

2 Company Overview

Who we are and what we do

Electricity North West Limited is the electricity distributor for the North West of England. Our job is to provide a safe and reliable supply of electricity, keeping the lights on 24 hours a day, seven days a week for our 2.4 million customers.

- 2.1 To do this, we own and operate an efficient network which we:
- Maintain – so that our network operates safely and efficiently
 - Repair – fix our network when it goes wrong
 - Renew – replace and refurbish our network when required
 - Reinforce – increase the capacity of our network to meet our customers' changing needs

The electricity industry and the role we play

- 2.2 The electricity industry in Great Britain is divided into four main sectors:
- The **generation companies** produce electricity from a variety of sources. These can range from coal and gas power stations to wind farms.
 - The **transmission companies** own and operate the high voltage network which links the major power stations to the distribution networks and transport electricity in bulk across the country. National Grid Electricity Transmission is responsible for the transmission network in England and Wales.
 - The **distribution companies** own and operate the lower voltage electricity networks connecting the high voltage network to every home and business in Great Britain.
 - The **electricity supply companies** buy the electricity from the generation companies and sell it to their customers. They pay the Transmission and Distribution Network Operators for the transportation of that electricity across their networks.



- 2.3 As a monopoly business we, like all the other electricity distributors in Great Britain, are regulated by Ofgem (Office of Gas and Electricity Markets). We operate under an electricity distribution licence which regulates our activities and ensures that we fulfil our obligations and responsibilities fairly for the customers we serve now and in the future.

Ownership and structure

- 2.4 Electricity North West Limited is a private limited company registered in England and Wales. We are owned by a consortium of funds managed by Colonial First State and JPMorgan Asset Management Infrastructure Investments Group. This consortium purchased the business in 2007 from United Utilities PLC.
- 2.5 Colonial First State is the asset management division of the Commonwealth Bank of Australia. It manages A\$ 150 billion of assets on behalf of institutional clients and pension funds.
- 2.6 JPMorgan Asset Management is the asset management division of JPMorgan Chase & Co. It manages over US \$1.4 trillion of assets on behalf of pension funds, institutions and other clients.

- 2.7 Both Colonial First State and JPMorgan have a strong track record of experience in UK infrastructure investments. Both place a very high value on ethical and sustainable investment and are committed to the long-term success of Electricity North West.

Our vision and values

- 2.8 We are driven by a vision to be the leading energy delivery business. To support this, we have developed a set of values which underpin our culture, behaviours and how we interact with all our stakeholders.
- 2.9 These values support everything we do and influence our activities from strategy development (such as the creation of this RIIO-ED1 business plan) to operational delivery (such as the way in which we talk to our customers). 'Living the Values' and achieving the vision are fundamental to the success of our business. Our customer value is at the heart of everything we do.



