



Planning for the future  
FINDINGS FROM QUALITATIVE  
RESEARCH WITH DOMESTIC &  
NON-DOMESTIC CUSTOMERS

Report prepared for NIE Networks

June 2021



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# Key insights: an executive summary

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## Background

NIE Networks identified the need to better understand the attitudes, current experiences and relative priorities of consumers in relation to customer service, network performance, environmental performance and future strategy. To this end, NIE Networks commissioned Perceptive Insight, an independent market research agency, to undertake an on-going programme of research to ascertain the views and perceptions of NIE Networks' customers and stakeholders. This report represents the findings from the latest round of non-domestic and domestic qualitative research, which took place in March and April 2021.

## Methodology

### Focus groups and depth interviews

Qualitative research was conducted with domestic and non-domestic customers. In March 2021, eight focus groups with a total of 56 participants were carried out online via Zoom to comply with Covid-19 social distancing restrictions. These were followed in April 2021 by 15 depth interviews with a sample of non-domestic customers from various sectors and business sizes.

### Recruiting participants

The aim of the research was to gather the views of a range of different types of consumer groups living in Northern Ireland. As such detailed specifications were set out for the recruitment of both the focus groups and depth interviews. Participants were recruited using a detailed recruitment screener with targeted quotas across key demographics. Three of the focus groups were held with customers that were known to have specific issues, so as to allow in-depth discussion on how those issues impacted them; the issues included frequent outages, bird fouling and being on the medical care register. A detailed description these specifications can be found at Appendix A.

## Key findings and recommendations

A summary of the key findings from these focus groups with domestic consumers and interviews with non-domestic consumers are outlined below.

## Domestic consumer focus group findings

### Changes to household electricity usage

- The Covid-19 pandemic has changed the way domestic customers use their electricity; more working from home and home schooling has resulted in higher electricity consumption and bills.
- Customers are becoming more conscious of their electricity usage and its impact on the environment and show interest in finding ways to reduce their consumption or live more sustainably.

### Awareness and understanding of the role of NIE Networks

- There was generally low awareness of NIE Networks role and responsibilities, with many thinking NIE Networks both distributes and sells electricity.
- Some participants continued to believe NIE Networks and Power NI are the same organisation;
- Most were not overly concerned about how the network is run, as long as they continue to experience a reliable supply.

### The impact of frequent power cuts

Those who experience frequent power cuts were asked how this impacted them. They explained how the frequent power cuts means that they incur additional costs and inconvenience.

- For this group, short outages can be as disruptive as longer power cuts.
- Areas that were most affected included; interruption to the operation of home such as businesses and home-schooling, and power surges resulting in damage to electrical equipment. One person had spent £1,000 replacing damaged hard drives and heating controls.
- Other impacts includes being unable to open or close electric gates, alarms and cookers having to be reset with each power cut. Also impacts on connectivity and septic tank.
- Some have purchased generators and battery backup-surge controllers but questioned why they should have too.
- For one, the frequent outages stopped only after a complaint had been made by the customer.
- Concerns were expressed around the strain more electric vehicles will put on the network in the future, and what this will mean to their level of service.

### The impact of bird fouling

Those who are excessively affected by bird fouling at their property were asked how this impacted them.

- The issue of bird fouling causes strong feelings of stress, frustration and futility.
- Some had been living with and dealing with the issue for many years.
- Others had bought homes more recently, not knowing that they were also buying into this problem.
- The impact on daily living was huge:
  - Continuous cleaning of cars, patios and yards;
  - Not using gardens;

- Parking elsewhere; but not always possible;
  - Frequently going out to scare birds away;
  - Not inviting visitors to their home/ friends choosing not to visit;
  - Embarrassment when visitors are soiled; and
  - In one case the hospitalisation of grandchild.
- Participants reported that the issues of bird fouling at their home impacts their mental health.
  - They are also concerned that it is environmental health issue.
  - Participants acknowledge that they have no power to resolve the issue themselves as they are not permitted to move the lines privately.
  - However, there is extreme frustration that no one is able or willing to help resolve the issue.
  - Those affected felt NIE Networks should invest in putting wires underground, and sought better communication and understanding from NIE Networks on the issue.

## What it means to be on the Medical Care Register

Those who are on the Medical Care Register were asked about their experience of this.

- Some were only made aware of the Medical Care Register when they switched energy supplier. Other found out about the register at their hospital consultation, although it was highlighted that not everyone that works within hospitals will be aware of the register. This led them to conclude that there may be others who are not aware of the Medical Care Register.
- Reasons for being on the register are diverse e.g. storing medicine worth £20k in fridge, a change in home heat of 1°C temp can cause epileptic seizures and dialysis.
- At times of power outages this group have heightened stress due to their circumstances.
- Some reported that getting through to NIE Networks during a power cut has proven especially difficult and causes great anxiety. Therefore it was suggested that a dedicated contact line be established for use by those on the register during these incidents.
- Some interactions with NIE Networks have been very positive. Frequent checkups during outages and follow up calls after were mentioned by those who had a positive experience.
- However, for some, a lack of information, lack of support, and refusal to provide a similar service for both planned and unplanned outages, e.g. a generator, have resulted in negative experiences.

## Customer service

Domestic customers were asked about their preferences for contacting NIE Networks in various circumstances and their experiences of the customer service they have received.

- A number of customers had the expectation that NIE Networks would be aware of all power outages and therefore there is no requirement to contact them to report it. Other said that they would leave it to a neighbour to report outages and some would refer to social media to find out more information on the situation.
- For most, the preferred method for contacting NIE Networks to report an unplanned power cuts is via telephone, as it offers a quicker response time.

- However, concern was raised about how older people, who don't have a mobile phone, can contact NIE Networks when there is an unplanned power cut if their landline is cut off.
- The preferred method of communication about planned outages is dependent on individual circumstance e.g., access to digital platforms. Most acknowledged that a postcard or letter is a sufficient way to notify them although a small number suggested a follow-up reminder text would be beneficial.
- Sufficient notice of a planned outage is dependent on individual needs e.g. those who operate a home business may require more notice.
- There were positive reports about the power checker app as a method of keeping up to date with the status of outages.

## Views on the future network

- Levels of awareness of government targets are generally low.
- There are a few who are well informed and more who are open to change.
- However, cost of entry to the various technologies is a large barrier to adoption.
- There are concerns with the practicalities, cost and availability of electric vehicles and home electric vehicle charging points.
- Although some customers would like to use renewable sources of heating, there are some negative views towards electric heating and its reputation. It was felt this would deter some from moving to using electric heating. They also pointed out that they would only move to a new system was a least equal to their current system in terms of convenience and effectiveness.
- There is a lack of knowledge around alternative sources such as air sourced heat pump.
- Some customers would like help to monitor and manage their home energy usage more effectively, with the aim of reducing bills and therefore consumption.
- There are mixed views on NIE Networks managing EV charging times overnight; customers are concerned about relinquishing control.
- There are also concerns about safety if encouraged to use appliances at night to avail of green tariffs.

## Vulnerable customers

- Vulnerability is a transient concept, and Covid-19 has brought considerable challenges for groups in society who would not have previously been considered 'vulnerable'.
- When asked who are vulnerable customers, the default position was to highlight customers who require electricity for their health care needs. There was less recognition of a wider definition of vulnerability. However, a small number suggested that consideration should be given to those affected by furlough or job loss due to the Covid-19 pandemic.

## Value for money

- The pandemic has meant that some households have seen large increases in their electricity costs, and they have become much more cost sensitive. Switching suppliers for better deals was fairly common among those we spoke to.

- Participants who were proactive about switching suppliers highlighted that it is not always straightforward to compare deals and to identify the one offering best value for money.
- Some participants reporting finding it difficult to understand their electricity bill and would like assistance to better monitor their usage, perhaps through smart meter technology.

## Mixed views on investment priorities

- There is some recognition about the need for investment to meet future demands on the network.
- It was accepted that electricity usage is increasing, with more people now at home, and therefore the network needs to be future proofed.
- While most are prepared to pay a little extra for investment there is recognition that others may not;
  - The view was expressed that adding an extra £10 to £20 per year to the bill would not make a difference to most.
  - However, the pandemic has meant that some households have seen large increases in their electricity costs and they have become much more cost sensitive.
- The view was expressed that if costs increase, customers want NIE Networks to justify those increases and be transparent in how their investments will help to meet targets.
- Those with frequent outages would like investment in their overhead lines so that they receive the same level of service as other customers.
- Although some agree additional costs on electric bills to cover investment is inevitable, others argue it is not up to the customer to cover this.

## Non-domestic consumer depth interview findings

### Electricity usage and awareness of NIE Networks

- For a range of businesses, electricity usage had reduced over the past year as a result of consecutive periods of lockdown due to Covid-19 restrictions.
- For some, this was expected to become more long-term with staff now having the opportunity to work from home on a permanent basis.
- A number of businesses showed interest in taking steps towards more sustainable energy usage. Several had already been proactive in this regard, for example, using EVs within the business or installing wind turbines and other renewable sources.
- In general, there was low awareness or understanding of the specific roles and responsibilities of NIE Networks, although a small number were very informed.

### Experience of electricity issues

- While unplanned power outages were recognised as causing significant business disruption when they occurred, only one interviewee reported these as a regular issue. All who had experienced unplanned outages reported general satisfaction with the NIE Networks' response.
- There was considerable dissatisfaction expressed by a number of participants about both the cost and time taken to establish new grid connections. Participants wanted to

receive a more personalised service and a breakdown of the costs involved as an explanation for the high prices.

- However, businesses were positive about the conduct of NIE Networks staff in respect of health and safety and safeguarding when coming on-site to carry out works.

## Customer services

- Telephone was the preferred method of contact in most circumstances.
- While interviewees recognised the role that video conferencing options, such as Zoom and Skype, have played during the Covid-19 pandemic, these were thought to add time and complexity to interactions for business purposes.
- The amount of notice needed by businesses for planned outages varied considerably from 24 hours to one month. There was no consensus on this issue.
- While most felt that a letter was still a satisfactory means of informing business customers about planned outages, some suggested a combination of methods should be used, including social media and email, in case the letter was overlooked or misplaced.
- Most businesses would value a specific contact person to speak to within NIE Networks, who is familiar with their locality and business needs .

## Future networks

- Most participants had a general awareness of concerns around climate change and the need for investment in a green energy transition. A number had become more mindful of reducing unnecessary consumption while others had taken more proactive steps in adopting low carbon technologies.
- However, the initial upfront cost of investing in such technologies was raised by many as an insurmountable barrier, particularly in the absence of Government financial incentives.
- This was further complicated by capacity issues on the network which meant it was not always possible to connect renewable sources to the grid.
- Other businesses were very limited in the steps they could take because they rented rather than owned the building in which they are based.

## Areas for investment

- Business participants identified a number of investment areas as of particular importance to them:
  - Upgrading the network to allow for connection of renewable generators;
  - Undergrounding of wires to reduce incidents of unplanned power cuts; and
  - Reducing the cost of new connections in order to promote business growth.
- Interviewees were divided on whether or not they would be willing to pay extra towards these investments, but in any case they felt it was essential that NIE Networks is transparent about how any additional charges are being used and communicate to customers on progress against investment intentions.

# Introduction

## Research background

Northern Ireland Electricity Networks (NIE Networks) commissioned Perceptive Insight, an independent market research agency, to undertake a programme of research designed to ascertain the views and perceptions of NIE Networks' customers and stakeholders.

The research is being overseen by NIE Networks in partnership with the Consumer Council, the Utility Regulator and the Department for the Economy. Representatives from these organisations form the Consumer Engagement Advisory Panel (CEAP). This joint panel provides advice and guidance throughout the research process.

Previously a series of workshops and customer surveys were conducted in 2019. These were followed by additional stakeholder workshops in November 2020. This report presents the findings from phase two qualitative research undertaken with domestic and non-domestic consumers in March and April 2021.

## Overview of the research programme

The diagram below provides an overview of the research programme for 2020/21:



### PLANNING AND DESIGN

- **Planning meeting**
  - Discuss scope of research
  - Agree timetable and reporting outputs
- **Concise literature review**
  - Compile a short report providing an update on best practice in stakeholder engagement and willingness to pay methodologies



### PHASE 1

#### Identify priorities for key stakeholders and customers

- 1 main engagement workshop with key stakeholders and 5 workshops on focused topics



### PHASE 2

#### Explore the priorities for customers and assess impacts

- 8 focus groups with domestic customers
- 15 depth interviews with non-domestic customers

### PHASE 3

- **Interviews with domestic customers**
  - 1,200 telephone interviews
- **Interviews with business customers**
  - 500 telephone interviews

## Research aims and objectives

The aims of the research were to:

- Qualitatively explore the range of views and behaviours that exist in the domestic and non-domestic customer population to understand the impact of decisions on various customer segments, to shape the issues that are measured through quantitative research and inform NIE Networks' future investment priorities; and
- With a particular focus on matters related to (1) customer service, (2) network performance, (3) environmental performance and (4) future strategy.

## Methodology

### Focus groups and depth interviews

Qualitative research was conducted with domestic and non-domestic customers. In March 2021, eight focus groups with a total of 56 participants were carried out online via Zoom to comply with Covid-19 social distancing restrictions. These were followed in April 2021 by 15 depth interviews with a sample of non-domestic customers from various sectors and business sizes.

### Recruiting participants

The aim of the research was to gather the views of a range of different types of consumer groups living in Northern Ireland. As such detailed specifications were set out for the recruitment of both the focus groups and depth interviews. Participants were recruited using a detailed recruitment screener with targeted quotas across key demographics. Three of the focus groups were held with customers that were known to have specific issues, so as to allow in-depth discussion on how those issues impacted them; the issues included frequent outages, bird fouling and being on the medical care register. A detailed description the specifications can be found at Appendix A.

## Report structure

The report is structured under the following headings:

### Domestic consumer findings

- **Electricity usage and awareness of NIE Networks** explores the changing use of electricity in the home and customers' knowledge of NIE Networks.
- **Experience of electricity issues** looks at recent electricity issues and contact with NIE Networks; particularly customers most affected by power cuts, customers on the Medical Care Register, customers most affected by bird fouling and recommendations for addressing these issues.
- **Customer service** focuses on a consumer experiences and preferences in their interactions with NIE Networks.
- **Future networks** explores customers' awareness, opinions and actions in relation to renewable energy sources, and identifies customers who may be disadvantaged by the green energy transition.

- **Vulnerable customers** highlights consumers who should be considered vulnerable and what type of additional support NIE Networks should offer to them.
- **Priorities for investment** identifies areas where participants believe NIE Networks should be focusing their investment in the network over the next 5,10 and 20 years.

## Non-domestic consumer findings

- **Electricity usage and awareness of NIE Networks** looks at how businesses currently use electricity, particularly in light of the Covid-19 pandemic.
- **Experience of electricity issues** looks at the nature and frequency of any issues and how these issues were resolved.
- **Customer services** explores business customers expectations in relation to customer service and if preferences for interaction on specific issues have changed, particularly in light of new innovations such as Zoom and Microsoft Teams etc.
- **Future networks** looks in greater detail at customers' current level of knowledge on climate change and appetite for adopting more sustainable energy usage practices.
- **Areas for investment** outlines which areas business customers believe NIE Networks should be prioritising for investment going forward.

