Northern Ireland Electricity Networks

A FUTURE NETWORK FOR ALL

NIE NETWORKS RP7 PRICE CONTROL

Our approach to planning for 2025-2031

Stakeholder Feedback

March 2023

Contents

Introduction

NIE Networks' stakeholder engagement activity has continually evolved throughout the current price control period (RP6) and we have interacted with hundreds of stakeholders through a multitude of events, workshops, questionnaires, surveys and group sessions since 2017. In this document we describe:

1. **How we have engaged with our stakeholders**
2. **What our stakeholders have told us following the public consultation we led on our initial RP7 Business Plan which we launched in September 2022.**
3. **How we used that feedback.**

This document is divided into four main parts:

- Section 1 describes how we have engaged with our stakeholder communities in preparing the RP7 business plan.
- Section 2 captures key messages from our stakeholders through the consultation exercise and the focus groups.
- Section 3 summarises stakeholder responses to each consultation question.
- Section 4 describes how we adjusted our plans based on stakeholder feedback.
- Appendix A includes more detailed analysis of stakeholder responses, including a selection of quotes from individual respondents.
- Appendix B is the full list of consultation questions.
- Appendix C lists respondents to our consultation and references how we have categorised each response.
- Appendix D sets of the composition of the various focus groups we facilitated to ensure the consumer voice is included.

1. Stakeholder Engagement Journey Through RP6

1.1 General

Stakeholder engagement activity at NIE Networks is overseen by the Consumer Engagement Advisory Panel (CEAP). CEAP was established during the development phase of the RP6 business plan. Comprising representatives from NIE Networks, the Utility Regulator, Department for the Economy and Consumer Council for Northern Ireland (CCNI), it oversees consultation with customer groups on the delivery of the RP6 programme and priorities leading into the next price control period, RP7.

In 2017 and on behalf of CEAP, NIE Networks commissioned Perceptive Insight, an independent market research agency, to gather the evolving views and priorities of NIE Networks' customers and stakeholders. Perceptive Insight, carried out a comprehensive literature review of consumer engagement models to identify examples of best practice in 2017 and again in September 2019 with recommendations provided (see: nie-networks-literature-review-9sep2019.aspx (nienetworks.co.uk)

The review established that the strongest examples of stakeholder engagement were those that gave interested parties multiple and repeated opportunities to engage throughout the business planning process. This allows the stakeholder to build knowledge of the sector and the issues and therefore contribute in a meaningful way. This cumulative involvement through focus groups, workshops and conferences, in addition to quantitative surveys, was therefore a feature of NIE Networks engagement throughout RP6.

The following diagram summarises key dates in our engagement journey.

1.2 Surveys and Focus Groups

Perceptive Insight carried out a multi-year programme of research to ascertain the views and perceptions of customers and stakeholders This commenced in November 2019, when they carried out quantitative surveys with domestic and businesses customers in Northern Ireland (a similar study was undertaken in 2015). The aim of the study was to:

- Ascertain businesses' perceptions of different service providers, including NIE Networks;
- Establish the extent to which respondents understand the role of NIE Networks;
- Determine experience with and overall levels of satisfaction with NIE networks;
- Gain an understanding of customers' preferred methods of contact and communication channels; and
- Identify level of intent to uptake low carbon technologies in the future.

To understand views of domestic customers, 510 face-to-face interviews were conducted between 8-19 Dec 2019. Quotas were applied to the survey to ensure a range of customers were interviewed. Findings for both surveys were analysed using Perceptive Insight's specialist survey software.

Similarly, to understand Business customer views, 213 telephone interviews were conducted between 4-18 Nov 2019. Stratification by size and sector was applied to the data to ensure a range of business types were interviewed and upon completion of the fieldwork, the data was weighted by business size to ensure representation.

In March 2021, qualitative research was conducted with domestic and non-domestic customers. 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 See Appendix C for Focus Group composition.

The aim of the research was to gather the views of a range of different types of consumer groups living in Northern Ireland. Detailed specifications were set out for the recruitment of both the focus groups and interviews. Participants were recruited using a recruitment screener with targeted quotas across key demographics. Three of the focus groups were held with customers that were known to have specific issues, 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. See summary of findings here: nie-networks-qualitative-customer-research-report.aspx (nienetworks.co.uk)

Finally, in May and July 2021, a further wave of quantitative research was carried out by Perceptive Insight. A telephone interviewing methodology was used to conduct the surveys. In total, 1,211 domestic and 507 non-domestic interviews were completed and a report summarising findings can be found here: nie-networks-quantitative-customer-research-report.aspx (nienetworks.co.uk).

1.3 Stakeholder Engagement Workshops

In November 2019 we carried out stakeholder workshops[1] and approximately 150 stakeholders were invited to participate. The workshops were led by NIE Networks' Managing Director. They were made up of various presentations, Q&A sessions, open discussions, electronic voting and breakout sessions, which meant that the format was interactive, collaborative and inclusive. An update on performance against RP6 commitments was given and stakeholders gave their views on our progress and areas of focus for the future. The second session of each event was dedicated to discussion and exploration about the most effective way to develop a stakeholder engagement plan. This session was facilitated by Perceptive Insight. A full report from the workshops can be found here: nie-networks-stakeholder-workshops-report-dec2019.aspx (nienetworks.co.uk)

A further series of workshops took place in November 2020. The objective of the workshops was to qualitatively explore and identify priorities for key stakeholders and to provide feedback on progress since the last round of workshops that took place 12 months previous. To uncover these insights, one large workshop and five focused workshops were held via online video-conferencing over a one-week period. Over 120 stakeholders were invited to attend the workshops which explored then following themes:

- Serving vulnerable customers
- Needs of business
- Connections
- The future network
- Emergency planning

Managing Director, NIE Networks delivered a presentation to inform stakeholders of the progress that has been made over the previous 12 months

[1] These workshops were held in Belfast and Derry~Londonderry on the 14th November and 19th November (2019)

and the areas of focus for NIE Networks looking ahead. Stakeholders were given the opportunity to ask questions and discuss further – the main areas of discussion included:

- Issues relating to the cost of connections;
- Plans for smart metering;
- Plans for carbon offset;
- Managing Distribution Loss Adjustments Factors;
- Managing the increasing demand for electricity and changing customer behaviours;
- Bringing forward investment plans to contribute to rebuilding the economy; and
- The vulnerable customer strategy.

A summary of the discussion can be found here: nie-networks-stakeholder-workshops-jan-2021-r.aspx (nienetworks.co.uk)

This workshop was followed up by a further workshop in January 2021. There were significant societal changes during the 12 months due to Covid-19, cost of living concerns and shifts in legislation and policy. The workshop incorporated an opening address from Alan Bryce, NIE Networks Board followed by a Q&A session with Managing Director of NIE Networks, and four breakout discussion sessions. Due to the pandemic, the workshop was held via online videoconferencing. Over 120 stakeholders were invited to attend the workshop and participants heard about progress that has been made during the business planning period and then NIE Networks senior team outlined priorities for RP7. This was to allow stakeholders the opportunity to comment on these business planning priorities. A summary of the discussion can be found here: nie-networks-stakeholder-workshops-feb-2022-report.aspx (nienetworks.co.uk)

1.4 Technical Workshops

Finally, in November 2021 / January 2022 we invited a range of experts to participate in the more technical aspects of the business plan. The objective was to bring a diverse range of views, experience, and expertise to inform thinking and to challenge discussion to help shape the business approach; and to provide meaningful input into discussions with respect to the more technical aspects of the business plan. The groups represented technical experts across a diverse range of industry and academia, including the four Distribution System Operator customer groups (system service providers, active and passive participants, passive consumer). To garner insights, three workshops were held via online videoconferencing to explore themes such as

- Low Carbon Technology forecasts;
- NIE RP7 technical models e.g. LCT tools, ADST;
- Open data requirements – what data should NIE Networks publish;
- Input into NIE Networks' proposed innovation projects and strategy;
- The future role of distribution flexibility;
- Network resilience; and
- Impact of climate change.

A report detailing the discussions can be found here: nie-networks-technical-workshops-report-14apr2022.aspx (nienetworks.co.uk)

1.5 Scenario Forecasts

Before developing a plan to meet the future needs of our customers we firstly had to assess how these needs are likely to evolve. We have utilised the expertise of consultants to produce three scenarios forecasting the potential impact that changing customer behaviour will have on our network. This primarily focuses on the uptake of electric vehicles and heat pumps.

Following feedback from our stakeholders and in light of the changing economic challenges being faced by our customers from the cost-of living crisis, we appointed economic consultancy support to review our three forecasted scenarios with respect to:

1. Stakeholder insights and feedback
2. Economic pressures
3. Supply chain constraints.

We collaborated extensively with SONI throughout the development of future scenarios, the result of which was the adoption of consistent NI forecasts for the uptake of EVs, heat pumps, generation and overall demand consumption by both NIE Networks and SONI.

1.6 Governance Arrangements

Governance arrangements within NIE Networks were established at the start of RP6 to ensure that stakeholder views were captured, shared and acted upon in current business operations and future business plans. The Board has had oversight of stakeholder activity receiving regular updates and, for complete transparency, attended workshops to hear stakeholder views first hand.

The Stakeholder Engagement Forum, Chaired initially by the Managing Director and supported by members of NIE Networks' Senior Management team, considered stakeholder views, ensuring that the needs of new and emerging stakeholders were captured and acted upon. The Customer Service Forum received regular updates on the CEAP work programme and stakeholder issues.

It was essential that all stakeholders were represented fairly and that a balance stakeholder view was captured. Establishing focus groups, including in person for the digitally excluded, meant that the voice of the consumer was included in our final business plan consultation. Having an independent third party facilitate workshops, focus groups and surveys ensured an impartial viewpoint was collected. We consulted our stakeholders (including CEAP) to identify if there were gaps in our groupings and we advertised workshops on our website to ensure they were open to anyone we may have missed.

These forums and this active engagement all resulted in positive outcomes for customers at both a strategic and operational level. For example, following feedback from consumer groups we introduced a Vulnerable Customer Strategy and a campaign style approach to encourage sign up to the Medical Care Register (increase of x% on 2017 levels). Following feedback from developers and their representatives, we changed our construction delivery model to ensure better on site communication. Following feedback from Connections customers we introduced new ways for customers to communicate with us - live chat on social channels and text reminders.

Ongoing stakeholder feedback has fundamentally shaped service delivery in NIE Networks and our thinking as we planned for RP7. We look forward to further constructive engagement with all stakeholder groups as we finalise RP6 and move towards RP7.

1.7 Other Methods of Engagement

In addition to research and workshops, we have used our partnerships with primary stakeholders (consumer groups, trade bodies, Councils, business representatives, charities, environmental groups etc) to better understand consumer issues and priorities and address these. As political stakeholders represent constituents across NI, we ran events and attended bi-lateral meetings to effectively engage with them. We also engaged with policy makers to help better understanding of future challenges and how we can overcome them. We have used radio and television to promote issues that matter to stakeholders and have used social media to encourage stakeholders to get involved in our engagement process. We've worked hard to ensure the voice of the "silent majority" is considered in our plans and will continue to use new and innovative ways to ensure our plans reflect a broad representation of customers in Northern Ireland.

1.8 Evolving Stakeholder Priorities

Throughout RP6, Stakeholder priorities have evolved and shifted especially in light of the emerging climate emergency and cost of living crisis. By taking account of stakeholder feedback on an ongoing basis, we were able to change our operational plans to meet stakeholder needs – for example launching a vulnerable customer strategy much earlier than expected.

As we moved towards RP7, we considered all the stakeholder feedback received since 2017 and data provided to us by SONI and WSP and developed an initial RP7 Business Plan to consult on. The plan set out that a significant step-change is needed in the level of investment in the electricity network required to facilitate the scale of decarbonisation that has now been mandated by government – in the order of £2.6bn.

The plan also acknowledges that we are embarking on the most significant change in the design, management and operation of the electricity network since rural electrification in the 1960s. A net carbon zero future for Northern Ireland will necessitate a much greater role and dependency on electricity in society, with the expected need for the rapid electrification of heat and transport a key requirement. Enabling this change will require significant development in the capacity of the existing network, alongside further development to ensure adequate capacity for the increasingly diverse mix of renewables that will emerge over the coming decades as we reach net zero by 2050. However, conscious of stakeholder concerns on cost, our initial plan aimed to strike a balanced position seeking to maximise the potential benefits from investing now and minimising the investments needed in the future to deliver a zero-carbon economy – aiming to establish a fair level of investment the public will have to pay. We also acknowledged our role to support vulnerable customers through the transition and asked stakeholders if we should expand our remit and go further for customers.

1.9 Stakeholder Consultation

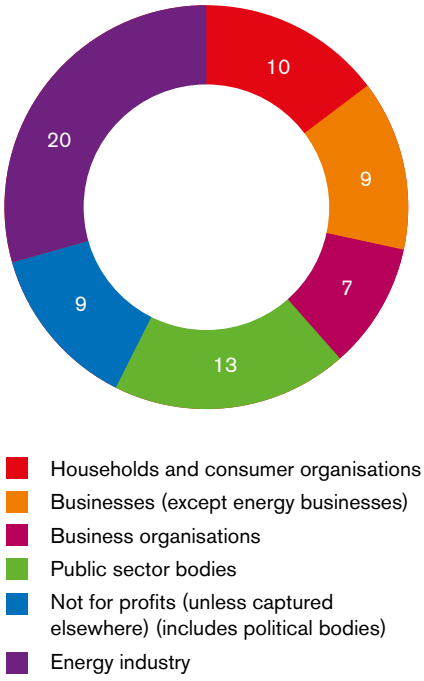
In October 2022, we formally launched a public consultation on this initial RP7 business plan. We promoted it through the press, radio and social media. We hosted webinars, spoke at conferences, facilitated round table discussions and bilateral engagements all to ensure awareness of the plan was maximised and our position was understood. We emphasised that our plans were not set in stone and we encouraged stakeholders to have their say. Specifically, we were keen to understand if customers felt that we are taking the right approach and have the right strategy to take us to 2031.

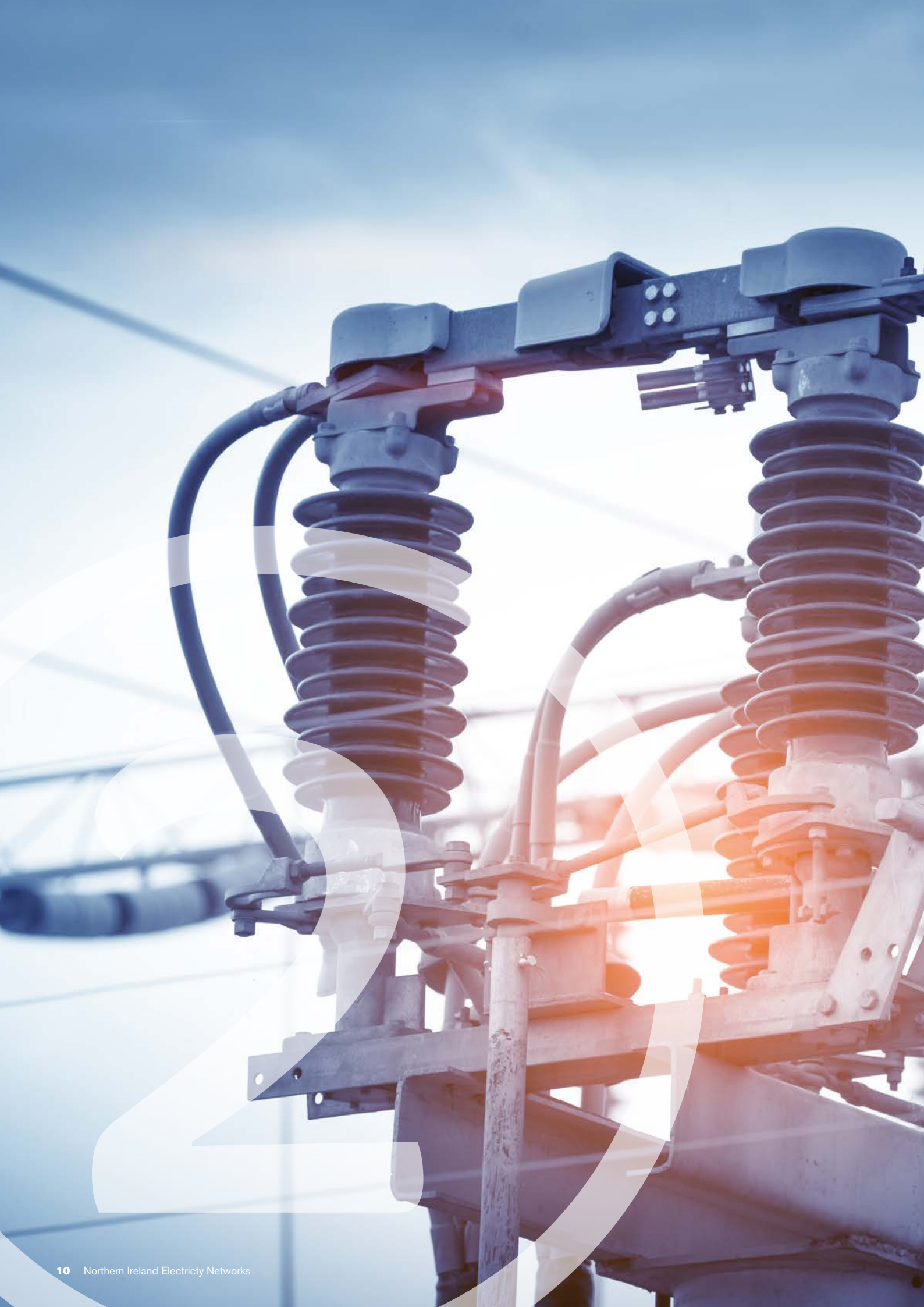
Perceptive Insight held eight focus groups, six of which were reconvened with those who had participated in the previous discussions in 2021. A further two discussions were carried out face to face to capture the views of the digitally excluded. Perceptive Insight also reconvened depth interviews with eight of the non-domestic customers who had previously contributed to the research in 2021. The aim of this phase of research was to check that the views of customers, which had been captured previously, had been adequately incorporated into the proposed business plan and to attain their views on the proposals.

