electricity north west

Bringing energy to your door

Strategic direction statement

2013

Planning for our future

Electricity North West plays a vital role in the North West region

We own, operate and maintain the electricity network:

delivering energy to 5 million people and we have a strong track record in safety and reliability

We own around **13,000 km** of overhead lines

We own over **44,000 km** of underground cables

We own around **34,000** transformers

We serve approximately **5 million** people at **2.4 million** domestic & industrial locations

electricity north west

Bringing energy to your door

Our entire network would cost approximately £11 billion to replace

We have a stretching vision to become the leading energy delivery business

Contents

Key

? *A question we would like stakeholders to think about*

Feedback from the Engaged Customer Panel

How we have responded to feedback

1 Welcome

Our annual strategic direction statement plays a key role in enabling us to engage with a wide audience to seek their views of the future. It explains how we manage our assets and the basis of the long-term investment plans for our network to the 2050s to give an insight into the potential development of our services and network.

This statement has become a key part of our business planning cycle. This year I am delighted to introduce a special extended edition that utilises the dialogue on our long-term vision established over the last few years to set out a more detailed view of our plans over the next decade in particular. This includes detail on what we understand our customers and stakeholders want us to deliver in that timeframe, the expenditure required to do so and the impact this will have on the prices customers will pay. As an innovative and visionary player in the energy sector, it is our responsibility to constantly look to the future and put in place a strategy to meet the challenges we will face.

"The aim of this document is to explore how our role in the energy industry will change over the next forty years and the developments we will need to make on our network. This special edition focuses on the implications of our changing role on our investment plans over the next ten years"

Since our last strategic direction statement was published in spring 2012, we have seen strong evidence of the Government's determination to achieve carbon emission reduction targets in the development of the Electricity Market Reform process, although this has created considerable short-term uncertainty for renewable energy generation projects. We have also led work across all electricity distributors to develop a common model which can predict the costs of using smart grid solutions to tackle the challenges of increased electricity demand that the long-term decarbonisation of heat and transport will bring to all our networks.

Our company vision is "to be the leading energy delivery business" and we plan to efficiently invest to achieve this aim. This can only be achieved in partnership with our stakeholders and we welcome any comment on our plans and also any suggestions as to how we can work together to develop a sustainable energy future for the North West.

Over the last twelve months I have challenged my team to respond to all the customer and stakeholder feedback we have been receiving and produce a plan that demonstrates our ambition to lead our industry. Our vision for the next decade is to focus on customers' priorities of customer service, reliability, sustainability and affordability in the context of major long-term changes to the generation and use of electricity.

Over the next ten years, we aim to reduce the number of power cuts by a further 20% and reduce the time customers are without power by 20%. We will also improve service for customers with faster and more regular updates on each power cut we are fixing, on-line tracking of new connections projects and enhanced services for our most vulnerable customers. We will strengthen the resilience of our network and enable low carbon generation and demand technologies, whilst also reducing our own carbon footprint. By further improving our efficiency and utilising the benefits of smart metering and smart grids we plan to achieve this whilst making substantial and sustained reductions to the prices our customers will pay.

The combination of big increases in service, reliability and resilience with big reductions in prices is a very tough challenge, but one we are all determined to deliver for you.

Steve Johnson
Chief Executive Officer

We would appreciate any feedback tailored to the questions (like this paragraph) throughout the document, or indeed any feedback or input in relation to how our business needs to change to serve customers in the future. Please contact us using the details listed on the final page.

2 The electricity supply industry

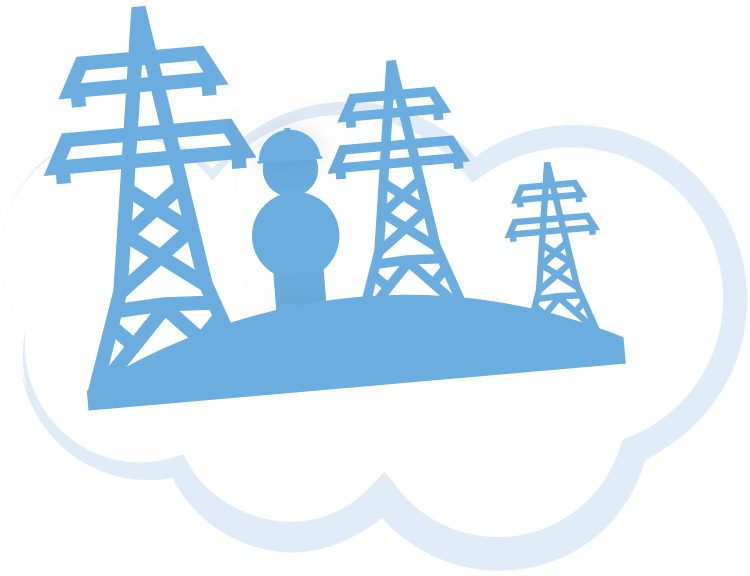
2.1 Industry structure

The electricity industry in Great Britain is divided into four main sectors:

- **Generators**, who own both the large power stations and smaller renewable generators. The generators produce electricity from a variety of fuel sources.
- **Transmission companies**, who own and operate the 400kV and 275kV transmission networks that link 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.
- **Distribution companies**, who own and operate the lower voltage electricity networks, connecting the smaller power stations and the national grid to every electricity customer in Britain. Originally there were fourteen regional Distribution Network Operators (DNOs), but these have been joined by a number of smaller Independent Distribution Network Operators (IDNOs). The fourteen DNOs are currently owned by six different companies.
- **Electricity suppliers,** who buy the electricity produced by the generators, sell that electricity to their customers and pay the network operators for the transportation of that electricity across their networks.

The electricity market is regulated by the Gas and Electricity Markets Authority which governs and acts through the Office of Gas and Electricity Markets (Ofgem). Distribution Network Operators (DNOs) are directly regulated by Ofgem and their charges for use of their networks are subject to a price control mechanism.

Electricity North West is one of the 14 regional DNOs and is a private limited company registered in England and Wales. We are owned by a consortium of funds controlled by the Commonwealth Bank of Australia and IIF International Holding GP Limited which is a constituent of JP Morgan Infrastructure Investments Fund.



3 About us

3.1 Our assets and key facts

As a DNO, we do not generate or supply electricity. We own a regional network which suppliers are charged for the use of in transporting electricity from generators to customers.

In simple terms our network is made up of overhead lines, underground cables and items of plant, such as switchgear and transformers, which are used to distribute electricity to customers' premises.

The bulk of electricity enters our network from the National Grid at Grid Supply Points. We have 16 such sites located around our region. It then travels through our 132kV network to a substation where the voltage is transformed to enter our 33kV network. Similar transformations take place from 33kV to HV (High Voltage) and from HV to LV (Low Voltage).

Through this network we deliver over 25 terawatt hours[1] of electricity each year to around 2.4 million customer premises across an area of 12 500 square kilometres.

Our network covers a diverse range of terrain and customer mix from isolated farms in rural areas to areas of heavy industry, urban populations and city centres.

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.

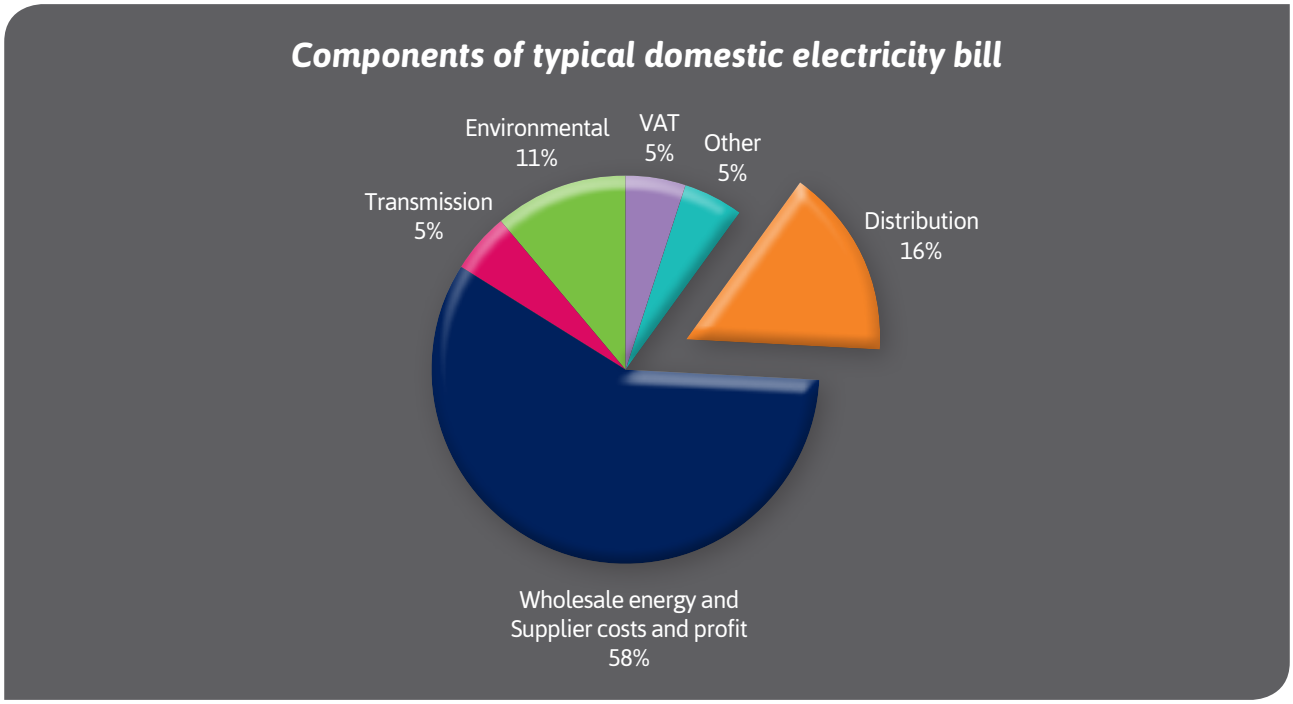
The network performs such that on average a customer will experience a power cut less than once every two years and on average is without electricity for less than one hour every year. This represents a reliability of over 99.99%.

Our network comprises the following key assets:

- **around 13,000 km of overhead lines**
- **over 44,000 km of underground cables**
- **over 84,000 items of switchgear**
- **more than 34,000 transformers**

Laid end-to-end, our lines and cables would stretch 1 ½ times around the world!

[1] A terawatt hour is equal to a thousand million kilowatt hours.



3.2 Where our income comes from and what we use it for

We have no direct financial relationship with customers connected to our network other than charges for new connections to the network. We charge electricity suppliers for the use of our network and the suppliers pass these costs on to their customers.

Distribution charges typically account for around 16% of the final electricity bill for domestic consumers[2].

The amount of income that we receive from suppliers is governed by a price control which since 1990 has been reviewed every five years. From 2015 the review period will be extended to eight years. At the price review, we submit our business plan for the period to our regulator, Ofgem. Ofgem analyses our submission and compares it to those of the 13 other DNOs, together with data from other comparable industries. Based on this analysis they then decide how much revenue we are allowed to recover from suppliers in each year of the price review period under discussion.

Using these revenues we raise the finance to operate and maintain the network, to replace existing assets and to build new ones. This is undertaken whilst at all times focusing on the three industry-wide challenges of moving to a low-carbon future, improving the reliability of energy supply and minimising costs for our customers.

Our income in each year is largely fixed but we can earn extra revenue by outperforming targets in incentive schemes, however if we fail to meet our targets our revenue may be reduced.

[2] Taken from Ofgem Factsheet 98 – 13 January 2013.