# KEY FINDINGS - DOMESTIC CUSTOMERS

# Electricity usage & awareness of NIE Networks

## The changing use of electricity in the home

Participants in the focus groups were initially asked about the use of electricity in their home and if the way that they use electricity has changed in recent times.

The issues highlighted in the discussions are reported under the following headings:

- Electricity usage within the home; and
- Knowledge of NIE Networks.

### Electricity usage within the home

#### Current conditions

Many participants confirmed that their electricity usage had increased in recent times. This was attributed to both the pandemic restrictions forcing them to spend more time at home, and a more general increase in the use of appliances such as laptops and tablets. A number observed that they had been 'topping up' their keypad meter much more frequently.

One customer noted that their home is covered in charging cables. In particular those with teenagers reported an increased number of devices being used and therefore, a lot more electricity dependence. Participants noted also that they are using household appliances such as washing machines and tumble dryers more than before.

*"With being keypad top-up and working from home, it is nightmare. Every time you go out you hear the beep <of the keypad>. With being at home, a lot of washing and tumble drying, we have definitely noticed a big jump with having to top-up." [Young working single]*

There were a number of participants, however, that had not noticed any change in their electricity usage, mainly as they pay for their electricity by direct debit. Therefore, they do not take as much notice of this type of spend. For others, their situation remained largely unchanged due to the pandemic and did not notice a sudden increase in usage, with some highlighting retirement having a greater impact on their usage.

*"It has maybe balanced itself out a little. We are using more in the house, but my husband has an electric car and because he isn't travelling to and from work, it has gone down. It has levelled off for us. We are using far more electric in the house." [Customer on Medical Care Register]*

*“We are both retired. Covid has not had any impact on it. We have the advantage of a wood burning stove to augment the heating. It has made no difference on my bills. Retirement has probably had a bigger impact.” [Older person]*

## Home schooling

Many participants reported an increase in their electricity usage because of home schooling and also because children who are university students moving back home. This has resulted in a notable increase in electric bills for customers. One customer detailed that they are spending up to an extra £6 - £7 a week more on electricity than they were before, as they are now working from home and their child is not at school.

*“My electric bill has gone up in price with home schooling. My youngest daughter was in Queen’s but is home now for remote learning. There are more laptops being used and a lot more being charged with electric.” [Older family]*

*“I got my bill not long ago and I can see a big difference from January last year.” [Lone parent/young family/working poor]*

It was acknowledged that electricity usage is likely to increase in the future. Some noted that they were looking to technology such as smart plugs to help them control their levels of electricity usage. Several other participants shared that as they are becoming more conscious of their energy usage, they are looking at smaller things they can do to reduce usage such as swapping to LED light bulbs or compact fluorescents.

*“I have one of those meters that I clamp onto my cable which shows me in real time how much I am using every day/week/month.” [Worst served customer]*

*“I have started looking into smart plugs for things to come on automatically to see whether that can help reduce usage instead of having things on constantly.” [Young working single]*

## Knowledge of NIE Networks

Participants were asked if they knew who was responsible for electricity in NI, whether they had heard of NIE Networks and what aspect of electricity NIE Networks is responsible for.

Several misconceptions were prevalent amongst focus group participants. These were that NIE Networks is an electricity supplier, with many participants believing they both own the network and sell the electricity.

Many participants commented that they were not aware of the fact that NIE Networks is not involved in the retail and selling aspect of the electricity network, with many agreeing that they believed NIE Networks and Power NI to be the same company. There was generally little fully accurate awareness of the role of NIE Networks.

Some participants shared that they were aware of NIE Networks as they know someone who works there. Several participants acknowledged that NIE Networks oversee the maintenance of the wires and electricity, but mentioned they do not think about it much. One participant raised the question of whether NIE Networks are a private or public organisation.

*"I have seen adverts on TV but did not know the extent of what they actually done." [Young working single]*

*"I knew they existed but didn't realise they are not a retailer as well." [Young working single]*

*"I knew there was a difference in the retail of electricity but didn't realise that Power NI and NIE were different. And I have changed electric supplier twice." [Older person]*

# Experience of electricity issues

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Participants were asked about their experiences as customers in relation to electricity, the type and frequency of issues and how the issues were resolved.

The key findings from the discussion are reported under the following headings:

- Recent electricity issues/ contact with NIE Networks;
- Customers most affected by power cuts;
- Medical care register; and
- Bird fouling.

Some focus groups were focused on a particular issue mentioned in three latter sections above; with participants recruited who are particularly affected by the issue under discussion.

## Recent electricity issues and contact with NIE Networks

When participants in the general population focus groups were asked about their experiences, power outages were the most common issue raised.

### Experiences of power cuts or outages

While most of those who took part in the discussions had little recent experience of power outages there were a number who had been affected in recent times (in addition to those who were specifically asked to participate in the research because it was an issue for them). Situated in a very remote area, one customer detailed how they have experienced a power cut six or seven times in the last year. They have a backup box which powers the lights in the kitchen, but the rest of the house has no electricity during these incidents. One participant shared that they have had more than six outages in the last few years, each lasting around two to four hours. Another participant reported that they experience frequent outages, the previous one lasting from 9am - 9pm, although usually outages are two to three hours long.

### Impacts

Participants in each of the discussions were asked to describe what it feels like not to have power, and what impact do power outages have on their household. One of the main impacts from power outages is the inability to use gas or central heating. This can be detrimental to households who do not have open fireplaces. Other impacts included being unable to electronically charge their devices or have lighting for almost 7 - 8 hours. One customer commented that they find outages 'infuriating', although they recognise many are inevitable and uncontrollable.

*“The impact is we cannot charge phones, go on computer, or do any hobbies such as Netflix. It halts me and we have no real lights.” [Young working single ]*

## Context of Covid-19 pandemic

Participants commented on how the Covid-19 pandemic has increased the severity of the impact that power outages have on their household. In the current climate, many people are working from home and home-schooling and are therefore more dependent on electricity than usual. These activities were highlighted to be majorly impacted when a customer is experiencing a power outage. It was acknowledged by several participants that power outages cause considerable interruption to the operation of home businesses.

*“I had an electric cut a few months ago. I am working from home and everything went off for 1.5-2 hours. I couldn’t do anything or even watch TV.” [Young working single ]*

One customer raised concern that many young families are heavily reliant on electricity in the home at this time.

*“There would be a number of young families living near who are dependent on electricity. People with young children and babies who are more inconvenienced than I would be. Due to Covid, they have had to stay at home for the last few outages.” [Older person]*

## Interactions with NIE Networks

Participants shared their experiences when trying to resolve such issues. The majority of participants stated they would call NIE Networks to obtain information about the fault. Another customer commented that they would use social media and NIE Networks status page to get more information.

*“Because I work in IT and with Power NI, I go to Twitter and check the status page and could see there was a fault.” [Young working single]*

*“We look online and track the update that gives estimated time of reinstallation.” [Older person]*

Concern was raised by several customers on the Medical Care Register. One customer who has been on the medical care register since 2012 noted it was difficult to contact NIE Networks regarding a power outage during the Covid-19 pandemic. One such customer had asked about accessing a generator as an essential item for long outages. Another customer on the medical care register described the information they were given by NIE Networks as ‘basic.’

*“It is press this, press that and when you eventually get through, their answer is ‘Can’t do anything, there are workmen out there and you will have to bear with us.’ That doesn’t sort out when you have machines to put on.” [Customer on Medical Care Register]*

*“They said the power would be on shortly. They never came with the generator and I had to sit all day in the house with no power. I thought it wasn’t very good, I was fuming.” [Customer on Medical Care Register]*

## Customers most affected by power cuts

Participant to one of the groups were recruited specifically because they are particularly affected by power cuts.

It was recognised among this group that NIE Networks tends to deal with unplanned outages quickly, and that the engineers work promptly and in all weathers. However, these participants highlighted that they experience many power cuts per year; with most of these being unplanned outages. One customer detailed how they could experience up to 20 outages per year, noting 13 outages in 2019. He highlighted that when there is bad weather, for example, wind over 35mph, he is certain to have a power cut. The customer compared his experiences with those who live in Belfast where the power lines are underground and therefore, do not experience the same level of power outages due to poor weather. He made the point that he is paying a similar rate to those in located in Belfast, for example, but is not receiving the same level of service.

Another participant acknowledged that at times, outages seem to have no relevance to the weather. They experienced outages once or twice a month during the first lockdown in April to June 2020 when there was good weather and low wind impact.

Another customer mentioned they have experienced repeated power cuts in the last year; around 15 outages. Although the outages usually last 10 minutes, the customer expressed the view that power cuts are a nuisance as they set the house alarm off each time, among other things.

## Impact of power cuts on a household

### Cost

Customers affected most by frequent power cuts mentioned they have had to incur additional costs as a result. One participant noted that even short outages create a high level of disruption for people. They revealed that power surges have resulted in significant damage to electrical equipment in their home and they have had to pay £1,000 to replace the damage to hard drives and heating controls.

*“The damage for me is when the power is switched on again with the massive power surges and it cooks the household’s heating system. It is huge losses, full contents of the freezer.”  
[Customer most affected by power cuts]*

Another customer highlighted the potential high financial impact caused by outages where a consumer is reliant on electricity for their employment. Due to the nature of their job as a potter, if a kiln is shut off at 700 degrees, they could potentially lose hundreds of pounds worth of work. They expressed their reliance on this money as their primary income, therefore, outages can be very frustrating.

## Internet connection

The impacts of power outages have been more noticeable since the Covid-19 pandemic, where customers and their children are now working remotely. It was argued that a strong, stable internet connection should be considered essential for daily life. Customers highlighted that power outages cutting out broadband connections means work and school calls are negatively affected e.g., Zoom or Google Classroom. One customer detailed the impact this had on their child:

*“One of the kids had a Google Meet for maths and the power went out. It went out for 20 seconds, but you have to get the router, computer going and back into class which knocks concentration. He was annoyed about that.” [Customer most affected by power cuts]*

## Appliances

Other impacts from power cuts included effects on household appliances. One participant mentioned that even a short outage would mean the electric gates and alarms must be reset. They commented that even though they only experience short outages, the disruption caused, in many scenarios, may be just as dangerous as longer outages.

Another participant noted they have a septic tank treatment system that has a constant air blower machine running continuously with a pump at the outlet. If the power is off for an extended period of time, this can cause major disruptions to the system. Other customers mentioned that they cannot heat their homes when there is an outage.

*“We went on holidays one year and the electric went off when we were away which meant the alarm went off.” [Customer most affected by power cuts]*

*“If you have a central heating system, you are sitting in the cold and dark which is not exactly pleasurable.” [Customer most affected by power cuts]*

## Preparation for unplanned power cuts

Participants shared the steps they have taken to prepare in case of unplanned power cuts. One participant commented that the only guaranteed way to counteract the impacts of power cuts was to fit an uninterruptible power supply which will provide a constant power supply, even if power fails. Although the customer has taken a proactive response, they are unhappy with having to do so. Other customers had purchased generators and a battery backup surge controller but questioned why customers should have to take such steps.

*“I have gone and purchased a standby generator that I run in the garage to keep essential services running.” [Customer most affected by power cuts]*

## Interactions with NIE Networks

Participants most affected by power outages shared their opinions about how NIE Networks dealt with their complaints about the outages before, during and after the power cuts. It was recognised that if power outages are longer than expected, there will be someone from NIE Networks at the other end of the line to speak to.

Customers, who were aware of it, expressed their content with NIE Networks power checker app. One customer commented that they found the NIE Networks fault page, which shows information about affected postcodes to be very good, and they appreciate that this page is automated and up to date.

Several customers stated that they use the telephone to contact NIE Networks regarding power outages. However, a few described a range of negative experiences when interacting with NIE Networks in this way. One customer commented that they used the telephone for initial contact with NIE Networks to report their continued problem with outages, however, they felt this was not productive and so had decided to also send an email. The customer stated that they received various explanations for the excessive outages, such as birds and slurry tanks, which they felt to be 'ridiculous.' After an extended email exchange, this participant had requested to speak to a manager. They explained that they live on a busy road and, as such, power cuts posed a risk to their children by causing the electric gates to stop working. Following this, NIE Networks did take action and there have been no more outages since. Although satisfied with the outcome, the participant stated they would have appreciated being informed of the reasons why outages have ceased.

*"The electric may only be off for a minute. We first reported in 2015 and it was going on a couple of years before that but did not think much about it. We felt we were not being listened to a couple of times a month." [Customer most affected by power cuts]*

Another participant highlighted that when they rang to report their power issues, NIE Networks informed the customer that they were already aware of the problems on the line. This customer suggested a more proactive response is needed to continuous outages on the same line. Other customers described feeling patronised and that they were 'not getting anywhere' after communicating their problems via telephone.

*"It is very disappointing that every time I ring up to report it, you seem to get a thanks for letting us know and nothing seems to happen." [Customer most affected by power cuts]*

The point was made by one of the participants that, although pleased with the fact the power cuts have stopped in their area, it took several conversations with NIE Networks over a period of 6 months before their issue was resolved.

*"He who shouts longest is heard longest." [Customer most affected by power cuts]*

One customer felt that there was a difference in communication standards between ordinary staff members and management. Whilst they recognise call centre staff may not have high levels of authority, they felt their concerns were being disregarded with answers from a script.

## Recommendations

Participants shared their thoughts on what they think could be done to improve issues they experience. Despite investment in network upgrades, several customers believe they are yet to see improvements. A number suggested that there should be compensation for impacts felt.

Customers who experience regular power outages, questioned why they pay the same prices for an inferior service. Customers highlighted they are paying the full amount for the service, and nothing has been offered by way of compensation for not receiving proper supply or damage to household equipment. Customers feel that NIE Networks are using overhead lines to save money and the customer is paying the price for lack of investment in underground cables.

*“There is no apology for the disruption. It was just ‘this is what you expect’ even though you are paying for the service.” [Customer most affected by power cuts]*

*“My argument is, if we have a cheaper supply system and overground, why are we being charged the same price as those in the city with underground and secure supply?” [Customer most affected by power cuts]*

One participant argued that to achieve successful change, NIE Networks should have a penalty process for customers most affected by power cuts. They suggested a fee paid to the customer if they experience, for example, five outages per year. This process was compared to broadband providers who guarantee a minimum speed of broadband. If it is off or below a certain speed, the customer is entitled to exit the contract or receives a reimbursement.

*“The KPI has to be linked in some way to finance, people ask questions when money is involved, and things happen and get done. I am happy if NIE want to give me a secure supply, not a payment. But if there is, I am happy to take a payment as it might force change.” [Customer most affected by power cuts]*

Participants were asked how they prefer to be notified and kept up to date for planned and unplanned cuts. It was acknowledged that a letter for planned power cuts is a fair method of communication, with many customers finding the power is restored long before the estimated time. The letter in advance was highlighted as a good window for customers to prepare. One customer shared that they received notification of four single day planned outages within the last eight months. They questioned why these issues could not be sorted out within a shorter time frame.

## Medical care register

One of the focus group discussions was held with customer who are on the Medical Care Register. Power cuts are especially difficult for these customers, who excessively depend on electricity for life saving equipment. Participants were asked what triggered them to join the Medical Care Register. Reasons for being on the register are diverse and included a customer

who is required to store specialist medicine worth £20k in a fridge, another where a 1°C temperature change can cause epileptic seizures and customers on dialysis.