Including the focus group reports, over 70 responses were received from a range of stakeholders, including consumer groups, companies, industry groups and energy industry participants. Some responses are comprehensive and address every question we asked; others tackle a subset of questions; or provide more general commentary. Every response is useful, but it has been necessary to interpret less explicit responses. We also acknowledge that given the level of complexity, especially with the more technical aspects of our plan, stakeholders may not always be able to provide fully informed feedback or considered alternatives.

All responses were considered by the NIE Networks team. Many respondents questioned the assumptions we made on the pace of electrification in NI (for example EV take-up). We had made those assumptions based on WSP data. Due to the divergence of views, we commissioned EY to further test the assumptions based. The plan was then adjusted, where appropriate, to reflect new EY data and stakeholder feedback.

Respondent Grouping





2. What Our Stakeholders Told Us

This section sets out the key high-level messages we took from responses and section 3 provides further detail by each question.

Stakeholders told us:

- It is clear that the electricity network is critical (and of growing criticality) to all our customers and stakeholders. Maintaining a reliable and resilient network is paramount.
- The network is an important enabler of universal net zero ambitions among households and businesses.
- Many stakeholders are conscious of costs and the need for innovation and efficiency to keep costs as low as possible, but ultimately, they don't want the network to be a blocker to progress because of a lack of investment.
- The future is unclear – however the 'Flexibility First' approach which commits to market testing prior to undertaking conventional reinforcement should allow NIE Networks to defer network investment until a clearer picture of demand and generation growth is available was welcome.
- Stakeholders have greatly appreciated our engagement with them on our planning for the future. There is a general consensus that our RP7 plan is well thought through and properly focused. However, some stakeholder told us that our ambition should be higher in some areas.

Householders and consumer organisations told us:

- There is concern about how people are going to cope with rising energy costs and heightened energy insecurity in the uncertain times ahead as our society transitions to decarbonisation.
- Providing support for vulnerable and fuel poor customers is of paramount importance although NIE Networks is not expected to provide that support alone.
- While there is uncertainty about forecast numbers of electric vehicles and heat pumps, it is clear that stakeholders think these are the future.

Businesses and business organisations told us:

- Stakeholders see the electricity network as a critical factor on the journey to net zero.
- The electricity network must not become a blocker to customer decarbonisation ambition.

Public sector bodies told us:

- Councils see the network as critical in their areas and welcome our proposed support for local area energy planning.

Not for profit organisations told us:

- Our network development plan should more fully take account of ecological impacts.

Energy industry respondents told us:

- Our plans are generally in line with their expectations.

Major Energy Users told us:

Our RP7 strategy is visionary, forward thinking and deserving of much merit but that this may not be the best time to commence an implementation programme.

Franchised vehicle retailers told us:

- The lack of an adequate EV charging network remains a major barrier to EV adoption and leaves NI far behind the rest of the United Kingdom in terms of progress moving towards the electrification of the vehicle parc.

Everyone told us:

- Cost matters, but not at the expense of progress on decarbonisation. Careful management of spend is crucial and investment should represent value for customers.

One respondent (Advice NI) captured this in their statement:

"The priority has to be decarbonisation because if it not, we are told by scientists the world over that the earth will become uninhabitable. Costs and smarts meters and satisfied customers will not matter much in that context. Advice NI understand that the monetary cost of decarbonisation will be enormous, and yet we understand the need to move uncompromisingly towards life-saving decarbonisation. We are concerned about how it will impact on ordinary people and how, if handled badly, it has the potential to deepen poverty and fuel poverty"

Our next steps are:

1. We have re-shaped parts of our planning for RP7, in line with feedback we received through the consultation and focus groups.
2. We will submit our full business plan to the Utility Regulator in March 2023. This report on the stakeholder consultation will form part of that submission.
3. We will publish our business plan on our website by end April 2024.
4. Our programme of stakeholder engagement will continue in the run-up to the RP7 period and throughout the RP7 delivery period. Where possible, we will adjust our activities based on stakeholder feedback, for example better promotion of our service offering for vulnerable customers, and seeking more sustainable approach to our business operations.

3. Key Messages from Stakeholder Responses

3.1 Facilitating net zero through a flexible and integrated energy system (Q1 - Q13)

In the first section of the consultation we set out our proposed four step approach to network reinforcement, describing extensive forecasting and modelling, monitoring at all voltages, flexibility and network interventions.

Respondents generally agreed that we had set out the right approach and right strategy for RP7 (Q1). There were particular comments welcoming in particular our extensive and ongoing stakeholder engagement.

The stakeholders who disagreed, emphasised the lack of focus on nature and biodiversity, and the lack of apparent urgency and scale in the plan, seeking much greater focus on those aspects.

There was a general point made by a number of stakeholders on the importance of affordability, and that it should remain central and a priority consideration. This feedback was key in all the decisions we made regarding the balance of investment and the cost to customers,

'The amount of work that has gone into putting this together is fantastic and I think the plan for going forward is well designed. The information days were extremely useful and informative'

Re-Gen Group

'SONI agrees with the approach proposed as it is aligned to what SONI considers is required in order to deliver on the NI Energy Strategy key principles.'

SONI

'ABC consider that the approach and strategy outlined within the consultation document is essential for planning for the future needs of the electricity network within the Borough and Northern Ireland as a whole.'

ABC Council

'The current strategy for RP7 lacks consideration for nature. Peer reviewed evidence on climate change and biodiversity shows that the nature and climate emergencies are inextricably linked. Therefore, it is essential that we pursue an integrated and joined-up approach to tackling them together.'

RSPB

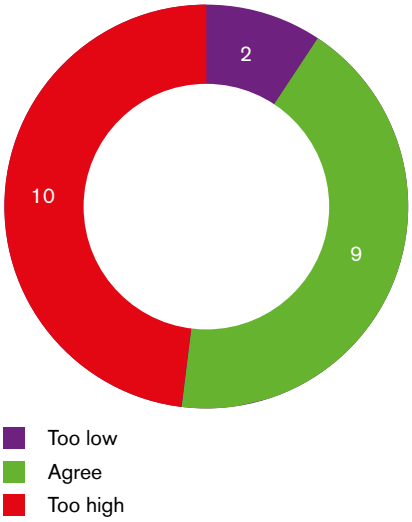
Forecasting the future, particularly the uptake of new technologies (Q2), is not easy. The net zero legislation and energy strategy targets can guide our modelling, but the path to uptake of electric vehicles and heat pumps at scale is also dependent on factors such as support mechanisms.

The largest number of respondents did not specifically comment on our best view scenario, while 40 % of those who commented agreed with that view. Many thought the forecasts were ambitious or quite challenging and with considerable uncertainties. Although 50 % of respondents considered our figures were too high, there were different views across the technologies. Many considered the present economic pressures would supress uptake.

Some respondents commented that the electric vehicle forecast could be too low and one respondent described the need to also consider electric heavy goods vehicles, which they are currently exploring. One recognised that by 2050 there would be universal electrification of transport, so that enabling investments in the network are a matter of timing rather than need.

A recurring theme in responses, particularly in the focus groups, was the lack of public charging infrastructure, which would need to be in place to support widespread adoption of electric vehicles.

Q2. Scenarios of future customer behaviour



'Unless significant headway is made … adequate investment in the LV network, 300,000 electric cars and 120,000 heat pumps in Northern Ireland is overly optimistic and unlikely to be achieved.'

Ulster Farmers' Union

'It may be that NIE Networks forecasting based on the SONI baselines are too conservative leaving little margin for error in the acceleration of uptake. Our general observation regarding the modelling of EV uptake is that no model disagrees with the eventual outcome, which is the blanket electrification of transport by 2050, it is the rate of change that is going to take place, in which case this should not be looked at over or under investment but an efficiency factor on spending. The fact remains that if enough investment is not put into the grid quickly enough, it risks NI's compliance with Net Zero targets of 2030 and 2050.'

Kelvatek

NFDA NI supports NIE's estimate of 300,000 vehicles being on Northern Ireland's roads by 2030… The gap between Northern Ireland's charging infrastructure and the rest of the UK is widening with each month. If the current situation remains unaddressed it will soon be impossible to catch up and the cost to bridge that gap would be ruinous.

NFDA

'CBI members have highlighted that when it comes to forecasting, there is a strong argument for NIE Networks to look at the end point of Northern Ireland's long-term plan to decarbonise and consider - if the economy is fully decarbonised, what should the grid look like?'

CBI NI

Participants thought the forecast for heat pumps could potentially be realistic if it saved consumers money compared to gas or oil. Similarly, participants were concerned that the cost to transition to heat pumps would deter the public if there was no financial incentive.

Focus Group C

On mobilisation of an NIE Networks Local Area Energy Planning team (Q3) all respondents offering an opinion agreed with the proposal. There was no dissent, although there were some cautionary comments about the availability of expertise in councils, which have not traditionally had an energy system planning role. There was also some encouragement to involve community initiatives. We have noted additional remarks from councils about their green energy planning initiatives and we are considering how best to support them in advance of the RP7 period.

'Ensuring that NIE Networks can offer dedicated support will be an important part of the energy transition, particularly at local community level, where upskilling and education will be very important.'

National Energy Action NI

'This ambition, if appropriately costed, aligns with consumers' desire for industry to demonstrate leadership in the journey to net zero.'

The Consumer Council

'Yes, we agree. However, the engagement should include generators and technology providers to ensure that local energy and net zero plans are suitable to attract the investment and secure the timelines required to meet 2030 targets.'

United Renewables, Agri AD

'Since communities and individuals will become more proactive in their energy provision, it also makes sense for this (Local Planning)Team to include the grassroots agencies who are already doing this work on the ground. For example.. include local community representatives; NICE; Co-operative Alternatives; Bryson Energy; community energy projects such as Drumlin Wind Energy Co-operative and the Edenderry Village project.'

Advice NI

'Yes, we agree with this suggestion. It should be noted that Belfast City Council plan to commission a Belfast Local Area Energy Plan. As part of this process, we will establish a regional energy consortium (comprising primary stakeholders - including network operators, local authorities, business and community energy groups) to shape a net zero vision for Belfast and guide the LAEP.'

Belfast City Council

Respondents universally accepted the need for increased monitoring of the LV network (Q4). The majority considered that we should aim to monitor more that 50% of the LV network, in many cases proposing 100% of the LV network.

'No. The value of 100% coverage (in particular, in providing insight to avoid inefficient investment) far outweighs the modest increase in overall costs.'

Ardent Energy et al.

'With a targeted policy and the right monitoring and sensing capabilities 50% of the LV network should be enough especially as 50% of the network does not translate to consumers numbers monitored, for instance one GB DNO intend to be monitoring 52% of their network, which translates to 96% of their customers.'

Kelvatek

'The electrification of heat and transport may require a higher figure. Even activating large numbers of hot water immersion heaters in homes could require monitoring to avoid overloads.'

NIHE

'50% is not ambitious enough given the urgency and gravity of the climate crisis. 100% would ideal but failing that, 80% might be a good second best as it would allow you to monitor higher levels of LCT connections while at the same time trying to avoid outages.'

Advice NI

All of the responses on the topic of the open data portal (Q5) provided positive sentiment, although there were some notes about data governance, funding and security.

'The Vimeo is a good demo of a useful resource. API capability is very welcome.'

The Electric Storage Company

'SONI welcomes NIE Networks Open Data Portal. SONI is currently collaborating with NIE Networks in the information sharing required to ensure consistency of the information available to customers. The collaboration of DSO and TSO will ensure that one accurate version of the data is available to all and SONI looks forward to continuing this collaborative programme with NIE Networks.'

SONI

'Council fully support a proof of concept 'Open Data Portal" being made available.'

Armagh City, Banbridge and Craigavon Borough Council

'The "Open Data Portal" seems very comprehensive and easy to navigate. There is good detail available here which seems easy to find. The geospatial mapping included is also very helpful.'

Maxol

All respondents answering the question on the 'flexibility first' approach (Q6) were supportive. While recognising the value of flexibility, some also emphasised the need to consider whole

system costs and impacts, real world demand elasticity and not unnecessarily to delay investment.

We note the priority some stakeholders have attached to microgeneration. Recognising a trend towards customer installation of microgeneration, we continue to explore (with SONI) how larger volumes of microgeneration might be accommodated while ensuring system security and operability.

'Yes, very futuristic, this is the way forward.'

Warrenpoint Harbour

'"Flexibility" is in keeping with our own support for microgeneration, distributed embedded generation and the 4 Ds (Decarbonisation, Decentralisation, Democratisation and Digitalisation).'

Action Renewables

'While the flexibility first strategy is welcome, there will be a need to develop and communicate "un-certainty management mechanisms" clearly and visibly to ensure that there is sufficient flexibility and agility to enable the investment required. Flexibility and agility should no less be carefully balanced with clarity on the scale of investment required to provide the necessary confidence in the process.'

NI Chamber of Commerce and Industry

'we would caution against the elasticity of certain demands being overestimated and the potential risk of rewarding flexibility which does not, ultimately, avoid network investments and/or other significant costs in the wider energy system'

Mutual Energy

Respondents unanimously indicated we should take wider societal impacts into account when weighing up FLEX versus conventional reinforcements (Q7).

'We would also note that failure to consider wider societal impacts such as decarbonisation would be likely to clash with statutory obligations under the Climate Change (Northern Ireland) Act 2022.'

Ardent Energy et al.

'Use of the industry standard CEM developed for the ENA by Baringa ensures that this and other factors such as emissions associated with losses, embedded emissions in the selected reinforcement option, emissions associated with the energy used to meet the capacity requirement and any other associated emissions are considered.'

Kelvatek

'Certainly. This is very relevant in modern society where there will be much interaction between the network operator, stakeholders and end users.'

WD-Associate (Support) Ltd

'Yes, especially from the perspective of considering fuel poverty and ensuring those customers aren't left behind.'

NIHE

Again, there was support, with no dissent, for going further, faster with our proposals on FLEX (Q8).

'Yes it will be useful to engage users in flexing demand and in turning up demand to utilise more renewable electricity. Locational and dynamic pricing of capacity could be appropriate for non-domestic users or Energy Services Companies linked to heat networks.'

NIHE

'Most if not all industrial consumers have the capacity to accommodate demand reduction with appropriate notice and or generation constrain as required'

NI Water

'Meaningful engagement with experienced service providers is vital in order to develop optimum solutions for flexibility services. The complex task of developing appropriate operational standards, commercial frameworks, effective market interfaces and ensuring that technical barriers hindering market participation are removed can only be done in consultation with industry stakeholders.'

The Demand Response Association of Ireland

'We agree with the "further, faster" approach if it unlocks efficiencies early and provides customer savings over the medium term.'

Maxol

A few stakeholders Ardent and Alliance for example) pointed out that innovation needs to be viewed through lens of costs for consumers (Q9). However, there was broad support for our innovation principles with commentators backing in particular:

- the concept of 'whole system' thinking on innovation;
- the need for innovation from lower technology readiness levels;
- NIE Networks' leadership of collaborative innovation; and
- innovation in integration of renewables as a contributor to the Department for the Economy's 10X strategy.
- Some stakeholders did suggest that innovation should focus on where there is already a proven track record (ABC Council); that the pitfalls of chasing innovative technologies should be avoided (Advice NI); and that innovation may be great but should not place higher costs on consumer (Alliance).

'Yes, although we believe this should be much more ambitious. In the past, NI's adoption of the 'fast follower' approach has resulted in inertia; for example, with digitalisation and the adoption of smart meters.'

Ardent Energy et al.

"'Yes, but the UFU are struck by one line and it is one we wish to stress;

'We (NIE Networks) are perfectly placed to be leaders in innovation in the integration of renewable generation onto the network'

It is imperative that this developed and rolled out if our members/land owners are to play an integral and active part in energy transition.'"

Ulster Farmers' Union

'We agree that NIEN should continue to innovate and that considering the unique circumstances of the Northern Ireland network, you should broaden your innovation remit to be more than 'fast followers' and to take a more

"whole system' approach.'

NI Water

'IoD believe that NIE Networks has a major role to play in supporting innovation and technologies that deliver a longer-term solution and reduces Northern Ireland's exposure on these issues. NIE are perfectly placed to be leaders in innovation in the integration of renewable generation onto the network and thus creating new business opportunities which further aligns with the DfE 10X strategy.'

IOD NI

Of respondents who explicitly answered the question on the level of innovation funding (Q10), not only was there no objection to the proposed 2% level of network investment funding for innovation, approaching half of the stakeholders thought the allowance should be higher. Key drivers for this opinion are:

- RP7 will be a critical and challenging period for system transformation and much of the low hanging fruit has been taken.
- All innovation projects should provide a positive return on investment.
- NIE Networks should also lever funding from other sources, where it is available.
- A Network Innovation Fund, administered by UR, is welcomed and is compatible with the promoted 'fast follower' approach.

Some oragnisations believe that the funding is needed but should be spent differently than what is proposed. For example, Advice NI suggests innovative solutions should not be a focus when the technology needed for consumers exists and is not the barrier to their engagement.

ABC Council state 2% allowance is not enough but focus should be given to industries where there is already a proven track record.

In line with our Innovation Strategy, we undertake network innovation projects where we anticipate a benefit to customers – ultimately through lower bills. We have taken a 'fast follower' approach where we have learned from similar projects in other jurisdictions and we have been able to trial new technologies at lower risk, but we foresee the need to undertake earlier stage innovations as the pace of decarbonisation increases. Although our innovation projects deliver value to customers, the return is typically over subsequent price control periods, so that it is necessary to fund the projects through our price control allowance.'

'the current UK government target for R&D is 2.4% of GDP by 2027'

QUB

'There needs to be a higher scale of allowance, 2% is not an acceptable level for RP7 and is not adequate to meet NIE Networks innovative aspirations.'

Ulster Farmers' Union

'Smart Grid Ireland's view is that the RP6 innovation allowances were totally inadequate including the lag-time for approvals. Based on RP6 calculation this needs to be raised to at least 5%.

Smart Grid Ireland

'The quantum such a fund should be determined in recognition of the express need for innovation to deliver carbon reduction while also avoiding significant additional cost demands on consumers.'

Consumer Council

A clear majority of responding stakeholders thought that we should go beyond our proposal to invest in LI5 sites in our baseline plan (Q11), including LI4 sites also. Reasons cited for including LI4 sites include: the priority for decarbonisation, anticipated growth in demand and the need for the network not to be an obstacle to roll-out of electrification.