We also have a responsibility to look after our network in the long term. Since 2010, we have reported on the condition of our network (using Health Indices - HI) and the network loading (using Load Indices - LI). Through the monitoring of these indices we will ensure that the overall condition of our network is being maintained in such a state that we can continue to provide a high quality service to our customers into the future.

To ensure that we have a network with the appropriate technology for the 21st century we are also spending significant sums on research and development. We are allowed to recover some of our additional spending on research and development, either through the Innovation Funding Incentive (IFI) or the Low Carbon Networks Fund (LCNF).

3.3 The changing face of economic regulation

From April 2015 the regulatory framework will change so that DNOs are incentivised to invest in greater innovation and to deliver specific outputs which will effectively form a contract with the regulator for a period lasting eight years rather than five.

This model, known as RIIO (setting **R**evenue using **I**ncentives to deliver **I**nnovation and **O**utputs) is designed to put a much greater emphasis on companies playing a full role in developing a more sustainable energy sector and delivering value for money network services for customers today and in the future.

The first electricity distribution price review under the new framework is referred to as RIIO-ED1. We are currently preparing our submission for this price review which will cover the eight year period from 2015 to 2023.

We would particularly welcome your views on our plans for this period which are detailed in this document.

4 Our vision of the electricity supply industry in the 2050s

4.1 Recognisable, but changing

We expect that in forty years' time the physical structure of electricity networks will be largely recognisable as the structure that is in existence today, but there will be a number of significant changes as we move towards a more intelligent and sustainable network. Our plans for the next ten years have been framed in this context.

4.2 Driven by what customers want

By the 2050s customers will have an increased reliance on electricity due to the UK's drive to de-carbonise heating, transport and electricity generation. Electricity will be generated on a large scale predominantly from nuclear and large wind farms, but there will also be significant low-carbon generation owned by customers, or sited close to them.

Customer expectations will have changed to reflect the improved standards they have experienced, and the technology available. Because of the move to de-carbonise heat and transport they will be more dependent on electricity, but we expect that they will have a greater tolerance of short duration outages because of the capabilities of smart appliances and local storage. Conversely, given this tolerance is based on storage, they are likely to have a lower tolerance of longer outages.

To match the supply of electricity to demand, customers will use smart appliances which respond to price and market signals to run at the optimum time for the customer and the network as a whole. Customers will generally use considerably more electricity for heating and transport, but smart technology will spread the load to meet the available generation.

4.3 Implications for energy networks

To meet customer expectations, future customer demand and generation will need to be forecast by both distribution and transmission operators. These forecasts will be integrated, in that they will be interactive between transmission and distribution companies.

Large generators will continue to be scheduled by the transmission system operator, National Grid, but customer behaviour, for both generation and demand will be influenced by signals from transmission, from the energy market, and from distributors. Real-time information will flow up and down the system allowing all parties to modify their signals and behaviours.

We are not forecasting any particular changes for the role that suppliers will play, with them continuing to be the key commercial contact for domestic customers. However the smart nature of future electricity networks will mean much greater interaction between customers, suppliers and DNOs at a local level.

Do you agree ?

Are there other aspects of future networks that we should be considering?

We would welcome any views or information that helps us refine our vision.

4.4 The new distribution company

Distribution companies will have to change to cope with the significant data management issues, both in relation to customer behaviour and in relation to the accuracy of asset data for system operation when dynamically managing power flows in real time.

The network will need to become more responsive to customer needs, so more automation will be required, particularly for the remote control of network equipment and the remote scheduling of customers' generation and storage.

There will also be a requirement for new commercial relationships with National Grid, small generators, network operators, suppliers and with customers or their agents.

5 Stakeholder engagement

2012 You said: Engagement needs to be accessible to any stakeholder, enabling the business planning process to be influenced by a range of people and groups regardless of their level of industry knowledge.

2013 We responded: We have developed our engagement framework against robust best practice guidelines. For more information go to www.enwl.co.uk/stakeholders

2013 We're asking: As we look forward to the next ten years and beyond, how do you think our engagement processes should develop?

5.1 Purpose

Operating the local electricity network is about providing an essential service to the region. The only way that we can do that effectively is to speak directly to our customers and stakeholders and incorporate their views into our plans.

What we do affects, and is affected by, numerous stakeholders and groups across our region. With them, we aim to:

- **engage on relevant issues**
- **listen to what stakeholders have to say**
- **respond by agreeing solutions that best fit our collective needs**

Stakeholder engagement is not simply a meaningless term at Electricity North West, it's central to how we do business. It helps us deliver, make decisions we can substantiate, and manage risk.

We have long prided ourselves on our flexibility and dynamism as a relatively small organisation, allowing us to respond quickly and effectively to stakeholder issues at a local level.

We are keen to maintain this ability to adapt quickly, but have developed our approach into a robust framework enabling us to deliver top engagement consistently across business areas, locations and stakeholders.

We are working towards achieving an accredited stakeholder engagement standard – following the principles of a robust and internationally-recognised model of best practice. This ensures an auditable strategy with enough flex to allow us to respond at different levels in a relevant and timely way, and enough structure and governance to make it meaningful and trustworthy.

5.2 Ongoing stakeholder engagement

5.2.1 Engagement in practice

In applying our framework, we have engaged with our customers and stakeholders through customer panels, online surveys, rail station and shopping centre roadshows, school visits, face-to-face workshops, 1-1 meetings and industry forums.

Engaging initially on six broad themes (reliability and availability, customer service, safety, environment, social obligations and connections) customers and stakeholders told us they wanted a service that is:

- **reliable**
- **affordable**
- **sustainable**
- **delivered with exceptional customer service**

Drilling down into more detail though further engagement, we have developed the plans outlined in this document. Through the questions highlighted in each section, we're asking for more feedback from which we will develop our final business plan for the 2015-2023 period.

When stakeholders raise an issue for debate we are committed to responding and finding a solution together – making the most of our collective knowledge and understanding.

For example, domestic and business customers tell us they want a reliable and affordable service. That means we need to look to innovative ideas to keep power flowing to their homes and make the most of the assets we've already got.

We're already pushing the boundaries in terms of demand-side response (DSR) initiatives, like our C2C programme (see our Low Carbon Future section). We're testing new ground with industry-firsts in smart grid and system management trials, and we're working with stakeholders to deliver them.

Industry specialists can help us with the technology we need but customers will have a continuing role – in learning new ways to use power, and the financial benefits that could offer.

Engaged Customer Panel

In the North West region only about a third of adults have heard of Electricity North West and only about one in eight can identify what we do. We asked recognised polling experts Populus to develop an approach which educates electricity customers about our role within the electricity industry and the issues that we face. These 'engaged customers' are able to express informed views about us.

While 'engaged customers' are less representative of the population at large, their views provide a customer perspective on particularly complicated issues, including long-term investment decisions, that 'typical' customers may be unwilling or unable to discuss because they have insufficient understanding of the electricity sector. By weighting the findings of these 'engaged customers' back to the population as a whole, their attitudes represent an approximation of the views that all customers would hold if they were better informed about the issues facing us and the electricity sector as a whole.

The attitudes of the Engaged Customer Panel represent a window on the future. It enables us to estimate the views that all customers would hold if they were engaged and made aware of the role that we play in the electricity sector. The views of the Engaged Customer Panel have been calibrated by our other stakeholder engagement, which gives broadly consistent responses. Throughout this document the views of the Engaged Customer Panel are shown in boxes like this one.

2012 You said:
Our process should be transparent and we should continue proactive engagement with stakeholders, providing feedback on how and why we've come to the decisions we have.

2013 We responded: We have established both internal and external stakeholder panels to help us develop our engagement activities further. Internally we will monitor process and provide the correct escalation for issues. Externally an independent and consistent group of representatives will challenge us on what we're doing, why we're doing it and how we're doing it, helping us improve.

2013 We're asking:
Do you agree with our current model of stakeholder engagement?

Do you think that our processes are robust enough to give us credible feedback?

5.2.2 Continuous development

Stakeholder engagement is only effective if we engage on the matters that are material to stakeholders. We've worked hard to ensure that our engagement is relevant, timely and tailored to our different groups – and have processes to allow us to adapt in line with changes in stakeholders, issues and materiality.

Our stakeholder engagement processes are constantly evolving and maturing. We recognise that we cannot be complacent. Our revitalised framework documents this process to help us effectively continue:

- **identifying new stakeholders and issues material to them**
- **responding with consistency and timeliness**
- **evaluating our responses and engagement processes to continue developing our strategy**

We intend to continue this process of stakeholder engagement throughout the years ahead to ensure that we continue to deliver the services that customers require.

5.3 Education programmes

Electricity North West has always maintained a programme of educational activities. These have focused on public safety, targeting groups ranging from school children to angling clubs.

We will continue to work to ensure that all members of our community are aware of the dangers of electricity, as well as its benefits, and develop new materials appropriate to each audience.

In the future we will need to extend our engagement programmes as we move into the low-carbon world. Currently our major contact with customers is when we are fixing faults, whilst in the future we will need to have a direct relationship with customers as we manage an active network.

We need to help customers understand the impacts of the introduction of new technology so that they can help us to derive the maximum benefit from smart grid technology.

This will be done initially through our work with schools, but will be extended as the capabilities and requirements of the low carbon economy become apparent.

One of the ways that we promote electricity awareness is through our TeachingZone website, which contains educational resources for both teachers and children. It can be found at **www.enwl.co.uk/teachingzone.**

5.4 Corporate Social Responsibility

We play an integral part in the communities of the North West. We acknowledge that this goes beyond our business vision of 'being the leading energy delivery business' and for our business to be successful, the communities we serve need to be successful.

We have a proud history of corporate responsibility work and this will continue as we go forward. To ascertain what issues matter most to our stakeholders, we regularly consult with them to help shape our corporate responsibility strategy and priorities.

We are working with groups across the North West to discover the most pressing areas of concern. Further details of our corporate responsibility approach can be found at www.enwl.co.uk/csr

6 Drivers for change on our network

There are many factors which will influence the development of our network into the 2050s. Currently there is significant uncertainty about the extent to which each of these factors will materialise. The extent to which they become reality and the interplay between them will define how our future network will look.

We have identified the key components driving our network development as being:

- **Changing customer expectations and needs**
- **Managing a safe network**
- **Stewardship of the existing network**
- **Moves to a low carbon future**
- **Accommodating new connections and load driven by regional development and growth**
- **Expansion of local renewable generation**
- **Adapting to the impacts of climate change**
- **Environmental management including the introduction of low carbon technologies such as electric vehicles and heat pumps**
- **New technology and innovation**

The following sections will detail our approach and plans in each of these areas.

Many of these themes will be interlinked so our approach, policies and procedures will be modified to incorporate the new factors into our standard ways of working.

Whilst developing our future forecasts, we have worked at a national level as part of the Smart Grid Forum working with Ofgem, DECC and other network companies to develop national scenarios. The five workstreams established within the Smart Grid Forum have looked at:

- **Scenarios for future demand on the network**
- **Development of an evaluation framework**
- **The network impacts of future demand scenarios**
- **Identification of risks**
- **Future work plans**

The outputs from these workstreams have been used in our future forecasts.

Have we identified the right sources of information to inform our view of the future?

Are there any specific issues that you believe we have overlooked?

Do you believe that there might be any development in the use or production of energy, particularly electrical energy, that we should take specific account of in our planning?

7 Customer service

7.1 Customer satisfaction

We have a high performing network supported by a customer service team who work hard to deliver great service, however we are aware that we could achieve even more in this area. The service customers receive when they contact us needs to improve. We currently measure customer satisfaction by the Broad Measure of Customer Satisfaction which is used by Ofgem to set incentives for improving performance in this area and allows comparison between other distribution network operators like us. It comprises three different components: a customer satisfaction survey; a complaints metric; and stakeholder engagement.