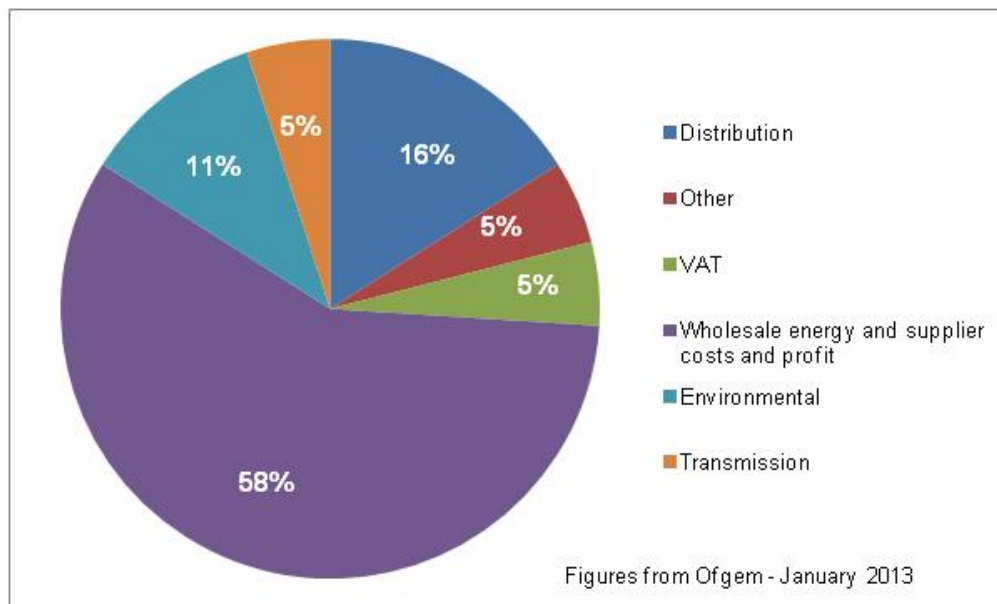
Our business

- 2.10 We are a major employer in the North West of England. We have over 1,600 staff who all contribute to delivering a safe, reliable and efficient service for our customers.
- 2.11 Our people are our most important asset and our people value helps ensure the sustainability of our business by developing the right mix of skills and resources to meet current and future needs. We have implemented structured development programmes, which allow us to develop and maintain a workforce of motivated, high-performing and capable individuals and attract new people to our organisation. We are making substantial investments in our graduate and apprentice programmes, as part of our £24 million workforce renewal programme. We provide secure, long-term, quality jobs and career development opportunities.
- 2.12 Our workforce is divided into two areas:
- Delivery, which is focussed on providing an efficient and reliable service for our customers
 - Support, which provides essential services such as HR, Finance, Training and Legal
- 2.13 All our people work very closely together to develop and deliver our ambitions and meet our challenges. Around 80% of our people work in Delivery and 20% in Support.

Our regulatory environment

- 2.14 Our charges are paid by electricity suppliers who in turn incorporate them into the prices they charge their customers. Our costs account for around 16% of the average domestic electricity bill. Ofgem regulates our charges through the price control framework. We are currently nearing the end of the fifth price control since privatisation (DPCR5), which covers the period from 2010 to 2015.

Components of typical electricity bill



- 2.15 Above is the breakdown for an average electricity bill. It reflects electricity prices in December 2012. The average electricity bill for a standard account is £531. This price is based on average annual consumption figures, averaged across all the former incumbent suppliers, all payment methods and averaged across Great Britain.
- 2.16 This regulatory framework will change in 2015, making way for RIIO-ED1, a new eight-year regulatory mechanism. This links our Revenue to the Outputs we deliver and uses Incentives and Innovation to ensure we deliver even better value for customers now and in the future. Stakeholder engagement plays a vital role in this new framework.
- 2.17 The RIIO-ED1 price review determines how much we are allowed to charge to fund our network investment and operating costs from 2015 to 2023.

Our operating environment

- 2.18 We are focussed on providing a reliable and efficient service for the people of the North West. We recognise the vital role we play in ensuring the North West continues to be a thriving and vibrant economic hub as well as a great place to live and work.
- 2.19 Our network is made up of pylons, overhead lines, underground cables and equipment such as switchgear and transformers, which are used to distribute electricity to our customers' homes and businesses.
- 2.20 Electricity enters our network from the National Grid through 15 Grid Supply Points. Our job is to deliver that electricity through a series of decreasing voltages to our 2.4 million domestic and business customers. Our network delivers over 23 terawatt hours of electricity each year across an area of 12,500 square kilometres.
- 2.21 We operate across a diverse range of terrain and serve a variety of customers ranging from isolated farms in rural areas to sites of heavy industry and city centres.
- 2.22 As a rough guide, about 55% of our customers live in Greater Manchester, 30% in Lancashire and 10% in Cumbria, with the remainder in parts of Cheshire, Derbyshire and North Yorkshire.



2.23 Our network comprises:

- Around 13,000 km of overhead lines
- Over 84,000 items of switchgear
- More than 34,000 transformers
- Over 44,000 km of underground cables