## Awareness of NIE Networks register

It was clear across the focus groups that many participants were not very aware of the register. For example, in group 5 (Older People), one participant out of nine was aware of the register. In group 6 (Older Families) and group 8 (Young working singles), no participants had heard of the register.

In the specially recruited group discussion, participants shared their experiences as to how they heard about the medical care register. Some customers were not made aware of the Medical Care Register until they switched energy supplier. One customer detailed how, although they have been on the register for two years, they should have been on it a lot earlier. However, they had not been made aware that they could have been on it. When they switched providers, they were asked if anyone in the house required electricity for medical care; this was the first time they were alerted to the service.

*“I found out through the electric company I was changing to. One of the representatives asked me was there anything I would need to be on the register for.” [Customer on Medical Care Register]*

Other customers mentioned they found out about the register through their health advisor at hospital who gave them leaflets. Although these customers praised hospital staff for directing them towards the register, it was highlighted that some health workers are still not aware that it exists.

*“The hospital was very good at that time and gave me all the leaflets to contact people and connect because the machine I needed was keeping me alive. It was Antrim Area hospital. I also got leaflets through Belfast City hospital.” [Customer on Medical Care Register]*

*“I am a nurse myself and I didn’t know about it and I would have been giving out medical equipment. I wouldn’t have known to tell anyone about the register as no one told us.” [Customer on Medical Care Register]*

## Interactions with NIE Networks

Participants shared their experiences of interactions with NIE Networks whilst being on the register.

Some interactions with NIE Networks have been very positive, with frequent checkups during the outage and follow up calls afterwards; those who had this type of experience were very complimentary of how they had been treated by NIE Networks.

Although one customer was unaware of who to ring initially when the power went out, they described NIE Networks to be very helpful. NIE Networks provided the customer with an estimated time, the location of the outage and rang back numerous times to check the customer was content and if they had had a risk assessment carried out. Whilst this was the

only contact the customer has had with NIE Networks, they commented that they were looked after well.

*“We were out for 1.5 hours. The medication we keep in the fridge is very expensive. There was around £20,000 worth of medication. The hospital is very keen for us to make sure it is well looked after. We were in contact around 5 times; they were very supportive.” [Customer on Medical Care Register]*

Another customer agreed that although they found it hard to get through to NIE Networks for first contact, their experience from then on was positive. Their child’s condition is temperature sensitive and relies heavily on a stable electricity supply. They described NIE Networks communication to be effective in calling the customer back and providing information about how long the electricity would be out or if further steps would be required e.g., moving locations.

*“Half an hour after it came back on, they were on the phone to check everything was ok. I cannot fault them at all. This was in and around the last lockdown. We were out for 3 or 4 hours with about 3 or 4 calls between us.” [Customer on Medical Care Register]*

However, a few had less positive interactions with NIE Networks. One customer described how he had been provided with a generator for planned interruptions but on another occasion, when there was an unplanned interruption, he was told that there was no generator available. He felt that there was a lack of communication during this outage which caused anxiety, and which was exacerbated as he was not afforded a generator. This meant that was unsure what actions he would need to take with his medical equipment and what steps to take to manage his condition.

## Recommendations

Participants shared recommendations on how NIE Networks could improve the experience for customers on the Medical Care Register.

It was suggested that NIE Networks should proactively contact customers on the register to acknowledge the electricity is out and inform them of when it will come back on. A few of the participants agreed with the idea of NIE Networks providing a courtesy call to customers on the register who have experienced a power outage. This would be helpful in situations where customers are not home and unaware of an outage. If the customer is informed, they can then arrange for refrigerated medication to be moved or arrange a generator.

*“A service where you receive a courtesy call to say the electric is off, this is how long we estimate will be and this is the plan for what we are going to do. Having that dedicated customer care that they let you know what they are putting in place for you.” [Customer on Medical Care Register]*

A text notification at any given time was suggested as a sufficient method of communication to alert customers on the register of an outage. One of the participants welcomed the idea of

receiving a text no matter the time. They explained that sometimes when they wake up and see the flashing time on the cooker, they question how long the power has been out for. They would prefer to know in the middle of the night how long the electric has been off for in case there is a potential need to act e.g., to check on medication.

It was highlighted by customers on the register that, as the contact number is currently a generic line, it can be difficult to make contact, with lots of other customers also trying to get through at the same time. Many of the participants suggested that NIE Networks provide a dedicated contact line for those customers on the medical care register.

*“It can be constantly engaged, and you end up on hold for long periods of time. A different number given out to just those with medical conditions might make the system easier. They wouldn’t have to find us and we wouldn’t have to go through the masses to find them.”*

*[Customer on Medical Care Register]*

## Bird Fouling

A groups discussion was convened with customers who had highlighted issues with bird fouling to NIE Networks.

The issue of bird fouling causes strong feelings of stress, frustration and futility among those affected. Some of these customers had been living with and dealing with the issue for many years, whereas others had bought homes recently, unaware that the property was affected by this problem. These participants shared their experiences of the impact bird fouling has caused, how they have tried to resolve the issue and suggestions for what could be done better by NIE Networks in response.

### Impact

Various impacts on daily life were noted as a result of bird fouling including damage to property and negative impacts on mental and physical health.

#### Destruction of property

Bird fouling has resulted in destruction to personal property: cars, windows, doors, fascia boards, patios, yards; and necessitates continuous cleaning. One participant explained that they find no point in cleaning their car anymore as a short time later it is destroyed again.

*“There is no point cleaning my car, five minutes later a bird will excrete on it. It covers the windows, windowsills, the doors, the fascia boards. It is not just the yard and cars. It travels. The whole area is destroyed, and I have sent all those photos to NIE.” [Customer affected by bird fouling]*

*“Very disappointed with it. I had my cars parked at the back but had to end up taking a whack out of my garden to move my cars over... I feel very annoyed.” [Customer affected by bird fouling]*

## Health

Participants said they believe the issue of bird fouling to be a health hazard and shared examples of the effects on both the individual and family members' mental and physical health.

One individual explained that a grandchild had become violently sick and was hospitalised due to eating bird excrement. Another participant highlighted that they were physically injured when trying to clean the bird fouling. This incident reportedly caused a high level of distress. A number of participants agreed that continuous experiences with bird fouling is negatively affecting their mental health.

*"My partner has grandchildren who cannot go out into the yard and play. We had an incident where a child ate a regurgitated berry and ended up in the hospital." [Customer affected by bird fouling]*

Another participant highlighted that they live alone and find it too dangerous at their age to go outside on a winter's day to power wash the bird excrement. They are concerned about falling due to slippery surfaces. Another participant noted how they can no longer use their garden due to extreme bird fouling.

*"I went out and slipped on my back on the pavement on it, I was so distressed I was past myself. I had tried to talk to the Council and Local MLA...I was in tears when I went into that office. I realised it was making me very depressed and affecting my health. I am a cheerful person with no health issues. Yet, I found myself in tears over this and having to go around the country trying to get help to see if someone could direct me to the right people." [Customer affected by bird fouling]*

Many participants shared that they feel embarrassed when friends and family are soiled and are ashamed of their property. This has resulted in many not inviting visitors to their home, or friends choosing not to visit.

*"This was a household where everyone was welcome with laughter, love, joy. I know that when it has a been a bad day with the birds I cannot bring them round to my own house." [Customer affected by bird fouling]*

One of the participants explained the distress they felt when they slipped and were injured. They contacted their local Council under the presumption that the Council carries a responsibility for environmental health. This customer explained they received no help from their Council, who also sent a letter of correspondence to NIE Networks.

*"I had tried to talk to Coleraine Borough Council, Causeway Coast and Glens as I thought they must have a responsibility for environmental health. I thought the county hall would know about who owns the roads and who is responsible for that part of it. I got help from none of them." [Customer affected by bird fouling]*

## Resolving the issue

Extreme frustration was expressed by participants, who feel that there is no one able or willing to help resolve their problems with bird fouling. Many customers reported that their experience in attempting to resolve the issue with NIE Networks was unsatisfactory and the issue remains unresolved.

Participants highlighted the extensive costs involved with adopting alternative methods to tackle the issue. One participant explained that when they contacted NIE Networks, they were told cones could be erected on the wires for X amount of money. As a young family, these costs were unrealistic.

Others experienced similar cost barriers. One participant stated the use of a 'dummy hawk' was once effective and since its removal they have considered re-introducing it themselves despite the health and safety risk of doing so.

*"I have contemplated going up myself, and my wife is saying do not or I will get electrocuted. Are they going to wait until someone resorts to trying to do something themselves and put their own lives in danger and god forbid is injured? I do not know how long they will let that go before someone does that." [Customer affected by bird fouling]*

Another customer highlighted how they offered to pay for brushes themselves, but they were turned down. They expressed their frustration that NIE Networks suggested this would only move the problem along the line.

*"There is a green and fields further along, it wouldn't affect anyone else." [Customer affected by bird fouling]*

## Communication and understanding

Customers expressed their concern that NIE Networks have failed to understand the full scope of the effects felt by customers impacted by bird fouling. Customers note that although NIE Networks staff are perfectly courteous and sympathise, the answer is continuously no. One customer observed that NIE Networks say to the customer they know how they feel, but nothing is ever done.

*"When you are putting up with this day after day, who wants to be doing that. If I was working full time, I don't know how I would cope, and my situation isn't as half as bad as people who have described theirs." [Customer affected by bird fouling]*

## Interaction with NIE Networks

One participant said they had written to NIE Newtowrk's management several times, and three other participants mentioned they had been in contact from 15 to 25 times. Many of the participants agreed they feel NIE Networks does not want to resolve their issues.

Four participants in the group had been dealing with the issue of bird fouling for over 6 years, with one participant stating it has been an issue for around 20 years. All participants had contacted NIE Networks about the issue either via email or telephone.

*“I think they have made a decision that they are not going to do it and they push everyone off with the same excuse.” [Customer affected by bird fouling]*

*“I informed NIE Networks of that, we have done letters, done emails. My last resort and the only time I got a response was when I took it to Twitter because it was a public forum.”  
[Customer affected by bird fouling]*

It was noted that the NIE Networks staff are pleasant and mannerly to deal with but ultimately are not able to make decisions to resolve the situation. The participant described this experience as far below the standard they expect from NIE Networks.

*“I have 17 pieces of correspondence dating back 6 years about this issue. On one occasion 18 months ago, I was at my wits end... I wanted to see what research had been done and what the terms of reference were, where the report was, how much money had been spent on researching but I got none of that. The letter I got back was nearly a replica that I had back 2 years previous from another official. That really upset me.” [Customer affected by bird fouling]*

*“A month later with no contact I emailed and asked did he <NIE Networks’ staff member> go past the house. He said he had not, but he would maybe be out that week. Then the email came in that they cannot do anything about it and that we basically had to stick it out and that is the way it is.” [Customer affected by bird fouling]*

## What could be done to resolve the issue

Customers affected by bird fouling offered solutions to how they think the issue could be solved.

Investment in infrastructure was suggested as a plausible solution to reduce the impacts of bird fouling. One customer stated that putting the overhead cables underground would resolve several issues at once. For example, if there is bad weather it is better having cable underground too. They argue that putting the cables underground should be considered by NIE Networks as a health and safety concern. Another participant stated that there should be a consistency of approach and described how NIE Networks had placed cables underground in Portrush, but not in surrounding towns such as Portstewart. They commented that they had offered to pay to contribute towards this process in their local area.

*“This is where I really took issue with NIE, whenever the Royal Portrush had the open championship here, there were millions of pounds spent putting cables underground in the Portrush area so they wouldn’t be an eyesore.” [Customer affected by bird fouling]*

# Customer service

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Participants were asked how their expectations in relation to customer service and interaction for specific issues have changed, particularly in light of new innovations such as Zoom/Teams etc.

This section sets out customers' preferred methods of contact in the following scenarios:

- Unplanned power cut;
- Planned power cut;
- Query meter reading;
- Online chat; and
- Power checker

## Power cuts

### Unplanned power cuts

There was consensus among participants that, if there is an unplanned power cut, consumers should be able to directly contact NIE Networks via telephone. Many argue this is the best method of contact as you can get a response quickly. However, several participants raised concern about customers who do not have landline or mobile phone access and cannot contact NIE Networks in this way. Some participants enquired as to a solution for those who cannot rely on technology.

*In points of crisis, you need someone at the other end of the phone to talk to someone." [Older person]*

*"A lot of fairly aged have no mobile phones, so the communication is zero for anyone on their own which is the difficulty I see." [Older person]*

Service agents were reported to be very polite and knowledgeable, but it was suggested that they are working to a script and therefore can only repeat what is coming from the team who are on the ground. Some customers suggested that more detail and feedback could be provided from the call centre, to provide more reassurance to customers. This could reduce repeated inbound calls to customer service teams.

Other participants said that they would prefer to use online resources rather than calling in to NIE Networks in instances of unplanned outages. They stressed this method is quicker than having to go online to find updates. Several mentioned that a text message with updates would be preferable and agreed they would give their number to NIE Networks if that enabled them to receive text updates on the situation. One participant referred to current GDPR permission laws, which make the customer feel protected when providing personal details.

Some participants highlighted that SMS updates would not be suitable due to poor signal. They suggested social media outlets such as a live Twitter or Facebook feed, or NIE Networks website would be preferable. It was recommended that so long as these outlets provide regular updates, this provides accessibility of information to the customer.

*With GDPR, I feel more comfortable that details will be used for intended purpose and won't be sold on to any mailing or marketing lists." [Young working single]*

## Planned power cuts

Customers made suggestions as to which method of contact with NIE Networks would suit their individual needs if there was to be a planned power cut with a number recommending innovative ways that NIE Networks could contact customers to notify them of a planned power cut.

Many participants agree that a letter is the most effective way of contacting all customers about a planned outage and that new technological methods may carry problems. One participant pointed out that from a generational perspective, not everyone has access to emails. For those who do have an email account, the recent increase in scam emails means there is a widespread scepticism towards them, and people could question how legitimate and genuine they are. Another participant highlighted that contacting customers via telephone to inform of planned power cuts would be inefficient, as people are not always at home to receive calls. A letter through the door was considered to be a more efficient way of the information being received.

*"It is force of habit when you come in and you can recognise branding on letter with due warning." [Young working single]*

Many participants agreed that a letter with two weeks' notice for a planned outage is sufficient, although several acknowledged they would understand if businesses would require longer. One participant stressed that they would need longer due to the nature of their self-catering business, which is connected to the house. This customer suggested they would prefer at least one month's notice.

*"We could have bookings in 2 weeks which can interfere and would have to inform the clients. We work through AirBnB and so do not have contact number for them; I would prefer more notice." [Older family]*

Many participants acknowledged the increased reliance on digital platforms and suggested several ways NIE Networks could utilise technology to contact customers. One participant suggested that for customers with smart phones and the NIE app downloaded, they could receive a notification about any planned outages in their area. This participant acknowledged that this method may only suit a certain percentage of the population and that a notification of an outage should by default remain as a letter. However, the app could allow customers to opt out of postal contact, saving money for NIE in the process and providing a more environmentally friendly method of communication.

