

October 2017



INVESTING FOR THE FUTURE

NIE Networks summary business plans 2017-2024



Who we are

NIE Networks is the owner of the electricity transmission and distribution networks in Northern Ireland and is the electricity distribution network operator, serving all 860,000 customers connected to the network.

Our role is:

- to operate our network of overhead lines, underground cables and substations effectively to 'keep the lights on' for our customers;
- to maintain our network so that it is in a condition to remain safe and reliable;
- to fix our network if it gets damaged or if it is faulty;
- to upgrade or extend the existing network to provide additional electricity supplies or capacity to our customers including the development of innovative solutions to manage the increasing level of renewables connections and the uptake of low carbon technologies;
- to provide electricity meters and provide metering data to suppliers and market operators. This is a key role in enabling wholesale and retail market competition; and
- to connect customers to the network, both for new electricity supplies and for new electricity generators.

NIE Networks is a regulated company and our business activities are overseen by the Utility Regulator in Northern Ireland. This document sets out a summary of what we plan to deliver for Northern Ireland customers from October 2017 to March

2024 – this is sometimes referred to as the RP6 price control period.

Our track record

NIE Networks is proud to serve Northern Ireland customers. We have a proven record of meeting our Guaranteed Standards for customers and restoring electricity to customers as quickly as possible when a fault occurs. Our safety, environmental and network asset management processes are externally audited to internationally recognised standards. We are a leading company in restoring electricity to customers in the event of severe weather.

Since our company was privatised in 1993 we have implemented a series of initiatives and programmes to deliver a 33% reduction in network charges. We have also delivered a greater than 50% reduction in the average time customers are without electricity supply caused by faults on the network.

Since 2012, we have invested in the region of £230m million (based on 09/10 prices) in the electricity network and delivered over 82,000 outputs including refurbishing or replacing:

- Over **10,000km** of **overhead lines**
- **17,600 under-eaves** services
- Over **430 circuit breakers** and transformers in primary substations
- Almost **2,500 components** in secondary substations
- Six **110kV substations**
- Approximately **30 km** of **underground cables**

We also commissioned three new 110/33kV cluster

substations and associated 33kV overhead line connections. We have enabled over a quarter of electricity consumed in Northern Ireland to come from renewable sources. Going forward we will be building on our past performance to deliver a safe, reliable and fit for purpose electricity service to customers in Northern Ireland.

Our network promises for 2017-2024

At NIE Networks, we believe that all of our customers deserve excellent service. Over the coming years we will be striving to deliver the following ten promises to you:

1. We will deliver approximately 145,000 outputs including refurbishing or replacing existing network assets
2. 90% of customers will have power restored within 3 hours
3. All customers will have power restored within 18 hours. *Excluding severe weather events.*
4. We will invest over £40 million every year to replace old or worn parts of the network
5. Customer and employee safety is essential. We will spend £60 million to reduce risk of interference or vandalism to the network
6. We are preparing for a low carbon future by trialling technologies that have the potential to further reduce costs in the long term.
7. We will deliver £55 million of efficiency savings
8. We will respond to 80% complaints within two days and 100% within five days
9. We will continue to minimise the impact of our business on the environment
10. We will continue to engage with and listen to the needs of our customers and stakeholders

How we plan & prioritise work

Extensive planning, analysis and consultation have been used to ensure that the plan to 2024 delivers benefits for current customers and sets the foundations for the future. Maintaining, improving and expanding the network to meet customers' needs requires continuous attention, innovation and investment.

In developing the plan we have considered a range of factors.

- **Delivering the required services at least cost.**

Throughout the process of developing the plan we have worked hard to ensure that the allowances we sought only include work which is strictly necessary to enable us to carry out our transmission and distribution functions to an appropriate standard and to provide a network which is fit for purpose for our customers.

- **Ensuring a safe, reliable & future-proofed network.** Our aim is not only to protect customers in respect of the cost of using our networks but also in respect of the safety and reliability of supply. The availability of a reliable electricity supply is important to business as well as domestic customers and enables Northern Ireland to compete effectively for inward investment.
- **Balancing the needs of current and future customers.** It is important to balance the interests of different generations of customers, not to defer works which ought properly to be undertaken now, and to balance the interests of different groups of today's customer (for example, rural and urban customers).