Our track record

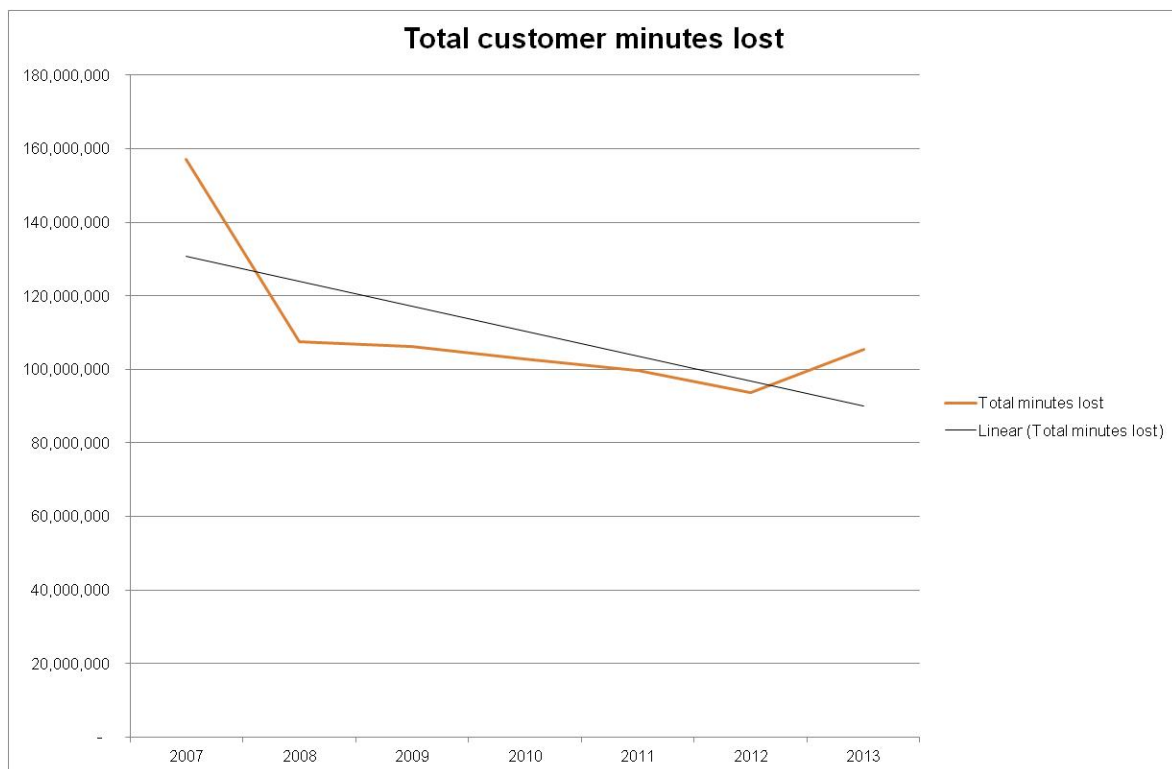
We acquired the business from United Utilities in 2007 and since then we have established a strong track record of service improvement, cost efficiency and industry-leading innovation. This provides us with a sound base from which to achieve our RIIO-ED1 objectives and gives us both the credibility and confidence that we can deliver our commitments.

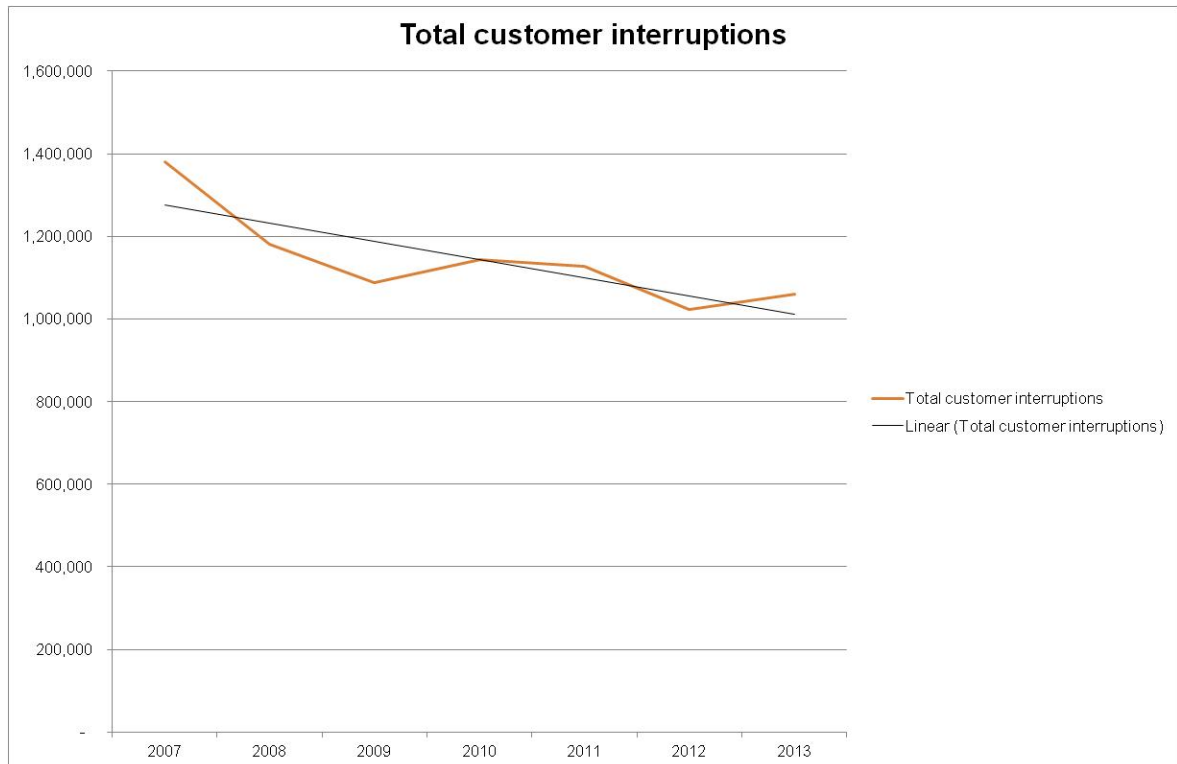
2.24 We are delivering value for our customers by:

