experience allowed revenue gives a reasonable approximation of the main driver of the significant business insurance cost lines. Phoenix's cost forecast is therefore based on this principle as detailed in the assumptions appended to the workbook submission.

Car Insurance

UR based the GD14 determination for car insurance on the AA's average premium for annual comprehensive car insurance in 2013 of £750 (£2012). As per section 8.1, this is an appropriate basis for forecasting the costs associated with insuring the vehicle fleet and for the level of cover required in the GTW distribution business.

Phoenix's cost forecast is therefore based on UR's GD14 determination of £750 (£2012) per car for those FTEs who require a company car as detailed in the assumptions appended to the workbook submission.

Building and Contents Insurance

This cost line covers the costs of managing the risks associated with business premises and any other associated sites i.e. building and contents insurance.

As per section 8.1, UR's GD14 determination for Phoenix's building and contents insurance cost line is an appropriate basis for forecasting building and contents insurance for the GTW distribution business.

Based on Phoenix's previous experience the total number of FTEs gives a reasonable approximation of the main driver of the building and contents insurance cost line. Phoenix's cost forecast is therefore based on this principle as detailed in the assumptions appended to the workbook submission.

Professional and Legal Fees

This cost line covers the costs relating to professional and legal services required for business operations e.g.

- consultancy costs (payroll, engineering, HSE, security, regulation and general);

- legal fees (corporate, commercial, HR, regulatory and competition); and
- audit and accountancy fees.

As per section 8.1, UR's GD14 determination for Phoenix's professional and legal fees cost line is an appropriate basis for forecasting the costs associated with professional and legal fees in the GTW distribution business.

Based on Phoenix's previous experience the *total* number of connections to the network gives a reasonable approximation of the main driver of the professional and legal fees cost line. As there are no financial ring-fencing or corporate governance conditions applicable to the GTW distribution business, Phoenix has normalised UR's GD14 professional and legal fees determined cost line accordingly. Phoenix's cost forecast is therefore based on these principles as detailed in the assumptions appended to the workbook submission.

In addition Phoenix has included a £15,000 fixed cost from year two onwards given that some costs e.g. Audit and Accountancy Fees are largely fixed and will not vary significantly over time.

IT

This cost line covers costs related to the provision of IT i.e.

- hardware;
- software, including software licences;
- networks and associated costs;
- maintenance fees;
- system upgrades and enhancements;
- help desk and support services; and
- management of data centres.

As per section 8.1, UR's GD14 determination for Phoenix's IT cost line is an appropriate basis for forecasting the costs associated with IT in the GTW distribution business.

Based on Phoenix's previous experience the total number of FTEs gives a reasonable approximation of the main driver of the IT cost line. Phoenix's cost forecast is therefore based on this principle as detailed in the assumptions appended to the workbook submission.

Miscellaneous

The following opex is not covered by any of the previous cost components, and as such, have been captured as miscellaneous:

- *Recruitment and Training*

As per section 8.1, UR's GD14 determination for Phoenix's HR cost line is an appropriate basis for forecasting the costs associated with recruitment and training in the GTW distribution business.

Based on Phoenix's previous experience the total number of FTEs gives a reasonable approximation of the main driver of the recruitment and training cost line. Phoenix's cost forecast is therefore based on this principle as detailed in the assumptions appended to the workbook submission.

- *Travel and Subsistence*

This cost line is largely driven by activity associated to the regulatory (e.g. ring-fencing requirements) and the rating processes, attendance at industry and supply chain meetings and forums as the complexity of the industry develops. In addition travel associated with specialist training events in GB will also impact on these costs. Note that fleet costs are categorised under the manpower cost line.

As per section 8.1, UR's GD14 determination for Phoenix's travel and subsistence cost line is an appropriate basis for forecasting the costs associated with travel and subsistence in the GTW distribution business.

Based on Phoenix's previous experience the total number of FTEs gives a reasonable approximation of the main driver of the travel and subsistence cost line. Phoenix's cost forecast is therefore based on this principle as detailed in the assumptions appended to the workbook submission.

- *Billing*

This cost line is largely driven by the need for Phoenix to undertake special meter reading visits i.e. meter queries or disputes, potential fraud situations, regular transportation service reads to facilitate balancing/allocation algorithms, implication of notional reads and re-visits following meter removals or return of a meter point where the property is vacant. These activities have increased in the existing Licensed Area following the introduction of a fully competitive environment and operation of the network code associated thereto.

As per section 8.1, UR's GD14 determination for Phoenix's billing cost line is an appropriate basis for forecasting the costs associated with billing in the GTW distribution business.

Based on Phoenix's previous experience the *total* number of connections to the network gives a reasonable approximation of the main driver of the billing cost line. Phoenix's cost forecast is

therefore based on this principle as detailed in the assumptions appended to the workbook submission. An additional cost forecast of £5,000 per annum has been included to cover bank fees including credit vetting.

Rates

This covers:

- network rates; and
- office rates.