The customer satisfaction survey contacts three categories of customers separately;

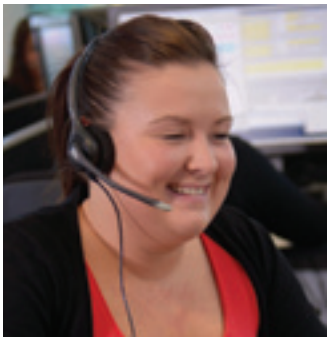
- **Connections: customers that have received a connection quotation or a completed connection**
- **Interruptions: customers that have experienced a planned or unplanned supply interruption**
- **General enquiry: customers that have raised a general enquiry with the DNO**

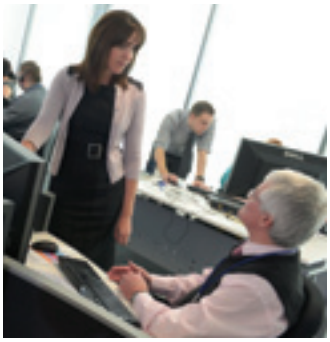
Our current performance using this measure is 76%. However, our ambition is to increase this to over 85% and to provide our customers with even higher levels of satisfaction with our services and we have produced action plans aimed at delivering this improvement.

In 2012, we invested over £1m in a new customer contact centre, developed new scripting tools for our customer agents to improve the levels of consistency in our interactions with customers and started company-wide customer service training.

Whilst we are currently performing well and have plans to do even better, we recognise that customers will also become more demanding and less tolerant of service failings. The introduction of low carbon technologies is likely to increase customers' reliance on electricity networks and the use of smart appliances which interact with our network will become more common. In addition we have seen great changes in the past decade in the way that customers communicate and access information with a huge increase in the number of mobile devices. Our customer offering will need to adapt and respond to these changing requirements if we are to maintain and build on the current levels of satisfaction. To respond to these challenges we will need to:

- **Ensure our customer data is maintained and used efficiently**
- **Enhance our customer insight initiatives to get a better understanding of customer needs as they evolve**
- **Involve customers and other stakeholders in the development and design of our services**
- **Continue to review how we measure customer satisfaction and develop, if appropriate, new methods for measuring customer satisfaction which reflect changes in how customers communicate with us and benchmark against other organisations not just utility companies**





We would be interested to hear of any views you may have on how our customer service can be measured, and what aspects of service you particularly value.

7.2 Guaranteed Standards of Performance

Guaranteed Standards are standards of customer service backed by a guarantee - customers receive a payment, either directly from us or through their electricity supplier, if we fail to meet these standards. The standards are the same for all distributors and include restoring supplies within 18 hours, giving sufficient notice of planned power cuts and responding to voltage quality issues.

There are exceptional circumstances in which the Guaranteed Standards may not apply, including events beyond our control such as severe weather.

Standards for connection services were introduced in October 2010 relating to the provision of estimates, the provision of quotations, the accuracy of quotations and the scheduling and completion of work. If we fail to meet any of these standards we will make a payment to the customer.

Our aim is always to minimise the number of occasions where customers are due a payment by providing customers with the levels of service they expect. We will also consult with customers and work with Ofgem to identify any new or changed standards that might be required to meet customers' future priorities.

We agree with Ofgem's proposal to reduce the time limit when mandatory guaranteed standards are paid from 18 hours to 12 hours without electricity as this aligns with our own customer and stakeholder feedback.

For some failures, customers are required to claim a payment though it is recognised that many customers will not be aware of the existence of the standards and whether a payment is due in particular circumstances. In response to feedback we have received during our stakeholder engagement, we plan to proactively contact customers who may be due a payment from us.

7.3 Quality of service

Reliability (power cuts) and availability (time without power) are the two key measures of service performance. Our network is generally very reliable with an overall availability of 99.99%. Over the last few years, we have made continuing improvements in the quality of service delivered to our customers. These improvements have largely come through the addition of further control technologies to our network, and improvements in our fault response process.

On average, in 2011/12, each unplanned fault affected 77 people compared to 92 five years previously. For those who did experience a fault, power was restored in an average of 92 minutes compared to 113 minutes five years before.

However, although these improvements are hard won and significant, we believe we can and should do even better. Customers consistently tell us that the reliability of their electricity supply should be our number one priority.

The main measures of our success in this area are the number of supply interruptions that last over three minutes and the length of those interruptions. This is measured in units known as Customer Interruptions (CI) and Customer Minutes Lost (CML). The interruptions measure, CI, is the total number of individual interruptions that an average group of 100 customers suffers in a year. The restoration measure, CML, represents the average number of minutes that a customer will be off supply in a year.

We plan to make further improvements in the levels of service into and through the RIIO-ED1 period. Our aim is to deliver a further 20% improvement in CIs and CMLs by 2019. This will be achieved by a variety of means, including the rolling out of new technologies and approaches developed under our ongoing research and development programmes to minimise the impact of faults. Further improvements in our operational response to those faults that do occur will be enabled by new tools and IT systems.

If we fail to meet the targets of performance agreed with Ofgem, the revenue that we are allowed to collect from customers will be reduced but if we outperform these targets we can collect additional revenue. The targets and incentive rates are reviewed at each price review.

In the financial year 2012/13 the impact of this incentive is that every time a customer is interrupted for more than three minutes due to a fault it costs us about £5.53 in reduced income, and for every minute that each of those customers is off supply it costs us an additional 28p. This money is not paid directly to affected customers, but is reflected in reduced charges to all customers through their suppliers.

We believe that the incentive scheme works well and supports our aim to provide good customer service, with continual improvement. However it is important that we regularly validate our view, and we welcome any comments on our performance and on the incentive scheme.

2012 You said: Focus on reducing the number and length of power interruptions.

2013 We set ourselves: A new stretching goal of a 20% improvement by 2019.

These measures have been in place for over 10 years now and we continue to seek ways of further improving our level of service. This mainly centres on reducing the effects of faults by the use of new remote control and automation technology; however improvements become increasingly harder as the overall performance improves. As technology advances, our network is increasingly 'smart' which means that many power cuts last between a few seconds and 3 minutes.

We asked our Engaged Customer Panel what our approach should be to these very short power cuts. 88% of the Engaged Customer Panel told us that these small interruptions were too short to worry about, with only 12% willing to meet the costs of investing to reduce the number of short power cuts and the length of these power cuts to under one minute.

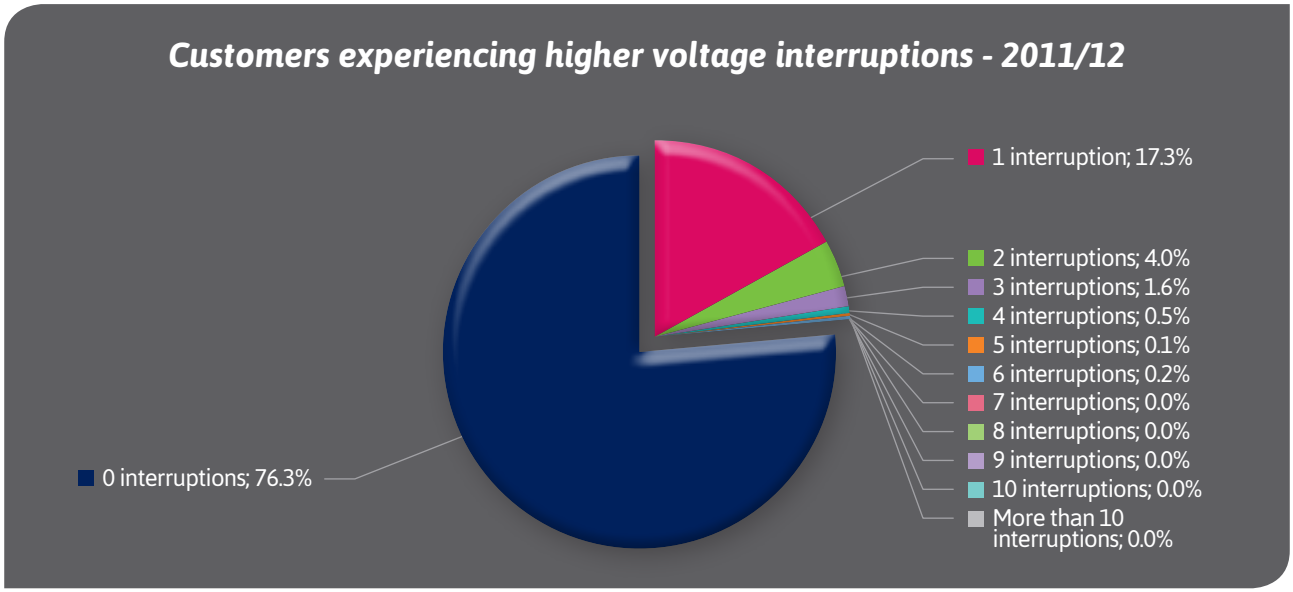
We believe that our service level on average is good and compares well to that of other DNOs, but we would be pleased to receive your views on how worst served customers should be defined, as well as any suggestions on how we should look to improve our overall service to such customers.

7.4 Worst served customers

Quality of service incentives have been very effective in encouraging companies to improve the average performance of the network, but one anomaly of this approach is that the network which supplies the worst served customers is usually deemed to be uneconomic to improve.

Worst served customers are currently defined as those who experience 15 or more interruptions caused by our higher voltage (HV and above) network over a three-year period and a minimum of three of those interruptions in each year.

Although our average performance is good, and continues to improve, we are aware that a number of customers experience relatively poor service. The chart below shows that most customers do not experience any higher voltage interruptions in a year, but that a small number can experience multiple interruptions.



Sometimes this is due to temporary issues to do with the way the network is operating at that point in time, but in some cases it is a more persistent issue, usually due to the customer's location and the characteristics of the network that serves them.

We have been undertaking a specific programme of improvements for these customers in the 2010-2015 period, targeting those that receive the very worst service. We aim to continue with this approach in 2015-2023 but expand its coverage to customers whose experience of power cuts doesn't qualify under the current definition.

We asked our engaged customer panel what, if anything, we should do to improve the service for these customers. Only 13% wanted us to do nothing, whilst 65% supported our proposal that where we could improve the quality of supply for less than £1000 per customer, we should invest this money to help such customers. A further 22% of the Engaged Customer Panel thought that we should set a new standard such that we will invest to ensure that no-one experiences 15 power cuts in any three year period and were prepared to pay an additional 23 pence per year to fund this.

7.5 Ease of connection

When a customer wants a new connection, we have to assess the practicalities of adding it to our network.

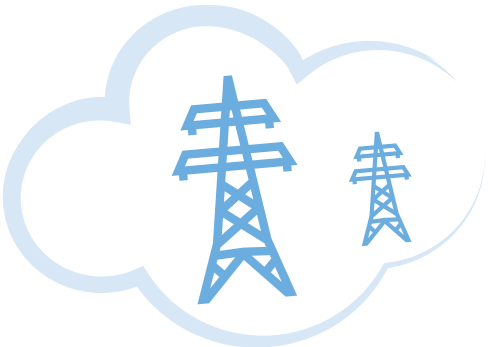
Investment will be made to enable low carbon generation and demand technologies, as soon as the market requires them. Our plan will deliver all our Guaranteed Standards of Performance (GSOP) obligations.

Between now and 2023 we will work to reduce the time taken for customers to connect to our network. We have already conducted a review of our end-to-end business processes which will deliver reductions in the time taken to connect. We will implement lean working practices and seek opportunities to identify efficiencies and reduce timescales.

We will reduce the average time to quote for a low voltage connection from an average of 9.4 working days to 8.5 working days. We will also reduce the average time taken to complete accepted quotations from an average of 78 working days to 40 days.