- Improving network performance
- Delivering investment programmes
- Investing in customer service
- Enabling the development of a competitive connections market
- Driving down costs
- Innovating to respond to challenges

Improving network performance

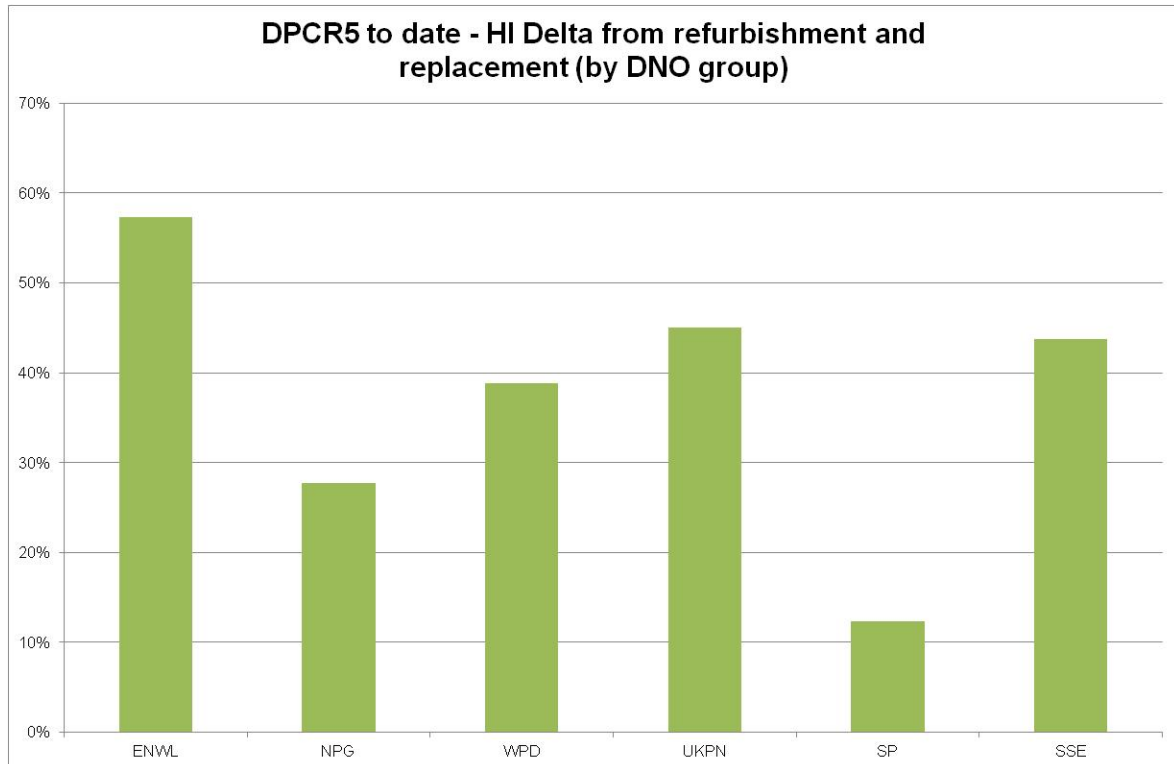
2.25 We have improved our network performance through the application of best-in-class asset management practice, better informed refurbishment and replacement decision-making and improved operational response to faults. Since 2007, we have improved Customer Interruptions (CIs) performance by 16% and Customer Minutes Lost (CMLs) performance by 18%, making our network one of the most reliable in the UK.