Costs are as determined by UR for the GTW Licensed Area.

Licence Fees

Licence fees cover the licence fees for the natural gas conveyance licences for the GTW Licensed Area.

Costs are as determined by UR for the GTW Licensed Area.

Proposals for which activities will be tendered

Full details of the proposed tendering activities are provided at section 6.

In summary, taking gas to the GTW Licensed Area shall entail the award of a number of new contracts albeit some supplies and services required may be bolted on to current agreements already entered into by Phoenix, to which such a variation would not constitute a material change. New contract awards would include the construction of the distribution network (including engineering and non-engineering material supply) whilst gas metering equipment and the ECC contract, for example, could - during the mobilisation phase - be delivered through existing Phoenix contracts which have previously been tendered through EU procedures and to which the entire Northern Ireland region was cited as the area for delivery. It would only be when the value or nature of services required constitutes a material change to the original award that such services would require to be tendered in order to achieve delivery through a separate contract.

Where appropriate, Phoenix would propose to procure materials as part of the overall network construction contract as detailed in section 3.6.

Identification and quantification of risks

The two main risks faced by the GTW distribution business in relation to opex are:

- cost forecasts; and
- activity forecasts.

Cost forecasts

Phoenix uses bottom-up analysis when preparing any cost forecast to ensure that efficiencies for consumers are captured within each individual cost line. This methodology mitigates the risk of forecasting error.

Furthermore Phoenix's cost forecasts are largely derived from actual costs incurred by the business over the last c.17 years. This means that Phoenix's cost forecasts are supported by factual evidence and experience gained in the Northern Ireland market. This also mitigates the risk of forecasting error.

Phoenix's price control cost forecasts have been subject to UR's detailed assessment and review on five separate occasions between 1996 and 2013. UR focuses its review on the evidence provided by Phoenix and verifies this from Phoenix's previous experience. As such, the allowances set by UR and upon which this application is based are robust having been scrutinised and widely consulted upon. This further mitigates the risk of forecasting error.

Activity forecasts

Connection targets within the early years are challenging, however Phoenix has provided detailed plans and processes to achieve UR's targets for growth in demand/connections and detailed plans to maximise the number of premises connected to the gas network in sections 7.1 and 7.2. Phoenix has based these plans on c.17 years of experience of growing a natural gas market which has ensured that c.57 per cent. of the c.301,000 properties with natural gas available have connected to that network. This mitigates the risk of underperforming against UR's connection targets.

Furthermore UR has indicated that the marketing incentive will be included within an uncertainty mechanism and linked to the number of domestic connections. This will mitigate the risk of underperforming against UR's domestic connection targets in relation to advertising, marketing and PR costs.

Other risks

Phoenix notes that licence fees are to be treated as pass-through.

Phoenix notes UR's intention to allow a re-opener if opex differs by more than 15 per cent. in any one year from forecast. Phoenix is therefore subject to the risk of opex differing by less than 15 per cent. in any one year.

Phoenix notes UR's intention to allow licence holders to retain opex outperformance for five years and thereafter return this to customers. Phoenix would therefore only be liable to fund five years of any opex overspend and thereafter Phoenix would anticipate that the opex allowances would be increased accordingly.

8.4 COST MANAGEMENT

Explanation of review processes for costs incurred

Group level

The Phoenix Group exercises strong financial and management accounting controls through the consolidation of all financial and treasury requirements within the finance function within Phoenix.

Long-term business plans and shorter term budgets and forecasts are tracked monthly against actual performance at both a company and consolidated group level in line with obligations under financing agreements, thereby enabling financial requirements to be monitored against the cash resources available to both the Group as a whole and its constituent parts.

A mixture of long-term debt, raised through the issue of fixed rate bonds, and short-term debt available within our banking facility, are used to ensure that there are sufficient resources available for operational requirements. The Group does not use derivative financial instruments for speculative purposes.

The Group has delegated the responsibility of monitoring financial risk management to the Finance Committee, a sub-committee of the Board. The policies set by this committee are directly implemented by the finance function.

Phoenix's finance function

Phoenix's Business Planning and Regulation Departments support management of business plans and forecasts, collation of data and statistics, liaison with key agencies and other third parties.

Phoenix's Contracts and Procurement Department is responsible for the management of all contracts and services, provision of facilities and fleet requirements and the effective operation of the office.

Phoenix's Finance Department is responsible for accounting and treasury functions. This incorporates financial reporting to meet all statutory, regulatory and financing requirements,

internal management accounting and reporting, audit and review of costs under the McNicholas contract arrangement, bank and other treasury management functions, tax management and compliance, stock and asset management, purchase and sales ledger control.

As noted in section 4.1, Phoenix utilise a financial authority matrix to assign procurement spending limits to budget holders. The authority matrix is reviewed and approved by the Finance Director on annual basis.

Purchase orders are independently reviewed by personnel with appropriate authority prior to the placing of all procurement orders.