We have taken a detailed approach to planning for the future. This has included reviewing the condition of the electricity network, carrying out detailed engineering studies, analysing costs, reviewing industry best practice, and importantly, considering the long term strategic issues facing the electricity network. The most important strategic issues are: ensuring the network is fit for purpose as the electricity



Fast resolution of power cuts is important to customers



We want to make it easier for our customers to communicate with us and improve our overall customer service delivery

sector faces the challenge of climate change through decarbonisation and how to manage an ageing network over the years ahead.

Delivering for our customers

Up to 2024 we will deliver ambitious work programmes which align to the most important services we provide including maintaining public safety of the network, reliability and availability performance, impact on the environment, overall customer satisfaction with the work we do and the performance of our connections business.

Safety

NIE Networks' core value is safety and we will relentlessly target improvements in our overall health and safety performance. Our objective is to identify and minimise the risks posed by the electricity network to the general public, employees and contractors.

We will invest approximately £60 million to ensure our network complies with new safety legislation. This will make the network safer for the public and reduce the risk from interference, vandalism or unauthorised access to the network. Similar legislation has been implemented in Great Britain and the work we plan to undertake is in line with other electricity companies.

Network reliability and availability

We know that fast resolution of power cuts is important to customers. When faults do occur, it's our job to fix them quickly and safely and to keep those affected up to date with progress. By 2024, we will have power cuts fixed for 90% of customers within 3 hours – this is an improvement on our current 87% standard. 100% of customers will have power restored within 18 hours, excluding severe weather events. This represents a 25% reduction on our previous 24 hour standard.

In addition, the Utility Regulator has set challenging targets for the overall improvement of network reliability for each year of RP6. This is measured through an industry metric known as 'customer minutes lost (CML)' which reflects the duration of planned and unplanned outages. We plan to improve our CML performance through effective network outage planning, increased network reliability and quicker fault response.

Future networks

We will spend around £40 million to reinforce capacity in a targeted basis across the network in order to meet the growth in housing and business development. Our plan includes the cost of developing innovative solutions to manage the increasing level of renewables connections and the uptake of low carbon technologies such as solar panels, heat pumps, electric vehicles and wind generation.

We will also address congestion on the 33kV network. Congestion in the electrical sense is a term used to describe when a network quickly reaches capacity thereby limiting headroom for further connections and potentially limiting the development of the electricity market. This is becoming an increasing problem on the 33kV network, driven by the increasing prevalence of embedded generation occurring in parallel with a reduction in electricity demand in particular areas of the network (which is referred to as 'load erosion').

Future network development will incorporate both traditional and innovative smart network reinforcement approaches. We will spend up to £6 million to apply innovative network solutions and to assess the benefits of smart grid technologies for the long term future. Our plans for innovation are primarily focused on integrating suitably advanced smart solutions into business as usual. We will undertake a number of projects with the objective of developing cost effective alternatives to conventional network expenditure, minimising the impact on future customers.



Very good progress has been made connecting renewables in Northern Ireland

Environment

We will minimise the impact of our business operations on the environment by reducing greenhouse gas emissions, limiting pollution, improving waste management and improving visual amenity.

We will continue to target improvement in our overall environmental performance using our internationally recognised ISO14001 accreditation. We will deliver continual development in best environment practice to our employees.

By working with local communities and environmental organisations we will demonstrate our commitment to sustainable initiatives.

Customer satisfaction

The provision of a high level of service for our customers remains a core business objective. We

are committed to keeping our customers at the centre of our focus and aim to provide a safe, reliable and responsive electricity service which meets the standards our customers expect.

As part of our engagement with customers and stakeholders, we have been listening to what they have been telling us about our current service level and what they would like us to deliver in the future. We want to make it easier for our customers to communicate with us and improve our overall customer service delivery.

We will continue to use surveys to determine the level of service delivered to customers. This will include internal employee surveys to establish the perceived level of service to customers as well as external customer surveys to understand their views on the level of service provided. Feedback from these surveys will be used to develop customer service improvement plans.

We will continue to operate an enquiry and complaints system which makes it easy for customers to access the right people and to obtain responses in a timely and effective manner.

Whilst we endeavour to get things right first time, sometimes things can go wrong. When complaints are received they are treated with urgency and with an aim to resolve the matter to the customer's satisfaction quickly.

We will continue to inform and provide priority information services for customers who rely on electricity for their healthcare needs, public representatives or emergency services who are working on behalf of customers.