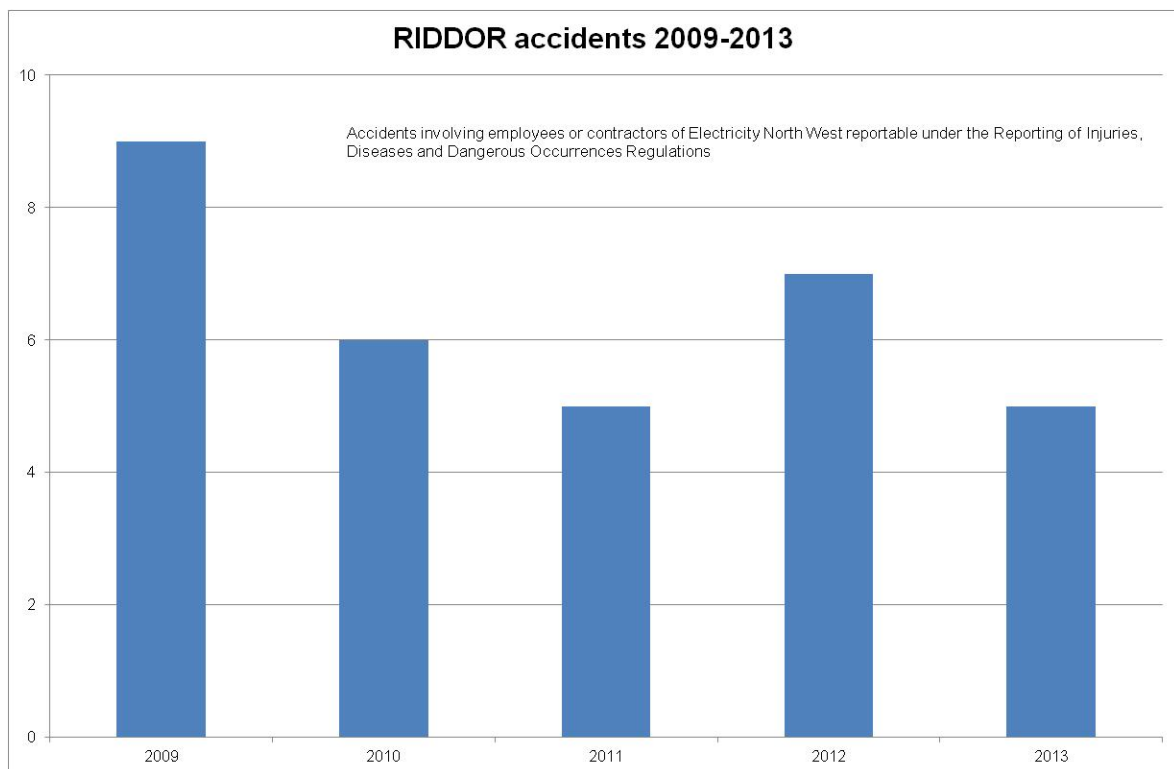
- 2.26 Whilst this business plan focuses on our performance improvement plans for 2015 to 2023, we will continue to improve network performance through the remainder of this price control in order to ensure our customers continue to receive the excellent service they have grown to expect.
- 2.27 We have pioneered innovative Condition Based Risk Management (CBRM) techniques for managing our network assets. This methodology allows us to get more from our investment, drive performance improvement and has set an industry benchmark for asset management. We have held BSI PAS-55 asset management certification since 2007.
- 2.28 We measure the condition and loading of the network using indicators called Health Indices (HIs) and Load Indices (LIs). We are on track to deliver the targets set by Ofgem for both these measures for DPCR5.

In the first two years of DPCR5, we delivered a higher proportion of our overall DPCR5 HI target than any other DNO group.