Phoenix currently provides centralised corporate services to the whole Phoenix Group. As detailed in section 2.2, similar efficiencies can be achieved by consolidating some of the functions within Phoenix for the existing and the GTW Licensed Areas. Phoenix departments will therefore be expanded to support cost monitoring and control, including operational activity based cost information, across the GTW Licensed Area. This will ensure that the GTW distribution business benefits from the knowledge and experience of existing FTEs (including Senior Managers and the Directors) and the strong financial and management accounting controls already in place.

Explanation of information systems for managing costs

As noted in section 4.5, it is envisaged that Phoenix's existing robust information systems would simply be extended through the addition of additional data sets to enable processing for the GTW distribution business.

As noted in section 3.7, the main system within Phoenix is Concerto, which records and manages assets and any movements thereto at a customer's premise. Phoenix currently uses the ArcGIS suite of GIS software supplied by Esri which provides a graphical record of the network and in conjunction with SynerGee enables effective management of the distribution network. These systems coupled with those used in Finance (Total), Contracts and Procurement (6 over 6), HR/Payroll (ICS Unicomp) together with mail, internet, office desktop solutions for current users within Phoenix will be used to support management of costs.

The existing hardware is stable and the processes robust so extrapolation across the GTW distribution business will be straightforward. This approach will ensure that Phoenix has the same ability to disseminate operational activity based cost activity, and therefore manage costs, in the GTW distribution business as has been proven, not least at the time of each price control review, for Phoenix.

8.5 EFFICIENCY IMPROVEMENT PLANS

Phoenix has a proven track record in the natural gas market in Northern Ireland, having developed a natural gas industry in the existing Licensed Area over the last c.17 years.

As noted in section 8.1:

- Phoenix's cost forecasts are largely derived from actual costs incurred by the business; and
- Phoenix account for potential efficiencies arising as the business grows and develops when preparing its cost forecasts.

Phoenix's price control cost forecasts have been subject to UR's detailed assessment and review on five separate occasions between 1996 and 2013. UR focuses its review on the evidence provided by Phoenix and verifies this from Phoenix's previous experience.

As such, the allowances set by UR at the time of each price control review already embed challenging efficiency targets. On the whole Phoenix has delivered against those efficiency targets and would consider itself to be a highly efficient and effective network operator.

As noted in section 8.1, Phoenix's cost build-up in the workbook submission is largely derived from UR's assessment of Phoenix's allowable opex for GD14. This is an appropriate basis for forecasting the opex requirements within the GTW distribution business given the GD14 determination captures any efficiency for customers already realised by Phoenix along with potential efficiencies forecast by Phoenix within each individual cost line. Therefore the GTW distribution business would immediately benefit from the innovation, improvements and efficiency gains already embedded within Phoenix's operation. Phoenix's cost build-up is therefore delivering efficiencies more aligned to a mature business.

Throughout the LP Business Plan and also within Phoenix's Innovation and Technology Transfer submission Phoenix has detailed how, through initiatives such as Alliance contracting, open-book project management, Design Review Groups, internal skill development, bespoke fit-for-purpose IT development, multi-skilled/tasked staff etc., the company has been able to continuously improve its unit costs and its customer service offering and therefore deliver efficiency improvements, cost reduction and additional value for all key stakeholders. It is envisaged that these efficiency improvement plans currently in operation in Phoenix would be replicated for the GTW distribution business. Further examples of important initiatives adopted by Phoenix to drive efficiency improvements and cost reductions within its business and their rationale are:

1. Business Improvement Plans ("**BIPs**") play a key part in delivering results e.g. one of Phoenix's more recent BIPs is to deliver the challenging targets set by UR in the GD14 determination and reduce the overall cost of providing the emergency service. A group has been established (sponsored by the Commercial Operations Director and chaired by the Senior Operations Manager) with members from Phoenix's Operations, Customer Service, Transportation Services, Risk Assurance and Sales teams. This group has reviewed all the

processes, procedures, system and paperwork of the entire emergency service and has (i) identified why a call is generated to the ECC; and (ii) outlined actions aimed at reducing the level of non-emergency calls to the ECC and the level of non-emergency calls attended by PES Service Engineers etc. This group has produced a detailed action plan, with responsible managers identified and timescales assigned for implementation. The group meets on a regular basis to review progress and to provide an update report to the sponsoring director. The use of BIPs has been and will continue to be a critical element in Phoenix's ongoing delivery of efficiency improvements both within Phoenix and the GTW distribution business.

2. As noted in section 7.1, Group Development Forums (“**GDFs**”) are another important approach to delivering continuous improvement. The culture within Phoenix largely sees each Senior Manager as responsible for their ‘own business’ i.e. their own department. At the start of each financial year, each Senior Manager must produce and present to the Directors a business plan for their department. This business plan must:
 - a. be aligned with the overall targets and objectives of Phoenix;
 - b. detail the department's contribution to the overall company targets i.e. where efficiency improvements and cost reductions have been identified; and
 - c. how these will be delivered.