We will continue to utilise new means of communicating with customers and continue to develop our on-line quotation system and web-based services.

We will also continue our industry-leading work with Independent Connections Providers to encourage competition in our region and target further successful Competition Notices, demonstrating effective competition in all relevant connections market segments.



8 Safe network services

Safety is our fundamental priority. Electricity is inherently dangerous and we are acutely aware of the safety risks involved in our work. We take great steps to ensure that the public is protected from accidental contact, and that our staff and contractors are appropriately trained and equipped to do their job safely.

Whatever changes are required to our network in the future, safety will always be the first consideration of any business decision we make. We are committed to achieving the highest standards of safety for all our customers, employees and contractors.

We do not foresee any major changes in safety legislation, nor do we propose that safety should be subject to any form of comparative assessment between DNOs.

We will ensure that, at a minimum, we will comply with all relevant legislation to protect members of the public, but we will continue to strive for even higher safety standards and trial the use of new technology and techniques to this end.

Please let us have any views on our management of safety of the public from the dangers of electricity

We are committed to ensuring the safety of everyone who may come into contact with our network. We already carry out proactive safety campaigns with at risk groups and 63% of our Engaged Customer Panel supported the continuation of this activity. 29% of our panel supported the idea that we undertake a wider safety campaign targeted at all those who may come into contact with our network. This rose to 32% when customers saw that this would only add 75p to the average annual bill.

We have also had strong support for this type of activity from other stakeholder groups. In response to this feedback we have subsequently reviewed the costs of this activity and concluded that it would be possible to fund something similar to our original proposals without increasing bills for customers. We therefore propose to develop and implement a more comprehensive communications plan around network safety over the next few years.

We also asked the Engaged Customer Panel about our plans for dealing with asbestos in some of our older sub-stations. 53% of customers wanted us to identify and remove asbestos from all higher risk substations by 2015, whilst 38% wanted us to increase prices by 30 pence per year to identify and remove asbestos from all substations by 2023.

2015-2023 Proposals

2012 You said: That you expected us to continue to manage the network in a safe manner.

2013 We included: A commitment to ensure that we comply with all appropriate legislation and other requirements. One of our key priorities is to improve the security of our major substation sites in the face of an increasing threat of third party access due to theft or vandalism. We will also continue with the roll-out of a number of programmes aimed at ensuring we manage the safety risk of our assets appropriately. As a result, we have included the following commitments in our RIIO-ED1 plan;

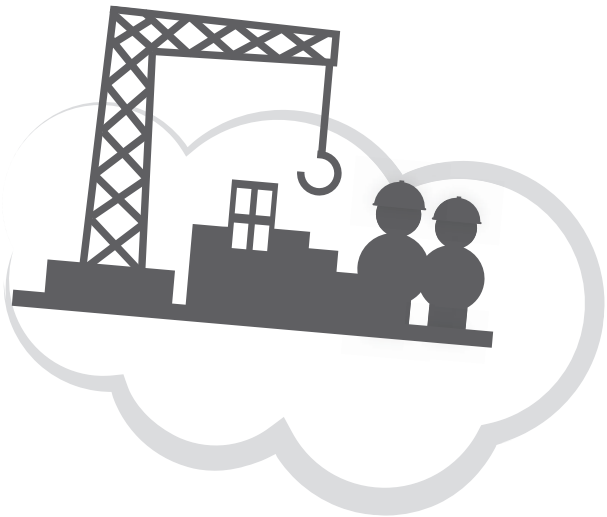
- Undertake a wider safety campaign targeted at all those who may come into contact with our network
- Improve the security at 815 of our major substations to prevent third party access
- Complete the programme of installing safe climbing apparatus for our trained staff on all our steel towers
- Complete the programme of asbestos remediation at high risk sites and complete work at a further 5,247 lower risk sites (656 per annum)

2013 – we're asking

Whether there are any further programmes that we should consider

In total, we plan to spend £30m in the RIIO-ED1 period to ensure our network is safe and continues to comply with all applicable legislation.

	Current Period	RIIO-ED1	Current Period	RIIO-ED1	
	5-year total (£m)	8-year total (£m)	Average Annual Spend (£m)		Annual Increase
Legal & Safety	15.4	29.6	3.1	3.7	19%

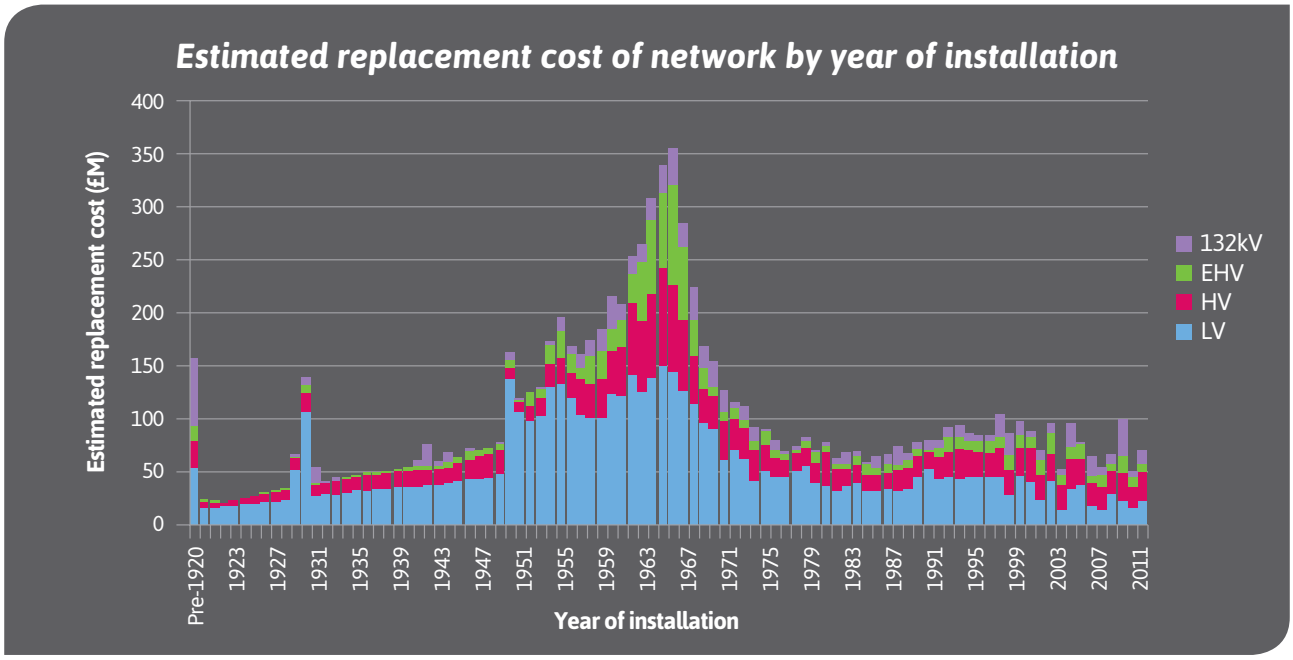


9 Stewardship of our network

9.1 Replacing our current assets

For the next twenty years the major area of investment is likely to remain the replacement of the existing legacy network, but other drivers, such as the low carbon future, may mean that this will not necessarily be through like-for-like replacements.

Much of our asset base was installed in the 1950s and 1960s and has given good service through its lifetime. Some of it is even older, dating back to the original transmission network in the 1930s and local area supplies before that. We are still finding cable assets from the 19th Century!



As with any mechanical equipment, as the assets get older, their performance may deteriorate. Over the last five years, we have invested significant resources and expenditure in developing class-leading asset management techniques to help us assess these assets as they get towards the end of their originally anticipated life. What we have found is that, through careful stewardship, many of these assets can considerably outlive their original life assumptions and continue to give reliable service into the future.

As such, it appears that we will be able to constrain the increase in asset replacement requirements above the level that age-based replacement would suggest over the next ten years or so. Our programme will be carefully targeted at those assets which have the greatest probability of failure, or whose continued operation brings an unacceptable future risk.

We will maintain the current low risk of service failure, which will be measured by stable long-term fault and failure rates and by achieving targeted improvements in the risk indices. Risk indices are determined by considering both the chance that any particular piece of equipment will fail and the consequences for safety, customer service, the environment and cost if it does fail. We will also continue to invest in our asset management systems to enable us to model and plan for the future in a manner that optimises the timing and efficiency of any investment we make.

Beyond the next ten years, even with careful targeting, replacement requirements are likely to rise significantly as the extensive first-generation network installed in the mid-20th century reaches the end of its life. Our overhead line network is relatively compact and cheap to replace, however little of our extensive cable network has been replaced and it is unclear how quickly much of this network will deteriorate and require replacing. We are investing in research and development to understand these assets better and hence better plan their long-term replacement. Above ground plant items are easier to assess and predict and many of these existing assets will need to be replaced by assets with enhanced capabilities to address network changes stimulated largely by moves to a low-carbon economy.

In 2010, we introduced a method of measuring the health of our network assets based on the outputs from our Condition-Based Risk Management (CBRM) approach – Health Indices. Using this approach, we can quantify;

- **The overall risk of the network assets**
- **What that risk would look like in the future if we didn't do anything**
- **What the planned impact of our proposed investments would be**

This modelling suggests that the overall risk in 2015 will be slightly higher than it was in 2010, but significantly less than if we hadn't invested in replacing assets at the end of their life. As we put effort into understanding the state of our assets and how this changes as they get older, we generally find that assets can live longer than previously thought. We also find that careful targeting of the worst assets can keep fault rates down, even as the asset base ages and deteriorates.

We asked our Engaged Customer Panel for their opinions on overall network risk. We explained that major power cuts, those lasting longer than 18 hours, are usually caused by major equipment failure and asked the panel what we should do in relation to such failures; whether we should hold risk constant, seek to reduce it further or save money by letting it increase. 62% of customers surveyed selected the option to invest to hold the risk of such failures at current levels. 36% of the panel would increase investment to reduce the chance of equipment failure in selected areas, even though this would add an additional £1.50 to the average annual domestic customer's bill.

2015-2023 Proposals

2012 You said: That we should try and maintain the overall state of the network but that the main priority should be reducing customer experience of power cuts. As such, you were not convinced that it was good value for money to start significantly increasing the current asset replacement rates.

2013 We included: A plan for asset replacement that also includes extensive use of asset refurbishment where work can result in existing assets living longer. This plan will result in;

- The network health as measured by Health Indices being within 10% of its 2015 position in 2023
- Overall fault numbers being within 10% of their current average position
- The following quantities of our assets being replaced in the 2015-2023 period

2013 – we're asking

If you have any views on how we should better manage our assets, or how we can flex our investment to serve customers better.

Asset	Total population	Number to be replaced	%
Woodpoles	170,992	5,932	3%
Steel Towers	4,053	563	14%
Transformers	34,475	1,418	4%
Switchgear	84,358	11,759	14%
Overhead conductor	12,923 km	451 km	3%
Underground cable	44,193 km	667 km	2%

We have also included forecasts for the replacement of the non-electrical infrastructure associated with our assets (civil works), which are often the parts of our network that customers see most frequently.

	Current Period	RIIO-ED1	Current Period	RIIO-ED1	
	5-year total (£m)	8-year total (£m)	Average Annual Spend (£m)		Increase
Asset Replacement	239.8	505.5	48.0	63.2	32%
Refurbishment	71.6	124.4	14.3	15.6	8%
Civil Works	26.3	88.3	5.3	11.0	95%

This work, together with increased refurbishment and life extension activity, will maintain overall network risk at an acceptable and affordable level over the 2015-2023 period.