2.29 We are committed to achieving the highest standards of safety for all our customers, employees and contractors and operate a 'zero harm' culture underpinned by a health and safety management system certified to OHSAS 18001.

2.30 Accidents involving employees or contractors of Electricity North West, reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations ('RIDDOR') have decreased significantly since 2009 as have Lost Time Accidents (LTAs).





Delivering investment programmes

- 2.31 We will invest £1.4 billion in our network between 2010 and 2015 to ensure its continuing reliability, availability and resilience. Our stakeholder engagement continually shows us that customers want us to maintain a stable level of investment to ensure the network can meet their needs now and in the future.
- 2.32 We have a track record in delivering investment programmes on time and within budget. Many of these programmes have led the industry in terms of delivering customer benefits.
- 2.33 Since 2007 we have been protecting our network against flooding, ensuring that more than 850,000 customers are no longer at risk from losing supply due to severe flooding of major substations – an area our customers feel particularly strongly about. We completed our DPCR5 flooding programme in 2013-14, a year ahead of the original schedule.
- 2.34 We have been installing a new fibre communications network to provide our own communications facility and replace the services rented from BT. This is our largest single project in DPCR5 and will complete on time in 2014.
- 2.35 By the end of 2016, we will be fully compliant with the Electricity Safety, Quality and Continuity Regulations (ESQCR). This programme has run for a number of years and involved checking and where necessary correcting the clearances of our overhead lines to the ground and nearby buildings and structures.
- 2.36 We have made significant improvements in the security of our substation sites in response to increased break-ins and metal theft incidents. By 2014 we will have improved security at all our major substations and replaced all our locking systems by 2015. We are implementing a number of innovative solutions, such as cable marking, which help deter theft and, when it does happen, assist the police in investigating and securing a conviction. This is already having a positive impact on reducing the number of incidents we experience.
- 2.37 We have continued to underground overhead lines in National Parks and Areas of Outstanding Natural Beauty in collaboration with our regional partners and stakeholders who represent these areas. This programme has been very successful and continues to deliver tangible improvements in visual amenity.

Investing in customer service

- 2.38 We have focussed on delivering customer service where our customers want it most – a reliable, efficient network. We recognise that we need to support this with an equivalent standard of customer communication and interaction.

- 2.39 In early 2012, we created a dedicated customer directorate as the focal point for all our customer interactions. We supported this by investing £1 million of our funds in a flagship Customer Contact Centre.
- 2.40 We are building on this technical investment by investing in recruiting, training and developing a motivated team of customer service agents.

Enabling the development of a competitive connections market

- 2.41 We have led the way in opening up the connections market to new entrants. This provides choice and price benefits for our customers and contributes to the economic development of our region.
- 2.42 The market for new connections is split into nine different segments. Ofgem has so far agreed that we have enabled competition in six of these, the highest number of any DNO. We have applied to Ofgem to have the remaining three segments declared competitive and we are confident that all segments will be competitive by the end of 2014. When this happens, we will be the first DNO to have enabled a fully competitive connections market.

Driving down costs

- 2.43 We constantly challenge our costs and have implemented a range of initiatives to reduce them, including scope and process improvement opportunities.
- 2.44 As a result we have:
- Reduced bespoke design effort and cost by introducing standard designs and solutions
 - Standardised work procedures and materials requirements generating procurement, training and inventory management savings
 - Implemented new techniques that allow targeted replacement of individual components, allowing us to reduce costs by working more efficiently and eliminating some consequential work
- 2.45 We have secured significant savings in materials and labour costs through new procurement and contracting processes.
- 2.46 We mainly contract with regional suppliers, who operate with a lower cost and overhead base. We develop close commercial, technical and operational ties with these companies to help them understand our needs and requirements and thereby better design the products and services they provide to us.
- 2.47 We benchmarked ourselves against the competitive asset management market and used this to identify further improvement opportunities. We have reduced the costs of our support functions and our plans include further efficiencies that reduce costs by at least 1% year-on-year.
- 2.48 We continue to challenge our support cost base by:
- Identifying the core processes and activities needed to support the efficient delivery of work, projects and corporate services
 - Eliminating handoffs, duplicated effort or abortive work
 - Integrating processes to ensure our organisation operates as an efficient whole, rather than the sum of discrete parts
- 2.49 Our efforts to reduce costs have been successful. As a result, we anticipate sharing around £140 million in DPCR5 cost efficiency savings with our customers. We are continuing this cost reduction commitment in RIIO-ED1, where our delivery costs are expected to be among the lowest in our industry.