'No, the UFU disagrees and would be in favour of Option 2. Net zero aspirations need to be financed and there appears to be firm debate as to how this is going to be paid for. But this should not hold back any commitment to network investment.'

Ulster Farmers' Union

'the LI5 approach seems sensible allied to a "Flexibility First" approach'

Maxol

'Everything possible should be done to clear the road to decarbonisation and it is regrettable that more has not been done already in this respect. have a lot of catching up to do. Our society has a lot of catching up to do.'

Advice NI

'We agree with NIE Networks approach as the most cost effective for the consumer, ideally without the constraints of the wider cost of living crisis, the safest long-term option would be 2. However, as NIE networks themselves point out the right decision at the current time is to reinforce those most in need while continuing load indexing on other sites to monitor available capacity.'

Kelvatek

There is clear support for replacing all 5 kVA transformers (Q12), which respondents realised are a blocker to installation of low carbon technologies, including electric vehicles. The three respondents who disagreed preferred to monitor the situation and replace the transformers on a case by case basis. (This is logical, but assumes we are informed about installation of low carbon technologies, which is regularly not the case, or neglects the cost of installing monitoring apparatus.)

'No, I would monitor usage and change on a case by case basis'

Warrenpoint Harbour

'Yes, there is a very clear and pressing rationale outlined in the document setting out the case for doing so.'

WD-Associate (Support) Ltd

'Yes, we agree with the proposal to replace all 5kVa transformers as soon as possible during RP7.'

Advice NI

'Yes, they will be a significant blocker to EV uptake as well as other LCT technology and deny consumers in this area an equitable outcome from the energy transition.'

Kelvatek

While a handful of stakeholders agreed with our proposal on substation upgrades (Q13), an overwhelming majority of those responding, nearly four times as many stakeholders, thought we

should go further by upgrading where there is forecast need for capacity. The rationale is similar to that in responses to question eleven – so that decarbonisation progress is not blocked or delayed by an insufficient network. Some responses also noted the need for reliable forecasts or proposed a combination of options 2 and 3.

'SONI considers that Option 1 may result in a backlog of investment work and a delay in achieving targets. Option 2 seems to be a reasonable approach but in areas where there is greater confidence in the Option 3 forecast, an upfront capped allowance should be considered.'

SONI

'Option 3 is the only viable route if we are to have any chance of meeting the RES-e 2030 target.'

Ulster Farmers' Union

'Option 3 looks to be the sensible choice, particularly if a new RES incentive scheme adopts an intelligent approach and prioritises new assets in the most needed locations.'

Centre for Advanced Sustainable Energy

'While Opt 3 presents the least risk to the 80% RES-e target, we would support Opt 2 as a sensible approach to ensuring the distribution network keeps up with proposed new low carbon generators. Consideration might be given to whether a "Flexibility First" approach could help.'

Maxol

3.2 Maintaining a safe, reliable and resilient network (Q14 - Q18)

In this second section of our consultation we described our plans to ensure the network continues to be safe, reliable and resilient. We asked about the cost of reliability, measures to reduce the impact of outages and protection of the network against climate change.

More stakeholders gave a specific answer to this question on maintaining the reliability of the network (Q14a) than any other and there was universal support for maintaining reliability of the network. Some respondents noted increasing dependence on electricity for heat and mobility. Another pointed out that climate change could lead to more frequent adverse weather events, implying that ensuring network reliability might require further investment.

'Network resilience to infrastructure failure and damage will become even more important as energy provision further consolidates. The resulting impact of any large-scale electricity outage could have severe safety and/or economic consequences and the risks must be appropriately mitigated via appropriate levels of operational spend and capital investment.'

Phoenix Natural Gas

'It is vital that the network is reliable, safe and secure and for the network to be affordable for all.'

Sinn Féin

'Yes we agree with maintaining the reliability of the network'

Belfast City Council

Participants agreed that they thought this was a good plan.

Focus Group G

While a few respondents agreed that a reduction of network reliability could be acceptable with a reduction in the electricity bill (Q14b), the clear majority did not agree and among those who submitted comments on this question there was almost universal disagreement with any reduction in reliability, with just one stakeholder suggesting NIE Networks should test this prospect through engagement with consumers. (Consumers in the focus groups indicated disagreement.)

The UFU are opposed to any reduction in capital spend which could reduce network reliability.'

Ulster Farmers' Union

'In our opinion, any plan that would assume a less reliable system would be deeply flawed, involve higher costs later, and might have unforeseen safety implications.'

Maxol

The Consumer Council deems it unlikely that consumers would accept a reduction in network reliability if it meant a higher incidence of electricity outages just to reduce bills in the short term. However, as we have not undertaken consumer research on this, we recommend that NIE Networks test this prospect through engagement with consumers.

Consumer Council

"That's a progressive step going back."

Focus Group A/B

On the question of allowances to help minimise the impact of planned outages (Q15) there was almost unanimous support for installing automated devices to reduce CMLs associated with faults. One respondent who indicated disagreement though that SCADA rollout in RP6 should already have lessened the impact of faults on the LV network. (In practice, this proposal is to go beyond the work undertaken in RP6 to further reduce CMLs.)

'YES – increased automation makes sense for both reliability and resiliency. Support of local resources including energy storage can also reduce impacts of planned outages.'

Smart Grid Ireland

'No. The UFU would question this. In RP6, NIE Network oversaw the rollout of SCADA, which was introduced to lessen the impact of faults on the LV lines. If SCADA was working efficiently surely this would improve the performance and reliability of the grid for other LCTs?'

Ulster Farmers' Union

'Translink are supportive of any allowances that will help minimise the

impact of any planned outages.'

Translink

"Smart. They're planning ahead. That's probably going to be cost effective for them too because the last thing they want is unplanned outages"

Focus Group F

While approximately half of the respondents agreed with our proposal to target only the top six worst performing circuits (Q16), the other half disagreed and thought we should go further. While stakeholders, especially households, are aware of the costs in targeting more circuits, there were many comments about the necessity of a reliable network, particularly in the context of increasing electrification. There was some nuance in the comments, where some who disagreed thought six circuits should be targeted first, followed by other poor performing circuits.

Some stakeholders pointed out the need to avoid "postcode lotteries" (NEA) and that we should define what "worst first" actually is. Stakeholders also asked should the focus be on the worst performing circuits or based on the effect circuits have on customers most in need, both now and in future. This is linked to likely prevalence of microgeneration in rural areas as pointed out by UFU, ABC and FODC.

'Since the majority of our members are located in remote rural settings, the UFU would wish to see a commitment from NIE Networks to eradicate all existing worst served customers in RP7.'

Ulster Farmers' Union

'Council disagree that only the 6 worst performing circuits should be targeted. All residents and businesses within the borough should be able to depend on a reliable and secure electricity supply.'

'No business or resident should be disadvantaged by lower levels of network performance.'

Armagh City, Banbridge and Craigavon Borough Council

'Yes, however we feel NIE should retain the ambition to eradicate all existing worst served customers should this become possible without impacting adversely on domestic and commercial customers.'

Belfast City Council

"Sort that out and then work your way back until everything's fixed."

Focus Group E

In line with responses to other questions about reliability, in response to this question on improving the number of customers that we can keep on supply following a HILP event (Q17) every stakeholder who provided a clear answer agreed with our proposal to improve the number of customers that we can keep on supply following a HILP event. Reasons included increasing reliance on electricity and moving up to the benchmark in GB. That said, a smaller number of comments emphasised the need to balance the costs of this work against the low probability of the scenario.

'Yes. People are becoming more dependent on electrical power for safety and communications, also increasingly for heat and transport.'

NIHE

'Businesses, in particular, cannot afford to be without power for lengthy periods of time. They need to have certainty that business is not at risk of interruption, in order to maintain competitiveness in an increasingly difficult operating climate. Additionally, home-working and electric vehicle trends mean that many people now rely on dependable supply at home.'

Armagh City, Banbridge and Craigavon Borough Council

'Given the rare occurrence of these events, and given the high priority need to future-proof the grid for decarbonisation, any investment in this area should be weighed against the investment priorities of decarbonisation.'

Advice NI

"It's got to be based on the probability. So, I think a risk-based approach is basically what I would call that. So not necessarily, not if it's going to cost a huge amount of money for something that had a tiny probability of happening"

Large business services (Focus Group: Non-domestic)

Most respondents who expressed a view concurred that we are proposing a plan that is balanced and sufficient to adapt our network for climate change during the RP7 period (Q18). However, a few additional comments said:

- no, more must be done to protect the key service that is delivered by the electricity network;
- there must be flexibility to react to climate change scenarios;
- there should be ongoing risk assessment; and
- more could be done to positively impact ecology.

'NIEN are taking actions in line with what Oracle sees as international norms.'

Oracle

'Although this appears to be challenging SONI would consider this to be a realistic approach and looks forward to working collaboratively with NIE Networks in the future.'

SONI

'The investment in infrastructure development must be ambitious and NI Water see that on balance, NIEN are adopting a balanced approach.'

NI Water

"I think that's a total no brainer. It's very clear that they need to do that really and to adopt changing circumstances with climate and whatever. And if you didn't do it, you would be really remiss in that."

Focus Group A/B

3.3 Meeting the needs of our customers (Q19 - Q22)

The third part of our consultation sought feedback on measures to support customers worst impacted by the energy crisis, introduction of a customer satisfaction incentive, action against bird fouling and a low regrets approach to replacement of meters with smart meters.

Opinion was somewhat split on the topic of allowance for direct measures or initiatives to help those customers who are worst impacted by the energy crisis (Q19). On one hand the clear majority, three quarters of stakeholders recognised the need for households, particularly vulnerable or energy poor customers, to be supported in some way. Some comments encouraged greater ambition on the part of NIE Networks, collaboration with other stakeholders, appropriate targeting of such measures and offered support and expertise. Others proposed that education, smart meters and efficiency/insulation should be the first interventions.

To provide the "tailored support" noted by CCNI delivery of EE along with smart meters, expertise and education are all needed. Rather than there being primary and secondary interventons, all of these will be needed to work together in tandem.

Energy efficiency is about more than just installation of fabric changes such as wall or loft insulation and even with a OSS, NIEN may still have a role to play in demand reduction facilitated through greater data usage obtained through smart metering for example. This would definitely also be linked to consumer engagement and education.

On the other hand, one quarter of respondents thought this was not a role for NIE Networks, that such an initiative should be open to competition or delivered through DfE's proposed 'one stop shop', or that policy on microgeneration should be reviewed.

'I don't believe it's necessary, requesting funding for solar panels for a home [that] struggles to pay for the electricity over complicates the solution.'

NIHE
The Electric Storage Company

'it is important that any direct measures that are allocated as a result of RP7 are appropriately target to those customers most in need.'

National Energy Action NI

'SONI considers that this activity does not sit with a natural monopoly. The services proposed should be open to competition and any funding may be via government subsidy initiatives rather than via electricity tariffs.'

SONI

"I think it's spot on. 100% they should take priority"

Focus Group C

NIE should be ambitious in helping those most vulnerable in society – understanding their needs, the resources required, and establishing a programme that addresses these or seeks resources to do this.'

Belfast City Council

Some stakeholders made suggestions that NIE Networks can deliver on now rather than wait until the commencement of RP7:

COPNI is encouraged by NIENs continued commitment to its Medical Care Register. However, we would encourage NIEN to report on the numbers subscribed to the register and would encourage NIEN to further promote the service as far as possible in conjunction with the relevant stakeholders.

Commissioner for the Protection of Older People

Respondents were generally sympathetic to the problem of bird fouling (Q20), although some commented that the cause of the issue was siting of the house. There was less consistent opinion on whether the costs should be paid by all customers, though a small majority thought so. A bird conservation charity would need more details before offering an opinion and offered its advice on this topic.

'Justified investments in reliability improvement (automation, tree wires, local resources, animal guards, etc.) are usually spread across all customers. We don't see any need to change this philosophy assuming that these are the most prudent investments for improving reliability with respect to bird fowling.'

Smart Grid Ireland

"Birds are there first. The houses were built in the wrong place."

Focus Group A/B

All the participants agreed that the technology should be fitted for customers affected by bird fouling.

However, there were concerns that the customers should not have to pay for this expense. Some thought the power companies should put some of their profit towards the maintenance of the network.

Focus Group C

Everyone agreed that customers affected by bird fouling should be fitted for the new technology and they were happy for the cost associated with this to be reflected in their bill.

Focus Group D

Households and consumer bodies generally welcomed the proposal, but commented on the need for

coordination across stakeholders.

Businesses were also generally supportive, also suggesting more ambition would be in order, including extending the proposal to farms, but noted the importance of energy efficiency.

Public sector bodies were generally more cautions, commenting that this kind of initiative should be delivered by, or in coordination with a one stop shop, councils, the government and its agencies. There was also comment on the priority to be associated with energy efficiency and the need for capacity in the grid for solar panels.

Energy industry respondents were clearer that this is not the role of NIE Networks.

Where respondents demonstrated a clear opinion, there was unanimous support for taking a no-regrets approach to installation of smart meters (Q21). Indeed, a number of respondents expressed concern that smart meters are not already rolled out in Northern Ireland. One contribution also recognised the need for retail tariff reform and the role of suppliers.

'The reasons to install Smart Metering have become more pressing, so a 'no regrets' approach seems appropriate. Pilots to resolve the potential in Smart Metering and Demand Side Response are likely to have a high value.'

NIHE

'on the topic of smart meters is shocking that this has been batted backwards and forwards between NIAUR and Energy Division for maybe 10 years now. And here we are in the middle of an energy crisis and not a smart meter about the place.'

WD-Associate (Support) Ltd

'smart meters should be installed in households and businesses Irrespective of approach'

Smart Grid Ireland

Everyone agreed in principle that smart meters should be fitted to be prepared for the future. They were not deterred by the fact that the meters would not be used right away or possibly ever.

Focus Group D

Again, those who expressed an opinion were unanimous in their support for introduction of a customer satisfaction incentive metric(Q22). Besides support there was some commentary around why a financial incentive should be necessary, the need for customers to interact digitally with us and remarks on the connections process.

Given that consumers benefit from appropriately calibrated measures, targets, and incentives, we would also welcome the opportunity to work with the UR and NIE Networks to further scope the introduction of a customer service incentive mechanism for RP7 with proportionate rewards and penalties.

Consumer Council

'We would encourage NIE through the RP7 to put in place measures to monitor the efficiency and security of supply in the energy system.'

National Energy Action NI

"No one gives me an incentive for doing my job better. You get the same money for doing it, just to do it good all the time"

Focus Group C

Participants agreed that NIE Networks should have an incentive metric to improve their customer service. They thought this would make NIE Networks more efficient and easier to work with in the long run.

Focus Group G

There was some scepticism expressed about the plan. Participants questioned whether the incentive benefits and profits go to the service or to the shareholders.

Focus Group H

Finally, the importance of striving to meet the needs of the digitally excluded was also referenced by a number of stakeholders. Important data regarding the level of our population who fall into this category was provided. We recognise that this is an area that will require continual attention as we develop into a more digital business.

3.4 Preparing our business for a digital and environmentally sustainable future (Q23 - Q24)

Here we asked for comments on our environmental action plan commitments. We also set out our approach to enabling actions in digital, IT, data, customer, employee, assets and DSO and sought feedback.

There was broad agreement among stakeholders who ranked our proposed environmental action plan commitments (Q23). Some particular comments suggested:

- Focus on decarbonisation of the electricity supply would have the greatest impact on our customers' decarbonisation efforts.
- There is an opportunity to contribute positively to biodiversity in our network developments.
- Environmental actions could be more specific in terms of specific and time-bound (SMART) targets. These details will follow, later.
- We should include a focus on our own real estate.
- There is an opportunity to demonstrate leadership through early and full decarbonisation of our vehicle fleet.

Your environmental strategy is very comprehensive with clearly defined goals.'

Derry City and Strabane District Council

'The biggest overall impact that NIEN has is the opportunity to foster is the transformation and decarbonisation of the Grid. The order for prioritisation must be biggest environmental impact first.'

NI Water

'The main issue for NIEL is the need for NIE Networks to set SMART targets for reducing its environmental impact. While the ten priorities listed are all good principles, the question is to what extent will those principles be applied and by when?'

'NIEL believes it would send out an important positive message if NIE Networks were to commit to having a completely electric fleet of vehicles.'

Northern Ireland Environment Link

On the enablers of the plan (Q24), all responding stakeholders agreed that our commitments are necessary enablers of transformational change. The most common theme supported in comments was people and skills required for deliverability of the plan.

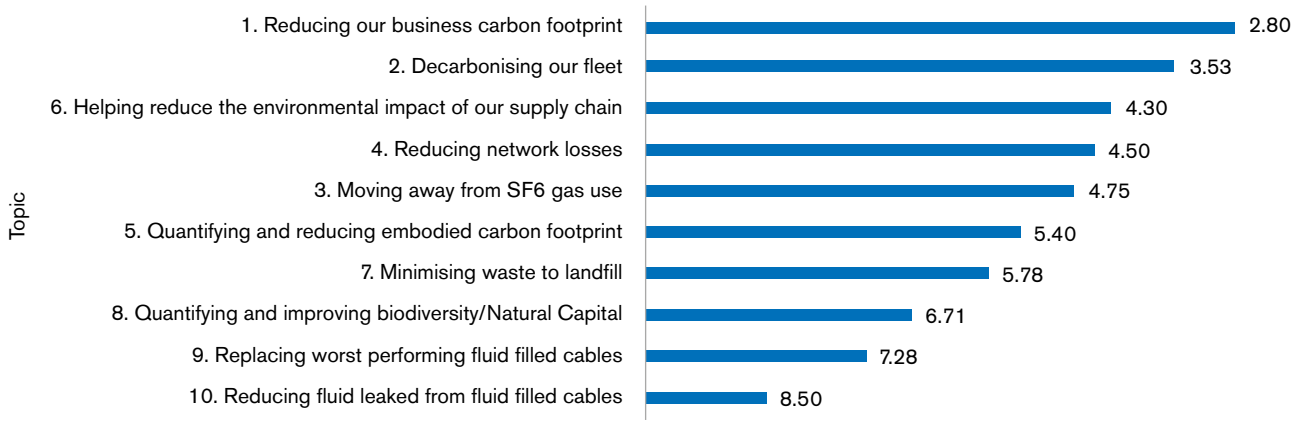
'The proposals for RP7 represent a significant step-change in investment for NIEN. Due consideration needs to be given to the wider power industry constraints in terms of availability of resources, and supply chain capacity. Deliverability is key in ensuring that RP7 objectives are met.'