The Directors (including the appropriate Senior Managers' own Director) can challenge the business plans and/or suggest new initiatives for further enhancing performance. These business plans are continuously evolving and are reviewed:

- a. monthly by the Chief Executive Officer and the Finance Director at budget panel reviews to establish if targets are being met; and
- b. mid-year when Senior Managers must present to the Directors an update i.e. performance against target and further initiatives under consideration and/or implemented.

GDFs give all Senior Managers ownership of their own activity and ensure focus is targeted at the key areas of the business by both Directors and Senior Managers. GDFs are vital to delivering further value enhancements within Phoenix and would therefore be replicated for the GTW distribution business.

3. UR has recognised that benchmarking Phoenix's performance against comparable network operators' businesses is challenging due to the different (i) scales of operation; (ii) stages in life cycle; and (iii) ways in which costs have been allocated or apportioned across the range of activities. However, Phoenix continues to work closely with UR and during the GD14 price control review, has made considerable progress on benchmarking performance.

Aside from this formal process for benchmarking (which, notably has determined that Phoenix is an efficient network operator), Phoenix also undertakes more informal benchmarking at an 'input' level (as opposed to the 'output' approach adopted by UR at the time of each price control review) e.g. Phoenix compares (i) the unit cost of purchasing materials; (ii) the productivity of its construction teams; and (iii) the level and cost of its manpower, with other network and connection companies in Great Britain. These informal comparisons also confirm that Phoenix is operating a highly efficient business.

The use of informal benchmarking, where possible, has been and will continue to be a critical element in Phoenix's ongoing delivery of efficiency improvements both within the Phoenix and the GTW distribution business. Phoenix is also committed to continuing to develop with the UR the formal benchmarking templates.

9. CAPITAL EXPENDITURE COSTS

9.1 ALIGNMENT WITH THE BUSINESS PLAN

Phoenix has a proven track record in the natural gas market in Northern Ireland, having developed from scratch a network and a market for natural gas over the last c.17 years.

Phoenix will draw on the strengths, knowledge and experience of existing FTEs including Senior Managers and the Directors who intend to develop the natural gas network in the GTW Licensed Area using the proven policies and procedures in place in the existing Licensed Area. Further detail and examples of Phoenix's innovation and technology advancements are provided within Phoenix's Innovation and Technology Transfer submission.

Phoenix provides full detail of the range of capex activities that will be incurred in section 9.2.

As detailed in section 2.1 under "*Proposals to manage contract operations,*" Phoenix intends to manage the construction contract across the GTW distribution business in accordance with the established processes already in use in Phoenix. Phoenix manages the existing construction contract and day-to-day activities with our contractor, McNicholas, through Alliance contracting principles.

This methodology also allows both Phoenix and McNicholas to work to the same figures and targets without each party having separate objectives and ensures that greatest value is delivered to Phoenix with the lowest cost and highest customer service and quality delivered to the end user.

Phoenix's management structures, coupled with appropriate policies and procedures on how the GTW distribution business functions, are designed to enable the achievement of the business objectives detailed in chapter 1 while controlling the risks associated with the environment within which it operates (see section 9.3).

9.2 ACTIVITY BUILD UP

The range of capex activities that will be incurred under the GTW distribution licence are:

- mains;
- supply point connection;
- engineering and project management; and
- lifecycle costs

Full detail of each activity along with the rationale is as follows:

Mains

This activity covers the construction of:

- 7bar and 4bar bulk network i.e. the network which will largely distribute gas to the principle towns within the GTW Licensed Area;
- feeder mains i.e. the network which will largely distribute large capacities of gas throughout the principle towns within the GTW Licensed Area; and
- infill mains i.e. the network which will largely distribute gas along each individual street in the GTW Licensed Area and will be the predominant part of the network to which customer connections are made.

Phoenix operates its medium pressure network in the existing Licensed Area at 4bar rather than the traditional 2bar as operated by gas companies in Great Britain. This means that smaller diameter pipes can be used to transport high volumes of natural gas, thereby minimising costs to consumers and maximising the speed to market for natural gas. Phoenix intends to follow this same practice across the GTW Licensed Area. Further detail is provided within Phoenix's Innovation and Technology Transfer submission ("Technical and Construction" section).

Supply Point Connection

This activity covers the connection of the service and the meter.

Phoenix has integrated the traditional two-team approach of laying the service pipe and installing the meter into a single team approach.

This led Phoenix to a further innovation in developing the pre-assembly of the meter inside the meter box at the factory in order to drive further efficiencies.

Pre-assembled meter installation

The traditional method, and the one still used in Great Britain and in the Republic of Ireland, for installing a new service connection into a property is for a service-laying team to construct the gas pipe from the road to the customer's property and for a separate Service Engineer to install the gas meter. This results in two visits by two separate "teams" to each customer's premises. Phoenix, in partnership with McNicholas and the integrated supply chain, challenged this traditional approach and considered undertaking the complete installation using just one team and a single visit.