9.2 Resilience

In addition to looking at performance under 'normal' conditions, we have been increasingly looking at the performance of the network in more extreme circumstances. Recent events such as the flooding incidents in 2005 and 2007, 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.

During 2010-2015, we will have installed additional flood protection at 31 major substation sites, supplying over 500,000 customers. Our aim is that by the end of 2023, all our major substations will be protected against a once in a 100 year flooding risk in line with the national specification ETR138[3]. This includes provision for the forecast impact of future climate change as outlined in our 2011 Climate Change Adaptation Report[4].

Following a national risk assessment, we will be undertaking further hardening works at a small number of our most strategic substation sites, to ensure they are suitably protected against malicious attack that could result in a widespread loss of supplies for a long time. Similarly, we are also undertaking a programme of network reconfiguration where we have identified network vulnerabilities, similar to those that caused a widespread blackout in London and the South East in 2009 due to the effect of malicious damage. Both these programmes will continue into RIIO-ED1.

With regard to the potential re-starting of the network from 'black', this is a national initiative to ensure the energy network as a whole has an appropriate amount of resilience to cope with such a circumstance. This largely involves ensuring substations have appropriate battery back up and that communications systems still work in the event of a complete mains power failure.

We asked our Engaged Customer Panel about the priority we should give to improving the resilience of our network against a range of potential risks, including protection against flooding, storms and terrorism. Recent events elsewhere in the UK have shown that incidents at a key pinch-point in our network (such as where cables come together to cross a river) can cause long-lasting and widespread disruption. We also asked the panel what they thought our approach to these sites should be.

68% of the Panel would like us to protect the most important substations from floods that might occur once every 1000 years, and all other major substations from the type of large floods that might only be seen once every 100 years, with only 14% wanting us to spend more.

56% of customers on the Panel wanted us to invest in protecting sites that serve very high numbers of customers only from terrorist attack, as we are currently doing. 29% thought we should spend another 15 pence per year on average to protect all sites that serve major urban areas.

64% of customers supported our plans to continue to invest to strengthen the resilience of our most important overhead lines to high winds and storms. We could extend our programme of investment beyond the most important overhead lines to include all lines serving major population centres at a cost of 15 pence per customer per year and 25% of customers supported this option.

64% of the Panel wanted us to identify high risk pinch points and remove them, with 29% keen that we extend this approach to cover medium risk pinch points at an additional cost of 15 pence per year.

[3] Energy Networks Association ETR 138:2009: Resilience To Flooding Of Grid And Primary Substations

[4] Electricity North West Climate Change Adaptation Report – 15 June 2011

2015-2023 Proposals

2012 You said: That we should continue to increase our investment in ensuring that the network is resilient against extreme events. Your highest priority was to ensure increased protection against the impact of flooding events.

2013 We included: In our plans increased provision for making the network more resilient to extreme events, specifically

- Installing greater physical security at our most strategic sites (those supplying the highest number of customers)
- Ensuring all 517 of our major substations have backup battery capacity of 72 hours
- Protecting 25,469 sites (3144 per annum) against metal theft, up from original plans to protect 16,980 sites (2122 per annum)
- Completing our programme of flood protection of major sites at risk of 1/100 year flood events covering 56 substations supplying around 800,000 customers[5]
- Re-configuring the network at four key locations to ensure redundancy in the event of a major incident

2013 - we're asking

For any views you may have on this area. We recognise that planning for truly exceptional events is not straightforward, and that judgements have to be made about the right levels of investment to guard against extremely unlikely, but potentially catastrophic events.

Overall, we plan to spend £36m in the RIIO-ED1 period on all forms of resilience.

	Current Period	RIIO-ED1	Current Period	RIIO-ED1	
	5-year total (£m)	8-year total (£m)	Average Annual Spend (£m)		Increase
Flooding	7.6	18.6	1.5	2.3	53%
Other - Resilience	1.8	17.7	0.4	2.2	450%

Metal theft is a major and growing problem for our network and is extremely dangerous for the criminals, our people and very occasionally the public. We asked our Engaged Customer Panel what our approach to metal theft should be. 62% of the Panel supported our proposal to install upgraded security measures at all high risk sites by 2015, with 32% of customers supporting the installation of upgraded security measures at all high and medium risk sites by 2023, decreasing further the chance that thefts are successful.

[5] Note that customers may be supplied by more than one substation

10 Moving to a low carbon future

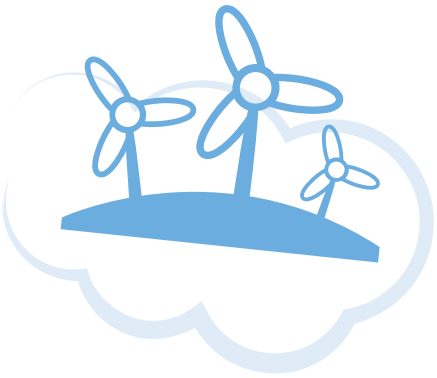
10.1 Low carbon future and smart grids

One of the major differences between the network that will be in place in the 2050s and the network of today is that it will have been adapted to respond to the needs of the low carbon future.

In order to meet government targets to "reduce greenhouse gas emissions by 34% by 2020 and by at least 80% by 2050, compared to 1990 levels"[6] there is an expectation that emissions cuts within the UK energy system will have to be greater than 80%.

In the electricity 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**



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.

Our network has been historically designed on the basis that electricity flows in one direction, 'down' through the voltage levels, so the way that the network is designed and managed will need to be changed to facilitate the introduction of significant quantities of local generation.

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 when local generation produces electricity; for example photovoltaic generation does not generate after dark.

Consequently we will need to change from a passive 'one-way' network, to a network where we actively manage the flows of power. The term for the group of technologies which will enable us to match supply with demand in the optimal manner is a 'smart grid'.

The introduction of smart meters will be one of the tools in the delivery of smart grids. We are currently working with government and industry partners to ensure that the smart metering programme meets our future needs.

[6] HM Treasury - Energy Market Assessment - March 2010

We believe that the low-carbon agenda will drive significant change to our business in the near future. We need advice and help from all our stakeholders in finding the right way forward. We expect that our strategy will be informed by significant interaction between us and our stakeholders, and we welcome any views you have now, particularly on how we should engage on these matters in the future.

There are a wide range of scenarios for the capability and complexity of smart grids. Issues are likely to include:

- **Management of smart domestic appliances to ensure that they are run at times of low demand on the network, whilst still fulfilling their function in a timely manner with no inconvenience for customers**
- **As the local generation market grows significantly then the distribution companies will have to take on the role of system operators, instructing generators when to run, and customers to reduce (or even increase) demand, in order to balance supply and demand. Currently this is only done at the transmission level**
- **As well as matching supply with demand, the implementation of demand-side management, where customers agree to reduce load at times of high demand on the network, will also avoid the need to reinforce our network**

The development of smart grids will be driven by our customers' changing needs and we will work with customers and other stakeholders to identify those needs. In parallel, we will work with our partners and suppliers on research projects such as those supported through the Low Carbon Networks Fund (LCN Fund) to ensure that we can provide the most effective solutions to customers' requirements.

The Low Carbon Networks Fund was introduced in 2010 to promote radical changes in electricity networks. The fund allows up to £500m to be spent nationally over a five year period to try out new technology, operating and commercial arrangements, with the objective of helping all DNOs to understand what they need to do to provide security of supply at efficient cost as the UK moves to a low-carbon future.

In 2011 and 2012 Electricity North West was awarded £19m from the Low Carbon Networks Fund to undertake the Capacity to Customers (C2C) and the Customer Load Active System Services (CLASS) projects. C2C aims to provide new capacity to customers at more affordable prices, whilst CLASS involves customers in the operation of the electricity networks with the aim of reducing our costs to serve. These projects are described below.

C2C

With electricity consumption forecast to double by 2050 new and innovative ways of meeting increased demand will be required. Traditionally the response to an increase in demand would be to put "more copper in the ground" - installing new assets to cope with the increase. To double our network capacity using traditional methods could cost over £10 billion.

Electricity distribution networks in the UK are built to meet a planning standard known as Engineering Recommendation P2/6. At higher voltages the network is designed to have sufficient spare capacity that if a circuit fails the flow of electricity can immediately be transferred to a parallel circuit with the result that the customers do not see an interruption in supply. This is equivalent to having a motorway hard shoulder the width of the carriageway itself.

One of the consequences of building to this standard is that on most higher voltage circuits less than half the capacity is being used at any one time. The C2C project is designed to demonstrate the potential release of this spare capacity through adaptive network reconfiguration techniques and real time management of demand and generation, whilst maintaining security of supply. Together with new innovative customer commercial arrangements, this method will be part of a move from passive to active network management for network operators.

This is like the opening up of the hard shoulder of the motorway but putting in more monitoring and control equipment to ensure it is managed safely.

The proposed method will reduce the need for traditional reinforcement, significantly cutting the cost and time required to provide new connections whilst also enhancing quality of supply for customers.

An initial trial has been planned in 2013 for several hundred representative HV circuits across our network, serving approximately 310 000 customers, which is close to 13% of our customer base. The project will involve major energy users in our region signing up to a trial which will offer incentives to switch their consumption patterns and prioritise their energy usage. If successful, it could lead to reduced costs for new connections and new income streams for participating businesses.

CLASS

Instead of applying traditional reinforcement techniques to create new capacity for the expected growth in demand from the decarbonisation of heat and transport Electricity North West along with other network companies is exploring ways of persuading customers and/ or customers' appliances to consume less at times of high demand.

The C2C project investigates, through innovative commercial arrangements, the willingness of customers to enter into new operating regimes, whereas the CLASS project explores the use of voltage regulation to provide a change in demand. CLASS aims to investigate and describe the varying relationship between voltage and demand. For example we know that a kettle and a washing machine react differently to a change in voltage, but at a network level we are unsure by how much the network demand changes for a given change in voltage across a day, a season, and a year.

The CLASS project aims to define the relationship between voltage and demand across a yearly cycle and to investigate two techniques showing how the demand response could be harnessed. CLASS aims to show that network operators can 1) reduce the demand on the network at times of high demand to delay the need for reinforcement; and 2) provide a demand response to National Grid, the GB system operator, to manage the national balance between generation and load system, and consequently the frequency.

The trial will involve 60 primary networks, serving approximately 350 000 customers, which is close to 17% of our customer base. If successful, it could lead to lower costs for new and existing customers from reduced network reinforcement costs.

10.2 New technology and innovation

A key enabler of the move to a low carbon future is the introduction of new technology. Electricity North West has been active in investing in research and development, spending over £18m in the last five years to support 60 innovative projects. We are planning to expand our research activities particularly in relation to smart grids and the challenges of future networks.

In the wider community, a wide range of new technologies have been developed over the last 40 years, ranging from consumer appliances to industrial processes. We expect the introduction of new technology to accelerate over the next forty years, and this creates uncertainty in our long-term plans.

For example, new consumer products may be popularised in the same way that mobile phones, mp3 players and large screen televisions have become commonplace over the past few decades. The introduction of similar types of appliances would serve to drive up demand. Conversely new technologies may be introduced which will make appliances (particularly white goods) cooperate with distribution networks to drive down demand.

We expect that our network infrastructure will appear largely the same as it is today, but the new technologies we introduce will help us to manage it more effectively through greater use of real-time data and a greater ability to operate the network remotely, although further work is needed to understand the full extent of these potential benefits.

Through continuing investment in innovation we will work with our partners in industry and academia to seek new solutions to network challenges.

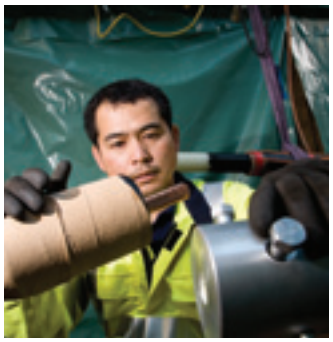
In recognition of the ever-increasing need to enhance the safe operation of our network and provide enhanced security of supply to our customers we have developed a remotely controllable Link Box Switch.