Mutual Energy

'Yes. All listed commitments are essential for successful transformational change. Continued and future development in staff and skills will be critical to deliver on implementation of RP7.'

Northern Regional College

Q23. Ranking of environmental priorities



3.5 Cost of investment (Q25)

The penultimate question was about the monetary impact of our proposals and the benefits it will bring to our customers and wider society.

Respondents were generally neutral on this topic, though those who expressed a non-neutral sentiment were generally positive.

All groups of stakeholders were conscious of the costs associated with the transformational nature of the RP7 proposals, and households in particular would value clarity on the effect on customer bills over time. However, stakeholders also commented on:

- The necessity of the scale of planned investment in the network to facilitate a low carbon future. Indeed, some respondents thought the forecast load growth could be bigger.
- The reassurance provided by NIE Networks' analysis, in support of the proposed investment.
- The anticipated societal benefits of the investment, including how it will underpin the 10X Economic Vision and enable decarbonisation and decoupling from fossil fuel volatility.

"It's imperative that we do reach 70% zero carbon by 2030 because the crisis is already here. So, it's almost like there's not a choice. It has to be done. And it's the political will of the government to invest in these new technologies to support people to kind of do that"

Focus Group D

'The increase in cost for the customers on the network must be set within the context of decoupling from the price volatility and geopolitical risk associated with a fossil fuel system.'

NI Water

'SONI recognises the scale of investment needed, however, in the context of both supporting the government policies in relation to decarbonisation and the age of the transmission and distribution networks, the need for the investment is clearly presented.'

SONI

While supporting allowances through the RP7 price control Bryson are concerned that the investment cost required will increase customer bills which further supports social tariffs to ensure affordability for those most in need.

Bryson Energy

Households and consumer groups expressed particular support for decarbonisation but were conscious of the potential for costs to deepen poverty and fuel poverty. We have also noted a number of comments expressing how customers have lost trust in the energy industry.

Businesses acknowledged the vision and commitment demonstrated in our proposals and were grateful for an honest conversation about the costs of delivering the future network. Investments should be appropriate, timely and represent value for customers.

Public sector respondents noted the necessity of the investment plans, the need for flexibility to allow for uncertainty and the positive impact on GVA that will be facilitated by a network that is fit for the future.

A not for profit organisation emphasised the need for network development to fully consider its ecological impact.

Energy industry commentators noted the forecast increase in demand might be underestimated but recognised the scale of the challenge and that the need for our plan is real.

3.6 Managing uncertainty (Q26)

Finally, we noted the degree of uncertainty relating to use of the network in the future and asked for comments on our proposals for forecasting, monitoring, re-openers, and flexibility and agility in enabling investment.

Stakeholders who responded to this question were generally supportive of the proposed principles for managing uncertainty, commenting specifically on

- the value of monitoring;
- the need for anticipatory investment;
- the need for efficient flexibility in allowances to respond to adoption of LCTs and condition monitoring, avoiding losing opportunities through delay relating to seeking additional funding; and
- that uncertainty mechanisms should be driven by evidence of customer need.

'The Consumer Council believe that it is important that the uncertainty mechanisms appropriately reflect customer needs and priorities.'

Consumer Council

'SONI recommends that NIE Networks seek elements of anticipatory investment in order to allow the flexibility to progress new workstreams quickly and avoid lost opportunities that may occur by having to seek additional funding during the price control period.'

SONI

'All proposals for managing uncertainty have been carefully considered for the benefit of all stakeholders.'

Northern Regional College

Households and consumer organisations noted in particular the need for urgency, a principle relating to vulnerable or fuel poor consumers and that spend on the network should reflect the needs and priorities of customers. One comment from a consumer organisation disagreed with our approach, desiring more information on ensuring security of supply and consumption reduction to aid decarbonisation.

Businesses and business organisations showed broad support for our proposals.

Energy industry stakeholders agreed with our proposals and noted the need to avoid lost opportunities, which might occur through slow processing of requests for additional funding.

3.7 Other Topics

Some respondents used the consultation to provide comment on subjects beyond our RP7 planning.

These included:

- Connections in general, including the process, time scale and charging approach.
- Support for vulnerable or energy poor customers.
- The need for smart meters and dynamic, time of use, charging for electricity.
- Reform of the system for charging for use of the distribution system.

Some of these topics are beyond the control of NIE Networks, but we will review the comments of all respondents on these matters and ensure that they are fully considered in the appropriate forum.

4. How We Adjusted our Plans Based On Stakeholder Feedback

As set out in Section 1, throughout RP6 we engaged with stakeholders which helped inform our thinking and shape our draft business plan which we then consulted on. We asked stakeholders to "have their say", making it clear that our plans could be modified based on their feedback. We asked 26 questions directly related to the plan and our approach.

This section sets out how we used stakeholders' responses in our consultation to modified our plan. It considers first the questions related to the Network Investment Plan, then question related to customer issues, environment and cost

Q2. We are interested in your views on our scenarios of future customer behaviour. Do you think they are realistic? Do you think our 'best view' scenario reflects the likely changes in the RP7 period?

Given the uncertainties around future energy scenarios and the dependencies on a wide-range of factors such as legislation, government policy, customer ambition, economic capability and technological improvements, we asked our consultants to develop scenarios of how we can expect our customers' needs to change to 2050. Each scenario considers the impact of how variability in these factors will affect the overall proliferation and rate of uptake of LCTs in Northern Ireland. From this range of pathways, following the recommendation of our consultancy support we selected our 'best-view' forecast, which is the one deemed most representative of the likely change in consumer behaviour during the RP7 period. Within our RP7 consultation we outlined these considerations to our stakeholders and asked the following question:

"We are interested in your views on our scenarios of future consumer behaviour. Do you think they are realistic? Do you think our 'best view' scenario reflects the likely changes in the RP7 period?"

We received a mixed view from stakeholders – 75% had no opinion, 12% agreed, 9% felt the scenarios were too high and 4% felt they were too low. Following this feedback and in light of the changing economic challenges and the cost of living crisis, we appointed economic consultancy support to review the forecasted scenarios and consider the following:

- Stakeholder insights and feedback
- Current pace of uptake
- Policy environment and market factors
- Customer response to cost pressures
- Supply chain delays

This review provided evidence to determine the reasonable level of adjustments which should be made to our projections. It did not offer alternative forecasts, instead suggested how our current forecasts could be refined in light of research conducted and the evidence presented.

We collaborated extensively with SONI throughout the development of future scenarios, the result of which was the adoption of consistent NI forecasts for the uptake of EVs, heat pumps, generation and overall demand consumption by both NIE Networks and SONI. This alignment leverages the value of sharing expertise and adopting a whole system approach when considering future energy scenarios of how we can expect our customers' needs to change to 2050.

The outcome of this assessment led to revisions of the scenarios we based our plan on. It is shown in the table below.

Table 1 – EV and HP Scenarios

LCT	Scenario	Original (By 2030)	Assessment	Revised (By 2030)
Electric Vehicles	Low	200k EVs	Too Low	250k EVs
	Best view	300k EVs	Reasonable	300k EVs
	High	400k EVs	Too High	320k EVs
Heat Pumps	Low	60k HPs	Too Low	80k HPs
	Best view	120k HPs	Reasonable	120k HPs
	High	180k HPs	Too High	140k HPs

Q3. Do you agree with the mobilisation of an NIE Networks Local Area Energy Planning team to support wider stakeholders including local authorities and councils in their journey to net zero? If so, what type of support should the team provide?

As identified as part of the Open Networks project[1] there is a need to ensure a coherent and consistent approach for the development of energy network within local areas. This has been achieved to date, to a limited extent, through the joined-up approach to public realm schemes within Northern Ireland. However, as local areas and councils develop their net zero plans, there will be unprecedented development of energy networks, necessitating the need for a coherent and consistent approach across the wider energy sector.

All respondents offering an opinion agreed with the proposal (33 in total). There was no dissent, although there were some cautionary comments about the availability of expertise in councils, which have not traditionally had an energy system planning role. There was also some encouragement to involve community initiatives. We have noted additional remarks from councils about their green energy planning initiatives and we are considering how best to support them in advance of the RP7 period.

On this basis we have included allowances for six experts within our RP7 indirect allowances to proactively engage with key players across the energy spectrum looking to leverage whole system opportunities including supporting LAEP.

We agree with stakeholders in their response to our consultation that a framework should be developed to deliver joint system planning, and as part of the ENA Open Networks project we have developed a potential framework[2] to enable coherent and consistent LAEPs.

"We anticipate in future that, across gas and electricity network development plans, the inability to show such a robustly 'joint-up' considered view of potential development requirements across the whole energy system may increase the risk of disapproval / delay to approval of plans developed separately. Therefore, continuing with the current approach employed in each sector is not in the interests of NI energy consumers, nor delivering governmental energy decarbonisation policy. The ongoing delivery of a suitable joint system planning approach should be a key commitment of, and output throughout, the RP7 period, and the work to scope such a framework should commence now, to establish it ahead of the RP7 period commencing."

Mutual Energy

Q4. Do you think we are being ambitious enough with our proposal to fit monitors on 50% of our LV network or should we aim for higher? & **Q5.** What do you think of our "Open Data Portal"?

In our draft plan, we proposed to fit monitors on 50% of our Low Voltage (LV) network and asked our stakeholders if this was ambitious enough or should we aim higher (Q4). Respondents universally accepted the need for increased monitoring of the LV network with the majority suggesting that we aim to monitor more that 50% of the LV network, in many cases proposing 100%.

Taking this feedback into account and refining our modelling, we have identified a need for 5,256 LV substation monitors within the RP7 period to track those network assets which are most likely to experience significant load growth in the coming years. This volume of monitoring will provide visibility at 43% of our ground mounted LV substations and 11% of our pole mounted substations; however, through enhanced use of meter data at single customer sites, we can extend the level of visibility to 70% of our ground mounted substations.

As part of our DSO transition, we will use this increased availability of network data to transform our analytical capabilities, enabling more data-driven decision-making in planning and operational timescales. Better data and analytics will drive more accurate forecasting and informed decision-making, leading to more efficient investments to enable a range of decarbonisation pathways. The data obtained from monitoring devices will also be of significant value to stakeholders, and where appropriate will be made 'open' for stakeholder use through our open data portal, which received positive sentiments by all stakeholders who responded to our open data portal question (Q5) in our RP7 public consultation.

[1] Open Networks Whole Energy System workstream (WS4)

[2] open-networks-2020-ws4-p4-final-repot.pdf (energynetworks.org)

In order to equip us with the required monitoring capability for the beginning of RP7, we expediated the submission of our LV monitoring allowance with the UR, with subsequent approval for the spend in RP6 granted in February 2023. This accelerated roll-out of this monitoring equipment allows time for data to be gathered and trends to be analysed to track those assets which are approaching their capacity limit, enabling investment to be targeted appropriately.

Q6. Do you agree with our 'Flexibility First' approach?

Our 'Flexibility First' approach, whereby we will test the market first before committing to major conventional reinforcement schemes, will allow us to defer network investment where this is in the customers' best interest. This approach, which received unanimous support from the respondents to our RP7 consultation[3], has been shaped by our innovation projects in RP6 and is facilitated by our plans to increase network visibility across all voltage levels. This ultimately avoids unnecessary investment and minimises disruption to customers, whilst democratising the energy system and empowering consumers to provide flexibility, a critical component of managing the future energy system.

Q7. Do you agree with us including wider societal impacts in our decision making between FLEX and conventional reinforcement?

To further ensure neutrality in decision making when choosing how best to provide capacity on the primary network, the Common Evaluation Methodology (CEM) which has been developed by the Energy Networks Association and used by our counterparts in GB has been adapted for use in NI. The CEM is a cost-benefit analysis tool which models the optimum investment option where both flexibility and conventional reinforcement options are available. The CEM has the capability of quantifying the wider societal issues to be considered when determining the optimum solution for network investment. This includes factors such as the carbon impact and network losses as well as placing a value on the benefits of deferring conventional investment until there is greater certainty (optionality). In doing so the true value of 'Flexibility First' is revealed, allowing a more sustainable approach to investments, whilst accommodating the uncertainty driven by the pathway to net zero.

Respondents to Q7 of our RP7 public consultation unanimously indicated that we should take these wider societal impacts into account when weighting up flexibility versus convention reinforcement, which we've reflected in our plan.

As well as being used in evaluating the role of flexibility in our business plan, the CEM will also be used throughout RP7 to ensure that each proposed investment on the primary network is assessed against the latest flexibility options. Further detail about the CEM can be found in our Business Plan (Appendix x – Baring a Common Evaluation Methodology.)

Q8. Do you agree with our approach of going further, faster, with FLEX markets?

Going further, faster is an initiative designed to stimulate the development of local flexibility markets in areas where there is anticipated future need but insufficient flexible capacity available at present. A fundamental DSO role is the development of local flexibility markets, and it is critical that sufficient flexible capacity exists in the right locations during RP7, so that it can be considered as a viable option alongside conventional network reinforcement when investment decisions are being made.

Our stakeholders, in response to Q8 in our RP7 consultation, unanimously agreed with our approach of going further, faster with flex markets[4]. On that basis we've included within our plan a going further, faster allowance of £207k which could unlock a further £6.8m in savings during RP8 through additional deferred or avoided network reinforcement, as well as promoting wider system benefits. This investment is only proposed in locations it is considered likely that normal procurement activities and market development will not deliver sufficient additional capacity.

Q9. Do you agree with our proposed RP7 innovation principles?

Q10. On top of your feedback on our approach to innovation in RP7 we want to understand what you feel is an appropriate scale of allowance. In RP6 our innovation allowance amounted to approximately 2% (approx. £6m) of our total Network Investment Plan. Do you feel that a similar percentage would be appropriate for RP7? This would represent an allowance of approximately £20m.

Stakeholders also provided strong support for these principles through our RP7 public consultation, with 27 stakeholders agreeing or suggesting increased ambition and none suggesting that we are going too far.

Specifically relating to the size of the RP7 innovation allowance, 13 stakeholders felt that the proposed level (2%, c.£20m) was appropriate, 9 stakeholders felt our allowance should be higher and none suggested it should be less than that proposed.

We've made sure to reflect this strong stakeholder support within our refreshed innovation vision and the scale, type and structure of our RP7 innovation allowance request.

Q11. In respect of assessing where to invest in the network, do you agree with our proposed approach of including only LI5 sites in our base line plan for RP7? Should we be going further?

Future load growth will erode the available capacity at many primary substations and drive the need for interventions over the coming years. As such, significant intervention is needed across the network to accommodate demand growth across NI during RP7 to ensure the network remains compliant with the Distribution System Security and Planning Standards. In our consultation we asked stakeholders if we should adopt the same intervention trigger as in RP6 or if we should go

[3] 27 stakeholders agreed with our flexibility first approach, 0 disagreed and 41 did not respond or were neutral.

[4] 24 stakeholders agreed with going further, faster, 0 disagreed and 44 were neutral or didn't respond to this question.

further. A clear majority of respondents thought that we should go beyond our RP6 intervention trigger (LI5 only) to resolve network constraints[5], citing reasons such as the priority for decarbonisation, anticipated growth in demand and the need for the network not to be an obstacle to roll-out of electrification. Therefore, our RP7 investment plan for the primary network includes both LI4 (assets which are fully utilised, but for less than 9 hours a year) and LI5 (assets which are fully utilised for 9 or more hours a year), including sites expected to be LI4 or LI5 within the first two years of RP8. There are many clear benefits by adopting this strategy including reducing the risk that the network becomes severely overloaded due to unforeseen, sudden demand increases or unforeseen landowner or legality delays. Adopting this strategy brings an additional 10 primary substations onto the RP7 plan when compared to an LI5 only intervention threshold; however, we can manage 3 of these sites via a flexibility solution.

Q13. Regarding the building of new substations or upgrading existing substations, which can be a lengthy process and can in some cases take several years, we would welcome your opinion on which option we should adopt in RP7.

To facilitate Net Zero, we need to invest to ensure that sufficient capacity is available on the distribution network for the connection of additional renewable generation. According to our charging methodology, smaller generators connected to our secondary network at low voltage do not pay for reinforcement on our primary network (33kV). The Energy Strategy for Northern Ireland Action Plan, outlined that a renewable generation support scheme will be delivered in 2023. This is against a backdrop of an already heavily congested distribution network as a consequence of facilitating the 2020 40% RES-e target, causing much of the inherent generation capacity on the primary network to be exhausted.

As part of our RP7 consultation we presented three investment options with respect to primary network reverse power flow:

- Option 1: Do not include any allowances in our baseline RP7 plan but rather 'wait and see' which substations generators are seeking connection at. Once we have sufficient certainty around these locations we will seek allowances from the UR via an uncertainty mechanism.
- Option 2: Include conventional allowances in our baseline plan to upgrade substations which currently have no or low capacity and wait and see where generators are likely to connect at other substations. Once we have sufficient certainty at these locations we will seek allowances from the UR via an uncertainty mechanism.
- Option 3: Forecast where likely generation is going to connect, forecast likely constraints now and include the allowances within our baseline plan.

No stakeholders felt that option 1 was appropriate, 5 felt option 2 was appropriate and 17 felt option 3 was appropriate. Whilst we agree with the sentiment stakeholders shared in selecting option 3 – ensuring the network doesn't become a blocker to net zero – we consider that option 2, supported by an agile and efficient reopener mechanism is optimum.

There remains significant uncertainty regarding the locations on the network that generators will seek to connect and committing to intervention decisions based on more speculative forecasts could have the unintended consequence of delaying interventions at other sites with a more acute need arising during the period. Instead, in option 2 we can progress interventions at sites where we already know there is no or low capacity and wait until we have a more certainty at other sites before intervening. This means that we can ensure that our delivery resources are effectively targeted and that customers do not pay for some interventions which may not be required in the short term. By selecting option 2 it does however place considerable importance on the need for an agile and efficient uncertainty mechanism to be agreed.

We have assessed the generation capacity on our network and worked with stakeholders to gauge the pipeline of likely future connections, targeting investment on the areas on the network that have less than 250kW of generation capacity to facilitate the further connection of small scale and micro generation. This equates to 80 primary substations, representing 37% of the entire population of primary substations. Where this constraint is not planned to be removed through other investment drivers such as forward powerflow or asset replacement, we will intervene at these substations to facilitate further connection of small scale and micro generation to the associated LV networks.