A similar point was raised by another participant, that an opt-in notification method would be suitable as a reminder about an outage. They noted how, in busy households, things may be forgotten two weeks after initial contact or letters may be set away unnoticed. They mentioned that if a customer forgets about an outage, it could cause negative impacts. For example, if there is load in the washing machine and you cannot afford for it to be cut off. A message or notification to remind you that the power will be off the next day is suggested as an appropriate method of contact. Some customers also expressed interest in more specific details regarding outages, as sometimes they change full day routines around this information.

*“Need to be more specific as normally they say it will be out 9-5, but when it comes to it the power may only be out for an hour. This is a big window.” [Older family]*

*“Could give people an option of emails if they didn’t want to get a letter. It would be a greener option and could give people the option to come off the postal list and to go on to emails, but the letter is definitely good.” [The renewable/prosumer/active future of energy consumer]*

## Power checker app

When informed of the details of NIE Networks’ Powercheck facility (on their website), participants provided several thoughts. A few participants had used Powercheck before and reported it to be useful. A large portion of participants noted they were completely unaware of this application. Those who were unaware agreed that it seems to be effective and were positive now that they know it exists. One participant highlighted they were only became aware of Powercheck when Power NI retweeted a message from NIE Networks. Many participants agreed that this application should be promoted better as they would feel more confident in using an official app such as the power checker if they had an outage.

*“NIE should promote it more ...that is an official page which is more legitimate. If it drags calls away from the likes of call centres and emails away from people, it might actually help keep those lines free for people who need it.” [Young working single ]*

## Queries and complaints

Participants were asked for their views on the most appropriate channels for contacting customers about queries and complaints.

### Meter reading queries

There was consensus that a formal letter, followed by a phone call is the preferred way for NIE Networks to contact customers about a meter reading query. One of the participants commented they think a letter to the customer is appropriate to start the process of querying a meter reading as this is a more formal, official method and they would be apprehensive if they received a only a text saying someone is coming to the house.

### General queries

Many of the participants considered that sending an email is most suitable if they have a general query or complaint.

## Online chat

It was apparent during the discussions that there are mixed views towards online chat as a method of interacting with customers. Several customers commented that online chats are a quick, handy method to enquire of issues or report problems, which they also use for other services. This method was expressed as a second alternative if you cannot get through to someone by telephone. One participant explained it provides them with reassurance that they are speaking to someone. Several participants, however, expressed frustration towards online chats, where bots produce generic answers on a perceived interpretation of what you have asked. It is suggested that online chats should have actual NIE Networks staff as the responders.

*“You can carry on doing what you are doing and do the wait time while you are sitting there. Especially in the day with so many WFH.” [Young working single ]*

*“If it is an actual person on the other end, taking in new information and relaying information that is relatable, then it is useful and can be handy.” [Young working single ]*

# Future networks

The key findings from the discussions of the future of the network are reported under the following headings:

- Importance of climate change and environmental issues;
- Awareness and opinion of government renewables targets;
- Reducing energy usage now and in the future;
- Barriers to reducing energy usage/ increasing use of renewables;
- Disadvantaged customers; and
- Growing need to invest in infrastructure.

## Importance of climate change and environmental issues

Participants were asked how important environmental considerations were to the choices they make regarding electricity usage, and what actions they had taken to minimise their impact on the environment.

There appeared to be a fairly high level of consideration of environmental issues with many voicing that climate change is something that everyone needs to take seriously. Many participants noted they are conscious of the challenges and impacts that climate change is having on the physical environment and recognise more needs to be done to try to redress the balance.

*“It is something I would be conscious of. We all live on this little place and the signs are out there to say it is changing and we all have a responsibility to play our part to take as little as possible from the world.” [Worst served customer]*

*“It is a major challenge at the moment with government. We have just had Biden elected who has got a big, green agenda about the environment. It is the most important thing, and we all have to be looking at the carbon footprint we are leaving behind.” [Older person]*

Some have taken initial steps to reduce their electricity usage, such as replacing light bulbs with low energy ones and turning devices off from stand-by or have made other small changes to their usage habits.

*“We changed the bulbs to energy saving, LED ones. It is supposedly using less voltage and less electricity...They are more eco-friendly, last longer, use less energy for same light.” [Lone parent/young family/working poor]*

*“Through work, I have done fire safety courses. It makes you more aware of leaving things on at night e.g., overloading sockets and leaving on lights. Things that are not necessary, but you leave them on anyway. You don’t need to leave your Wi-Fi on at night for no reason.” [Lone parent/young family/working poor]*

*“I have smart lights which turn off at 11pm. Although they can be annoying if you need them and they go off.” [Young working single]*

## Awareness and opinion of government renewables targets

Participants were presented with an overview of current renewables achievements and targets, namely;

- 48% of energy in Northern Ireland comes from renewable sources, largely onshore wind; and
- The Government is considering setting a target of at least 70% by 2030.

Levels of awareness of these figures were generally low, although there were some who are well informed and open to changing their energy usage patterns to help tackle climate change. Participants emphasised the importance of communication and public education around renewables targets.

### Information about Government initiatives

Participants were asked where they have seen information on Government renewables. Several participants highlighted that they have heard about renewable energy and Government targets through social media. One participant expressed their belief that the national press tends to be negative about renewables, only highlighting the less desirable aspects. They argued that when there is positive progress towards meeting targets, the public does not hear about these achievements. They stated how previous failings in Government renewables schemes have shone a negative light on renewables for the public, and more needs to be done to reverse this impression.

*“We only hear of how much we failed by rather than how well we are doing. Typical thing is the Renewable Heat Incentive Scheme; every renewable scheme is under extreme scrutiny because of that.” [The renewable/prosumer/active future of energy consumer]*

A lack of knowledge and information was highlighted as a reason for the public misunderstanding of renewable energy. It was argued that publicising targets is crucial to raise public awareness of what the future might hold in terms of how we communicate, travel and use energy differently. One participant reported that although skeptical about the idea of EVs, the more they read and understood, the more they were convinced of the idea. They argued for better educating the public on the rationale and benefits of renewable targets and actions.

*“Even if a target of 70% is not reached, at least people’s mindsets will be different in noticing where we should be.” [Older person]*

*“Targets should be made public and then the public can keep politicians’ toes to the fire and hold them accountable.” [Older person]*

## Importance of targets

There was general agreement amongst most participants that it is important for the Government to set renewable targets. Participants commented that without targets, there will be nothing to work towards and that otherwise relying on industry to regulate itself does not work.

However, for some, Government targets were perceived as unrealistic, requiring considerable action in order to be met. Participants also raised concerns around how targets are created such as whether or not this involved looking at how other countries have reached their targets and if these are cost-effective solutions. One participant made the point that NIE Networks should be at the table when designing and implementing energy strategies, as any realistic strategy should be informed by stakeholders with the potential to take forward Government initiatives.

*“They need a forward plan, but who is it they are consulting with and how are they planning it?”  
[Older person]*

## Reducing energy usage now and in the future

Participants were asked whether they had taken action to reduce their energy usage or increase their use of renewable sources. They were further asked about what additional steps they might take in the future. As part of this discussion, participants highlighted barriers they face in changing their usage behaviour and energy sources.

While a number of participants had previously taken active steps to reduce their usage, most noted that overall household energy usage had unavoidably increased due to the Covid-19 pandemic, and they did not foresee usage returning to pre-pandemic levels for some time.

## Solar panels

### Export savings

A few participants had invested in solar panels as an effective method of increasing use of renewable energy, which had resulted in a considerable reduction in electricity consumption from the grid in the Spring and Summer months. As an added benefit, participants with solar panels reported that they are saving on their electricity bills. Those who export excess electricity to the grid also noted an extra source of income.

*“I have 14 panels (just under 4kW) and in electric savings it is around £250 - £270 a year. Also, I export around £100 a year and this has not changed over 6 years. The net benefit from export and own usages is £300 - £400 a year.” [The renewable/prosumer/active future of energy consumer]*

One participant highlighted that solar panels involve a change in electricity usage behaviour, as to get the greatest benefit a household needs to consume electricity during the day rather than at night. Although this condition suits their individual circumstances as they are retired, they recognise this behaviour may not suit every household.

*“For my solar panels, it costs me £5,000 to put them on the top, but they were quite generous at that time. I get back £600 per year as well as free electricity for myself.” [Older person]*

## Cost

For many, the initial costs of entry are a deterrent to installing solar panels. One participant shared that they had been quoted an installation cost of £15,000 for their roof and they did not believe they would recoup this money through electricity import savings. Many participants argued that if solar panels were less expensive, they might be more attractive to domestic settings, but currently many cannot see themselves installing renewables due to cost.

One of the participants highlighted that consumers looking at increasing their renewable usage need to consider solar panels in terms of an investment. Solar panels will reap rewards in the long-term. This participant recognised however that if customers are looking to save money every month, solar panels would not be workable.

*“It needs to get cheaper. If I buy a house tomorrow, I cannot afford to put solar on it due to the price. If it were more accessible for everybody, it would be easier to use renewables.” [Young working single]*

*“Financial incentives encourage people to do that but for many, you need that extra money coming in to allow you to step on board and go forward with it.” [Customer on Medical Care Register]*

## Financial incentives

Availability of government incentives was noted as a driving force in consumers adopting solar panels. One customer noted the long payback time involved with solar panels: around 20 years. They expressed that the government Renewable Obligation Certificate (ROC) payments made solar panels more financially viable and was a decisive factor when looking at investing. Without this incentive, the business case for solar panels now is not as good as it was five or six years ago.

*“That is a big incentive because my installer said it would take 6/7 years to recoup the cost, and from my own figures he was exactly right. Our income is guaranteed for a total of 20 years. That income is significant enough, but if that income had not of been there 6 years ago, I would not have done it because the payback time would have been stretched out to 20 odd years.”*  
*[The renewable/prosumer/active future of energy consumer]*

One participant commented that in a bid to do something better for the planet, receiving a grant for putting solar panels helped sway their decision. The support and help which they got from the Government allowed them to actively reduce their energy usage. This grant is no

longer available. Lack of NI government incentives is noted as a deterrent to adopting solar panels at a domestic level, with one participant drawing UK wide comparisons.

*“You see those in England can avail of the ‘Green Homes Loans’, which are not in NI yet. This is where you get a loan to make your home more ecofriendly, whether that be getting solar panels or insulation up to £10k to make greener improvements to your home. It is something that is at the forefront of people’s minds.” [Young working single]*

Green Home Loans<sup>1</sup>

*“If I was to choose between a holiday and putting something on the roof which serves no immediate benefit; I wouldn’t be too keen in investing on it.” [Young working single]*

## Electric vehicles

Several participants had purchased an electric vehicle. Like solar panels, the viability of this renewable source depends highly on individual circumstances.

For one participant, having an EV worked well because of the length of their commute to work. This distance was suitable for the EV as it is within the mileage range accommodated by the car battery. They commented that their EV is a ‘smoother’ drive and cost-effective. Although they noted the expensive initial outlay, the EV has reduced household spending on petrol and diesel. They highlighted that cold weather can quickly cause the battery to deteriorate, and a hybrid may be more suitable for people who travel longer distances.

### Cost

While many participants recognised the switch to electric vehicles as inevitable in the coming years, several explained that the price point of vehicles is not currently viable for most willing consumers. Several participants have researched and considered EVs but had concluded that they were neither practical nor cost effective.

Participants stressed that while the public are told to self-regulate their energy usage and do more for the environment, spending and costs to the individual are still important factors to consider. One participant felt it was unfair to place pressure on individuals to change their habits, when most pollution is created by industry.

*“If I want to look at a Corsa versus E Corsa, Corsa-e is almost 50% the price. I know total cost of ownership brings it to about power over a 10-year period, most people do not keep their car for 10 years. There is no value for money.” [Young working single ]*

Electric vehicles are associated with initial high costs, but there are savings to be made. One participant mentioned the initial reason they purchased an EV was due to the tax relief on it, proving a major cost saving advantage.

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<sup>1</sup> Now referred to as Green Deal. The Green Deal helps you make energy-saving improvements to your home and to find the best way to pay for them. **Error! Hyperlink reference not valid.** The Green Deal is not available in Northern Ireland.

*“If you drive erratically, it eats the battery. I am happy with it and have had great saving on fuel costs and the tax savings from work. They are a good enough job and if you are doing anything in the range of 200 miles they will work.” [The renewable/prosumer/active future of energy consumer]*

One participant noted that their children are very eco-conscious and are always speaking of environmental damage. Although they are looking for an EV, they note that cost of hybrid EVs are currently too high and if they were to purchase one it would have to be considered an investment.

*“Several of our friends have electric cars. The environmental impact will have an influence.” [Older person]*

### Practicality and lifestyle factors

Participants' interest in EVs depended on how compatible the existing technology would be with individual lifestyles. There are various advantages in purchasing an EV. One participant shared how their workplace installed a public charger in the car park. This easily facilitated the choice to switch to an EV. Due to the amount of driving they are doing and the type of driving, an EV was well suited to their circumstances. The car can charge while they are at work, saving them the need to charge the car at home; only when necessary. As a result, they have found big financial savings when looking at their spending on fuel each month.

*“Very satisfied with decision, saved so much money every month. Range can be limited at times in cold weather as the battery is impacted by temperature. Sometimes you can only get 70 miles range with a full charge. But you just have to plan journeys more carefully to where chargers are. Sacrifices are worth it in terms of the savings I am making.” [The renewable/prosumer/active future of energy consumer]*

However others raised concern over the reliability of EVs when driving long distances. Several participants who lived rurally were unsure whether current EV models could accommodate the distances they would typically travel and felt that EV technology had not yet sufficiently developed to meet their needs. This was especially disappointing for one individual for whom climate change was a pertinent issue given their connection to the countryside. One such participant explained that due to the location where they live, any EV would have to charge as they drove on their internal combustion engine. They understand that this is not possible with the current technology. One EV-owner highlighted that with a solely electric car, rather than a hybrid, it is essential to plan your journeys, be mindful of how far you are driving and make sure your car is charged. They further cautioned that if you are not careful about the way you drive the car, it can damage the battery.

Many participants therefore felt it would be difficult for a customer to justify investing in an EVs which will not accommodate the majority of their journeys and the technology needs to improve before it will become domestically viable.

*“Not just that, but if the power bank goes it is a straight write off of the car. That is something manufacturers didn't think of and as a consumer you need to consider.” [Young working single]*

*“The EV car business has a long way to go before people take it up in numbers. It wouldn’t suit us at all. We have to travel distances; Belfast is an hour and 40 mins away.” [Older person]*

## Infrastructure

UK wide comparisons were made in relation to Government incentives for EV charging points. One participant highlighted that Scottish Power ran an incentive where all households were offered a charging point for electric cars. Scottish Power would supply this and cover the upfront cost. They explained the many benefits their relative had received from this scheme, particularly cost savings, which was thought especially important for pensioners.

*“For them as pensioners, it has been really effective. Maybe that is something NIE Networks could look at if they are going down the road of planning for EVs; allowing every household to have an electric point in their home. Doing it at a cost-effective time e.g., a lower tariff at night-time when you are charging your car.” [The renewable/prosumer/active future of energy consumer]*

## Availability of information

Lack of available resources surrounding EVs was highlighted as an issue for customers. One participant with an interest in purchasing an EV shared their experience of attempting to obtain more information on the vehicles. They described this process as unhelpful to them and that there was a lack of example products in car showrooms which suited their individual needs.