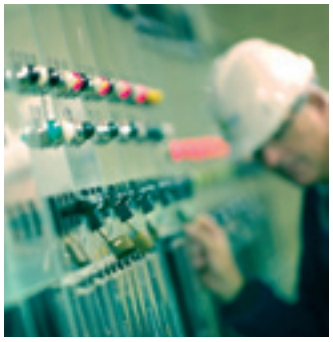
Link boxes are underground chambers that are commonly used across UK distribution networks to enable engineers to restore supplies to customers following faults on low voltage networks. These link boxes are placed at the end of underground circuits and provide a means to link different circuits from different substations so that if a fault appears at one substation, supplies can be restored to customers from an alternative source whist the substation fault is repaired. The current method of linking these circuits is for an engineer to reach into the underground chamber and insert a solid metal link into a potentially live circuit. The Link Box Switch device is normally in the 'open' position and once safely inserted in place rather than a solid link, engineers can stand back and use a remote control to 'close' the Link Box Switch so restoring supplies, Following the successful repair and the re-energisation of the faulted substation an engineer can then remotely 'open' the Link Box Switch and remove the device to be used again elsewhere.

Do you believe that our approach to innovation and change is sufficient?

Are there other avenues we should be researching in relation to change and innovation?

11 New connections





11.1 Factors driving growth

As well as maintaining the current performance of our network we also have to plan for changes of use of our network. Whilst energy efficiency measures will act to reduce the amount of energy used, other pressures will act to increase electricity demand. These include:

- **Population growth and movement**
- **Economic growth and/or economic regeneration**
- **Increased use of air conditioning**
- **Electricity displacing gas as a source of heating**
- **Future use of electric vehicles, displacing petrol and diesel**

The increase in population, plus the increased intensity of electrical use is expected to lead to a major increase in electricity demand. Government estimates suggest that electricity demand could double by 2050. We will have to develop our network to meet this expected growth through a mix of our business-as-usual practices and new approaches where non-traditional loads appear.

As well as managing new connections associated with increases in demand we also have to cater for the increased amount of local generation that will connect to our network.

11.2 Customer connections

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 of these will be driven by a combination of population and economic growth factors. Customer connections is a competitive market area with a number of different service providers capable of providing quotations and making new connections to our network. Most connections however will ultimately be adopted as part of our network.

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 see growth of 12%, with increases of around 7% in the remainder of our area.

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.

Whilst less than 10% of our customers are commercial and industrial, they consume almost two thirds of the electricity. Their consumption over the last few years has fallen as a result of the economic recession.

Over the longer term, DECC have assumed an overall annual GDP growth of 2.5% to 2050 in their '2050 Pathways Analysis' work, and this is reflected in our assumptions for the North West.

Have we identified the right sources of information to inform our view of the future?

Do you believe that we are planning a sufficient response to the challenges of the future?

Should we be taking any specific actions in relation to energy efficiency, or in measures to help manage customers' use of electricity?

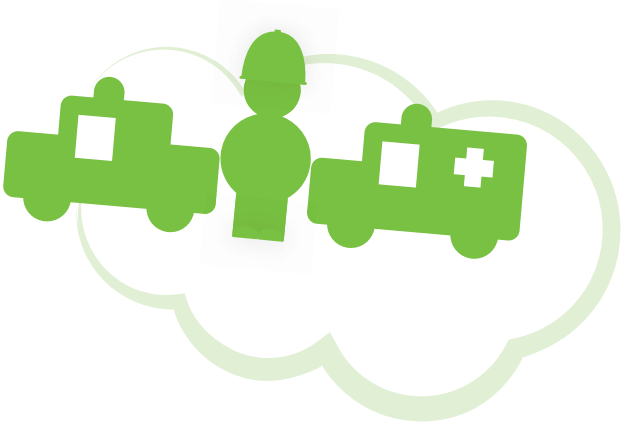
11.3 Distributed Generation (DG)

The amount of local generation (also called distributed generation) that connects to our network is largely driven by the economic rewards for customers and developers. Many customers also want to connect renewable sources of generation to play their part in reducing their carbon impact. The introduction of the Feed In Tariff (FiT) has driven an increase in the amount of DG connected to our network, particularly solar powered photo-voltaic cells, and is also supporting growth in the numbers of small wind turbines that are being connected.

We expect that government incentives will continue to be the major driver for the introduction of DG until such time as the technology available becomes commercially competitive with other forms of generation.

11.4 Reinforcement

Where new connections are added to the network, we may need to reinforce the network so that it will cope with the additional demand. In addition, we need to reinforce the network where the load from existing connections increases to the extent that assets become overloaded. We are investing effort in developing new tools to predict where these may occur in a more complex environment. We are also carrying out trials of non-traditional responses such as Demand-Side Response (DSR) schemes to defer or avoid the need for network investment.



As new customers want to connect to the electricity network, the capacity of our network is used up. We asked our Engaged Customer Panel who should pay to increase the capacity of the network when it becomes full. 35% of customers initially supported the idea that we should build a network that will cope with any requirements, with the costs shared amongst us all. However, on understanding the bill impact of this proposal, support dropped to 18%, with 61% supporting the proposal that individual connection customers should pay for the equipment they are the sole users of, and the costs of rest of the network should be shared amongst us all.

Similarly we proposed that where renewable power generators, such as wind farms, want to connect to our network they should pay for the equipment they are the sole users of, and the costs to strengthen the rest of the network should be shared amongst us all. Whilst 60% of customers on our Engaged Customer Panel supported this approach, 36% supported the idea that the renewable generator should pay for all the reinforcement costs.

2015-2023 Proposals

2012 You said: That you expect us to be able to provide adequate capacity in the future for new connections and changes in demand, but you were not convinced that it was currently worth investing significantly in additional speculative capacity.

2013 We included: Provision for ensuring that the network is able to accommodate additional demands, and to resolve some of the technical issues that are likely to arise from the extensive connection of distributed generation. This includes:

- Installing larger capacity transformers and/or additional interconnection at 14 of our major substations
- Replacing switchgear at 25 locations where its current rating is likely to prevent the extensive connection of distributed generation in those locations
- Providing for the resolution of voltage and harmonic issues expected to arise based on the forecast numbers of electric vehicles and heat pump installations

Our planned spending on reinforcement is:

	Current Period	RIIO-ED1	Current Period	RIIO-ED1	
	5-year total (£m)	8-year total (£m)	Average Annual Spend (£m)		Increase
Reinforcement	76.7	135.2	15.3	16.9	10%

11.5 Diversions

Another activity that is largely driven by customer activity is diversions. This is where we have to move our assets because the current route becomes unavailable, for example through the termination of the legal rights to locate our equipment, or because of the construction of a new highway.

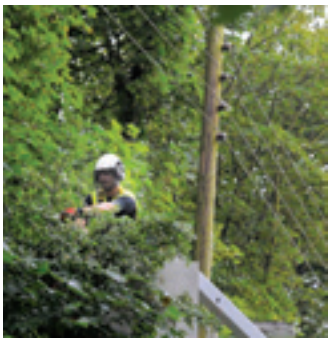
We have consulted with local authorities and developers to judge the likely activity in this area in the 2015-2023 period. This has revealed a number of major planned infrastructure projects in our region which we have taken account of in our forecast. As we have little discretion over this activity, or control of the activity levels, we have not consulted on this area in our domestic consumer surveys.

We have engaged with a wide range of stakeholders on the potential new developments in the North West that may require some diversion of the existing network. A key driver of diversion work in the last few years has been the extension of the Metrolink system across Greater Manchester. This work is coming to a close, although the Metrolink second city crossing in the centre of Manchester and an extension of the line to Salford will cause some additional diversion activity. Other key drivers of diversion work that stakeholders have flagged to us include the work we need to do to support Network Rail's electrification programme and the M6 to Heysham bypass.

2015-2023 Proposals

Our planned spending on diversions is:

	Current Period	RIIO-ED1	Current Period	RIIO-ED1	
	5-year total (£m)	8-year total (£m)	Average Annual Spend (£m)		Increase
Diversions	16.8	37.6	3.4	4.7	38%



12 Managing environmental impacts

Our network and the work we undertake on it affects the environment in a number of ways, whether through noise, visual impact, waste materials or potential contamination. We also need to take account of the potential impact of climate change on our network, as well as mitigating our own contribution to carbon emissions.

12.1 Climate change mitigation

To mitigate the impact of climate change we are working to reduce our own carbon emissions and also to facilitate the connection of low-carbon generation to our network (discussed earlier in the section on 'Low-carbon future and smart grids').

Like all infrastructure operators, many of our activities result in CO_2 emissions, whether from the vehicles we use to get around, the buildings that house our staff or emissions from our equipment. We have been reporting our carbon footprint for a number of years now and publish an annual report[7]. We have set ourselves the target of reducing our footprint by 10% from its 2010 level by 2020 and will report annually on our progress towards this aim. The major initiatives to help us achieve this are the phased introduction of electric vehicles into our transport fleet and improvements from more efficient energy use in buildings.

Electricity losses on the distribution network represent a significant part of our carbon footprint and we are looking at a number of technical approaches which can reduce these. These include:

- **Fitting capacitor banks to the LV and or HV network – this has both voltage regulation and losses benefits**
- **Fitting harmonic suppression equipment**
- **Buying low or super low loss transformers**
- **Buying the largest size cable available**

These initiatives will be subject to a robust cost benefit analysis to ensure they deliver overall value to customers.

12.2 Climate change adaptation

Climate change is expected to result in higher average temperatures, drier summers, wetter winters and a greater incidence of extreme events over the coming years. The Department of Environment, Food and Rural Affairs (Defra) is keen to understand how the country's infrastructure will cope with these changes in conditions.

Electricity North West has worked with other electricity network companies to identify any changes which may be needed to industry standards, and to implement necessary programmes of work to introduce them. In June 2011 we submitted our first report to Defra under the Climate Change Adaptation Reporting Power, which summarised the work undertaken to date and in particular how it will affect our network.

The biggest potential impact is expected to be the increased risk of flooding to our substations. We are already taking steps to install new, and improve existing, flood protection to major substations located on floodplains.

Initial studies suggest that other impacts will be of a smaller scale and any necessary modifications to our network will be built into our long-term maintenance, asset replacement and reinforcement programmes.

? We would be pleased to hear any views that you have on climate change, our role in mitigating it and adapting to it.

[7] http://www.enwl.co.uk/docs/about-us/carbon-footprint-report.pdf

12.3 Introduction of electric vehicles

In the transport sector, the major initiative to reduce CO_2 emissions will be the introduction of electric vehicles. If the take-up of electric vehicles reaches government targets then this will present a major challenge to electricity networks.

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, so that the overall load profile is optimised over the day.

DECC's '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 electric and plug-in hybrid vehicles, with 20% covered by fuel cell vehicles.

The Government has introduced the 'Plugged-In Places' programme which provides funding to support the installation and trialling of recharging infrastructure. The trials are designed to demonstrate how electric vehicle charging will work in practice in a range of different settings as well as testing innovative technologies such as rapid charging, inductive charging and battery swap.

It is planned to install 4000 charging points nationally under the scheme, which will inform the future development of a national recharging infrastructure.

12.4 Introduction of heat pumps

The introduction of heat pumps will provide a 'greener' form of heating, reducing carbon emissions associated with traditional heating systems, but with a major impact on our network.

Heat pumps extract heat from a natural source such as the ground or air and release it in another location at a higher temperature. This heat can then be used to heat homes or hot water.