Q14. Do you agree with our position of maintaining the reliability of the network? Would you accept a reduction in network reliability to reduce your electricity bill in the short term? For context, a £50m reduction in capital spend would result in an approximate £1.90 saving on the average annual domestic electricity bill during RP7. For our commercial customers this represents an annual decrease between £7.50 for a small business and £118 for a medium business.

Q15. Our plan is to further reduce CMLs associated with faults on our network in RP7 to help offset the increased average duration of outages due to planned work on the network. To do this we propose including allowances within our RP7 baseline costs to install automated devices on our overhead line network. Are you happy that we include allowances in our plan to help minimise the impact of planned outages?

It is clear that customers will expect increasing levels of network performance as they become more reliant on electricity in the future. In response to our RP7 public consultation, stakeholders told us that

[5] 6 stakeholders agreed with an LI5 only investment trigger, 12 thought that this should be extended to both LI4s and 50 stakeholders were neutral or didn't respond.

as a minimum, network reliability must be maintained into the future[6], with strong disagreement for any reduction in reliability, even for a cost saving. On the rare occasions when assets do fail, customers told us[7] that we should aim to reduce the impact that this has by installing automation devices, and additionally agreed with our proposed climate change resilience measures[8].

Both the reliability and resilience of the network have an important role to play in delivering increased network performance in RP7 and beyond.

We define network reliability as the likelihood of our assets failing. Generally speaking we improve this through asset maintenance and replacement activity. Whilst these activities can be costly, they minimise the risk of our assets failing in the first place, providing maximum benefit to customers and keeping the network as safe as possible.

Network resilience is the ability of assets, networks and systems to anticipate, absorb, adapt to and / or rapidly recover from a disruptive event[9]. Resilience can be improved through measures such as faster staff response time and deployment of network automation. These interventions are generally less expensive than replacing assets in the short term. However, they generally do not prevent assets from failing in the first instance – customers will still be impacted through faults; albeit, to a much lesser degree and for a lesser time period.

> **"In our opinion, any plan that would assume a less reliable system would be deeply flawed, involve higher costs later, and might have unforeseen safety implications."**
>
> Maxol

We have made significant network performance improvements during RP6, primarily through targeted network reliability improvements and improvements in network resilience. However, over time we have noticed an incremental increasing trend in the number of faults on the distribution network representing a slight reduction in network reliability. We cannot allow this trend to increase further over time, otherwise the number of faults on the network will become unsustainable, increasing customer disruption and cost and posing significant deliverability challenges in RP8 and beyond when wholesale reliability improvements would be required.

However, given stakeholder concerns about keeping costs as low as possible, we have adopted a prudent approach, of broadly maintaining the health and reliability of the network in RP7, whilst improving the resilience of the network. We will target a challenging 9.75% reduction in our unplanned Customer Minutes Lost (CML) target over the period as compared to the 8.33% targeted reduction during RP6. We consider that this strikes the correct balance between delivering the network performance improvements that our customers require whilst ensuring costs are kept as low as possible.

Q16. Do you agree with our approach of targeting the top 6 worst performing circuits only or should we aim to eradicate all existing worst served customers?

[6] 100% of respondents that voiced an opinion on Q38 agreed with maintaining the reliability of our network.
[7] Q15, 22 stakeholders agreed with automation proposals, 1 disagreed.
[8] Q18, 17 stakeholders agreed with our climate change adaption measures, 1 disagreed.
[9] House of Lords - The Resilience of the Electricity System - Science and Technology Committee (parliament.uk)

"Network resilience to infrastructure failure and damage will become even more important as energy provision further consolidates. The resulting impact of any large-scale electricity outage could have severe safety and/or economic consequences and the risks must be appropriately mitigated via appropriate levels of operational spend and capital investment.

Another key consideration across each of these areas, is customer confidence. Network Operators must ensure customers' expectations of a guaranteed energy supply continue into the future. The ability to bring customers along the energy transition pathway would be severely curtailed if Network Operators allow any drop in historical levels of performance going forward."

Phoenix Natural Gas

Approximately half of the respondents agreed with our proposals, the other half disagreed and thought we should go further[10]. Based on this we have taken a targeted levelling up approach by investing £3m in deploying network resilience improvements to the 15 poorest performing circuits and reducing the number of customers classified as worst served by 50% in RP7.

The proposed allowance represents an investment of £1,600 per Worst Served Customer, which compares favourably with counterparts in GB.

Q17. Our current proposals for RP7 include investment to improve the number of customers that we can keep on supply following a High Impact Low Probability (HILP) event and move closer to the GB average. Do you agree that we should invest in this area?

Decarbonisation of heat and transport will increase customer reliance on electricity. While all Bulk Supply Points (110/33kV) in the Northern Ireland network comply with the requirements of the Distribution System Security and Planning Standards (DSSPS), for some BSPs there is limited resupply capacity under double outage conditions (e.g. the loss of two transformers). Whilst this is an unlikely event, the consequences are significant, resulting in widespread and protracted customer outages. We consider that this would be unacceptable for our customers regardless of DSSPS compliance. To reflect the increased reliance on electricity and the potential for major customer disruption if a high impact low probability (HILP) event occurs, consultants were commissioned to benchmark NIE Networks against all other UK DNOs and provide recommendations. The analysis performed by our consultants concluded that the average 33kV backfeed capacity for a HILP event is 18% higher in GB than Northern Ireland.

Following recommendations from our consultants and an economic review of the value this investment would deliver to our customers, c.£4m of reinforcement has been included within our RP7 plan to target investment at the locations with the potential for the largest customer disruption following an HILP event to deliver maximum benefit with minimal investment.

Our stakeholders agree. In response to Q17 of our consultation every stakeholder who provided a clear answer (25 in total) agreed with our proposal to improve the number of customers that we can keep on supply following a HILP event. Reasons included increasing reliance on electricity and moving up to the benchmark in GB. That said, a smaller number of comments emphasised the need to balance the costs of this work against the low probability of the scenario.

Q18. Do you think we are going far enough to adapt our network for climate change in RP7?

Most respondents who expressed a view concurred that we are proposing a plan that is balanced and sufficient to adapt our network for climate change during the RP7 period. However, we considered the additional comments submitted from stakeholders about uncertainty in the future. We believe these types of concerns will be addressed through the uncertainty mechanisms throughout the price control.

'NIEN are taking actions in line with what Oracle sees as international norms.'

Oracle

[10] Of those that responded to our worst served customer question 13 agreed with targeting the top 6 worst performing circuits and 12 thought we should go further.

Q19. Do you think we should seek allowances through the RP7 price control to spend on direct measures or initiatives to help those customers who are worst impacted by the energy crisis? For example, we could seek funding to provide solar panels for such customers. If you do think we should consider initiatives such as this, how ambitious should we be?

Opinion was somewhat split on the topic of allowance for direct measures or initiatives to help those customers who are worst impacted by the energy crisis. As such we have focused our efforts on delivering customer service measures to support vulnerable customer for example implementing recommendations as set out in the UR's Best Practice Framework including:

- Adoption of UR's wide ranging definition of vulnerability
- Work collectively with suppliers/ other utilities to enhance our Medical Customer Care Register
- Establish a centralised specialist vulnerability team, with representation at Board level
- Achieve full compliance with BSI 18477 for Inclusive Service provision
- Set up effective referral points with external partners
- Company-wide training on Vulnerability and how to identify those in need
- Dedicated phone line for those registered

Concern was also raised over the older population, their potential lack of willingness to engage or invest in new technology and 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. To address this we have committed to ensure a socially inclusive and fair transition to DSO.

Q20. Do you think that we should be fitting a new innovative device aimed at deterring birds from roosting on overhead lines in areas known for bird fouling issues? As a customer, would you be happy that the costs to resolve bird fouling issues are spread across our customer base and ultimately reflected in your bill?

Respondents were generally sympathetic to the problem of bird fouling, and affected customers expressed their concern that there has been a failure to understand the full scope of the effects of bird fouling and expressed extreme frustration that there is no source of assistance available to help them resolve the issue. Although there were questions raised regarding who should pay, prudent investment was called for and a suggestion that an extended trial should be completed to ensure success in all cases. As such we have committed to deliver on solutions for customers affected by bird fouling problems and are already progressing options for legacy sites. Following feedback from bird conservation charities, we will involve stakeholders in this process. We will also review our policy regarding lines over dwellings to minimise future issues.

Q21. Do you think a 'low regrets' type of approach should be considered for metering in RP7?

We received widespread support for a low regrets approach to metering. We have committed to work with UR and others to develop a balanced approach of a low regrets initiative will accommodate future needs for smart functionality.

Q22. With regards to meeting the needs of our customers –

- Are there any Customer Measures or Commitments that we might have missed, and if so, what else would you like us to consider and why?
- Are there any specific customer metrics that NIE Networks should be measuring performance against on during RP7?
- Do you consider that a Customer Satisfaction Incentive metric should be introduced to drive improvements in customer service in RP7?
- Are there any gaps/areas that you feel are missing from the plan?

Customers broadly supported the Customer Measures and Commitments and on balance these have been well received and were predicated on all of our customer engagement over the last 6 years. Customers welcomed the ongoing efforts of the Customer Engagement Advisory Panel (CEAP) throughout RP6 and in developing a customer engagement strategy to inform our RP7 Business Plan. They welcomed the continued customer engagement and central role for customers envisaged in RP7. There was broad support for the need for customer satisfaction measures to further improve customer service and customers highlighted that this must not take precedence over central commitments to achieving net zero and ensuring overall value for money.

Key feedback was that given the role that we will play in the energy transition, it is essential that we continue to deepen our customer and stakeholder engagement activities and incorporate the findings into our operational activities. We recognise that there is an onus on us to ensure that we prioritise this feedback to deliver meaningful outcomes for customers, and in particular those who are most vulnerable.

We received feedback to monitor our delivery over the RP7 period, ideally tracking progress on an annual basis, and benchmarking ourselves against customers' experience in similar industries and that this monitoring should include customer feedback on outputs experienced by customers.

Customers told us that satisfaction surveys should help us to identify where our internal skills need enhancing and where customers may be coming disengaged from the energy sector recommending that we are measured on connection timescales and communications throughout the connections process, how we engage customers into the local market providing the information that they need, meeting minimum communication metrics, measuring digital interactions and overall measuring if we are seen as a key enabler for the low carbon transition recognising that all customers

will have different needs. There was support for greater transparency in our performance reporting.

To respond to these asks, we are engaging with the Utility Regulator to develop an Evaluative Performance Framework for the RP7 price control that will ensure that we deliver a quality service and meet the emerging needs of customers.

Customers told us that given the severity of the energy and cost-of-living crisis that we should ensure that relevant customer facing staff are sufficiently trained in the identification of vulnerable customers and how to support them which could include training in Energy Efficiency, Fuel Poverty, and identifying and supporting vulnerable customers. Training on the identification of vulnerable customers is already part of our business plan. In response to this feedback we will also include the provision of training on energy efficiency and fuel poverty into our plans. As with any investment we make in training, clear objectives will be set at the outset and evaluation of training effectiveness in meeting those objectives will be measured and monitored.

The feedback suggested that we explore how we could measure and monitor customer behaviours that might help in the identification of households who have 'self-disconnected' or be able to flag households who are rationing energy at a dangerous level to help energy suppliers to target their support to the most vulnerable. Customers asked us to explore how we could measure and monitor customer behaviours that might help in the identification of households who have 'self-disconnected' or be able to flag households who are rationing energy at a dangerous level to help energy suppliers to target their support to the most vulnerable.

We view this as an important aspect in the consideration of a smart metering roll out in Northern Ireland. A key benefit of smart metering is that the additional data it provides can help to enable identification of and provide additional support to vulnerable customers to enable a fair transition. We will ensure that this feedback is incorporated into any future considerations in rolling out Smart Metering.

Other key feedback was that it is important that the customer measures and commitments are clearly communicated once the final determination for RP7 is confirmed so that customers are aware of what they are entitled to. Part of this will include ensuring that those households not connected to the digital sphere have alternative ways to engage with us. This means all advice and information must be equally accessible to vulnerable households or individuals that aren't online or able to access the internet and other apps. We have committed in our business plan to ensure that all traditional forms of communication will continue to be supported.

We are implementing some of the feedback that we received now, for example we are starting to measure the volumes of customers connecting LCTs at their properties and highlighting customer applications for LCTs which have not proceeded due to grid capacity issues.

Customers raised concerns around grid connections charging methodology in Northern Ireland. This area remains outside of our RP7 Business Plan as outlined in the Utility Regulator RP7 Final Approach paper. This is an area that we cannot change on our own. Any change to current connections charging in Northern Ireland requires a UR decision. We welcome the UR's inclusion in its Draft Forward Work Plan 2023/24 to commence a review of connections charging. We are advocating for a Connections Charging Review in Northern Ireland to more closely align connections charging methodology in Northern Ireland to that of neighbouring jurisdictions. The aim is to ensure there is a level playing field in connections charging in order to ensure a just energy transition and also to encourage investment in the wider economy in Northern Ireland.

Q23. Focused on preparing our business for a digital and environmentally sustainable future.

- We are committed to delivering a sustainable energy system for all, including behaving sustainably in our own practices, which means ensuring our business has a positive impact on the environment, communities and economy in which we serve. Following feedback from stakeholders we adjusted our plan as follows:
- We introduced SMART targets against our priorities, detailing the extent to which they will be applied and when they will be delivered.
- We introduced a higher target for the transition of our own fleet vehicles to Electric Vehicles to demonstrate leadership
- We have committed to focus on biodiversity and nature, ensuring that any new developments do not have a negative impact on biodiversity.
- We will focus on reducing our Business Carbon Footprint. We may choose to contribute to carbon removal projects to further improve the impact of our operations, however this will be in line with the requirements of our Science Based Target.
- Network resilience in the face of climate change is a priority for stakeholders and we have addressed this in the climate adaptation and climate resilience elements of our plan.
- We have committed to monitor, measure and review the success of the priorities set out in the RP7 Environmental Action Plan.
- A Supplier Code has been included in our Environmental Action Plan.
- We have committed to replace 5km of Fluid-filled Cables which have been identified through careful management and monitoring of their performance. We will also proactively inject all remaining FFCs with small amounts of tracers to aid the quick location and therefore repair of leaks.
- We have committed to apply circular economy principles, in particular in terms of waste minimisation and material efficiency, as part of our environmental strategy. Throughout RP7 we will continue to monitor resource use and work with our suppliers

and equipment manufacturers to reduce single use plastic packaging and limit non-recyclable materials entering our supply. We will also work with our partner organisations and charities to maximise circular economy potential within our business activities promoting industrial symbiosis at the end of a materials life in NIE Networks' applications where possible and achieve a recycling rate of greater than 96% of waste.

'The main issue for NIEL is the need for NIE Networks to set SMART targets for reducing its environmental impact. While the ten priorities listed are all good principles, the question is to what extent will those principles be applied and by when?'

NI Environment Link

Q24. Are there any necessary enablers that we may have missed, and if so, what else would you like us to consider and why?

Some stakeholders questioned our ability to deliver such an ambitious plan given the skills constraints reported at present, challenges securing staff and potential supply chain issues. In our Construction Directorate for example, headcount will need to increase from today's level (700 people) to 1,250 by 2028; contractor resource will need to grow to in excess of 1,000 full time equivalents during RP7. Significant recruitment will be required at all levels from Apprentice to Graduate level.

A detailed review was carried out of the plan in conjunction with contracting partners to determine what changes are required to ensure resources are available. We liaised with colleges and universities and as part of these plans we have already increased apprentice intake volumes by a factor of three in September 2022 from historic levels and committed funding to grow this intake as well as enhancing the capacity of current training facilities for the September 2023 intake, ahead of planned investment in a new purpose-built training school. We will focus on building on our successful apprenticeship, higher level apprenticeship (HLA), and graduate programmes to develop a workforce with the right skill set to deliver the challenges that we face in RP7.

NIE Networks sought constructive feedback from the contractors and manufacturers regarding possible areas for improvement for all parties regarding the operation of their contracts.

An area of improvement identified through this engagement is with regard to how we issue works under framework agreements.

NIE Networks expect significant increases in new connections in RP7 to meet 80% renewable targets by 2030, primarily through the connection of onshore renewable projects and increased connection of LCTs. Stakeholders questioned work-force resilience and whether the team can deliver what will be expected of them. Again, rather than wait until RP7, we have already started to adjust our resource model and business structure so we are ready to deliver RP7 in 2025.

Q25. Our vision is to provide an electricity network that is capable of facilitating Northern Ireland's overall plan to address climate change, which aims to achieve net zero carbon and affordable energy by ending our society's reliance on fossil fuels and associated price volatility. In this context, we would welcome stakeholder feedback on our analysis of the monetary impact of our proposals and the benefits it will bring to our customers and wider society. And Q26. Do you agree with our principles for managing uncertainty in RP7?

All groups of stakeholders were supportive of our plans but conscious of the costs associated with the transformational nature of the RP7 proposals, and households in particular would value clarity on the effect on customer bills over time. As we developed our plans, there have been significant shift in the economic climate which could create a major impact on the cost of borrowing. There have been supply chain and inflation rises. However, we have vigorously protected our position of keeping cost to customers as low as possible and changed our plan, for example introducing measures such as re-phasing our delivery to support that.

Stakeholder acknowledged that are planning for 5-8 years into the future and a lot can change in that time. The plan is based on our current best view of what that future will look like but will have to adapt and respond to the changes that happen throughout the period to 2031. As such we have introduced the following measures to protect cost to customers:

- We use industry-standard models and software to forecast when and where we need to upgrade the existing network to make sure that are as efficient in how we use our resources and we keep costs as low as possible.
- We have uncertainty mechanisms built into the price control to deal with economic and operational considerations and external factors which may emerge over the RP7 period. We have proposed to the UR that we have checks and balances built into the price control that ensure we are funded for the work that we have to do and no more.
- We have committed to continuing to engage with customers and stakeholders, the Utility Regulator the Consumer Engagement Advisory Panel to ensure we get the best plan to deliver for Northern Ireland while delivering the best price and outcomes for customers.