To deliver such a solution involved upskilling the McNicholas teams to enable them to commission gas meters. No such training existed in the UK so Phoenix and its alliance partners sourced a training organisation and devised a limited scope meter training module, which enabled the service-laying teams to obtain the necessary training and accreditation to commission gas meters.

This step allowed the meter installation to be completed by one team and thereby deliver cost savings. Phoenix then sought further improvements to the traditional process. Under a traditional approach, a meter box was delivered to Phoenix and McNicholas by one manufacturer, the meters delivered by a separate manufacturer, and construction teams first installed the meter box and then fitted the meter in the customers' premises. In collaboration with its supply chain, Phoenix explored the opportunity of having a pre-assembled meter installation delivered to the stores. A pre-assembled installation meant that the meter was already fitted in the meter box. The delivery of the pre-assembled meter installation provided not only capex savings during the installation process but also ongoing opex savings. Such opex savings arose because the opportunity for defective workmanship was reduced due to the fact that critical fittings were connected in a factory environment (instead of being done in a dirty, wet environment by a construction team) by the manufacturer. This in turn reduced the potential number of Public Reported Gas Escapes: as the opportunity for gas leakage was reduced, the number of jobs that Phoenix's Engineers would have to attend on an emergency call out decreased. The installation time was also reduced.

Recently Phoenix has challenged the traditional meter installation one stage further. It is standard practice that a copper inlet is installed as the transition 'fitting' from the PE pipe external to the meter box to the meter inlet connection. Phoenix has redesigned this so that the PE is now taken into the meter box up to the meter inlet connection. This again reduces the overall cost of the service connection as the unit cost of PE pipe is significantly cheaper than copper.

Based on the number of meter installations Phoenix has undertaken to date, Phoenix estimate that the saving to consumers is c. £5m.

Phoenix has also worked with meter manufacturers to develop a simpler, less expensive PAYG metering solution that did not have any debt facility, since this was not required for Northern Ireland customers who, as customers for the very first time, had not accumulated any debt.

Pay As You Go (PAYG) metering

The main sources of fuel for customers' homes before the introduction of natural gas in Northern Ireland were coal and oil. As customers were used to paying for their fuel supply on a regular basis, they wanted the option of paying for natural gas in the same way. There was little stigma attached to this payment method in Northern Ireland (in contrast to the position in Great Britain). Phoenix therefore worked hard to introduce PAYG metering as a positive solution for customers. PAYG metering proved a very popular solution for natural gas customers. Today, on average, two out of every three new meters installed in Phoenix's existing Licensed Area are PAYG.

In the early years, the only PAYG metering solution available to consumers was achieved through the use of Great Britain-style quantum meters. These meters provided a PAYG facility but also a debt repayment facility. Phoenix believed that this technology was overly complicated for customers who were happy to use PAYG metering. Phoenix had always had responsibility for procuring domestic size gas meters and therefore started to explore with meter manufacturers the opportunity of developing a simpler, less expensive, PAYG metering solution that did not have any debt facility. In partnership with Landis and Gyr, Phoenix developed such a meter, which had the advantage of being simpler to use, less expensive to build, and less problematic with regards operation than the traditional quantum meter. Following a successful operational trial, Phoenix adopted this new meter as the PAYG metering solution for customers.

The new PAYG meters resulted in reduced capex but also delivered operational cost savings. The reduced complexity relative to the traditional quantum meter means there are three times fewer call-outs per year due to meter issues. The benefit in the reduction in call-outs for meter problems continues to be passed onto customers as reduced opex forecasts.

Phoenix estimates that to date the construction cost savings of installing PAYG meters compared to the traditional quantum meter is c. £3m.

Further detail is provided within Phoenix's Innovation and Technology Transfer submission ("Technical and Construction" section). Phoenix intends to duplicate these innovative and technological improvements across the GTW Licensed Area to ensure that the efficiency improvements and cost savings passed onto customers in the existing Licensed Area are immediately passed onto customers in the GTW Licensed Area.

Engineering & Project Management

Phoenix outsources much of its construction activity to a third party contractor, currently McNicholas (see section 2.1 and Phoenix's Innovation and Technology Transfer submission ("Technical and Construction" section)). Costs forecast under the generic heading of "Management Fee" cover all costs incurred by McNicholas associated with managing Phoenix construction activity i.e. manpower and associated costs, supply chain costs, depot costs, security, training, safety equipment, general office and support costs etc.

In addition, the management fee also covers operating costs relating to staff directly employed by Phoenix, plus their associated overheads, that are recharged from opex to capex.

Phoenix intends to manage its construction activity across the GTW Licensed Area in accordance with the established management practice in the existing Licensed Area. The "Engineering & Project Management" activity will therefore cover activities associated with managing Phoenix construction activity across the GTW Licensed Area i.e. manpower and associated costs, supply chain costs, depot costs, security, training, safety equipment, general office and support costs etc.