In heating applications, heat is removed from ambient air, soil or bedrock using a heat 'collection loop' and delivered to where it is needed, usually into the heating and hot water systems of a house, providing a low emission, renewable heating system. Heat pumps are well established in other European countries and are becoming more popular in the UK. We expect them to become more common in our area, primarily on new housing developments.

Heat pumps do have an impact on the environment as they need electricity to run but they use less electrical energy than the heat energy they transfer. Typically one unit of electricity is needed to deliver two to three units of heat with a heat pump.

Heat pumps also need high electrical currents to start up so where a heat pump is being added to an existing home the supply may need to be reinforced before it can be used. Heat pump deployment may have a major impact on our network. We would welcome your views on the potential uptake of this technology.

We asked our Engaged Customer Panel for views on how quickly we should prepare for the changes that may result from the connection of more Electric Vehicles and Heat Pumps. 20% of the Panel thought that we should only respond to customers' requests when they occur - even if this slows down the move to a low carbon North West. We proposed that we should invest in the network so that, for example, anyone who wants an Electric Vehicle in the North West could connect it by 2031 without there being a need for additional works to be undertaken first, but this would be 90 pence more expensive for the average customer. This proposal was supported by 63% of the Engaged Customer Panel. A further 18% thought that we should invest, adding a further 90 pence to bills, so that anyone who wants an Electric Vehicle in the North West could connect it sooner, by 2023.

In assessing the likely uptake of low carbon technologies we have engaged widely with our regional stakeholders. This work has indicated that the general outlook for economic activity in the North West is likely to be lower than the national average. We are also aware that Government funded stimuli such as the Domestic Renewable Heat Incentive have been set at a level that favours 'off gas grid' areas. The combination of these economic drivers and stimulus packages indicates that low carbon technology take up will be lower in the North West than the national average.

We are currently planning to ensure that the network is sufficiently robust to cope with the additional burden that the take-up in low carbon technologies will cause. We have worked closely with the Department of Energy and Climate Change (DECC) to understand the implications of their forecasts for the region. DECC have proposed that they will stimulate low carbon technologies through a range of incentive mechanisms, including the Renewable Heat Incentive. We have therefore based our plans on their lowest take-up scenario.

When heat pumps and electric vehicles are introduced, they could have a dramatic effect on customer demand. Our challenge is to manage the introduction of this new load, so it can be matched to the available generation.

12.5 Undergrounding of overhead lines

In terms of the visual impact of our network, we plan any new installations to be compliant with current planning requirements. Traditionally, the decision on whether to use an underground cable or an overhead line to supply customers has been based on considerations of cost, safety and location. Underground cables are significantly more expensive than overhead lines, but it is more appropriate to use them in certain parts of our area.

In conjunction with our stakeholders, we established a programme of undergrounding for visual amenity in 2005. Up to £1m each year has been available to spend on removing overhead lines and replacing them with underground cables in National Parks and Areas of Outstanding Natural Beauty, in order to improve the visual amenity.

This programme has successfully removed lines from a number of prominent sites and has become a model of public-private partnership working. With the current level of funding we expect to be able to underground an average of 10km each year.

We have worked with our stakeholders to implement programmes of work reflecting local priorities. We will continue to replace existing overhead lines with underground cables in conjunction with relevant parties where funding is available.

We appreciate that overhead lines and pylons can detract from the natural environment in our national parks and other areas of natural beauty. In the past, we have invested in placing power lines underground to improve visual amenity. We asked our Engaged Customer Panel if they thought we should we continue investing, accelerate our investment, or stop it. 65% of customers thought we should continue to spend the current levels on the areas identified by local environmental groups. A further 20% thought that we should double the current investment levels (up to £2 million per year) on the areas identified by local environmental groups even though this would add an additional 15 pence per year to the average bill.

2015-2023 Proposals

2012 You said: That you were supportive of continuing the current programme of selective undergrounding in sensitive areas but did not prioritise a significant upscaling of the programme.

2013 We included: In a continuation of the current scheme in our forecasts. We assume that priorities will continue to be guided by our regional partners representing the individual areas.

Our proposed spending on the undergrounding of overhead lines is:

	Current Period	RIIO-ED1	Current Period	RIIO-ED1	
	5-year total (£m)	8-year total (£m)	Average Annual Spend (£m)		Increase
Undergrounding	5.3	10.0	1.1	1.3	18%

12.6 New nuclear in Cumbria

In July 2011 the government approved the National Policy Statements for Energy which had announced that two sites in our area are "potentially suitable for the deployment of new nuclear power stations by 2025". These are the existing nuclear sites of Sellafield on the Cumbrian coast and Heysham in Lancashire.

NuGen has applied to National Grid for the connection of a 3.6GW nuclear power station at Moorside, near Sellafield. To enable this connection, National Grid needs to provide the security of 4x400kV transmission circuits; however it currently has no assets in the west of Cumbria.

National Grid has considered six options for this connection. One of these has a significant effect on Electricity North West's 132kV distribution network whereby National Grid proposes to establish a 400kV double circuit overhead line around the west coast of Cumbria. Our current understanding is that this solution is the lowest overall cost and hence is considered the most likely to proceed. We are working with National Grid and the local planning authorities to find an optimal solution for all stakeholders.

To secure planning consents for their 400kV transmission lines, National Grid will have to locate the lines in the optimum position aesthetically. This may necessitate the removal of a significant proportion of Electricity North West's 132kV tower lines in Cumbria. To maintain existing customer supplies, National Grid would then have to construct new Grid Supply Points (GSPs) to feed our local networks.

We continue to undertake discussion with National Grid to understand the impact on our network and to agree cost apportionment principles. In developing our forecast we have assumed that North West customers would only pay for the ongoing assets that they use and benefit from, for example replacing old assets close to end of life with brand new ones or any change in reliability as a result of the project. We have assumed that North West customers would not pay for any 400kV assets, any dismantlement costs or any temporary or enabling works.

The exact requirements and timing of any work required of Electricity North West remains uncertain and subject to negotiation with National Grid and the planning process. We may not include any costs for this project within our final business plan on the assumption that the activities that would be funded by North West customers will only be agreed and included into price projections once details of the ultimate solution are more certain.

2013 – we're asking

for any views that stakeholders have on our existing plans and on how this initiative should be taken forward.

2013 – we're asking

Whether there are any other environmental issues that we should be addressing?

12.7 Other environmental effects

Electricity North West will always aim to minimise the effect that our network has on the environment. For example we use oil and gases as insulation in our cables and equipment, and we need to ensure that this does not escape into the environment. In particular we will be looking at options to minimise the release of sulphur hexafluoride (SF6) from plant and oil from oil-filled cables. This could involve a future programme of replacement of these assets.

At our Whitegate substation we have replaced aging SF6 equipment with up to date technology which has significantly reduced our carbon footprint. We will continue to use environmental impact as one of the criteria when evaluating projects.

2015-2023 Proposals

2012 You said: That you were supportive of ongoing efforts to minimise environmental impacts, but were not in favour of significant additional programmes.

2013 We included: Programmes to maintain our approach to minimising consequential environmental impacts. These include:

- Installing oil containment bunds at 224 of our substations to prevent oil leaks
- Installing noise enclosures on 18 of our noisiest transformers
- Completing contaminated land clean-ups on 16 of our sites, many of which are located on the sites of former power stations

Our planned spending for environmental drivers is:

	Current Period	RIIO-ED1	Current Period	RIIO-ED1	
	5-year total (£m)	8-year total (£m)	Average Annual Spend (£m)		Increase
Environmental	2.8	9.4	0.6	1.2	100%

67% of our Engaged Consumer Panel supported a proposal to introduce a proactive programme to replace 20% of our oil-filled cable network by 2023. A further 27% would spend an additional 45 pence per year to increase this to 33% of the oil-filled cable network.

13 Social impacts

We are aware that some of our customers have special requirements, particularly when the power goes off. We maintain a Priority Services Register (PSR) of vulnerable customers and have teamed up with the British Red Cross to offer enhanced services to these customers at the time of fault. We are currently reviewing our processes to determine what additional service levels we can offer to our Priority Service Register customers as a result of the stakeholder feedback we have received in this area.

In addition we recognise that fuel poverty is becoming a major issue. We will engage with local authorities, agencies and suppliers to determine how we can assist in helping fuel poor customers, for example, by understanding their energy usage and increasing their awareness of energy efficiency options and possible alternative forms of energy.

As presented earlier in this document, we will continue to proactively engage with the public and with schools on public awareness education on the dangers of electricity. We will operate and maintain our assets safely, in line with all applicable legislation.

We asked our Engaged Customer Panel about these service we should provide to vulnerable customer groups and 54% supported our proposals to work with voluntary bodies to provide them with support when there is a power cut and prioritise restoring power to them.

14 Investment summary

We are grateful for the input we have received to date and this has shaped our future plans and priorities to the extent that we are now publishing a much greater level of detail in this special edition of our strategic direction statement. In summary, our network investment expenditure plans for the next ten years are:

	2010-2015	2015-2023	Current Period	RIIO-ED1	
	5-year total (£m)	8-year total (£m)	Average Annual Spend (£m)		Increase
Legal & Safety	15.4	29.6	3.1	3.7	20%
Asset Replacement	239.8	505.5	48.0	63.2	32%
Refurbishment	71.6	124.4	14.3	15.6	9%
Civil Works	26.3	88.3	5.3	11.0	110%
ESQCR[8]	28.1	0.0	5.6	0	-100%
Flooding	7.6	18.6	1.5	2.3	53%
Other Resilience	1.8	17.7	0.4	2.2	515%
Reinforcement	76.7	135.2	15.3	16.9	10%
Diversions	16.8	37.6	3.4	4.7	40%
Undergrounding	5.3	10.0	1.1	1.3	18%
Environmental	2.8	9.4	0.6	1.2	100%
TOTAL	492.2	976.3	98.4	122.0	24%

The overall impact of our planned programmes is to increase the levels of network investment in the 2015-2023 period. Most of this increase comes from addressing the needs of an ageing asset base, improving the resilience of the network to extreme events and accommodating the needs of the transition to a low carbon economy.

[8] ESQCR is a specific programme to meet the requirements of the Electricity Safety, Quality and Continuity Regulations. It will be completed in 2015.

15 Price impact

15.1 Efficiency improvement programme

Having explored the continuing and changing needs of our customers and stakeholders and the investment we plan to make to respond to these needs, we must also ensure that all of this investment is delivered efficiently.

We have a dedicated and talented team of engineers, planners, project managers and procurement specialists who are working to develop innovative ways to manage capacity growth, connections – particularly low carbon – and fault identification and remedy.

Opportunities in network automation, real-time data capture and remote control of key network functions are enabling a more efficient approach to replacement, reinforcement and other capital works. We believe this is essential if our network is to adapt to changing customer needs and deliver this at an affordable cost. This team is also delivering incremental improvements to our design and engineering practices through, for example, the adoption of standardised approaches to the replacement of common asset items with the following benefits:

- **Reduced bespoke design effort and hence reduction in design costs**
- **Standardisation of work procedures and materials requirements**
- **New techniques that allow targeted replacement of individual components, speeding up jobs, reducing risk and lowering cost**

Work has been completed on developing this approach for all the lower voltage plant on our network and our cost forecasts include the projected benefits of applying the 'standard solutions' approach to these assets. Work is ongoing to extend a modular design approach to our larger assets, which is expected to release further efficiencies over the next few years.