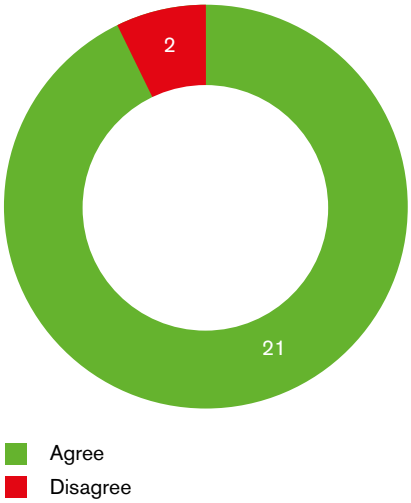
A. Detailed Overview of Consultation Responses

A.1 General Remarks

This Appendix gives a more detailed overview of stakeholder responses. It is structured to show sentiment in three ways: First, a chart of responses, showing feedback by agreementdisagreement or option (where respondents indicated a clear view - in some cases a degree of interpretation was applied.) Second, representative comments demonstrating the type of response we received. Finally, a short commentary on the portfolio of responses we received.

A.2 Facilitating net zero through a flexible and integrated energy system (Q1 – Q13)

Q1. Do you think we are taking the right approach to and have the right strategy for RP7. All thoughts and comments are welcome.



'Yes, the approach is very positive with engagement of all main stakeholders'

Warrenpoint Harbour

'The approach taken by NIEN is, in Oracles' opinion, well balanced between the economics and engineering and will move the energy sector in the correct direction towards a net-zero carbon economy, enable NIEN taking on a Distribution System Operator (DSO) role and deliver the required infrastructure for Northern Ireland.'

Oracle

'We agree that your RP7 strategy is visionary, forward thinking and deserving of much merit but our main concern is that this may not be the best time to commence an implement programme.'

Major Energy Users Council (MEUC)

'The amount of work that has gone into putting this together is fantastic and I think the plan for going forward is well designed. The information days were extremely useful and informative'

Re-Gen Group

'We welcome the commitments RP7 makes in relation to customer measures.'

National Energy Action NI

'SONI agrees with the approach proposed as it is aligned to what SONI considers is required in order to deliver on the NI Energy Strategy key principles.'

SONI

'Yes, although consideration for more revolutionary changes should be considered.'

Ulster Farmers' Union

'ABC consider that the approach and strategy outlined within the consultation document is essential for planning for the future needs of the electricity network within the Borough and Northern Ireland as a whole.'

ABC Council

'The current strategy for RP7 lacks consideration for nature. Peer reviewed evidence on climate change and biodiversity shows that the nature and climate emergencies are inextricably linked. Therefore, it is essential that we pursue an integrated and joined-up approach to tackling them together.'

RSPB

'From a network investment perspective, MEL are supportive that NIEN will need to invest significantly in its distribution and transmission networks through the RP7 price control period, both to maintain reliability and resilience, and to facilitate the energy transition.'

Mutual Energy

'Material investment in the network, together with the necessary regulatory reforms, is needed at pace to ensure that Northern Ireland's households and businesses are not left behind or at a further disadvantage to other UK regions and the Republic of Ireland.'

'The importance of transforming an ageing network into an enabler of low carbon technologies (LCTs) should not be underestimated. It is our view that investment in the network during the Relevant Period will give a clear signal of intentions as to whether Northern Ireland is prepared to deliver an ambitious and inclusive low carbon transition.'

NI Chamber of Commerce and Industry

'"I actually feel very reassured that somebody like NIE, that's looking after the infrastructure for the whole of the province, is futureproofing. What they're hoping to do, not for the next seven years, but 40 years, and taking into account the change of everything that's going on with climate, with usage, with digitalization"

Large urban hospitality business (Focus Group: Non-domestic)

It is hard to discern from RP7 the urgency and enormity of tackling global warming. All the right language is used, net zero, decarbonisation, transition, climate targets, etc., and all the mandatory legislation is referenced, but the plan does not deviate far from a business-as-usual approach to energy provision.'

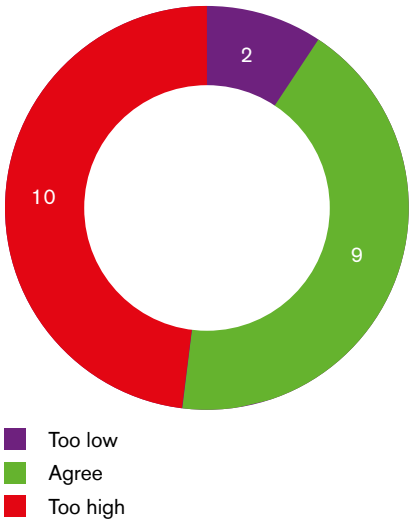
Advice NI

Respondents generally agreed that we had set out the right approach and right strategy for RP7. There were particular comments welcoming in particular our extensive and ongoing stakeholder engagement.

The stakeholders who disagreed emphasised the lack of focus on nature and biodiversity, and the lack of apparent urgency and scale in the plan, seeking much greater focus on those aspects.

On our forecasting and modelling, our best view of 300,000 electric vehicles and 120,000 heat pumps by 2030:

Q2. Do you think they are realistic? Do you think our "best view" scenario reflects the likely changes in the RP7 period?



'Unless significant headway is made … adequate investment in the LV network, 300,000 electric cars and 120,000 heat pumps in Norther Ireland is overly optimistic and unlikely to be achieved.'

Ulster Farmers' Union

'Northern Ireland lags behind in the uptake of Electric Vehicles (and other LCTs) due in no small part to the issues around grid capacity and connection pricing policy. We continue to be unique across these islands in passing on 100% of grid strengthening costs (at the voltage level plus one above) to the connection applicant.'

EVANI

'It may be that NIE Networks forecasting based on the SONI baselines are too conservative leaving little margin for error in the acceleration of uptake. Our general observation regarding the modelling of EV uptake is that no model disagrees with the eventual outcome, which is the blanket electrification of transport by 2050, it is the rate of change that is going to take place, in which case this should not be looked at over or under investment but an efficiency factor on spending. The fact remains that if enough investment is not put into the grid quickly enough, it risks NI's compliance with Net Zero targets of 2030 and 2050.'

Kelvatek

'There are considerable uncertainties about the rates of deployment of EVs and heat pumps and the maximum stress they impose on the grid, affected by the number of Fast Chargers, how they are used, and the types and quality of heat pump installations.'

'Urban heat networks with heat pumps and large thermal stores can reduce the need for LV grid reinforcement but require local area energy plans.'

'Your introduction states that 'Transport will be powered by clean, green, fuels' which may imply gas or liquid fuels, but batteries are being applied to HGVs already, and battery technology is likely to keep developing, making electric vehicles more attractive.'

NIHE

"We agree that there will be significant increases in the number of electric vehicles and heat pumps between now and 2031, as well as a substantial uplift in the amount of renewable energy across Northern Ireland, however we are concerned that the current limitations of the grid will restrict the potential for the increase in renewable energy.'

Armagh City, Banbridge and Craigavon Borough Council

'CBI members have highlighted that when it comes to forecasting, there is a strong argument for NIE Networks to look at the end point of Northern Ireland's long-term plan to decarbonise and consider - if the economy is fully decarbonised, what should the grid look like?'

CBI NI

Broadly, yes. However, we would add that the 2030 targets in the Best View scenario can only be realised if two barriers are overcome; policy/ regulatory inertia; and the need to support consumers in their new role in the energy system through, for example education and behavioural change.

Ardent Energy et al.

Most participants felt that the forecasted target for electric vehicles was very ambitious. Their concerns focused on the lack of infrastructure for charging points, and how the

financial situation of consumers to purchase EVs may have been impacted due to the rising cost of living.

Focus Group A/B

Participants thought the forecast for heat pumps could potentially be realistic if it saved consumers money compared to gas or oil. Similarly, participants were concerned that the cost to transition to heat pumps would deter the public if there was no financial incentive.

Focus Group C

Participants expressed concern about the about the practicability of charging EV when there is a lack of infrastructure to support this, and the implications of this on the forecasted targets.

Focus Group F

Most participants either had not heard of air sourced heat pumps or had heard of them but did not know how they work or what the cost is to install them.

One of the concerns and challenges identified by the group was existing housing and how NIE Networks would make infrastructural changes to homes in order to accommodate for the move to electric and who would pay for that.

Focus Group H

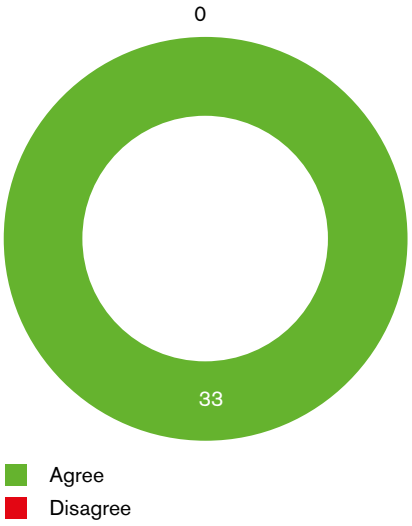
Forecasting the future, particularly the uptake of new technologies, is not easy. The net zero legislation and energy strategy targets can guide our modelling, but the path to uptake of electric vehicles and heat pumps at scale is also dependent on factors such as support mechanisms.

The largest number of respondents did not specifically comment on our best view scenario, while 40 % of those who commented agreed with that view. Many thought the forecasts were ambitious or quite challenging and with considerable uncertainties. Although 50 % of respondents considered our figures were too high, there were different views across the technologies. Many considered the present economic pressures would supress uptake.

Some respondents commented that the electric vehicle forecast could be too low and one respondent described the need to also consider electric heavy goods vehicles, which they are currently exploring. One recognised that by 2050 there would be universal electrification of transport, so that enabling investments in the network are a matter of timing rather than need.

A recurring theme in responses, particularly in the focus groups, was the lack of public charging infrastructure, which would need to be in place to support widespread adoption of electric vehicles.

Q3. Do you agree with the mobilisation of an NIE Networks Local Area Energy Planning team to support wider stakeholders including local authorities and councils in their journey to net zero? If so, what type of support should the team provide?



'Ensuring that NIE Networks can offer dedicated support will be an important part of the energy transition, particularly at local community level, where upskilling and education will be very important.'

National Energy Action NI

'Over the coming year, SONI is looking to expand its own engagement with councils.'

SONI

'This ambition, if appropriately costed, aligns with consumers' desire for industry to demonstrate leadership in the journey to net zero.'

The Consumer Council

'Yes, we agree with this suggestion. It should be noted that Belfast City Council plan to commission a Belfast Local Area Energy Plan. As part of this process, we will establish a regional energy consortium (comprising primary stakeholders - including network operators, local authorities, business and community energy groups) to shape a net zero vision for Belfast and guide the LAEP.'

Belfast City Council

Translink agree with the approach but would request that a planning team could specifically support Translink in the journey to net zero across Northern Ireland in relation to both bus and rail fleet.

Translink

'Yes, strongly support local engagement with councils and other major stakeholders to help with the journey to net zero. Advice on local grid capacity and other grid characteristics would be very useful as well as indicating the type and timescale of new infrastructure such as EV charging points or opportunities for local and micro grids. NIE should be able to advise on community energy schemes, particularly where these could be at significant scale – e.g., locally owned wind farms.'

Centre for Advanced Sustainable Energy

'Yes, we agree. However, the engagement should include generators and technology providers to ensure that local energy and net zero plans are suitable to attract the investment and secure the timelines required to meet 2030 targets.'

United Renewables, Agri AD

'SGI welcomes NIE Networks mobilization as a catalyst for joint innovation between NIE Networks and local authorities and councils, including community energy schemes.'

Smart Grid Ireland

'Council welcome any support from Local Energy Planning teams which would assist with developing our Climate Action Plans and moving towards net –zero.'

Armagh City, Banbridge and Craigavon Borough Council

'RSPB would also urge NIE Networks to engage with council's biodiversity officers on ensuring that councils' journeys to net zero do not worsen the nature crisis. The pathway to net zero should also incorporate energy efficiency.'

RSPB

'Yes, we agree with this suggestion. It should be noted that Belfast City Council plan to commission a Belfast Local Area Energy Plan. As part of this process, we will establish a regional energy consortium (comprising primary stakeholders - including network operators, local authorities, business and community energy groups) to shape a net zero vision for Belfast and guide the LAEP.'

Belfast City Council

'This ambition, if appropriately costed, aligns with consumers' desire for industry to demonstrate leadership in the journey to net zero.'

Consumer Council

'We strongly agree that that a "Local Area Planning Team" would be of great benefit in supporting wider stakeholders.

Any forecasting information relating to the uptake and locations of EV ownership would be of significant benefit. This would enable us to target our EV investments in those locations where the need is greatest.

Maxol

'This is key to deliver an efficient network planning solution however, it should be widened to include all Government departments.'

Energy Institute (NI Branch)

'Yes. NIE Networks expertise in this respect is vital and will allow the targeting of energy efficiency schemes as well as gain important control on new connections for heat and transport. Collaboration between the network and local authorities is important to ensure a just energy transition for all. The type of support that should be provided would be clear information on localised network constraints, energy market related support, and connection information support.'

Kelvatek

'"he idea of Local Area Energy Planning Team seems like a good approach but it should include more than just the obvious stakeholders. The Team would certainly ensure the partnership working Advice NI has recommended elsewhere in this response as a means of prioritising and supporting vulnerable and fuel poor customers.

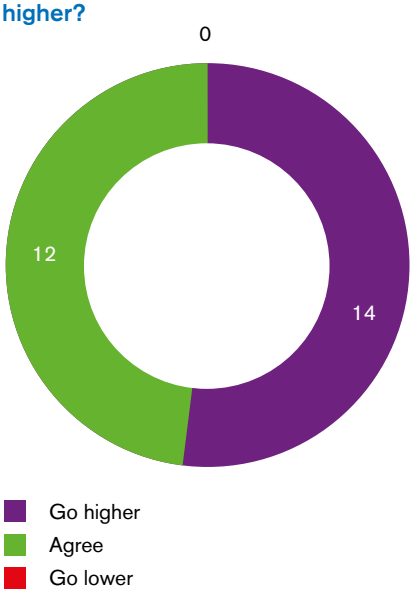
Since communities and individuals will become more proactive in their energy provision, it also makes sense for this Team to include the grassroots agencies who are already doing this work on the ground. For example, the team should include local community representatives; NICE; Co-operative Alternatives; Bryson Energy; community energy projects such as Drumlin Wind Energy Co-operative and the Edenderry Village project (see the Appendix for more information on these initiatives).

Advice NI has drafted a proposal for a concept called Sustainable Energy Communities (SECs) which would work in a way similar to that proposed by the Local Area Energy Planning team.

Advice NI

On mobilisation of an NIE Networks Local Area Energy Planning team (Q3) a full half of respondents agreed with the commendable proposal. There was no dissent, although there were some cautionary comments about the availability of expertise in councils, which have not traditionally had an energy system planning role. There was also some encouragement to involve community initiatives. We have noted additional remarks from councils about their green energy planning initiatives and we are considering how best to support them in advance of the RP7 period.

Q4. Do you think we are being ambitious enough with our proposal to fit monitors on 50% of our LV network or should we aim for higher?



'No. The value of 100% coverage (in particular, in providing insight to avoid inefficient investment) far outweighs the modest increase in overall costs.'

Ardent Energy et al.

'The additional costs for fitting monitors on the LV network is very modest. Data will become a more and more essential resource to decarbonising. As this rolls out, this data should help design the future network. A decarbonised system will be a 'prosumer' model in which data will be key. Due to the modest costs involved and the importance of data, a higher target may be justified.'

Belfast City Council

'The need for monitoring of the full network is essential to allow for forecasting and targeting of future network upgrades and investments.'

Maxol

'No, data is key to effective forecasting and monitoring, the aim should be 100% of the system monitored with check points every 2 years to establish if targets are being delivered and costs are being achieved'

Energy Institute (NI Branch)

'With a targeted policy and the right monitoring and sensing capabilities 50% of the LV network should be enough especially as 50% of the network does not translate to consumers numbers monitored, for instance one GB DNO intend to be monitoring 52% of their network, which translates to 96% of their customers.'

Kelvatek

'We agree that moving to 100% coverage would further improve our ability to keep ahead of investment needs on the LV network.'

NI Water

'50% is not ambitious enough given the urgency and gravity of the climate crisis. 100% would ideal but failing that, 80% might be a good second best as it would allow you to monitor higher levels of LCT connections while at the same time trying to avoid outages. The idea should be to prepare for greater and greater levels of LCT connections and microgeneration, and to avoid chaos and delays in doing so.'

Advice NI

'The base line costs as indicated for 100 % monitoring seem to be worthwhile to expand this exercise for full coverage and full derived benefit of the related data.'

United Renewables

'The electrification of heat and transport may require a higher figure. Even activating large numbers of hot water immersion heaters in homes could require monitoring to avoid overloads.'

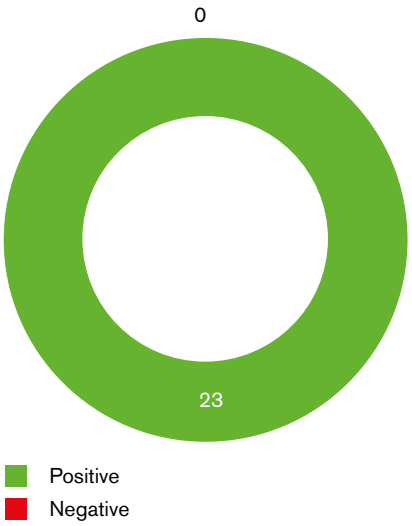
NIHE

'Aim higher and make it a de facto installation with all upgrades/ replacements. The expectation is that with the move to SMART grids more information will be required for real time optimisation as well as longer term planning.'

Translink

Respondents universally accepted the need for increased monitoring of the LV network. The majority considered that we should aim to monitor more that 50% of the LV network, in many cases proposing 100% of the LV network.

Q5. What do you think of our "Open Data Portal"?



'It's a good interface and useful datasets, however who is the intended audience and what is its relevance to them?'

NIHE

'The Vimeo is a good demo of a useful resource. API capability is very welcome.'

The Electric Storage Company

'SONI welcomes NIE Networks Open Data Portal. SONI is currently collaborating with NIE Networks in the information sharing required to ensure consistency of the information available to customers. The collaboration of DSO and TSO will ensure that one accurate version of the data is available to all and SONI looks forward to continuing this collaborative programme with NIE Networks.'