Lifecycle Costs

Lifecycle costs cover meter and meter battery replacement and the inspections and replacement of domestic regulators and a variety of pressure reduction equipment. Operation and maintenance of the network in the existing Licensed Area is managed in line with the principles of PAS 55 (the British Standards Institution's "Publicly Available Specification" for the optimised management of physical assets and infrastructure, see section 5.7) and monitored and controlled via a 24 hour manned system control operation.

Phoenix is in the process of implementing RCM, where the appropriate performance and fault data is available. Where the required data is unavailable, Phoenix will operate to manufacturers' instructions. Phoenix also operates, maintains and inspects its asset in compliance with PSSR. These philosophies will be replicated across the GTW distribution business.

Proposals for which activities will be tendered

Phoenix outsources much of its capital works to a third party contractor, currently McNicholas (see section 2.1).

Phoenix intends to manage its capital works across the GTW Licensed Area in accordance with the established processes already in use in the existing Licensed Area.

Phoenix is subject to the OJEU procurement thresholds and as such, the construction contract for the GTW distribution business will be awarded by Phoenix following a competitive tendering process completed during mobilisation as detailed in section 3.6.

Full details of the proposed tendering activities and Phoenix's demonstrable experience of the competitive tendering process are provided at section 6.

In summary, taking gas to the GTW Licensed Area shall entail the award of a number of new contracts albeit some supplies and services required may be bolted on to current agreements already entered into by Phoenix to which such a variation would not constitute a material change. New contract awards would include the construction of the distribution network (including engineering and non-engineering material supply) whilst gas metering equipment and the ECC contract, for example, could - during the mobilisation phase - be delivered through existing Phoenix contracts which have previously been tendered through EU procedures and to which the entire Northern Ireland region was cited as the area for delivery. It would only be when the value or nature of services required constitutes a material change to the original award that such services would require to be tendered in order to achieve delivery through a separate contract.

Where appropriate, Phoenix would propose to procure materials as part of the overall network construction contract as detailed in section 3.6.

9.3 COST MANAGEMENT

The following section details Phoenix's cost management of the construction contract. Phoenix's high level finance function and cost management at a Group level is as detailed in section 8.4.

Explanation of the review process for costs incurred

As detailed in section 2.1 under "*Proposals to manage contract operations,*" Phoenix intends to manage the construction contract across the GTW distribution business in accordance with the established processes already in use in Phoenix.

Phoenix manages the existing construction contract and day-to-day activities with our contractor, McNicholas, through Alliance contracting principles. In summary:

- (a) the contract is based on a philosophy that the party best able to manage the risk manages that risk;
- (b) Phoenix and McNicholas management resources are shared throughout the construction process, i.e. there is no duplication or traditional "man-marking" of staff. Staff are treated as a "single" resource and are utilised where needed throughout both organisations;

- (c) an open-book actual cost approach is used, including a profit share mechanism. Tender rates are set by McNicholas but Phoenix pays McNicholas based on their actual costs plus agreed uplifts. Any difference between tender rates and actual costs are shared, both positively and negatively, between Phoenix and McNicholas; and
- (d) a fully integrated supply chain utilising a common IT system ensures that stock levels are minimised throughout the supply chain resulting in lower financing costs for McNicholas and other suppliers.

The existing construction contract reflects the joining in pursuit of common interests between McNicholas and Phoenix. Some of the benefits this brings are:

- one contract, one performance framework;
- aligned objectives and shared risks;
- shared coordination, collective accountability;
- full transparency of costs; and
- innovation in delivery.

On the other hand, the traditional approach to contracting can lead to:

- separate objectives for each party;
- performance individually judged, provision made for disputes;
- contracts based on tight specification; and
- change not easily accommodated.

Phoenix strongly believes that Alliance contracting has many benefitting factors over the traditional approach. The contract with McNicholas provides a real opportunity to innovate and implement efficiency improvements which delivers immediate reductions in unit costs to Phoenix. As management resources are streamlined and the supply chain is integrated, any innovations, design changes or simple process improvements are implemented quickly, promptly delivering benefits.

Phoenix and McNicholas run regular joint working groups to align and condense ideas, which are continually evolving, to better current practices and products. These groups are primarily focussed on business improvement although the overall goal is to improve customer experience, quality and safety whilst reducing the overall costs e.g. a recent innovation on the Phoenix network is the introduction of a PE inlet to certain domestic style boxes. This PE inlet, which is sleeved in glass reinforced plastic, replaces the current rigid copper anaconda that runs from the inlet of the box to the regulator; it really is just an extension of the existing service. This modification provides cost reduction as well as improving the overall engineering solution. Further detail and examples are

provided within Phoenix's Innovation and Technology Transfer submission ("Technical and Construction" section).

Some of the joint working/business improvement groups are:

- Commercial;
- Innovations;
- Design and Supply Chain;
- Plant and Transport;
- QuEST (see section 4.4);
- Contract coordination; and
- Reinstatement/Workload/Customer Experience.