Innovating to respond to challenges

- 2.50 The outlook for our industry and the wider energy industry is already changing. We have to adapt to changes in social, economic and environmental conditions which means we need to find newer, better, cheaper and faster ways of providing our service. One of our biggest challenges is enabling and transitioning to a low carbon future.
- 2.51 We are responding to this by:
- Enabling the mitigating actions of others, either in terms of changing electricity generation or electricity usage

- Reducing our own carbon footprint
 - Adapting our network to withstand the impacts of climate change
- 2.52 Electricity demand is predicted to increase as we respond to the challenges of decarbonisation of heat, transport and power generation. The technologies which will support this have yet to be widely adopted but we are leading the way in finding efficient ways to cope with their impact.
- 2.53 Our C₂C (Capacity to Customers) project was awarded funding from Ofgem's Low Carbon Network Fund (LCNF) in December 2011. The project will trial the use of new technology and innovative commercial contracts to increase the amount of energy that can be distributed through our existing network. In April 2013 the first trial customer, Bolton Arena, agreed to a managed contract for an 18-month trial period.
- 2.54 We are also developing our CLASS (Customer Load Active System Services) project, following an Ofgem funding award of £9 million in November 2012. CLASS runs from January 2013 until September 2015. Like C₂C, CLASS will trial a cutting edge technique to maximise the use of the existing network. While C₂C frees up capacity by reconfiguring the network and using our reserved emergency capacity, the CLASS trial will reduce demand by reducing voltage.
- 2.55 Our latest LCNF project, Smart Street, will incorporate LV network meshing technologies, active voltage management and conservation voltage reduction. This project will deliver direct cost reductions for customers through reduced energy charges, reduced DUoS charges and higher FiT revenues.
- 2.56 We have reduced our own carbon footprint by 10% since 2010 and are planning further reductions over the remainder of DPCR5 and throughout RII0-ED1. This is underpinned by plans to rationalise and improve the efficiency of our property estate and transition to an increasingly efficient fleet of vans, trucks and other vehicles.
- 2.57 The most significant impact of climate change on our network will be from the increased frequency of extreme weather events, particularly flooding. Between 2010 and 2015 we will install flood protection at 31 major substation sites.
- 2.58 Innovation is not just about big, technology-driven projects. We look to innovate in the way we run our day-to-day operations through process improvements, organisational considerations and training and developing our people.
- 2.59 We have developed new and more efficient ways to buy the plant and equipment we need to maintain and improve our network. We have worked with product developers to design new or better components, which mean we can complete work quicker with less disruption to our customers' supplies. We are deploying new communications tools to improve the way we get information from our field staff to our Customer Contact Centre to ensure we give our customers accurate and meaningful information in real time.
- 2.60 We have introduced proactive payment of Guaranteed Standards of Performance (GSoP) payments to customers on our Priority Services Register and developed new relationships with the British Red Cross to deliver enhanced support to our vulnerable customers. We have introduced online quotations for connections customers and have implemented an online fault map which will be supplemented with an online planned outages schedule in the near future. We are also trialling new ways to provide enhanced notification of planned outages and restoration times to our customers. Our innovation track record is enviable and we are committed to maintaining it.

Our challenges

Our customers and stakeholders believe our number one priority is to keep the lights on. Our plans will deliver on this commitment and respond to the changing and challenging environment in which we have to deliver.

Keeping the lights on

- 2.61 Our customers will become even more dependent on electricity and consequently less tolerant of power cuts. We need to continually improve our network's reliability to meet their expectations. We have to do this in the context of an ageing network and increasing sensitivity to prices.
- 2.62 We also have to consider the performance of the network in more extreme circumstances. Recent events such as the Cumbria floods in 2005 and 2007 and severe storms of Christmas 2013, together with the impact of service failures in other companies due to extreme one-off situations, has led to an increased focus on protecting the networks against the effects of rare but potentially significant events.