*“We went to Volkswagen <car showroom> 3 or 4 months ago as we were interested in EV’s and wanted more information. The salesman knew nothing of EVs. They had no cars to show us but could arrange to get one in to show; however, this car was very large and that particular model was not of interest. The car dealership did not know when they could have a variety of models.” [Older person]*

Despite this, participants stressed their willingness to take steps to benefit the environment.

*“We have looked at all that and making renewable energy. When you have kids, who go to school and learn all about this stuff, they get so invested and you want to make everything the place they want to be.” [Customer on Medical Care Register]*

## Wind turbine

One participant was very aware of Government initiatives for wind turbines. This individual had been directly involved in the installation of 30 to 40 turbines on the Limavady mountain. They praised the intention behind the Government grants to incentivise. However, they also noted some possible drawbacks, that is, some may consider turbines to be an eyesore in the natural landscape, and problems can arise during construction.

*“There is a whole investigation going on up by Omagh, where they started to put in a wind turbine and the whole peat it was on top of has run down and destroyed tons of sand, to me that is a natural disaster, although it is good.” [Customer on Medical Care Register]*

## Air source heat pumps

There is a lack of knowledge around alternative sources such as air source heat pumps. Many participants had never heard of an air source heat pump and stressed the need for improved education on this renewable technology, especially if it is suitable for some domestic households.

A few participants commented that their oil bills are very high now and had considered an air source heat pump as a replacement for oil heating. Cost was cited as the main barrier, with one participant stressing that they cannot afford to install the technology in the absence of a grant scheme. Considering the current economic climate, one participant expressed that the average domestic customer cannot afford the initial cost.

*“Price is colossal to buy the system which is the main thing putting me off.” [Older family]*

*“Heat pumps are expensive to install. You will see your money back at some stage. Can people really afford that extra cash to spend on that initially? Answer is no.” [Young working single]*

## Electric heating

Although some customers would like to use renewable sources of heating, there are some negative views towards electric heating as an initial step to facilitate this.

The cost of electric heating was mentioned many times as a reason preventing participants switching from their current heating source. One participant explained they had previously enquired about changing from gas central heating to electric, however, the installation fee was very expensive.

*“I would need all the figures to see if it was to benefit me. If I had it on all day long I think it would be more expensive. Cost would be a deterrent.” [Customer on Medical Care Register]*

For others, there was concern around the practicality of electric heating. For one participant, it is essential they can rely on their heat source to work effectively due to a child having a medical condition which can be impacted by a change in temperature.

*“For us, it is not cost but practicality. We have to keep things fairly regulated. Even the slightest one degree change in temperature can send him into a full-blown seizure. Knowing it will work and do what it is meant to would be the only barrier we have.” [Customer on Medical Care Register]*

Some participants commented on previous negative experiences with Economy 7 heating, such as no heat in the evenings and higher cost. They argued that electric heating must be proven to work as well as gas or oil and to provide instant heat before the public will be interested. It was felt that domestic uptake of electric heating would be dependent on education and information about its benefits.

*“It is back to public perception of things and opening people’s minds up.” [Older person]*

*“I wouldn’t want something like Economy 7 which warms up during day but when at night there is no heat left.” [Older family]*

## Smart meters

Several customers commented that they would like help to manage their home energy usage better, for example, through installation of smart meters. One participant mentioned they contacted their provider seeking a device that could be put inside the home to show usage in monetary terms. For example, if the tumble drier was on for an hour, they could see the monetary equivalent. For those customers smart meters are perceived as a tool to help bring down electricity usage and costs of bills. A number of participants highlighted that they would manage their electricity differently if they knew the exact breakdown of usage. Several participants confirmed that they would welcome the implementation of smart meters in their homes, even if information is shared with providers to monitor capacity issues and demand on the network.

*“How can they simplify everything for supplier and consumer from usage breakdowns, to how it is spent, what days you are spending more? The more information you have means more ability to change behavior.” [Young working single]*

*“If we were more aware of what is costing what, then you can decide what you don’t need and then it makes it easier for people to see where money is going.” [Older family]*

## Additional barriers

In addition to the barriers encountered in relation to individual renewable energy solutions, participants highlighted additional challenges to reducing or changing energy usage for the benefit of the environment.

## Supporting infrastructure

Concern was raised over the condition of the network and its ability to successfully connect renewables to the grid. One participant commented that the cables are not in place to carry the amount of electricity generated from renewable sources. They explained that in their area, the network can only carry so much electricity from wind turbines. They suggested that poor wires are a big issue for renewables usage, which will need to be rectified before domestic customers can move forward.

## Sources of information

Several participants suggested that the public are not well informed about renewable energy sources and do not know which renewables could suit individual purposes.

One participant stated they have a very old oil-fired boiler which they plan to replace with gas. They raised the point that although there could be other sources of heating, which are more eco-friendly than gas, they are not aware of any. They commented that greater knowledge of

appropriate renewable energy sources is necessary to change behaviours. From a solar panel perspective, participants shared they have noticed a decrease in people installing this renewable source in the last 5 years. One participant mentioned that there are no longer representatives visiting homes to provide people with information about solar PV.

One participant acknowledged that awareness is often dependent on individual consumers mindsets and whether they are prepared to go looking for the information. They mentioned that when they were building their new house that they began researching renewable sources. They recognised that sources and information are available if an individual seeks it out themselves.

*“It is there if you look for it, but it is whether you have time and interest to go research it.” [The renewable/prosumer/active future of energy consumer]*

## Disadvantaged customers

Participants were asked if there are any types of customers that they consider to be at a disadvantage in the move to more sustainable sources of energy and what additional support could be provided.

Concern was raised over the older population, their potential lack of willingness to engage or invest in new technology, with the result that they may get ‘left behind’. It was argued that older people are not necessarily up to date with certain technologies. One participant commented that some older people may not be able to benefit from different tariffs tied to times of high- or low- demand or they may not necessarily be interested. They suggested that older people want something simple and smart technologies may be a ‘hassle’ for them. They recommended additional support for this group should there be a move towards smart technologies.

*“Elderly are not as aware of different times, tariffs or interested. They want something simple instead of having look or price around for different times and tariffs. This could be a hassle for them.” [Lone parent/young family/working poor]*

There was concern that those in more disadvantaged socio-economic groups may also lose out in the move to sustainable sources of energy. It was noted that the change to renewable sources requires investment and money and, therefore, those who cannot afford this up-front cost may not be able to participate. From a social housing perspective, the view was expressed that the Housing Executive could implement more schemes for tenants to take advantage of renewable sources of energy such as solar panels.

International comparisons were drawn, looking at both Italy and Spain’s solar panel schemes. One participant noted how many factories in these countries have solar PV installed on the roof as an efficient way to reduce spending on energy and grid consumption. The participant suggested similar schemes could be implemented for NI schools which had a high demand for electricity when the sun is shining. This could help schools keep electricity costs low and allow finances to be used elsewhere.

*“I noticed in Bangor over the last few years, all the new housing developments are all social housing. Every single one has 6 panels of some sort on the roof.” [The renewable/prosumer/active future of energy consumer]*

*“Or any new builds or commercial, perhaps they should be putting solar panels on them all now.” [The renewable/prosumer/active future of energy consumer]*

## Investment in infrastructure

### Smart solutions to support EVs

Participants were asked to what extent they support a smart solution for technology such as EVs, which allows electricity to be shared across all users with one central system that manages it.

Participants were curious as to how such a system would operate, and, in principle, generally shared support for such a smart solution, as long as it worked efficiently and there were no major issues with functionality.

One participant highlighted that a smart grid has been talked about for 15 years, where each household socket has its own IP address, and the grid determines when to charge your car. They recognised that this technology has the potential to level out electricity demand peaks. However, concern was raised over the current feasibility of the network to support this solution. There were also mixed views on NIE Networks managing EV charging times overnight. Participants were concerned about relinquishing control, as well as about the safety of charging at night.

Participants were interested to know whether the system would be rigid with no control, or with limited control. They identified flexibility as a major factor in whether customers will be in favour of NIE Networks managing their EV charging points.

*“What good is it if you have a car to charge but you have an emergency and cannot go anywhere because you decided to save a few pounds a month.” [Older person]*

Participants debated whether they would be prepared to pay a premium on their electricity bill to be in complete control of their own EV charging at home. From an economic perspective, a view was expressed that allowing customers to pay a premium presents an issue of socio-economic fairness. It was suggested that those customers putting themselves forward for the discounted price would be the more vulnerable in society with less income; the idea that customers are able to pay a premium get more control restricts the choices of those with less disposable income. They argued this could create a societal divide and the concept of different levels of control over electricity usage is not acceptable for an essential utility.

*“A basic need restricted shouldn’t be allowed.” [Young working singles]*

*“It depends on the economics. Are people going to have the finances to pay for the extra cost? Tied in with the economy or those on living wage and can people afford to pay more?” [Older person]*

Several participants agreed that there needs to be caveats and controls in place; one participant stressed the need for the balancing of costs and incentives for customers to use EV cars, therefore, any management system must support this and not come with excessive costs.

## Off-peak tariffs

Although the view was expressed that a lower tariff option may be of benefit to a large majority of customers, concern was also raised that not all customers could equally avail of this, for example, people who work night shifts or who drive during the night for work may be excluded from these benefits.

One participant detailed the experience of a friend whose retail electricity supplier had increased its prices during peak periods such as winter and evenings. This friend would use the dishwasher or washing machine at the weekend to avoid the huge peak in costs during busy times when industry is operating.

*“During those peak winter months between 4-7pm when everyone is home with the heating and lights on, that is when the retailer supplier whacks the price up to balance that load out.” [Customers who experience most power cuts]*

## Safety concerns

Concern was raised over suggested electricity usage at night; something which several participants confirmed had been instilled in them as a dangerous practice. They said they would be hesitant to change their behaviours because of this. One participant described how they had been visited by the NI Fire Safety Authority to carry out a health and safety check of the household. The Authority advised the participant to turn off any appliances at night to reduce the risk of fires. This participant argued that in relation to health and safety, using appliances at night is contrary to the advice given, and many others agreed they would not feel comfortable doing so.

*“I don’t understand then how NIE can say go to bed and we will turn on high power tumble driers.” [Older person]*

## Individual consumer responsibility

It was acknowledged that customers, as well as NIE Networks, have a responsibility to improve the way electricity is used to reduce environmental impacts. It was suggested that to persuade the domestic population to fully support smart solutions, there needs to be a better understanding of the benefits; if people are well informed of the reasons why smart solutions are necessary, they may be more likely to comply.

*“The networks are trying to readjust to the new way of things, but we have a responsibility to comply with what is happening. It is not just them; it is us and how we use the network.” [Older person]*

## Public electric vehicle charging points

### Management of charging points

Given the future requirement for a robust public EV charging infrastructure in NI to cater for those without home charging capabilities; participants were first asked who should be responsible for managing these charging points. Participants demonstrated considerable uncertainty around this. A number of participants said they did not have a view on this topic, while several others stated they trust NIE Networks to make the right decisions in this area.

Some participants agreed it was appropriate for NIE Networks to make the initial investment and then lease out use of the charging points. Referring to how the current electricity network is set-up, they accepted this arrangement as almost inevitable. One customer suggested that NIE Networks could allow market competition for charging points. This could benefit the consumer by creating a choice of different rates, as with diesel and petrol fuel prices at present.

*“Have different sellers. It’s working now so why can’t it in 10 years’ time.” [Young working singles]*

*“It is like now where NIE lease out to Click, SSE, Budget.” [Older families]*

### Costs of establishing charging infrastructure

Participants were asked who should pay to establish electric charging infrastructure. Several participants suggested collaboration between the private sector and government.

However, it was argued by one participant that to encourage innovation, private investment and ownership would be necessary. They explained that development might be slowed if this infrastructure is made subject to high levels of government regulation and that market competition can drive innovation.

One participant highlighted that considerable costs will be involved in developing a public EV charging infrastructure that is fit for purpose. One participant suggested that the private sector may only be willing to consider investment once demand is higher. Therefore, as the number of EVs on the roads is currently low, it may be necessary for NIE Networks to cover the initial infrastructure costs.

*“Stacks of businesses would be glad if they had a car parked around the back and can bid for that. But how many do you need? How many cars are there going to be?” [Older person]*

# Vulnerable customers

Participants were asked who they think is a vulnerable customer in relation to electricity and what makes them vulnerable. The discussion acknowledged specific groups of people who particularly need to be taken into account in light of the Covid-19 pandemic. Participants debated over what defines a vulnerable customer, and what type of support NIE Networks should provide.

Top of mind, participants initially referred to older people and people with disabilities, who are more likely to have a medical need for electricity, as being vulnerable. However, on further probing, additional groupings were identified. The key findings from the discussion are reported under the following headings:

- Young families;
- Disabled;
- Older people;
- Rural areas; and
- Those hit worst by Covid-19

## Older people

It was highlighted during the discussions that older people are specifically vulnerable, especially when it comes to power outages. This has recently been exacerbated as the Covid-19 pandemic means that older people are spending most of their time at home and have restricted visitors.

The point was made by one participant that around 60% of over 80s live on their own. Participants expressed discomfort in knowing these older people would be alone without power if there was an outage. They also highlighted concern for those older people who could not get support from relatives or who could not relocate during an outage to somewhere safe with electricity and heating. It was suggested that older people who lack digital skills may be particularly isolated and vulnerable in these circumstances.

*“When the power goes out here, my husband’s elderly aunt and uncle down the lane from us. We would relay to them as they do not use the internet or have a mobile, they cannot look that stuff up. We go and make sure they are ok. There must be people who have no one to look in on them. What responsibility does NIE have in looking after those people at this time?” [Worst served customer]*

One of the participants suggested that NIE Networks needs to do more to keep people informed about what support is available. One participant suggested that families could put details forward of older family members to be added to the Medical Care Register, as many older people do not know how or would not consider putting themselves forward.

*“Dedicated teams for the vulnerable which are more manned. Specialist support where if something happens, they can get quick turn around and call outs to help ASAP.” [Young working single]*

## Disability

Those with both physical and learning disabilities were referenced as customers who may be vulnerable in relation to electricity and may require more support in particular scenarios. One participant highlighted that their electricity meter is in the garage and when the electricity went out, they were unable to locate it. A scenario like this could be difficult for someone with a mobility disability.

A suggested method to support disabled customers was Bluetooth meters; this meter is portable and can be put anywhere in the home, offering a flexible alternative for those with disabilities who can put the meter somewhere that is convenient for them. Another participant expressed the need for increased communication about what support options are available to vulnerable customers, for example, such as generators.

*“I didn’t even know that service (medical care register) was available, and my husband was on a nebuliser. We would have had a battery operated one in case we are out in the car, which wasn’t as strong or effective, it was an emergency one. But I am sure many people do not have that.” [The renewable/prosumer/active future of energy consumer]*

## Young families

Several participants pointed out that it is not just the elderly or those on the Medical Care Register that should be considered vulnerable. They consider that there is a real problem with fuel and energy poverty amongst many young families. One participant stressed this is a hidden problem which has not gained a lot of public attention.

Several participants felt that the issue of young families unable to pay their electricity bills is both a social and economic problem, especially as children have been home schooled for most of the year. As a result, households are using far more electricity than before, and bills have substantially increased. One participant made reference to the number of parents they know who have lost their jobs due to Covid-19. They commented that trying to home school small children is already difficult and families should not have to contend with worries about being disconnected from their electricity supply in addition to this. They emphasised that parents of young children need support just as much as the elderly.