SONI

'Council fully support a proof of concept 'Open Data Portal" being made available. On the back of recent experience we consider it would be a beneficial tool for Council as well as businesses across the borough who wish to understand if a renewable energy project or new proposal has the capacity to be supported by the network, without the need to go through the often time-consuming and sometimes costly exercises to determine network viability.'

Armagh City, Banbridge and Craigavon Borough Council

'MEL are supportive of the potential benefits of making NIEN's operating data, etc. available to industry (and the public), in the context, inter alia, of the need for increasing system flexibility, and are therefore supportive of the need for the Open Data Portal to be further developed and maintained on an ongoing basis.'

Mutual Energy

'We welcome access to open data which may inform future planning by Belfast City Council.'

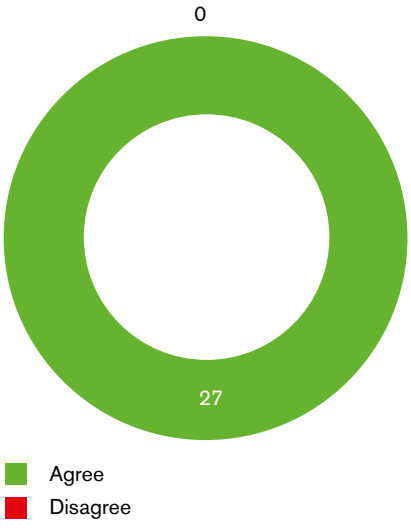
Belfast City Council

'The "Open Data Portal" seems very comprehensive and easy to navigate. There is good detail available here which seems easy to find. The geospatial mapping included is also very helpful.'

Maxol

All of the responses on the topic of the open data portal provided positive sentiment, although there were some notes about data governance, funding and security.

Q6. Do you agree with our 'Flexibility First' approach?



'Yes, very futuristic, this is the way forward.'

Warrenpoint Harbour

'Yes. The UFU would like to see the further roll out of flagship innovation projects such as 'FLEX'. This must be considered along side conventional reinforcement and the decision to 'wait and see' but not create any

unnecessary delays which may prove costly to the landowners.'

Ulster Farmers' Union

'The DRAI supports the "flexibility first" approach which will allow for flexibility services to provide cost-effective solutions to the network, helping to facilitate decarbonisation and strengthen security of supply.'

The Demand Response Association of Ireland

'"Flexibility" is in keeping with our own support for microgeneration, distributed embedded generation and the 4 Ds (Decarbonisation, Decentralisation, Democratisation and Digitalisation).'

Action Renewables

'Increases in demand side flexibility can reduce the final size of the power system required, so NIEN should investigate how much flexibility can be provided for heat pump loads by using thermal stores.'

NIHE

'Flexibility and "Make better use" is entirely commensurate with NI Water's plans, and NIW will seek to work with NIEN to optimise flexibility opportunities. The extent to which large energy consuming assets can participate in FLEX should be thoroughly explored. We believe the tendered FLEX approach is valid.'

NI Water

'Yes, it's been proven that the deferment of reinforcement that energy flexibility enables allows network operators to make more informed investment decisions, achieving decarbonisation at a lower cost. It will also play a crucial role in adapting to wider changes in energy demand and usage patterns.'

Kelvatek

'we would caution against the elasticity of certain demands being overestimated and the potential risk of rewarding flexibility which does not, ultimately, avoid network investments and/or other significant costs in the wider energy system'

'it is important, given the overarching purpose of energy decarbonisation, that the carbon intensity of any distributed / 'behind the meter' energy generation which service providers may be utilising in response to flexibility signals is accounted for in the design of any such scheme'

Mutual Energy

'While the flexibility first strategy is welcome, there will be a need to develop and communicate "uncertainty management mechanisms" clearly and visibly to ensure that there is sufficient flexibility and agility to enable the investment required. Flexibility and agility should no less be carefully balanced with clarity on the scale of investment required to provide the necessary confidence in the process.'

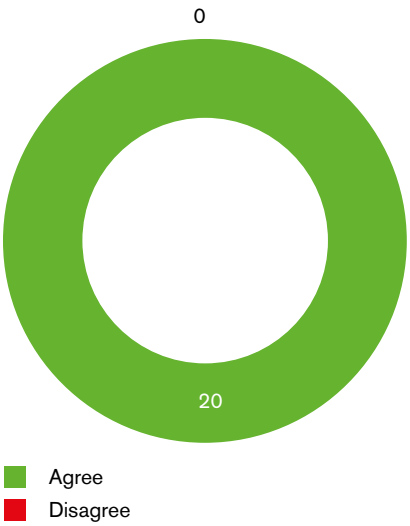
NI Chamber of Commerce and Industry

'Yes, this is an essential approach.'

Belfast City Council

All respondents answering the question on the 'flexibility first' approach were supportive. While recognising the value of flexibility, some also emphasised the need to consider whole system costs and impacts, and not unnecessarily to delay investment.

Q7. Do you agree with us including wider societal impacts in our decision making between FLEX and conventional reinforcement?



'We would also note that failure to consider wider societal impacts such as decarbonisation would be likely to clash with statutory obligations under the Climate Change (Northern Ireland) Act 2022.'

Ardent Energy et al.

'We agree [however] that the inclusion of societal impacts in investment decisions in the network is a crucial component in any assessment.'

Maxol

'Use of the industry standard CEM developed for the ENA by Baringa ensures that this and other factors such as emissions associated with losses, embedded emissions in the selected reinforcement option, emissions associated with the energy used to meet the capacity requirement and any other associated emissions are considered.'

Kelvatek

'Certainly. This is very relevant in modern society where there will be much interaction between the network operator, stakeholders and end users. More openness in background, rationale and implementation is to be commended and will promote better decision environment in comparison to historic practices of debate focused often on cheap short-term solutions.'

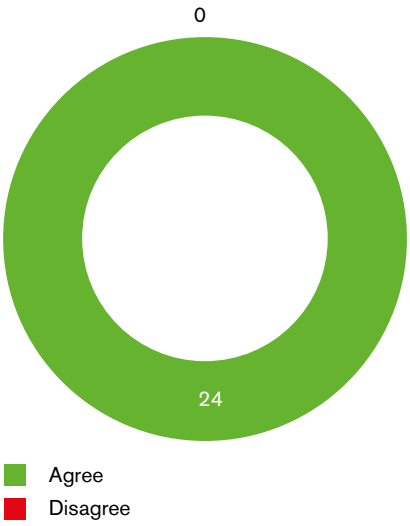
WD-Associate (Support) Ltd

'Yes, especially from the perspective of considering fuel poverty and ensuring those customers aren't left behind.'

NIHE

Respondents unanimously indicated we should take wider societal impacts into account when weighing up FLEX versus conventional reinforcements (Q7).

Q8. Do you agree with our approach of going further, faster, with FLEX markets?



'Yes it will be useful to engage users in flexing demand and in turning up demand to utilise more renewable electricity. Locational and dynamic pricing of capacity could be appropriate for non-domestic users or Energy Services Companies linked to heat networks.'

NIHE

'Most if not all industrial consumers have the capacity to accommodate demand reduction with appropriate notice and or generation constrain as required. NI Water are working generally to introduce business wide integrated operations and control. The IT changes NI Water are developing will allow optimised source and distribution and there will likely be opportunities to interact with NIEN constrains to realise both short term and long term network management opportunities for both NIEN and NI Water.

In some cases, DSR can or could be accommodated without significant production disruption. FLEX buys time and allows investment to be directed appropriately'
NI Water

'The potential of FLEX markets should be explored after an evaluation to see how much future saving could be realised.'

Centre for Advanced Sustainable Energy

'Meaningful engagement with experienced service providers is vital in order to develop optimum solutions for flexibility services. The complex task of developing appropriate operational standards, commercial frameworks, effective market interfaces and ensuring that technical barriers hindering market participation are removed can only be done in consultation with industry stakeholders.'

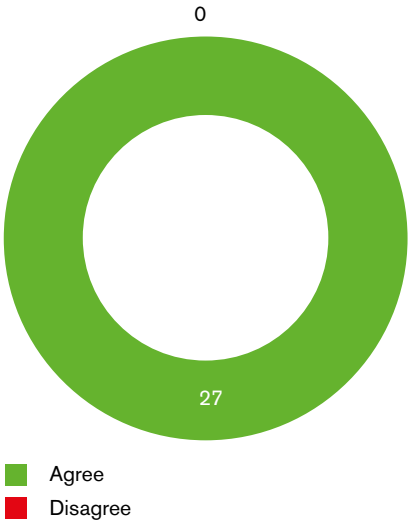
The Demand Response Association of Ireland

'We agree with the "further, faster" approach if it unlocks efficiencies early and provides customer savings over the medium term.'

Maxol

Again, there was support, with no dissent, for going further, faster with our proposals on FLEX.

Q9. Do you agree with our proposed RP7 innovation principles?



'Innovation will have to be faster than RP6, deploying proven innovation is a good idea, trails on lower TRL's good idea, whole approach good idea'

Warrenpoint Harbour

''Yes, although we believe this should be much more ambitious. In the past, NI's adoption of the 'fast follower' approach has resulted in inertia; for example, with digitalisation and the adoption of smart meters.'

'To facilitate innovation we would propose that NIEN establishes a permanent 'Electrification Hub' comprising relevant NI-based companies (including electricity suppliers), academic researchers, as well as representatives of consumer organisations, the Utility Regulator and government departments.'

Ardent Energy et al.

'In terms of the innovation principles proposed, we would just clarify, for the avoidance of doubt, that adopting a 'whole system' approach to innovation, should be considered to mean 'whole energy system' (i.e. most particularly the existing electricity and gas networks, and potentially in future other solutions e.g. geothermal / heat networks, etc.).'

Mutual Energy

"'Yes, but the UFU are struck by one line and it is one we wish to stress;

'We (NIE Networks) are perfectly placed to be leaders in innovation in the integration of renewable generation onto the network'

It is imperative that this developed and rolled out if our members/land owners are to play an integral and active part in energy transition.'"

Ulster Farmers' Union

'We welcome the investment into lower TRLs as Northern Ireland's situation offers some unique opportunities.'

'A whole system approach is sensible but this should include all energy networks and distribution to maximise the efficient and effective investment of resources to decarbonise Northern Ireland.'

Centre for Advanced Sustainable Energy

'We welcome the introduction of a whole system approach and going beyond being a 'fast follower' of GB practice to respond to local energy supply conditions. This especially with our heavy dependence on oil fuels alongside a large wind resource. Other countries have developed useful practices. E.g. Denmark with heat networks and large heat pumps.'

NIHE

'Since we have some of the highest levels of distributed renewable energy generation in the world, Northern Ireland can take a global lead in the development of the technical innovation required to integrate renewable generation onto an electrical network to form the bulk of generation on the network. Northern Ireland also has a successful track record through, organisations such as the Centre for Advanced Sustainable Energy, in collaborative, industrial lead research.'

AgriAD

'YES - Being a fast follower is not an option.'

Smart Grid Ireland

'Given the anticipated 10% increase in grid usage over the coming years along with the changing customer behaviour, ABC would have the view that the rate of innovation needs to be in excess of RP6 levels.'

Armagh City, Banbridge and Craigavon Borough Council

'We do not necessarily see the relevance of these principles in the context of ensuring energy security and decarbonisation. [...] Seeking to become global leaders in innovation in the integration of renewable generation onto the grid would be a nice side effect but it should not be a primary focus. And we should avoid the pitfall of chasing so-called innovative technologies that do not advance our journey towards decarbonisation or that perform no better than existing or natural solutions.'

Advice NI

'We agree that NIEN should continue to innovate and that considering the unique circumstances of the Northern Ireland network, you should broaden your innovation remit to be more than 'fast followers' and to take a more "whole system' approach.'

NI Water

'The CBI warmly welcomes NIE Networks' ambition to "…be leaders in innovation in the integration of renewable generation onto the network". The 'whole system' approach that is put forward in the consultation document, along with the proposal to ensure supportive innovation to deliver that whole system approach are consistent with decarbonisation ambitions across the business community.'

CBI NI

'At Kelvatek we are particularly pleased to see NIEN transition from the fast follower phase to 'projects with lower Technology Readiness Levels (TRLs), leveraging the specific circumstances of the Northern Ireland network.'

'This is not a criticism of the fast follower approach which has seen some of the most successful innovation from the GB market deployed on NI networks, it is more support in recognition that some issues that the NI network faces are very, very different from the GB network and this approach also aligns with the 10x Economy ambitions outlined by the Department for the Economy in NI.'

Kelvatek

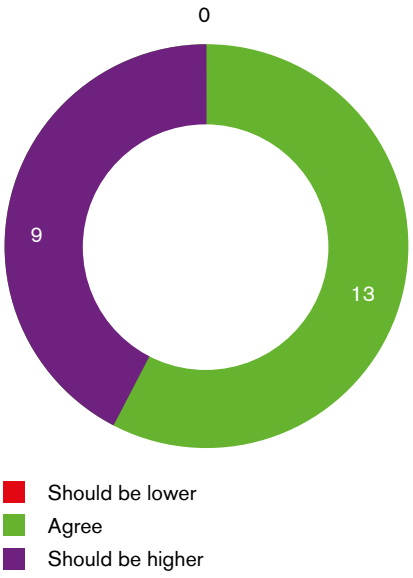
'IoD believe that NIE Networks has a major role to play in supporting innovation and technologies that deliver a longer-term solution and reduces Northern Ireland's exposure on these issues. NIE are perfectly placed to be leaders in innovation in the integration of renewable generation onto the network and thus creating new business opportunities which further aligns with the DfE 10X strategy.'

IOD NI

There was broad support for our innovation principles, with commentators backing in particular:

- the concept of 'whole system' thinking on innovation;
- the need for innovation from lower technology readiness levels;
- NIE Networks' leadership of collaborative innovation; and
- innovation in integration of renewables as a contributor to the Department for the Economy's 10X strategy.

Q10. On top of your feedback on our approach to innovation in RP7 we want to understand what you feel is an appropriate scale of allowance. In RP6 our innovation allowance amounted to approximately 2% (approx. £6m) of our total Network Investment Plan. Do you feel that a similar percentage would be appropriate for RP7? This would represent an allowance of approximately £20m.



'the current UK government target for R&D is 2.4% of GDP by 2027'

QUB

'An allowance of £20m would be an improvement but it should be used to leverage other sources of innovation e.g. Innovate UK funding with appropriate NI and GB partners.'

The Electric Storage Company

'Each of the innovation projects should deliver a benefit to the decarbonisation agenda for Northern Ireland, some accelerating the net-zero journey, some facilitating additional low carbon technology connections and others providing societal benefit. Each of these, in their own way, provide a positive rate of return. It would be useful in the RP7 final submission to provide scenarios to different percentage rates of innovation investment to judge the correct balance between the funding for NIEN and their ability to deliver the required targets and objectives for the Northern Ireland economy.'

Oracle

'SONI considers that given the interactions between TSO/DSO from our perspective, joint collaboration funding would be beneficial (where appropriate) to ensure that projects can progress as part of the whole system innovation approach in our joint working groups.

We consider that the upfront innovation fund should be accommodated and the ability to seek additional funding based on a case of need, during the price control period should also be accommodated. Allowances should be considered for some element of anticipatory investment in order to allow for innovation concepts and trials to be progressed quickly.'

SONI

'we support a 2% innovation allowance but feel that NIE should aim to be more ambitious than 2% so long as it does not place a higher cost on the consumer.'

Alliance Party of Northern Ireland

'There needs to be a higher scale of allowance, 2% is not an acceptable level for RP7 and is not adequate to meet NIE Networks innovative aspirations.'

Ulster Farmers' Union

'Given the scale of the challenges and that much of the 'low-hanging fruit' of the energy transition has been already taken it would be prudent to make a higher level of investment in innovation, particularly in the more challenging areas to address.'

Centre for Advanced Sustainable Energy

'The RP7 price control period will coincide with a critical period of developing, testing, and scaling up innovative technologies and processes, that will shape an integrated energy system capable of delivering net zero. Whilst there may be additional funding opportunities from local and national funding mechanisms, access to a ringfenced Network Innovation Fund, that is proportionate to the scale of challenge will be fundamental.

In determining what constitutes a proportionate level of funding, we believe that NIEN should provide detailed industry insight into the main areas and themes of innovation within the electricity sector. Whilst there is a clear need for significant investment across transmission and distribution networks to support the future use of electricity consumers and prosumers, it is less clear where innovation funding would provide best value. For instance, is this to support effective network design, is it to research technologies that will help inform and in turn enhance the efficiency of capex expenditure or is this to better understand the suitability of downstream end user technologies and their performance in local settings.

NIEN have proposed a funding requirement of 2% of total network expenditure, and notwithstanding the points above, given the scale of challenge associated with the decarbonisation of the electricity network, this may indeed be necessary. It is however important to note that within the GD23 Price Control Final Determination, it was determined that innovation funding of 1% of total network capital expenditure would be made available to PNGL as part of an Innovation Fund. We believe that this amount is considerably less that what is required to effectively deliver a decarbonised renewable gas network and will place a much greater focus on the success of applications to non-regulated funding sources, an approach that cannot guarantee that sufficient funding will be available in a timely enough manner to bring the maximum benefits to consumers.'

Phoenix Natural Gas

'Given the changes in the energy supply situation and in climate change, shrinking the allowance would seem perverse. Relatively small amounts of money could resolve some issues around electrification of heat in homes. E.g. Developing a repeatable test for radiator flow balancing, testing of thermal stores to avoid running in winter peak demand hours or to utilise more curtailed wind energy, using heat stored underground to suppress peak ground source heat pump demands.'

NIHE

'Due to the scale of the challenges faced, the allowance would be a minimum of what would be required. Accepting concerns about affordability, this minimum allowance should be levered to obtain other centralised research funds.'

United Renewables, AgriAD

'Again I think that represents good value for money, is a reasonable target sum to start with. In relation to a Network Innovation Fund, maybe our Utility Regulator could start to practise what they preach in context of "fast follower" there being a Low Carbon Network Fund managed by OFGEM in GB.'

WD-Associate (Support) Ltd

'Smart Grid Ireland's view is that the RP6 innovation allowances were totally inadequate including the lag-time for approvals. Based on RP6 calculation this needs to be raised to at least 5%. Societies drive towards community energy systems and the upheaval this will bring to the current operating system both in terms of regulation and supply will necessitate significant innovation to the grid and grid edge interaction.