In addition, due to the actual cost approach, Phoenix and McNicholas have an in-depth understanding of each element of their construction costs down to the sub-elements of labour, plant, materials, transport, fuel, etc. It is this high level of detail that provides Phoenix with the knowledge that value for money is being acquired, what elements within the contract are working well, and what areas require focus to deliver further efficiencies. This enables both Phoenix and McNicholas to focus on areas where costs are under pressure and understand the underlying reasons for those pressures. Similarly in areas where costs are performing well it still enables both Phoenix and the contractor to identify opportunities for improving costs still further.

This methodology also allows both Phoenix and McNicholas to work to the same figures and targets without each party having separate objectives and ensures that greatest value is delivered to Phoenix with the lowest cost and highest customer service and quality delivered to the end user. Efficiency is not just about saving money, it is also about creating value e.g. the vendor assessment process is applied to existing suppliers to monitor their performance, mitigate risk and drive continuous improvement. Vendor assessments are predominantly carried out by McNicholas but Phoenix may choose if they are to be party to these in line with the existing audit systems already in place.

Explanation of the information systems used for monitoring costs

All work is initiated through systems and processes which allow full traceability.

Design work is carried out by Phoenix Engineers - upon completion of the design the Engineer carries out a costing for the works, which is then financially appraised to ensure it sits within the Phoenix business model.

Phoenix's Commercial Operations department audits and verifies works for interim payments using quantitative accounting software and GIS mapping systems (see sections 3.5, 4.5 and 5.7) to measure work packages with monthly audits carried out to check valuations. A monthly template is completed using the contractors' approved values and actual costs.

Phoenix identifies areas that show poor performance and passes these to the contractor so they can establish reasons and implement changes to address any issues.

The contractor's site operation produces a wide variety of informative data which is gathered and collated prior to reporting to Phoenix. This information provides a key link from the site operative through to management. The nature of this information varies depending on site operations and the ultimate managerial decisions that need to be made e.g.

- performance of individual rates on a package by package basis – comparison of tender rates with actual costs;
- number/value and content of target costs completed;
- cash flow forecasting on a work package/year/contract-to-date basis;
- details of spend against budget on a work package/year/contract-to-date basis;
- details of accruals requiring actualised on a work package/year/contract-to-date basis;
- method of cost allocation for civil engineering materials associated with the works;
- details of gain/pain share profit pool percentages on a work package/year/contract-to-date basis (see below); and
- analysis of service connection costs by pressure, length and connection type.

Another benefit of the Alliance contract is that it has, at its core, an incentive mechanism to reward both Phoenix and the contractor for initiatives that deliver efficiencies. Payment to the contractor is based on a profit sharing mechanism i.e. a pain/gain mechanism that uses tender rates submitted by the contractor to determine the 'target' rate for a quantity of work and then payment is made using the actual costs that were incurred doing that work. Any difference, both positive and negative, between the target rate and the actual cost is shared between Phoenix and the contractor. This means that if both parties work together to reduce costs, the contractor would see an increase in its profit levels but Phoenix would still see a final cost that is less than the traditional approach delivered by the target rate. The transparency that is created by capturing the true cost of completing an activity in its core subcategories e.g. plant, materials, labour etc., enables both Phoenix and the contractor to focus on areas where costs are under pressure and understand the underlying reasons for those pressures. Similarly in areas where costs are performing well it still enables both Phoenix and the contractor to identify opportunities for improving costs still further. Some of the key elements of this pain/gain mechanism are:

- valuation and payment to the contractor on a monthly basis;
- interim payments based on actual costs;
- all works subject to full on site re-measurement;
- all site and cost data collected and collated by the contractor;
- transparency of all detailed information is essential; and
- level of gain/pain delivered.

The contractor is required to compile target costs for all stated packages prior to commencement of the works on site. They are responsible for carrying out all site measurements and compiling this data in an approved format e.g.

- the type of works carried out based on the activity rates schedule;
- the location of works – full postal address etc.;
- the title and reference of the work package;
- details of the standard of site conditions established by the operatives, e.g. barrier protection, removal of spoil etc.;
- the date when the works were constructed and commissioned;
- names of the operatives who completed the works;
- the quantity of works completed and commissioned; and
- the time taken to undertake the works.

It is imperative that the contractor provides a fully transparent audit trail from the initial target costing through to the financial closure of the work package to provide Phoenix with full site of each individual cost i.e. the open-book actual cost approach. Cost and metric/productivity data collection and the cost accounting system are documented with details such as:

- accounting systems, ledgers/modules and interfaces and all prevent/detect controls;
- organisational chart and roles and responsibilities;
- purchase order process, accounts payable, plant, sub-contractors, cash book, employee expenses, stock control and payroll;
- cost collection and allocation to activity in the form of a cost control chart;

- allocation and reallocation of costs by activity to job. The basis of reallocation of costs to relevant work packages must be documented clearly stating how costs are allocated to individual work packages including the algorithms used; and
- basis of allocation of costs relating to previous periods e.g. actualised costs which can be accrued.