*“I can think of one family where both businesses had to fold. They have no income, trying to apply for benefits, it is not coming quick enough.” [Lone parent/young family/working poor]*

Participants provided suggestions as to how NIE Networks could support young families. Although dependent on the customer, it was acknowledged that many families who are out of work or on zero hours contracts simply are not able to meet their energy bills at present. Within the discussions participants agreed there should be an increased level of leniency on bills for young families, perhaps until Government support becomes available. For example, a three-to-six-month grace period to assure families they can teach their children and the electricity

will not be turned off.<sup>2</sup> It was suggested that this would have broad public support and that many parents who have been left unemployed will get jobs again and be able to pay the money back in the long term.

*“We are in this together and it is more difficult for some. They are doing the best they can and need that extra support until they will get into it again.” [Customer on Medical Care Register ]*

## Rural areas

Customers living in remote, rural areas were also highlighted as a group who may be particularly vulnerable due to a less reliable electricity supply and network. One participant noted that remote areas are more susceptible to regular power outages than customers in urban areas.

It was suggested that NIE Networks could try to make the network more efficient/reliable in these areas, especially in places with potential for the use of wind turbines and solar panels or through investing in the undergrounding of wires.

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<sup>2</sup> It should be noted that the focus group discussions took place in February and March 2021 when the highest level of Government lockdown restrictions were in place.

# Priorities for investment

Participants were asked a series of questions about the issue of investment in the network. This began with a discussion around how much they currently pay for electricity and whether this was considered to be good value for the service received. Participants were then asked how they would prioritise investment in the network over the next five, 10 and 20 years in terms of the areas discussed throughout the session. Finally, participants discussed how much extra they would be willing to pay towards investment.

The key findings from the discussion are reported under the following headings:

- Cost;
- Investment priorities; and
- Customer investment.

## Cost

Several customers who pay for their electricity via direct debit stated that they were unsure of what their previous bill was, as they do not notice the money going out every quarter. However, a number of participants noted that their electricity bill is higher than other regular outgoings such as broadband and mobile phone bills, particularly in the context of the pandemic.

Other customers, particularly younger participants and those with keypad meters appeared to be more cost sensitive. One participant stated they are constantly putting money into their prepayment meter and are spending more than they would like to. They consider electricity charges to be one of their main expenditures.

*“Over past year comparatively to what paid November 2019 to November this year, electric bill has trebled if not more. Comparing it to the summer months to winter months, there is a massive difference there.” [Young working single]*

## Switching suppliers

Several participants reported that they had switched supplier in order to get the best price for their electricity, with some switching regularly. For example, in Group 6 (Older families) six of the nine participants had changed supplier in the previous two years, with one participant confirming that they had changed four times in a year. One participant highlighted that it is not always clear when comparing offers which is the most affordable and consumers should take extra care in this regard. For example, although one provider may be more expensive per unit, financial incentives offered means a customer could ultimately be better off.

*“I just switched to Budget Energy and for the next 12 months I will be able to save £90. They are giving me £40 free electric signing up, and over the next 12 months will get £60. If you shop around, you can make it more affordable for yourself.” [Lone parent/young family/working poor]*

One participant pointed out that, while it is possible to cancel broadband or other subscriptions to cut down on costs, it is not possible to go without electricity. Therefore, switching supplier was seen as the only way to reduce spend. It should be noted that one participant was unaware that they could change supplier and another participant said that they did not know how to check if there are companies with better deals available, and this is something they would like to be addressed.

*“We would change supplier regularly enough, usually when we get calls to the door from someone asking would we be interested in switching. If it looks good value we generally do. We change every couple of years.” [Older family]*

One participant acknowledged that although the process of switching may seem daunting for some, it is relatively easy, and therefore, customers should welcome cash incentives to change supplier if offered. This individual informed the other participants that electricity companies handle the switching process on the customer’s behalf and although the amount saved may not be substantial, once an offer finishes, it is straightforward to switch again.

*“If there was better publicity for the best one. Maybe I will consider having a look after this of what else is out there.” [Lone parent/young family/working poor]*

## Value for money

Participants were asked if the amount they pay for electricity is good value for money compared to other services such as gas, broadband, and mobile phone bills. Some participants highlighted their electricity bill is quite good value in comparison to their oil. However, a few customers commented that their electricity bill is higher in current times.

Participants shared suggestions to help electricity customers better understand their bills. Several participants shared that they find it difficult to understand their electricity usage as it is currently presented, that is, in kilowatt hours and expressed interest in smart meters to help with this.

*“If I put £40 in today and I have the TV on and laptop and I could see today your laptop cost you £1 or the tv cost you 50p, there is a way I can turn that off and save 50p. If I look at something measured in Kh, do not know what this means.” [Young working single]*

A number of participants were unaware of what rate they are on and described incidents in the past when they suddenly had to pay more, even though their consumption had not increased. It was suggested by one participant that it would be useful for customers to have consumption monitors, similar to mobile phone applications which report screen time usage in percentages. This could allow customers to better understand where their money is going.

*“All of a sudden, the bill has gone up £20-30 a month but your behavior hasn’t changed, just the rate. Having more transparency to see what you are using would be the best way.” [Young working single]*

*“How can they simplify everything for supplier and consumer from usage breakdowns, to how it is spent, what days you are spending more. The more information you have means more ability to change behavior.” [Young working single]*

## Investment priorities

Despite concerns around existing electricity pricing, customers highlighted that electricity consumption is only likely to increase going forward and that it is essential that NIE Networks takes a proactive approach in response. A number of participants stressed that consumers would have increased trust in NIE Networks if ethical as well as economic considerations are taken into account in investment decisions.

## Updating the network and developing new technologies

There was some recognition among participants about the need for investment to meet the future demands on the network. It was accepted that, as electricity consumption is increasing, the network needs to be future-proofed to allow for this. It was also acknowledged that this has been made more urgent by the Covid-19 pandemic and the lifestyle changes that it has brought about; namely, working and learning from home. Participants believed this would continue on a greater scale even after the pandemic, and as offices may no longer operate at full capacity, this electricity usage demand will be redistributed to domestic dwellings, thereby creating more demands and pressures on the network from residential customers than previously

One participant used the analogy of a new build house; as one might future proof a new home during planning and construction, so too should NIE Networks in relation to the electricity network. Those with frequent outages stressed that this should include investment in newer, thicker overhead lines or undergrounding of lines to deliver an equal level of service to all customers. These participants emphasized the importance of an ongoing programme of line maintenance and suggested NIE Networks practice better collaboration with other service providers to update the network efficiently.

*“They have got rid of nearly all of them in Bangor and the network is a lot more efficient over last number of years.” [The renewable/prosumer/active future of energy consumer]*

*“When a brand-new road is laid, NIE or whoever a week later come and dig it up to put a pipe down, fill it in, only for someone else to come along and dig it up. All of that should be forward planning.” [Older family]*

*“£1,000,000 spent a year, I shook my head in disgust as I do not see anything like that at all. The only thing I have seen in my 20 years as a homeowner in this property as previous is about to happen outside with the overhead line going from a 2 conductor to a 3 conductor system and that is it.” [Worst served customer]*

## EV charging points

In respect of future proofing the network, electric vehicles and charging points were areas which several customers felt NIE Networks should be prioritising. Participants noted that an increasing number of households are becoming more energy efficient and conscious of the environment. With the Government considering setting a target of at least 70% of energy to come from renewables by 2030, they anticipate that there will be increased demand for electric vehicles. Participants commented that this would result in an imminent and substantial demand on the transmission network for EV charging.

With the government drive for more EVs, a number of customers questioned how NIE Networks plans to ensure each household has the network capacity for charging points. It was acknowledged that this is a concern for both urban and rural dwellers. One participant raised the issue that the current reliance on overhead line capacity in many rural areas will need to be addressed to ensure the network can cope with the increased demand. They suggested a need for major network upgrades in relation to this.

*“Maybe that is something NIE could look at, if they are going down the road of planning for EV’s, is allowing every household to have an electric point in their home. Doing it at a cost-effective time e.g., a lower tariff at nighttime when you are charging your car.” [The renewable/prosumer/active future of energy consumer]*

On the other hand, it was highlighted that for many living in cities, many households do not have driveways and therefore cars are parked on the street. One participant mentioned that they have difficulty finding a parking space in their busy street and questioned how those cars will be charged. Another participant expressed concern around how demand for public charging points in City Centres would be managed, for example, where a vehicle is connected from the morning and remains all day while its owner is at work. They asked how many charging points would be made available to meet demand.

*“As more of these things come on the road, you are going to need people to have them at home. Not everyone has their own driveway for this.” [The renewable/prosumer/active future of energy consumer]*

## Renewable energy

Renewables was another area in which participants highlighted the need for future proofing investment. Several suggestions were put forward by participants who see the need for more action to be taken to support microgeneration such as solar panels and battery storage.

One participant expressed interest in installing extensive solar panels on their farm to supply solar generated electricity to their local area but highlighted that the infrastructure does not exist to allow for this. They suggested that there is an onus on NIE Networks to make the necessary network changes to facilitate projects like this by those who are considering such installations.

*“I could power the whole of Fermanagh from my farm if the network was in place.” [Older person]*

It was noted that many renewable sources, including wind and solar energy, do not produce a constant and reliable supply of electricity. It was therefore suggested that NIE Networks consider investment in battery storage. The benefits of battery storage were highlighted as two-fold; reducing network demand for capacity and affording consumers option to utilise self-generated energy. One participant detailed an example of the positive impacts of battery storage, noting the price and size reductions in previous years.

*“My brother-in-law got solar panels in last year, his battery cost him £3,000 and is the size of a big microwave. The cost has come down by 800%, the size has come down by 1000%. He now pays nothing for electricity in the summer, as he is storing what he isn’t using and using it on dull days.” [The renewable/prosumer/active future of energy consumer]*

## Communicating with customers about reasons for investment

Several participants emphasised the need for the customer to play an active role in the investment process, so they are aware of where the investment is going and why infrastructure needs to be upgraded.

One participant questioned the level of reporting that the customer will receive regarding how much progress NIE Networks will have made towards their investment intentions. They expressed the view that customers need transparency and would appreciate regular updates on any progress that is made.

*“The customer should be involved if the price increases that come along will affect them, cannot leave Stormont to make those decisions.” [Older family]*

## Customer investment

Participants debated the extent to which they would pay towards investment in the electricity network. Many participants acknowledged that ensuring a reliable and stable supply of electricity on the island into the future is a substantial undertaking in terms of both logistics and costs and which the customer may have to contribute to. Although some agreed additional costs on electric bills to cover investment is inevitable, others argue it is not up to the customer to cover this.

Although in initial discussions participant were hesitant about agreeing to pay extra in their bill, most agreed that they would not notice their bill increasing by £5 to £10 per year. Some pointed out that it is better to pay small amounts gradually rather than a large bill all at once in the future. Although many customers agreed that adding an extra £10 per year to the bill would not make a difference to most, concern was raised for specific groups of people who may not be able to support that level of financial investment. One customer highlighted that those who are financially stable will be able to absorb a slight bill increase, however, they cannot speak on behalf of those who are less well off.

Another participant expressed the need for NIE Networks to be transparent to customers in what they will use the investment for. They noted that customers may be reluctant to pay £5 - £10 extra per year if they see no apparent progress made in their local area. It was that suggested NIE Networks enhance their communication as to why customers should contribute.

One participant suggested customers may be more willing to pay if they are better informed about their civic responsibilities to achieve a greener energy system.

*“We have no choice, we need to change, we cannot run on fossil energy. It will have a cost for all of us and whether we want it or not, it will happen.” [Lone parent/young family/working poor]*

Another participant raised the point that although they would not mind paying a minimal amount towards investment in the network for a set amount of time, they would expect that, at some stage in the future, prices would once again return to a baseline with additional costs incurred only on an intermittent basis for maintenance purposes.

While most said they are prepared to pay a little extra for investment, there was recognition that others may not. Several participants rejected the idea that the customer should be responsible for investment in the electricity network.

There was some skepticism towards NIE Networks passing costs on to consumers as a profit-making business. Several participants expressed that they feel it is unfair that paying customers should be further charged for innovation required by government targets and regulation. It was questioned by one participant why the government is not providing funding to upgrade NIE Networks' infrastructure as it will ultimately be of benefit to the whole population. The point was made that a customer of any other network, for example Sky, would not be happy if they requested the customer pay towards upgrading their network and infrastructure.

*“It is their job to get their network in order, it is not the consumers job to get it in order.” [Young working single]*

If costs increase, customers want NIE Networks to be transparent in their investments against targets. They suggest that if NIE Networks are open and honest in relation to their profit margin and what they themselves can put back into the economy, customers may be more willing to contribute. Although several participants mentioned they do not mind paying an extra £10 per year, they expressed frustration at having to do so as consumers.

*“If they were to ask the customer to increase by £10 a year and state what they can add for a better future for new technology, I think people would be more accommodating. But, if you start to go up to £40, the electricity suppliers are making a lot of money.” [Older family]*

The ability to contribute towards investment was highlighted as a circumstantial issue. One participant noted that those who are out of work or on zero hours contracts may not be able to afford extra charges on their bills. It was suggested NIE Networks consider social impacts in their decisions. In doing so, one customer suggested NIE Networks needs to give further

consideration to how they inform the public about their investment intentions and increase tariffs for investment, without penalising those people those who can least afford it.

*“It is a money-making company; it is bound to have money set aside for investment. Why does the customer get hit with the investment? Can they not provide the money themselves instead of pushing it onto the consumer?” [Older family]*

# KEY FINDINGS - NON-DOMESTIC CUSTOMERS

# Electricity usage & awareness of NIE Networks

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The key findings from the discussion are reported under the following headings:

- Electricity usage within the home; and
- Knowledge of NIE Networks.

## Use of electricity

Participants were asked how they use electricity in their business and whether or not this has changed due to the Covid-19 restriction. It is apparent many business customers are conscious of their energy usage.

### Low carbon technologies

Several non-domestic customers noted a change in how they use electricity since adopting innovative energy solutions such as solar panels and wind turbines.

One non-domestic customer explained that although they are not particularly knowledgeable about the logistics of solar panels, since installation they make around £,1000 per year from grid exports. Another interviewee, who is a large manufacturer, detailed that they also export electricity from solar panels and wind turbines.

Working towards net zero and exploring innovative ways to do so was highlighted as very important to one customer who is a large farmer. The business spends £30,000 per annum on electricity. It is focused on operating more sustainably and is investing in an anaerobic digestion plant to sell electricity back into the network.

### Changes brought about by the pandemic

The Covid-19 pandemic has brought considerable challenges for businesses in Northern Ireland, with many premises closing down for long periods of time.

Some customers noted an major decrease in electricity usage since the pandemic. One participant, who is a hairdresser, explained that they have been closed every month so far in 2021 (interview conducted in March 2021), therefore, they have had no electricity usage during lockdown. However, under normal circumstances the business is heavily reliant on electricity. Another customer, who is a bar owner, noted minimal electricity usage as the site has been closed since lockdown began.