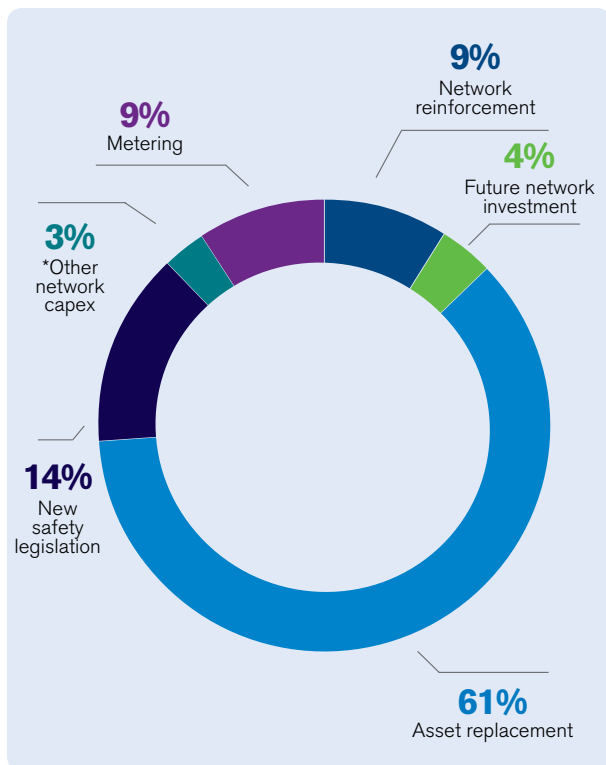
Connections

Very good progress has been made on connecting renewables so far in Northern Ireland. In 2010, the Northern Ireland Assembly set a target of achieving 40% of electricity consumption from renewable sources by 2020, including an interim target of 20% by 2015. At this point, we have connected 1386MW of renewable generation to the grid. We plan to connect a further 462MW which will bring the overall total to 1771MW.

The market opened for connections greater than 5MW in June 2016 and the full market will open by April 2018. This will provide customers with a choice of providers.



Figure 1 – RP6 capital expenditure by category



* 'Other network capex' includes investment in network-related IT and telecommunication infrastructure, and flood defences.

Our investment programme

We will spend in the region of £440 million on programmes to replace older network assets, improve safety and prepare us for a low carbon future.

In addition there could be up to £200 million transmission load projects that include the North-South Interconnector. These projects are brought forward on an individual basis over the time period by SONI. They are then passed to NIE Networks for delivery.

We will continue to operate efficiently

We will continue to drive efficiencies in our business by delivering a further £55 million of efficiency savings through:

- improvements to business processes supported by investment in new IT systems;
- improvements to operational working practices;
- effective procurement strategies;
- continued use of in-house resource to undertake core activities;
- design of the right engineering solutions to network problems i.e. no 'gold plating'; and
- learning from other distribution network operators (DNOs), utilities and large asset based organisations.

How we will finance our plan

We will fund our network investments through operating cash flows from revenue receipts, raising of new debt and retention of earnings as required. We estimate that our borrowings will increase to around £950 million by 2024 and that we will need to raise an additional £500 million of new debt.

Impact on customers' bills

NIE Networks derives its revenue principally through charges for use of the distribution system levied on electricity suppliers and charges for use of the transmission system levied on SONI.

Our network charges are approximately 21% of the final electricity bill for the 2015/16 tariff year. This

percentage will vary each year depending on electricity wholesale prices and other costs which make up the final bill.

The costs associated with network investment are paid for by customers over 40 years reflecting the long term value of network assets. We will reduce our costs to customers over the period.

Our tariff forecasts reflect the cost of ongoing investment in the network and significant new programmes to improve safety, manage the increasing level of renewables connections and the uptake of Low Carbon Technologies.

The table below shows a comparison of average network charges at the end of RP6 (2023/24) compared to the last full year of RP5 (2016/17).

Table 1 – forecast average network charges in 2016/17 and 2023/24

Customer group	Number of customers	Average networks charges at the end of RP5			Average network charges at the end of RP6		
		Distribution £/annum	Transmission £/annum	Total £/annum	Distribution £/annum	Transmission £/annum	Total £/annum
Domestic	790,000	115	15	130	109	15	124
Small businesses, max demand < 70kVA	65,000	538	75	614	510	76	586
Small and medium sized enterprises, max demand > 70 kVA	5,000	8,187	1,343	9,530	7,763	1,345	9,107
Large energy users connected at LV and HV, max demand > 1MW	172	54,248	17,789	72,037	51,435	17,807	69,242
Large energy users connected at 33kV, max demand > 1MW	18	96,584	82,711	179,294	91,576	82,793	174,369

Based on actual RP5 tariffs and average network charges at the end of RP6 according to the Utility Regulator's Final Determination, Table 1, page 22

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