Phoenix carries out a high volume of random audits to ensure that the contractor gets it right all of the time e.g. audits of:

- purchase orders, good received notes, third party invoices and supplier statements;
- details of main contractor discounts and evidence of these being credited to the contract, where applicable;
- timesheets;
- payslips;
- plant hire and utilisation records; and
- contractor assessments of subcontractors' applications for payment and subsequent subcontractor invoices.

As detailed in section 2.1 under "*Proposals to manage contract operations,*" Phoenix intends to manage the construction contract across the GTW distribution business in accordance with the established and proven processes already in use in Phoenix.

10. FINANCE COSTS

This chapter has been prepared with input from Frontier Economics Ltd (“**Frontier**”) and Gleacher Shacklock LLP.

10.1 WACC

This section sets out our estimate of the (real pre-tax) allowed cost of capital required to own and operate the LP network over the first 10 years of the GTW project incorporated within the workbook submission and provides an:

- ***Explanation of build-up of the WACC; and***
- ***Explanation of assumptions used and their appropriateness***

To inform our thinking on the WACC for GTW, we considered recent GB regulatory precedents and Competition Commission (“**CC**”) determinations. However, we also recognised that there are at least three clear reasons why these WACC estimates are not good benchmarks for the GTW LP network.

- First, a number of commentators have voiced concern about the methodologies that underlie more recent WACC allowances. There is considerable uncertainty and debate about whether the methodologies are appropriate, and in particular we think that the short-term view of equity market returns adopted by these regulators is not appropriate.
- Second, the time-period for which our WACC submission is required is substantially further into the future than the period covered by the CC for its recent NIE determination. Similarly in Ofgem’s RIIO price controls the networks are to an extent protected from uncertainty about longer-term future movements in financial markets by the indexation of the cost of debt parameter²⁵.
- Third, the WACC for the GTW project must reflect the differences in the specific circumstances of the investment. In particular, this is not an existing mature utility, and the investment is being undertaken in Northern Ireland. Our WACC submission reflects the fact that this is not a mature GB utility investment, and therefore has different associated circumstances and risks.

²⁵ Ofgem has also considered indexing some parameters underlying the cost of equity.

We have therefore sought to undertake a rigorous bottom-up assessment of the cost of capital for the GTW project. In particular, the following features of the GTW project have informed our view.

- The GTW LP network is exposed to volume risk because it will be regulated under a price cap for the first 10 years. This is magnified by the commercial uncertainty surrounding the project: its viability depends on connecting a small number of large customers early on. The risk is mitigated to an extent by the proposed re-opener if actual volumes differ by more than 15% in any one year from forecasted volumes, and by our confidence and experience in negotiating with and connecting large customers. Despite this, it is still possible that significant loss of revenue could be caused by a failure to connect a single large customer on time, or by any subsequent loss of volumes from a large customer (for example, if one of the large business customers were to fold). We have assessed various scenarios around our baseline volume assumptions and tested the resulting implications for required returns based on these scenarios.
- Relative to GB we continue to consider that Northern Ireland investments are associated with incremental regulatory uncertainty. The regulatory environment for gas has progressed since Phoenix was established in 1996. However, there have been two recent referrals to the CC in Northern Ireland, and ultimately the relatively unusual regulatory environment for the GTW project implies greater regulatory risk for this project (particularly for the initial 10-year period).
- Phoenix will face construction risk during the roll-out period, with high upfront capex needed. Evidence from large capex programmes in other industries suggests a premium on the cost of capital associated with construction risk. For example, Private Finance Initiative (PFI) providers have typically been rewarded a WACC premium during the construction phase of a project, and the Civil Aviation Authority (CAA) proposed that the WACC for Heathrow Terminal 5 should be higher than the WACC for the rest of Heathrow.

In support of the potential debt options available for a business of this nature, Phoenix has approached several banks to provide indicative terms in respect to providing support for a project of this nature and have used this information to inform their assessment of the debt costs associated within the derivation of cost of capital. In addition Phoenix has included within the assessment of equity return the cost associated to the incorporation of debt in the business within the initial years of the investment together with the risk to the equity investment of these debt costs changing between the date of the bid being made and the actual debt being introduced.

Summary

We have thoroughly assessed the risk context and our ability to mitigate these risks. Our analysis indicates that the required cost of capital for the GTW LP project is 5.7% (real pre-tax) for the first 5-year period and 5.35% (real pre-tax) for the second 5-year period. The parameters underlying our estimate are shown in Tables 10.1a and 10.1b.

Table 10.1a. Phoenix WACC submission Years 1-5	
Gearing	65%
Cost of debt	3.4%
Cost of equity	9.98%
Real, pre-tax WACC	5.7%

Table 10.1b. Phoenix WACC submission Years 6-10	
Gearing	65%
Cost of debt	3.4%
Cost of equity	8.96%
Real, pre-tax WACC	5.35%