*“In the lockdown we have been closed, but a certain amount of electricity still needs to be on first thing; alarms, fire alarms, to keep the building secure and safe. We have a minimal amount of usage at the minute.” [Hospitality, Large, Urban]*

Another customer, a consultancy business, noted that, as an office-based business, their electricity usage is for typical office equipment; computers, lighting, printers. They mentioned their electricity usage for their business premises has reduced as their staff are now working from home. Although they anticipate usage may continue to be lower into the future than prior to the pandemic due to greater flexibility for staff working patterns, plans to increase staff numbers may offset this.

*“Our electricity usage has reduced significantly because everyone is working from home. I would say moving forward that it will get quite close to what it was before... overall there may be a slight reduction than pre Covid-19 times, but not much.” [Personal Services, Micro, Urban]*

Due to the nature of their business, several customers mentioned their electricity usage remained largely unchanged during the pandemic. One business customer, a small farmer, explained they use a considerable amount of electricity and spend around £700 every two months. Another participant, a GP surgery, highlighted that most of their electricity usage comes from heating and lights.

*“We would use a considerable amount of electricity. Our usage may have changed slightly, but when you have a bill that size, £20/£30 extra in the two months isn’t a big issue. If it was £20 or £30 for the house extra over the billing period, then we would be thinking about it.” Agriculture, Micro, Rural]*

## Knowledge of NIE Networks

Participants were asked if they had heard of NIE Networks and if they knew what aspect of electricity NIE Networks is responsible for.

Two of the business customers mentioned that although they have heard of NIE Networks, they were not aware of NIE Networks’ roles and responsibilities. Several participants held the misconception that NIE Networks is an electricity supplier, and that it both owns the network and sells the electricity. One participant detailed that they have been an NIE Networks customer for decades and mentioned misunderstanding that NIE Networks no longer sell the electricity.

Knowledge of the extent of NIE Networks’ roles and responsibilities was varied. Several customers commented they have a ‘fair’ idea of what NIE Networks are responsible for such as looking after the electricity lines. One business participant mentioned they are aware of NIE Networks’ role as a separate organisation to electricity suppliers because one of the business’ board members is involved with NIE Networks. Another participant stated they are aware of NIE Networks as a company created to maintain the infrastructure and separate from the billing element of electricity.

# Experiences of electricity issues

Non-domestic customers were asked if they had experienced any recent issues with their electricity service. Participants were asked about their experiences as customers in relation to the nature and frequency of any issues and how these issues were resolved.

The key findings from the discussion are reported under the following headings:

- Unplanned power outage;
- New connections;
- Professional conduct around safeguarding; and
- Switching to commercial contracts.

## Unplanned power outage

Most reported having no issues over the past couple of years. However, a number of customers reported their experiences of unplanned power cuts and the impact this has had on their business.

One customer had experienced three power outages since September 2020. This farmer described the nature of their work as time sensitive and detailed an occasion when they experienced an outage at 5pm, which is a critical time in the farm's daily schedule of work. For small dairy farmers, the impacts of power outages can be dangerous and inconvenient for staff who are left in darkness. Frequent outages cause major disruptions to work. It was acknowledged that the issue is usually resolved through contacting NIE Networks, and the power is usually restored within 30 minutes.

*"We call the number that we are given, but it is normally our neighbour who works for NIE Networks that would come. If he is on call, he would come within 20 minutes. If he is not on call and cannot come it could be an hour and a half. I cannot see them resolving it any quicker."*  
[Agriculture, Micro, Rural]

Another customer reported that when they experienced a power outage, they contacted NIE Networks via telephone and the line was fixed within two hours. With 200 staff members, outages can have a detrimental impact on daily turnover for large manufacturers.

Outages bring a high degree of business interruption for some businesses such as large shopping centres. This participant reported that they experienced a power outage in November due to excavation work in the City Centre. As the business has a generator, not all units were affected by the outage. Power outages create difficulties for both unit owners who are not covered by the generator and customers who are unable to shop as planned. They

highlighted that when they rang the emergency helpline number for NIE Networks, the connection was re-established within an hour.

*“Everything was back up and running inside the hour. But I could imagine if that were to happen on a busy Christmas Eve or Christmas trading week; it could have been a lot worse.”*  
[Retail, Large, Urban]

## New connections

Six participants mentioned they have had experiences with NIE Networks regarding new connections to the network. Customers raised concern with issues surrounding setting up new connections such as costs and timescales.

### Cost

Customers were complimentary about the responsiveness of the NIE Networks connections team. However, dissatisfaction with the costs was expressed by a number of interviewees. One participant raised the issue of the rising cost of connections. They stressed the need for better communication of the breakdown and rationale for costs of connections, considering that there is ‘no other option but to use NIE Networks.’ Although they acknowledged interaction with NIE Networks has been good overall in relation to their connections, they highlighted the feeling that they are working with a ‘faceless’ organisation and do not understand their operations or processes. Therefore, the customer would welcome a conversation or explanation of the cost of connections.

*“We needed a G59 connection – they needed to put in a new substation for it. We got a bill for over £70k to do that. But you don’t know what’s coming at you or why. There’s no particular rationale for why the cost is £70k as opposed to £50k as opposed to £20k.... there’s no negotiation on that either.”* [Agriculture, Medium, Rural]

Another participant detailed their experience when upgrading their power connection, capacity and cables due to extensions and refurbishments which increased the size of their business premises. They noted that although the application and procedure to upgrade their connection was completed in a timely manner, the procedure was expensive. They commented that businesses are quoted a price, which you either do or do not accept. In the current economic climate, the issue of cost is important.

### Lead times

Several customers expressed their concern over lead times from NIE Networks when trying to set up new connections. One customer addressed their experience with having their turbines connected to the grid. They described this process to be ‘*labourious, expensive and very inefficient*’, noting that it took almost three years and £380,000 to resolve the issue. This customer explained that because of the notably long timescale for connection, the business felt almost discouraged from putting the turbines up at all and suggested NIE Networks should address this issue in order to encourage the installment of renewables.

One customer that works in construction noted the high level of connections that take place each month due to the nature of their business. They issued concerns over the response time from NIE Networks. They stressed that an increase in lead times can lead to jobs not getting finished quickly enough and the business being slowed down. Therefore, they suggested a prompter approach and quicker process for connections is needed.

*“It takes quite a while to get the actual paperwork for payment and of getting them to respond to conversations and calls. It is a long response time.” [Construction, Medium, Urban]*

## Professional conduct around safeguarding

One customer was particularly complimentary of NIE Networks’ professional approach, noting its awareness of the need for vetted staff when accessing their site for maintenance, and, for example, providing the licence plates of staff carrying out the work. This participant compared NIE Networks’ employees positively in comparison to other organisations with whom they had dealt.

## Switching to commercial contract

Although not directly involved in the process, one customer drew attention to issues that their landlord had experienced in switching from a domestic to a commercial electricity contract. They detailed that the issue took a long time to resolve and whilst the landlord was understanding, this process would have been extremely difficult for other business owners who may not be afforded the same understanding. They advocated for better communication from NIE Networks, as the process was costly for the landlord.

*“It was a bit of a disaster and took us about 10 attempts as they kept coming back and telling us what wasn’t right.” [Hospitality, Small, Rural]*

# Customer service

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Non-domestic customers were asked how their expectations in relation to customer service and interaction for specific issues have changed, particularly in light of new innovations such as Zoom and Microsoft Teams etc.

This section sets out non-domestic customers' preferred methods of contact in the following scenarios:

- Unplanned power cuts;
- Planned power cut;
- Queries with meter reading or arranging connection;
- To make a complaint or obtain information; and
- Working with NIE Networks.

## Unplanned power cuts

Non-domestic customers explained the impact that unplanned power cuts caused to their business. In these instances they are keen to obtain information about the likely duration of the outage and the estimated restoration time so that they can take appropriate action to mitigate the impact. Directly contacting NIE Networks through telephone is the overall preferred method; to speak to someone quickly and directly. One customer explained that they prefer the use of telephone as it offers the quickest response to determine why the power has gone out, what line is down and when it will be restored. Another customer agreed that although the use of email can be satisfactory, using the telephone provides a prompter response.

*“Using the phone ensures someone has an understanding and something will be done.”*  
*[Hospitality, Small, Rural]*

One customer stressed that having a direct, specific contact within NIE Networks to find out information promptly may be necessary for some businesses that rely heavily on the use of electricity.

*“For a business of our nature, I would need to speak to someone directly, a call centre isn't of use. Maybe an account manager because the care we provide here is critical and if we cannot provide it, there will be issues for patients.”* [Healthcare, Small, Urban]

## Planned power cut

Customers suggested their preferred method of contact with NIE Networks if there was to be a planned power cut and advised what level of notice is sufficient for their business.

### Preferred method of contact

Technology is changing the way in which customers prefer to be contacted by NIE Networks. A letter of notice is generally satisfactory for customers. However, with the increased reliance on digital communication methods, business customers note the reduction in use of postal services and that a letter in the post might be missed. Contact via email or social media from NIE Networks in relation to planned power outages were also suggested as preferred methods of communication. One customer suggested the use of text message as a reminder closer to the time would be welcome.

### Notice

Customers shared how much notice they think is sufficient for their business if there is going to be a planned power cut. One customer stated that 24 hours' notice is sufficient and noted the impact of planned power cuts to be less significant due to possession of generators. However, the majority of customers stressed the need for due warning of planned work, as there is the potential for considerable impacts to the business.

For many customers, at least one week's notice is necessary, either to start the generators running or to rearrange and reschedule meetings. It is argued that the longer the outage, the longer the warning time needed for businesses. One customer stressed that due to the nature of their business, they would need at least one month's notice as client's book in four to six weeks in advance.

### Impact of power outages

Customers detailed how power outages could affect their business:

- An outage would have a potentially enormous impact for a secondary school by interrupting children's education. As whiteboards, dining facilities and other amenities would stop working, it is likely that the school would have to close for duration of the outage;
- A charitable organisation noted that if the phone lines are down, they cannot provide phone support to families, use their sensory room or provide heat in their mobile facilities;
- For a hairdresser, power outages would mean the complete closure of the business due to heavy reliance on electrical appliances; and
- For a large manufacturer with 200+ employees, turning the power off for a day would have a considerable negative impact through high loss of turnover.

*"It would all be out of the question and we would probably have to close until it restarts again."  
[Personal Services, Micro, Urban]*

*“They shouldn’t be taking power off industry during the week, they should be doing that at the weekend. If they are, they need to put in a generator.” [Manufacturing, Large, Urban]*

*“It would have a very negative impact, because you are going to lose your turnover... if you are turning over in that month £1.5 million, if you divide that by 20 working days, that shows how much money you are losing in one day.” [Manufacturing, Large, Urban]*

## Queries with meter readings or arranging connections

Contacting NIE Networks to query a meter reading or to arrange a connection is perceived by non-domestic customers as not as pressing or time sensitive an issue as power outages.

In relation to meter readings, one customer suggested that NIE Networks could call the business to provide information on what steps the business itself can take to aid the situation. In relation to arranging connections, another customer suggested that as long as NIE Networks provide accurate and realistic answers, they have no preferred method of communication.

## To make a complaint or obtain information

Non- domestic customers’ preferred method of contact with NIE Networks when looking to make a complaint or obtain information was mixed.

### Preferred method of contact

Several customers stated that they would prefer to get in contact via telephone. One customer explained that emails to service providers often tend not to be answered while the use of Zoom can prolong the process. Another customer stated that if they were to use online methods of communication, there would be concern over the waiting time for response. It is suggested that NIE Networks should make clear on its website points of contact for making a complaint and make this information easy to navigate and locate.

*“I think I would want to speak to them, if you put something online you just don’t know how long you will be waiting for a response back.” [Business Services, Medium, Urban]*

However, some customers confirmed that they would prefer to use email to make a complaint. One customer stated this method allows them to get their point across effectively as they are not under pressure on the telephone and so will not forget details of their issues.

## Specific contacts within NIE Networks

Some of those interviewed stressed that it is important for them to be confident in their relationship with NIE Networks and commented on the positive relationship they have with NIE Networks. However, one customer described NIE Networks as 'faceless' and that it took an extended period of around 18 months to get into contact with senior management.

The importance of personal communication was noted and several customers suggested there be a direct, local contact for the business. This contact should be familiar with the business, area and any issues they may face. This provides a direct line for complaints to a staff member who understands the nature of the business and the gravity of consequences should issues arise with the electricity supply.

## Video conferencing

Although many customers expressed their preference for face-to-face or direct telephone contact, several customers acknowledged that the use of innovative contact methods such as Zoom can be a 'brilliant' way to know who you are talking to.

## Working with NIE Networks

Those interviewed were asked how NIE Networks can best work with their business during power outages or to plan new connections. Whilst business owners recognise that the process cannot be based solely on their individual business needs, several suggestions were made as to how NIE Networks can work proactively with businesses and their individual circumstances.

## Collaboration

Participants said that they would welcome increased collaboration and communication with NIE Networks. However, it was highlighted by one customer that: *"There is no consultation around process."* They proposed that NIE Networks consult with businesses prior to planned outages to determine which dates may best suit the needs of the business and its planned schedule of work, such as utilising days off or quieter days which would have a lesser impact on production.

One customer indicated that in order to best work with businesses for planned outages, NIE Networks should provide detailed information of what is happening and why. Increased sharing of information may allow NIE Networks to liaise better with businesses in their planning around outages.

*"It is all about communication, keeping us informed and giving as much notice as possible by as many mediums as possible." [Manufacturing, Small, Rural]*

# Future networks

Customers were asked about their current level of knowledge about climate change, current energy usage behaviours and level of interest in adopting more sustainable practices.

The key findings from the discussion are reported under the following headings:

- Awareness and opinion of government renewables targets;
- Impacts on businesses' energy and electricity usage; and
- Actions to reduce energy usage/ increasing use of renewables.

## Awareness and opinion of government renewable targets

Currently 48% of energy comes from renewable sources, largely on-shore wind. The Government is considering setting a target of at least 70% by 2030. For those customers aware of the Government's renewable initiatives, many were unaware of the current proportion of NI's energy generated through renewable sources.

Although some customers were not aware of the government's current renewables targets, they recognised the importance of having them. It was suggested that better communication of initiatives available and targets set nationally could increase smaller business owners' personal interest in the increased use of renewables.

*"I think they should be promoting it more, giving leaflets around local businesses so they have an idea of how they can help to raise that percentage." [Personal Services, Micro, Urban]*

*"I am not aware of the targets, but then again, it is probably not being put out there." [Hospitality, Small, Rural]*

## Impact on businesses' energy and electricity usage

Participants felt that anticipated implementation of renewables would undoubtedly have an impact on their electricity and energy usage. Some expressed a fear that increased use of renewables will drive prices up for local businesses. Customers commented they expect that the cost of electricity will be impacted.

In consideration of government targets and the impact on businesses' energy usage, participants mentioned a number of possible ways forward:

- One customer stated that although green energy is very important to their business, the target for renewable energy is not feasible unless NIE Networks revise their approach to wind and other renewables coming onto the network, particularly in respect of the cost of connections;
- Renewables need to be reliable and resilient with a secure supply; and
- Targets are important, but need to be *'sensible, reasonable and cost-efficient.'*

## Actions to reduce energy usage and/ or increase use of renewables

It is anticipated that, in light of Government policy, promotion and adoption of renewable technology will fundamentally change business energy usage. Customers were asked whether their business has any targets in place or has taken any actions as part of a strategy to reduce its impact on climate change.