- 2.63 We forecast that growth on our network will continue to be largely driven by demand from customers for new connections to new buildings. The rate will be driven by a combination of population and economic growth factors.
- 2.64 Society does not stand still and we need to plan for changes in the social and economic circumstances in our region.
- 2.65 Figures from the Office of National Statistics predict that the population of our area will increase by 10% over the next 25 years. Growth will be concentrated in Greater Manchester, which is expected to grow by 12%, with growth of around 7% in the remainder of our area.
- 2.66 Just over 90% of our customers are domestic, consuming around a third of the electricity used in our area, so we will have to develop our low voltage network to cope with a larger population, living in a higher number of households in urban environments.

The low carbon future

- 2.67 The UK Government has committed to reducing carbon dioxide (CO₂) emissions by 80% of their 1990 levels by 2050.
- 2.68 In the energy sector, reductions will be achieved through:
- The introduction of low-carbon generation, much of it locally produced
 - Measures to reduce the overall amount of energy used
 - More intelligent use of the electricity that is used
 - Decarbonisation of heat and transport
- 2.69 Much of the low carbon generation will be small-scale technologies such as wind turbines, biomass or photovoltaic cells, which will connect directly to our network rather than the transmission network.
- 2.70 The growing popularity of electric or hybrid cars and heat pumps will create additional demands on our network.
- 2.71 Decarbonisation of heat and transport has the potential to create significant increases in total energy distributed and in the peak demand for electricity, the timing of which will not necessarily coincide with local generation.
- 2.72 The UK's electricity transmission and distribution networks have been designed on the basis that electricity flows in one direction, down through the voltage levels. Local generation will introduce significant levels of flow up the network so the way that the network is designed and managed will need to change from a passive one-way system to one where we actively manage the flows of power. This actively managed system is often referred to as a smart grid. Whilst the total smart grid vision may be some way off, the introduction of smart meters across the UK by 2020 will help us start the transition.

New technology

- 2.73 We expect the introduction of new technology to accelerate over the next 40 years and this creates uncertainty in our long-term plans. New consumer products may be popularised in the same way that mobile phones and other digital devices have, placing greater demand on our network. Conversely new technologies may be introduced which will make appliances (particularly white goods) co-operate with distribution networks to reduce demand and help manage peak loads.
- 2.74 In the transport sector, the major initiative to reduce CO₂ emissions will be the introduction of electric vehicles. The Department of Energy and Climate Change's (DECC) pathways projections present a scenario where vehicles become more efficient and there are breakthroughs in battery technology. This will drive the introduction of significant numbers of electric and plug-in hybrid electric vehicles, so that by 2050, 60% of mileage will be covered by these vehicles. This will present a major challenge to electricity networks.
- 2.75 It is estimated that the electricity required to travel 80 miles is equivalent to the daily consumption of an average house. We will need to increase the capacity of our network to cope with the added demand from electric vehicles, whilst ensuring that the management of the refuelling electrical load is undertaken in a smart manner.
- 2.76 As we look to the future we expect that the majority of our network infrastructure will appear largely the same as it does today. New technology will help us to manage it more effectively through greater use of real-time data, remote operation and smart solutions.

Our response – the way forward

We are proud of our track record and believe we are well placed to achieve our vision of being the leading energy delivery business.

- 2.77 Our plans for the future build on these strengths and will deliver a more reliable, affordable and sustainable network for our customers. We need to support this with first-class service so we are committed to delivering industry-leading performance in the way we communicate, interact and inform our customers about our activities. We want to ensure that every point of contact with customers delivers a consistent and excellent experience.
- 2.78 We are also focused on ensuring our plans are driven by the needs and requirements of our stakeholders now and in the future. Our stakeholder engagement process is robust and embedded in our business and we will maintain this engagement throughout DPCR5, RIIO-ED1 and beyond.
- 2.79 We have used the Ofgem Outputs framework to enable the discussion on our priorities with stakeholders and to articulate our proposals and ideas for the future.
- 2.80 The framework comprises six Outputs:
- Safety
 - Social obligations
 - Reliability and availability
 - Customer satisfaction
 - Connections
 - Environmental impacts
- 2.81 For each, we constructed a range of costed options that we presented to customers and stakeholders to identify their priorities and willingness-to-pay (or not) for improvements. From this, we have constructed an overall plan which balances the needs of our network with stakeholder priorities and affordability.