It is important, though, that we maintain an appropriate balance between support functions and our field force. Productivity, efficiency, output delivery and cost control are fundamental characteristics of delivering a value-for-money service to our customers. We have learnt from the best by benchmarking ourselves against the competitive asset management market and used this learning to drive to be a high-performance organisation. We have reduced the costs of our support functions and our plans include further efficiencies that reduce costs by at least 1% each year. Our cost base is kept under constant scrutiny by applying some simple principles;

- **Focussing on activities that provide or support the provision of service and value to our customers**
- **Eliminating duplicated effort or abortive work**
- **Ensuring our organisation operates as an efficient whole, rather than a sum of discrete parts**

We have identified a number of strategic transformation projects and will implement them over the next few years to make a significant improvement in the efficiency of our back-office data handling and IT system costs. Specific attention will be directed to work planning and management and integration of this core operational information with our financial systems. The objective is to streamline the flow of data between the 'field' and the back-office and remove much of the reprocessing necessary to meet our reporting obligations.

Our transformation programme has been designed with the customer in mind. We have identified opportunities to improve customer service through the innovative combination of process re-engineering, organisational development and investment. This is the right thing to do for customers, and we are committed to ensuring it delivers value for money and service excellence.

All businesses require a minimum level of overhead to ensure proper governance, compliance and control. Electricity North West expects its transformation programme to deliver benefits across the range of central service costs such as Finance, Human Resources, Communications and Regulation. Key improvements in workflow, management information and transaction processing will allow us to deliver better services with a progressively reducing central support cost.

15.2 Financing our investments

Repairing and replacing existing parts of our network and extending or reinforcing the network to meet new or increased demand for electricity all requires significant investment. As the cables, transformers and other assets tend to last for very many years then it is right that the costs of this investment are spread over a long period of time. In this way different generations of customers that benefit from access to electricity will share the costs.

After consulting with customers and stakeholders on future requirements, designing innovative investment plans and ensuring that our costs are efficient, we also need to ensure that we finance our activities efficiently.

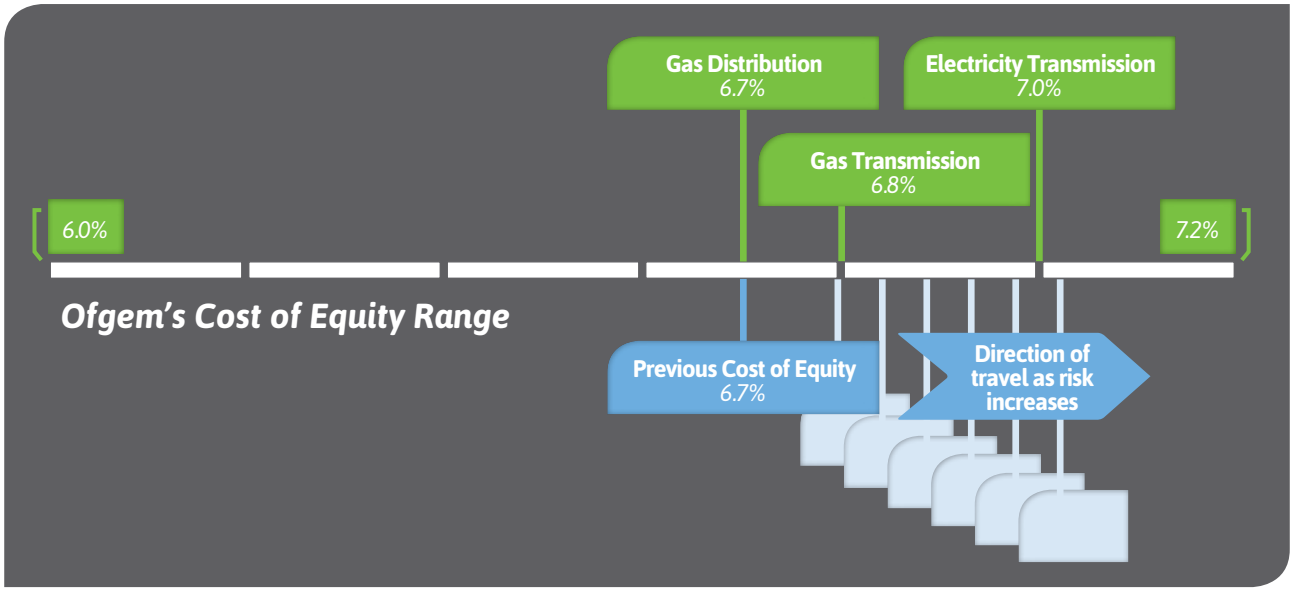
To ensure that we can spread investment costs over the long-term then we need to raise money to finance the initial investment. This is raised from two kinds of investors, equity investors (shareholders) and lenders (debt investors, who lend us the money for long periods of time).

Shareholders will have paid an initial amount to own the company but as we need to continue to replace and grow the network then they will need to re-invest profits from the business and they may need to invest new money. Our shareholders need to ensure they are paid an appropriate return on their cash so that we can attract investment to our company. This return is paid as a dividend, usually each year, to reflect the need to pay their investors and other commitments on a regular basis.

The amount that we pay as a dividend depends in part on an estimate of how much these shareholders need to receive to make it worthwhile investing more in our business when compared to other alternative investments available right around the world. If the level we can pay is not sufficient then there is a risk that we will not be able to secure ongoing investment. It also rightly depends on our ability to perform well and meet our customer service commitments and the output obligations that we set out in this document.

In deciding whether the return is high enough the shareholders take into account the risks of holding their money in our company when compared to other sectors. Generally speaking, an electricity distribution business is considered a comparatively lower risk than an airline or a retailer for example as we are not subject to the same economic uncertainties. As we have a monopoly position, the relative risk tends to be compared with other similar utilities, such as water, gas and transport. We then need to consider how the risk in the business is changing over time. The riskiness of the business links to how uncertain the amounts of future dividends might be.

At this stage, and given some of the long-term uncertainties set out in this document, we consider that the business will be a little bit more risky in the next ten years than it has been in the recent past. We expect it to be a little bit more risky for shareholders than gas networks and similar to the risks borne by electricity transmission owners, as illustrated in the following diagram. A riskier business requires a higher cost of equity.



We also need to borrow a lot of the money that we need to invest from lenders. We think we will continue to raise around £60 in every £100 investment from lenders. So that we can spread the costs of borrowing this money over a very long period, we wouldn't normally borrow this from banks. We tend to borrow this from institutions that have similar long term liabilities to match; often this will be pension schemes and life insurance funds. This is achieved by issuing corporate bonds to these investors where we promise to pay a fixed rate of interest and give them their money back at the end of the period, usually after a period of 20 to 30 years.

It is similar to having a mortgage on the assets, and taking out a new mortgage to fund the "extension" on our house in the form of the new investments in our network.

In this way we keep the impact on customer bills as low as possible as we are financing the investment in our assets efficiently.

We are currently considering our financing approach as loans are available in the market now that are significantly cheaper than some of our longer-term borrowing.

We are very interested to understand if other stakeholders agree with the Engaged Customer Panel who rejected proposals to borrow money over shorter time-frames.

We asked our Engaged Customer Panel about our approach to financing our business. The majority of the Panel, 65%, accept that around 9% of the money they pay for distribution will pay interest on loans. Customers show a clear preference for us to use long-term fixed-rate loans rather than shorter-term variable rate loans with 93% of customers who expressed a view (65% of all customers) agreeing with this approach. The Engaged Customer Panel also shows a very strong preference (90%) for us to continue our current mix of loans and other sources of capital.

Please tell us if you disagree with how we plan to fund the investment in our network to keep the lights on.

The amount that we can charge customers in their bills to pay these interest and related costs is part of our plan for 2015-2023. Because we aim to spread the costs over as long as possible we have to agree the interest rates on the corporate bonds we issue for long periods and this can mean that when interest rates change we can either be paying more or less than the new rate would be; just like if you take out a fixed rate mortgage.

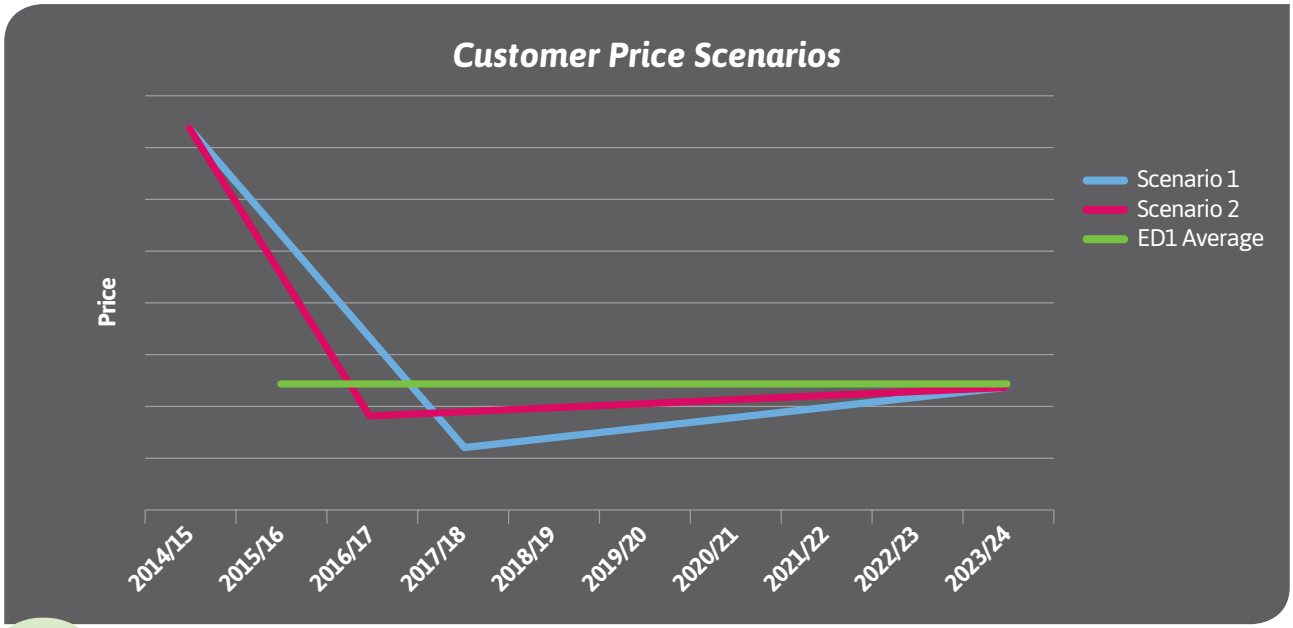
We consider this is the best way to finance the money we need to borrow in the long term and to provide the most certainty.

15.3 Price impacts of our proposals

Having considered our plans for 2015-2023 and their efficient costs of delivery, support and financing, we can put together the potential impact on typical bills in the future.

In summary terms, the overall impact of our proposals is to deliver real terms price reductions in the 2015-2023 period.

We envisage that this will translate into significant price reductions at beginning of the period, with small real price increases towards the end. Our aim is to end the period with prices that allow smooth transition into the subsequent RIIO-ED2 period (2024-2031).



We welcome any views you may have on the proposed shape of the revenue profiles, for example should prices reduce for two or three years in real terms before rising by a small amount in real terms for the remaining RIIO-ED1 period?

16 Summary

We foresee an exciting future for the electricity network where it will be required to supplement its traditional roles with new uses as part of a national move to a low-carbon future. We will also need to consider more carefully the potential effects of extreme events on networks and replace the majority of the first-generation above-ground asset base in such a way as to provide continued excellent service for the rest of the 21st century.

electricity north west

Bringing energy to your door

We are interested in views on this document and our future plans, particularly whether there are any areas you feel we have missed, or other priorities and factors we should consider.

Please write to:

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Email us at **futurenetworks@enwl.co.uk**

Or comment via the link on our website which also includes details of previous stakeholder events: **www.enwl.co.uk**

We look forward to hearing your views.