### Managing usage and smart meters

Several of those we spoke to confirmed that they are looking at ways to reduce their energy consumption within their business. One customer shared their active approach to minimising their consumption. They have implemented an LED lighting programme which has notably reduced their power costs and consumption. Additionally, they have installed EV charging points in their car park and would like to expand on this. However, as they are in a City Centre location, they are limited in what renewables are suitable for their premises. They stated that renewable subsidies or grants would help their efforts in using more renewable sources.

Covid-19 has brought considerable challenges for businesses. One customer detailed that due to the pandemic, the business has not been operational for some time but once returned, they will begin to think about cutting down on unnecessary usage, such as leaving on appliances and water heaters when not in use. Although the business has no current targets or usage of renewables, this customer expressed definite interest in the use of smart meters to monitor day-to-day electricity usage.

Another participant provided similar views. Although they have no current energy management strategy, they will be seeking to look at how to minimise their consumption, particularly looking at the size of the building. As a result, they highlighted how smart meters would be useful for baseload monitoring and to better understand when consumption is at its peak.

*"If we have five or six 2kW heaters on from 8am – 6pm, this will significantly increase our annual bill. It is trying to get to the root cause to fix the problem in the first place to reduce the consumption." [Healthcare, Small, Urban]*

### Electric vehicles (in business or to support employees)

Non-domestic customers shared their views on whether or not investing and implementing electric vehicles would fit with their business structure.

One participant noted that while they may have a personal interest in EVs, there is currently no demand from staff. They have looked into installing charging points but found limited information available and would like to see more of this, especially in relation to cost. This customer raised the issue that there were previously incentives available for the installation of charging points, which have since been discontinued.

Another participant explained that they are also open to having EV charging points available on their business premises but was unsure if EVs have sufficient range for their daily use. Lack of relevant research and cost were again identified as possible barriers to moving forward with this technology.

For the construction sector, the outlay cost of EVs for staff was considered as not currently viable. Concern was raised over the need for sufficient research into the immediate and long-term effects of EV battery disposal and what impacts this will have for businesses. Despite some interest from participants, it was concluded that Northern Ireland is arguably 'far' behind the curve in terms of hydrogen vehicles.

*"I think electric vehicles are inevitable and I assume in due course we need to consider implementing something to be able to charge those vehicles." [Healthcare, Small, Urban]*

*"The problem for us is where do you put the charging points that are somewhere accessible." [Business Services, Medium, Urban]*

It can be difficult for businesses to forward plan EV charging points due to availability of space. One participant explained that their business only has a very small car park in which spaces are at a premium. As such, charging points in a business park would not be easily accessible.

*"Our office is situated in a business park; an option could be for there to be a designated spot somewhere. We talked about it last year, but at the minute for us, it just wouldn't work. We would consider EV charging points if there was not that impact of taking away essential spaces." [Business Services, Medium, Urban]*

## Solar panels

Customers shared their views on whether solar panels were a workable renewable source for their business to implement. Although some customers expressed interest in solar panels, they acknowledged several drawbacks to acquiring this renewable source.

The cost of initial investment was described as too high for many businesses. The long pay-back period involved with solar panels was also highlighted as a barrier. One participant was advised that this cost, along with the expenditure to strengthen the roof to hold the panels, would make this renewable source unfeasible.

The observation was made that there is currently no incentive for businesses to invest in solar panels. With the Government's Renewable Obligation Certificate (ROC) scheme being withdrawn to new subscribers, one customer stressed that without this support they would not

be able to install solar panels. For several businesses, no support scheme means solar as a renewable source is less attractive and potentially no longer viable.

*“At the minute, solar panels are not getting particularly good press and they have a long pay-back period.” [Business Services, Medium, Urban]*

One customer highlighted the carbon footprint of the development process and transport of solar panels. They observed that often, solar panels are made in inefficient factories overseas. They felt the value of these panels as a renewable energy source was therefore limited. They argued that the overall impact of solar panels needs more research, taking into account the initial carbon emissions in the manufacturing process.

*“That high input of burned energy, is that going to save out the benefit of having renewable energy?” [Agriculture, Micro, Rural]*

## Cost of supporting infrastructure

The current high costs of various renewable energy sources were emphasised as a barrier for customers when looking at increasing their use of renewable energy.

A wind turbine offers the production of green energy, however, cost can be a prohibiting factor to its adoption. A farmer spoke about the difficulties involved when considering installation of another wind turbine on their farm. In 2015, this customer had to sell property to meet the initial cost, as the bank offered no support. Additionally, they were met with high costs from NIE Networks to provide the supporting infrastructure; namely a grid connection.

Another participant also noted the high cost involved with upgrading the appropriate infrastructure for ‘phase 3 lines’. This individual reported that they could not afford this expenditure; therefore, they have resorted to the use of a generator.

*“It cost £90k to NIE to get the infrastructure in place. This is a huge barrier to the adoption of green energy.” [Sport club, Micro, Rural]*

## Ownership

For several business customers, privately renting their premises presents itself as an obstacle to implementing renewable sources such as solar PV and EV charging points.

The point was made that partner shareholders within a business bring complexity issues when transferring individual interests. The difficulties of working out what is a viable option of renewable sources when there are multiple stakeholders involved was noted.

*“For example, if 5 GPs own the building and they sign a contract to put PV on the roof and someone says they are retiring and want their money out, this can create legal issues about ownership.” [Healthcare, Small, Urban]*

For those customers who rent their units privately, the idea of solar panels is essentially unviable, as any adaptations would require consent and cooperation from the landlord. One customer stated how they *'are always looking at ways to be greener and more sustainable'* and have changed to EVs for deliveries and company cars. However, as they are located in a rented unit, they are unable to make any decisions in relation to solar panels.

# Areas for investment

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Finally, participants were asked to outline which areas they believe NIE Networks should be prioritising for investment. This was framed first in the context of renewables targets and then broadened to include the various interest areas discussed earlier in the interview, such as addressing unplanned power outages and improvements to the connections service.

The key findings from the discussion are reported under the following headings:

- Investing towards net zero targets;
- Broader investment priorities; and
- Extent of investment contributions.

## Investment towards net zero targets

Meeting future net zero targets will require new energy usage behaviours and investment in the infrastructure to support this. Non-domestic customers were asked their thoughts on ways in which NIE Networks can work with their business towards achieving these targets.

Several of those we spoke to confirmed that their business is looking to invest in renewables, however, there is concern over investment intentions from NIE Networks in supporting renewables onto the electricity grid.

### Microgeneration

A number of participants acknowledged the advantages that micro-generation can bring to a business. One customer stated that micro-generation methods such as solar panels can be attached to most buildings. As such, if NIE Networks can aid this process, then renewables will be a realistic option for many small businesses. Businesses will then have the opportunity to use any power generated and save money on imports from the grid.

*“We all have roofs and areas that we can put solar panels or even small wind turbines. To me it makes sense that lots of businesses are able to put these up to help pay for their own electric bill or add income to their business by selling it back to the grid.” [Hospitality, Large, Urban]*

### Upgrading the network

While several participants described themselves as ‘green aware’ and expressed their openness towards green initiatives, they are concerned about how the use of renewable sources aligns with their financial capabilities.

It was stressed that there are no incentives for using renewables at the moment. Therefore, it is crucial NIE Networks establish renewables as a ‘number one priority’ area for investment, particularly in relation to developing a network that will facilitate the increasing use of energy from sustainable sources and as such provide network capacity to businesses who wish to connect their renewables to the grid. This was seen as an option to allow businesses to manage otherwise rising energy costs.

*“50% of our bills are made up of fixed cost, we are doing our best to reduce consumption, but fixed costs seem to increase every year, whilst we do everything else to bring them down.”*  
[Retail, Large, Urban]

*“The greener the energy that they can deliver, the better for the planet, the better for the business customers who are trying to tell their own green energy story.”* [Agriculture, Medium, Rural]

*“If they are going to want people to use renewables, they have got to give them an incentive to use it.”* [Construction, Medium, Urban]

One customer commented how younger staff members are extremely aware of and proactive in exploring green options, but in reality, there must be a cost benefit for the business also. As such, they believe that NIE Networks needs to keep the costs of connections at a reasonable level for businesses, especially considering the current economic climate in which the pandemic has negatively impacted many organisations. At a time of low financial resilience, managing overheads for individual businesses is critical.

*“Cost is important to all businesses and to the public, whatever they are going to do needs to be cost-effective.”* [Construction, Medium, Urban]

Another participant believed NIE Networks' investment focus should be on ensuring an up-to-date network to support EVs coming onto the grid. Although this customer holds a positive view of EVs generally, they want to ensure the infrastructure is in place before implementing this technology business wide.

## Communication, information and awareness

Several participants highlighted a need for NIE Networks to focus on their communication with businesses about the advantages of renewables, combined with awareness raising about the help that can be provided by NIE Networks to facilitate renewable energy installations. One customer suggested NIE Networks could raise this awareness through leaflets dropped through business doors.

*“Even TV adverts to try get the message out there, at night-time would be a way.”* [Personal Services, Micro, Urban]

Although they recognise that tax breaks cannot come from NIE Networks, customers highlighted they would welcome more information on the benefits and payback from renewable sources.

*“I don't think there is enough information on that surrounding what you can do to make your business more environmentally sound. The awareness isn't there.”* [Manufacturing, Small, Rural]

## Broader investment priorities

Customers were asked which areas they believe NIE Networks should prioritise and focus on for the next five, 10 and 20 years.

### Network maintenance

Those that we spoke to acknowledged that NIE Networks must ensure the stability of the network through regular maintenance. A few customers affected by regular outages suggested all wiring be placed underground. They commented that, as well as resulting in an inferior service for some customers, poles and wires also mar the countryside and are a nuisance for farmers.

One participant described the approach to the electricity network in Scotland as much more 'proactive' and described NIE Networks in comparison to be reactive and uninterested in renewable energy.

### Supporting businesses with connections to help growth

One customer commented that they would like NIE Networks to provide a more straightforward connections process to encourage business growth.

*"If we want to set up factory somewhere, NIE should be there to help assist doing it."  
[Manufacturing, Large, Urban]*

### Interconnector

Two customers explicitly raised the point that NIE Networks should be directing their focus to the interconnector between Northern Ireland, the Republic of Ireland, and the rest of Europe. One customer stated that the connector may support cheaper renewable energy. The other customer expressed that they would like to see better collaboration in this area.

## Extent of investment contribution

Non domestic customers were asked how much extra per year, if anything, would they as a customer be prepared to pay towards investment in the electricity network. Participants' responses varied as to the extent to which they believe a customer should be paying to invest in the network.

Several customers rejected the idea that the customer should be responsible for investment in the electricity network. Various opinions were outlined:

- Electricity is already an expensive outgoing for many businesses and as such they may not be prepared to pay more towards investment in the network; instead, the Government should secure investment capital to fund roll out;
- Many businesses have been hit badly financially due to the pandemic and are therefore not currently in a position to pay towards investment; it was felt to be unfair to expect struggling businesses to pay out additional money when they have been unable to open and earn stable revenue for many months;

- One customer queried why NIE Networks are not investing their own money back into the network, rather than asking the customer to pay.

However several interviewees recognised that, as a customer, it may be a requirement to contribute towards investment in the electricity network. Although many interviewees agreed with the suggestion of contribution, several suggested this would be to a very limited extent.

A number of customers stated that they would be more open to the idea of contributing than others as they understand the importance of resilience planning. One participant highlighted that future-proofing the network is especially important considering the potential impact of climate change. This business owner suggested such resilience investment should already be underway and felt any premise of an opt-in scheme in relation to future-proofing the network is not suitable. It was observed that for commercial water rates, investment costs are included in the overall rate and customers do not see a breakdown of the amount specifically allocated to this purpose.

*“I would expect it to be something that you don’t see and included in the rate that everyone pays, as everyone benefits from that.” [Business Services, Medium, Urban]*

Another customer stated that although they would not be keen to pay anything towards network investment, if they were to be ‘realistic’, paying an extra 5 - 8% per annum would not be a major issue. They acknowledge that equipment and infrastructure must be maintained, kept up to date and fit for purpose and they expect this level of service if they are paying extra. Another participant agreed that they would only be willing to pay if there is a visible return benefit to the customer. For this individual, that might include more straightforward grid connections for renewable microgenerators. A further participant added that additional cost now should reduce expenditure in the long-term. To determine how much more, they would be willing to pay, this business owner felt it would be necessary to view NIE Networks’ whole network development plan to assess the added value and to ensure totals tied in with the business’ own carbon targets.

## Transparency

The view was expressed by a number of customers that there is an acute need for transparency between NIE Networks and their customers as to what changes will come as a result of customer investment.

It was acknowledged by one participant that businesses need to weigh up their social conscience against economic interests. For this customer, willingness to pay more will depend on what the package of investment entails and what NIE Networks will provide as a result.

*“For businesses, it is not always about cost-saving, there is a balance as well in playing your part.” [Manufacturing, Small, Rural]*

## Communication and customer service

Several customers recommended it is key that NIE Networks focus on improving their communication and customer service as part of their future strategies. It was argued by one customer that NIE Networks need enhanced communication and consultation with local communities and businesses before they start any works.

*"I find a lot now that with a lot of big companies communication seems to have gone by the west-side badly. With the pandemic and people working from home, I think communication has got lost and it is definitely something that needs to be looked at." [Hospitality, Small, Rural]*

*"When people take on a complaint or query, there should be more responses." [Construction, Medium, Urban]*

# Appendix A

## Breakdown of focus group and depth interview structure

The qualitative research consisted of the following:

- Focus groups x 8
- Non-domestic consumer depths x 15

### Focus group structure

Group	Type	Selection criteria
Group 1	Customers with frequent outages	From NIE Networks records. Includes more rural customers.
Group 2	Customers on Medical Care Register	From NIE Networks records. Includes a range of conditions.
Group 3	Customers affected by bird fouling	From NIE Networks records.
Group 4	Lone parent / young family / working poor	Aged <35, kids <11, on benefits or working poor, ABC <sub>1</sub> C <sub>2</sub> DE
Group 5	Older People	Aged >65, empty nesters, to include representation across ABC <sub>1</sub> C <sub>2</sub> DE groups
Group 6	Older families	Aged >35 with teenage kids, to include representation across ABC <sub>1</sub> C <sub>2</sub> DE groups
Group 7	The renewables/ prosumers/ active future of energy customers	Those who have actively taken energy saving options or energy generation
Group 8	Young working singles	Aged 24 to 40, own residence, working, ABC <sub>1</sub>

### Non-domestic consumer depth interviews

Interview	Sector	Size	Location
1	Manufacturing	Large	Urban
2	Agriculture	Medium	Rural
3	Construction	Micro	Urban
4	Hospitality	Large	Urban
5	Retail	Large	Urban
6	Business Services	Medium	Urban
7	Personal Services	Micro	Urban
8	Healthcare	Small	Urban
9	Education	Medium	Urban
10	Voluntary/charity	Small	Urban
11	Sport club	Micro	Rural
12	Manufacturing	Small	Rural

13	Agriculture	Micro	Rural
14	Construction	Medium	Urban
15	Hospitality	Small	Rural