NIE must take into account the potential for microgrid deployment in large sites and in local energy communities particularly given that NI has only 2 energy communities compared to 640+ in RoI. This imbalance has to be addressed as a matter of urgency and investment in facilitating microgrid and local energy community development will in turn mitigate the amount needed to be spent on grid infrastructure

One aspect which is very evident is that a fully committed approach to innovation acceleration will be cost effective particularly given, in real terms, the minimal impact on bills.'

Smart Grid Ireland

'ABC would have reservations that the proposed allocation of 2% in sufficient.'

Armagh City, Banbridge and Craigavon Borough Council

'The Network Innovation Fund would be extremely useful if applied to widening easier access to the grid

for individual prosumers of electricity and empowering communities to become prosumers. The technology is already available for this to happen. The barriers are not technological, they are legislative and institutional. This is the kind of innovation that would be most useful at this point in time. The light touch regulatory approval process would be better directed towards communities trying to generate their own electricity than towards corporations with 'innovations' that may or may not be of value. The answers do not always lie in advanced technological solutions which sometimes are more about a company making profits than getting to the heart of a solution to a problem'

Advice NI

'If Northern Ireland is to become a leading low-carbon innovation hub, then more innovation funding must be introduced for NIE Networks to coordinate and lead the way on whole systems approaches. At Kelvatek we would put forward the argument that the best place to coordinate and target need for energy infrastructure would be with both the DNO and the TSO. All green economic growth will effectively stem from the backbone energy infrastructure in NI.'

Kelvatek

'The quantum such a fund should be determined in recognition of the express need for innovation to deliver carbon reduction while also avoiding significant additional cost demands on consumers.'

Consumer Council

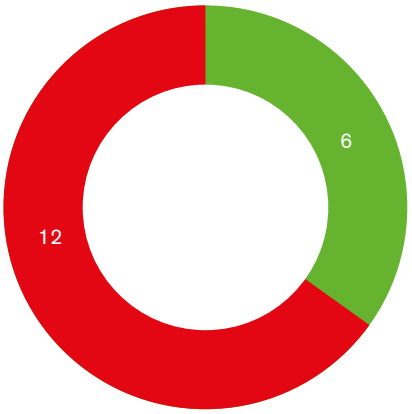
'£20 million over the period of RP7 is far from adequate. The next decade will see significant change in the NI energy system. Adopting a conservative, incremental approach to innovation in the face of rapid societal and technological change is false economy. Failure to fully integrate innovation into normal business operations will result in more wasted opportunities, lost investment and ultimately higher costs for consumers. We recommend that at least £40 million is allocated for innovation in RP7'

Ardent Energy et al.

Of respondents who explicitly answered the question on the level of innovation funding, not only was there no objection to the proposed 2% level of network investment funding for innovation, approaching half of the stakeholders thought the allowance should be higher. Key drivers for this opinion are:

- RP7 will be a critical and challenging period for system transformation and much of the low hanging fruit has been taken.
- All innovation projects should provide a positive return on investment.
- NIE Networks should also lever funding from other sources, where it is available.
- A Network Innovation Fund, administered by UR, is welcomed and is compatible with the promoted 'fast follower' approach.

Q11. In respect of assessing where to invest in the network, do you agree with our proposed approach of including only LI5 sites in our base line plan for RP7? Should we be going further?



'The cost of living crisis has been quoted as the reason for the approach in Q11. Should the cost of living crisis play a part in decisions for the 2025-2031 period?'

QUB

'Your LI approach should be linked to customer-led investments in flexibility. If a commercial customer is willing, and financed, to invest in LCT with FLEX capability should be encouraged, with the requisite NIE Networks investment prioritised and fast-tracked. This would ensure more carbon is removed, more investment is achieved that then in turn facilitates more resilient networks through provision of more FLEX capability. We know from our clients that there is considerable, pent-up demand for LCT deployment via commercial customers who want to participate in network services.'

The Electric Storage Company

'No, the UFU disagrees and would be in favour of Option 2. Net zero aspirations need to be financed and there appears to be firm debate as to how this is going to be paid for. But this should not hold back any commitment to network investment.'

Ulster Farmers' Union

'Translink suggest that engagement with potential large users (such as Translink in relation to roll out of BEV's, or electrification of the rail network) is undertaken in advance of the base line plan for RP7 to ensure that plans are aligned and that there are no blockers to decarbonisation.'

'Better to prioritise LI5 sites and then the most pressing LI4 sites rather than an arbitrary cut-off?'

Translink

'NIE, should go further. The current cost of living crisis is due to global pressures that are external to Northern Ireland, that we have very little control over. If we cannot secure our own indigenous energy supply then these global pressures on Northern Ireland will increase, exacerbating the current cost of living crisis. Investing in LI4 as well as LI5 sites, as noted in the consultation document, will be needed in the medium term and therefore will not be futile.'

United Renewables, Agri AD

I am in favour of option 2, going further. From a commercial perspective, the longer term outlook would be more prudent, especially considering the asset lifetime and the various complications of actual deployment. Also, the scenario we consider is for a electricity network operator and thus can be a long

term view as such an entity is a critical societal service imbued with the onus of security supply; its not like a competitor is going to install a different grid and they go out of business.'

WD-Associate (Support) Ltd

'Option1 strikes the best balance but a potential levy for customers requiring LCTs could be considered.'

Northern Regional College

'Smart Grid Ireland would recommend that NIE Networks goes further in their proposed approach and include LI4 sites as well [...] With anticipated energy price reduction in 2024 the difference in cost by going further should be minimal in additional cost to the consumer.'

Smart Grid Ireland

'Everything possible should be done to clear the road to decarbonisation and it is regrettable that more has not been done already in this respect. have a lot of catching up to do. Our society has a lot of catching up to do.'

Advice NI

'Every opportunity to improve grid accessibility should be pursued.'

NI Water

'We agree with NIE Networks approach as the most cost effective for the consumer, ideally without the constraints of the wider cost of living crisis, the safest long-term option would be 2. However, as NIE networks themselves point out the right decision at the current time is to reinforce those most in need while continuing load indexing on other sites to monitor available capacity.'

Kelvatek

'the LI5 approach seems sensible allied to a "Flexibility First" approach'

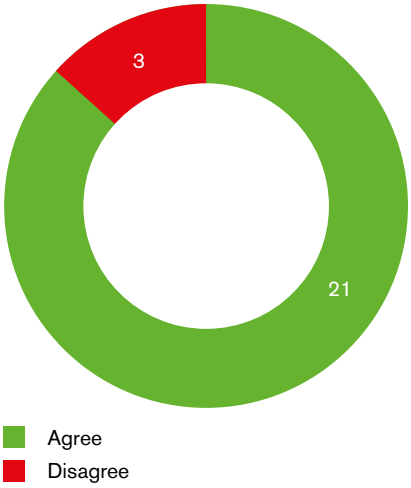
Maxol

'If it is possible to go further without impacting on business customers, we would encourage that approach. Failing that, we support the proposed approach of including only LI5 sites. We welcome the recognition that investment in grid development needs to be affordable to drive decarbonisation, that NIE currently accounts for 3.7p of the 28p/kwh charged to customers and that this 3.7p is set by the Utility Regulator and is not expected to rise due to the anticipated increase in consumption.'

Belfast City Council

A clear majority of responding stakeholders thought that we should go beyond our proposal to invest in LI5 sites in our baseline plan, including LI4 sites also. Reasons cited for including LI4 sites include: the priority for decarbonisation, anticipated growth in demand and the need for the network not to be an obstacle to roll-out of electrification.

Q12. Do you agree with our proposal to replace all 5kVa transformers as soon as possible during RP7?



'Transformers that can accommodate backflows of electricity, and which can meet much larger loads, seem to be needed. E.g. Even adding direct water heating of 3kW at each home is much larger than current load allowances. EV fast chargers can require very large currents, and are likely to be located at homes and often used at the evening peak.'

NIHE

'No, I would monitor usage and change on a case by case basis'

Warrenpoint Harbour

'Your argument to replace all 5kVa transformers in anticipation of LCT being deployed is simple and clear. An alternative approach may be to encourage deployment of smart LCT such as Behind the Meter storage, in addition to the proposed LCT ...'

The Electric Storage Company

'Assess and prioritise.'

RenewableNI

'Yes, there is a very clear and pressing rationale outlined in the document setting out the case for doing so.'

WD-Associate (Support) Ltd

'Absolutely YES – NIE Networks need to be ahead of the curve with regards to EV. By 2030 out of every three cars sold, two will be electric. (Source IEA) and the growth in rooftop solar needs to be provided for as well.'

Smart Grid Ireland

'Yes, we agree with the proposal to replace all 5kVa transformers as soon as possible during RP7.'

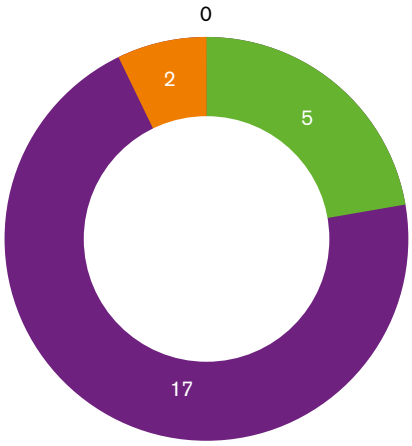
Advice NI

'Yes, they will be a significant blocker to EV uptake as well as other LCT technology and deny consumers in this area an equitable outcome from the energy transition.'

Kelvatek

There is clear support for replacing all 5 kVA transformers, which respondents realised are a blocker to installation of low carbon technologies, including electric vehicles. The three respondents who disagreed preferred to monitor the situation and replace the transformers on a case by case basis. This is logical, but assumes we are informed about installation of low carbon technologies, which is regularly not the case, or neglects the cost of installing monitoring apparatus.

Q13. Regarding the building of new substations or upgrading existing substations, which can be a lengthy process and can in some cases take several years, we would welcome your opinion on which option presented at the end of page 32 we should adopt in RP7.



'If option 3 costs less than option 2 and presents the least risk that the network blocks the 80% RES-e target, then it should be adopted. The main drawback is that there are no details given on the forecasting accuracy/techniques used to estimate the future connection of generation which means it is difficult to compare the risks associated with the two options.'

QUB

'The three options are not presented equally. Option 1 has not got a figure that each domestic or commercial customer would pay under Option 1.

There is another Option, 2a. Where customers are prepared in invest in smart LCT, enabling Demand Side Management without impairing operating activities on the site, those smart, managed connections should be encouraged, facilitated and fast-tracked.'

The Electric Storage Company

'SONI considers that Option 1 may result in a backlog of investment work and a delay in achieving targets. Option 2 seems to be a reasonable approach but in areas where there is greater confidence in the Option 3 forecast, an upfront capped allowance should be considered.'

SONI

'Option 3 is the only viable route if we are to have any chance of meeting the RES-e 2030 target.'

Ulster Farmers' Union

'Translink would be happy to engage in relation to our plans to decarbonise the bus and rail fleet that may have an impact on the requirement to build or upgrade substations.'

Translink

'Option 3 looks to be the sensible choice, particularly if a new RES incentive scheme adopts an intelligent approach and prioritises new assets in the most needed locations.'

Centre for Advanced Sustainable Energy

'supportive of Managed Connection arrangements'

NIHE

'Option 3, for the same reason as stated in the answer to Q11.

Additional comment.

The improvements in NIE connection services, outlined in Section 5, page 44, are to be fully commended and will be much need to shorten the delivery time on generation projects, over current timelines which will, if not improved, lead us to falling well short of the 2030 targets.'

United Renewables, AgriAD

'would favour option 3 as it is presented in the document, being derived on an analytical basis as best future fit and at moderate cost'

WD-Associate (Support) Ltd

'Option 2 is a more balanced approach to minimize risk for future investment.'

Northern Regional College

'We do not believe a wait & see approach is adequate. There has to be a better method of forecasting and assessing growth areas for investment. Recent experience has highlighted the delay with companies attempting to grow or build new facilities having to wait significant periods of consultation, planning and other surveys before systems can be put in place to accommodate their needs. It is important that the network does not become a blocker to achieving the 80% RES target.'

Smart Grid Ireland

'In terms of the options presented regarding the building of new substations or upgrading existing ones, Council would have strong reservations regarding options 1 and 2. This is a contradiction to the new emphasis on forecasting and modelling which is the approach identified for RP7. Also given the lengthy timeframes for new and upgraded substations, we believe that action needs to be taken now in order to ensure future-readiness. The cost impact on customers (both domestic and commercial) needs to be affordable and as the option which ensures the least risk of becoming a blocker to the 80% RES-e target, Council would urge NIE Networks to move forward with this option.'

Armagh City, Banbridge and Craigavon Borough Council

"'It is surprising to see from page 32 just how many substations are not ready for decarbonisation. This is a lamentable state of affairs. Ironically, the majority of these substations are in rural areas where microgeneration is likely to be highest. It is a cause for concern too as vulnerable customers are being impacted. Ensuring theses substations become ready for microgeneration is an immediate priority. Therefore, Option 3 appears to be the best option when it comes to ensuring the network is ready to meet the 80% RES-e target.

Since the island of Ireland sits within the Single Energy Market and since NIE was acquired by the ESB, there is no mention of how, on this tiny island and in the face of a climate emergency, NIE will work with the ESB to provide a seamless supply of renewable energy for the future. It seems to be a logical and sensible step and the economies of scale could save money in the long run,

especially given the location of so much of our offshore wind and wave resources.'"

Advice NI

'We consider option 3 is the most likely option to align with decarbonisation targets.'

NI Water

'Considering the annual cost option 2 would be the fiscally responsible approach considering current circumstances. Perhaps a condition-based funding reopener would be the best approach, where a certain level of forecast or imminent capacity issues could trigger further funding over a given time horizon?'

Kelvatek

'While Opt 3 presents the least risk to the 80% RES-e target, we would support Opt 2 as a sensible approach to ensuring the distribution network keeps up with proposed new low carbon generators. Consideration might be given to whether a "Flexibility First" approach could help.'

Maxol

'We do, however, believe it would be pragmatic and efficient to prioritise on a 'least regret' basis while a joint 'whole energy system planning' framework outlined in our response to question 2 is developed.'

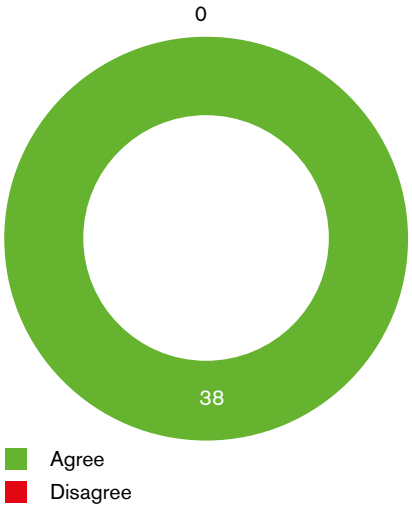
Mutual Energy

While a handful of stakeholders agreed with our proposal on substation upgrades, an overwhelming majority of those responding, nearly four times as many stakeholders, thought we should go further by upgrading where there is forecast need for capacity. The rationale is similar to that in responses to question eleven – so that decarbonisation progress is not blocked or delayed by an insufficient network. Some responses also noted the need for reliable forecasts or proposed a combination of options 2 and 3.

A.3 Maintaining a safe, reliable and resilient network (Q14 – Q18)

Q14. Do you agree with our position of maintaining the reliability of the network? Would you accept a reduction in network reliability to reduce your electricity bill in the short term? For context, a £50m reduction in capital spend would result in an approximate £1.90 saving on the average annual domestic electricity bill during RP7. For our commercial customers this represents an annual decrease between £7.50 for a small business and £118 for a medium business.

Q14a. Agree on maintaining reliability?



'NI customers should expect gradual improvements in reliability over the RP7 period. A reliable network will be a pre-requisite as we all come to depend on the electricity network more for power, light, heat and mobility. The investments required to facilitate this should also be sufficient well-funded and designed to support reliability to GB levels.'

The Electric Storage Company

'With increasing dependence on the NIE Network to allow for charging of vehicles, the reliability of the supply is key to the ability of Translink to deploy a public transport service.'

Translink

''Reducing reliability could increase costs for business and cause problems for domestic consumers particularly as greater dependency on grid connections for heating and transport.'

Centre for Advanced Sustainable Energy

'Network resilience to infrastructure failure and damage will become even more important as energy provision further consolidates. The resulting impact of any large-scale electricity outage could have severe safety and/or economic consequences and the risks must be appropriately mitigated via appropriate levels of operational spend and capital investment.

Another key consideration across each of these areas, is customer confidence. Network Operators must ensure customers' expectations of a guaranteed energy supply continue into the future. The ability to bring customers along the energy transition pathway would be severely curtailed if Network Operators allow any drop in historical levels of performance going forward.'

Phoenix Natural Gas

'With increases in home working, removal of open fires, increased dependence on electricity for charging E-bikes phones and Electric Vehicles, computers, health alarm systems, mobility aids, and an increased use of electric heat pumps and solar PV panels, we do not see a reduction in reliability as appropriate.'

NIHE

'And we should consider the impact of climate change leading to more frequent adverse weather conditions and extreme weather events.'

United Renewables

'Would not accept a reduction in reliability. This needs to be maintained.'

Northern Regional College

'It is vital that the network is reliable, safe and secure and for the network to be affordable for all.'

Sinn Féin

'NI Water considers the maintenance and reliability of the network of paramount importance.'

NI Water

'In the context of the challenging situation, we accept that reliability of the network needs at the very least to be maintained. We absolutely do not agree with reduced spend in this area, an annual £1.90 saving on a bill for the average energy consumer is a small price to pay for a safe, reliable, and resilient network. As pointed out in your own response because of the increasing electrification of wider society, reliance on energy is increasing, in turn the cost to wider society from a poorly maintained network increase. In a decarbonised world or one transitioning towards it, network reliability equals growth, and often it also directly impacts revenues of businesses who are becoming increasingly reliant on supply. The more reliable the network is the more cars can be charged, the more productivity can be leveraged from homeworking, the more green industrial output can be supported.'

Kelvatek

'The safety and reliability of the network should be imperative.'

Maxol

'Yes we agree with maintaining the reliability of the network'

Belfast City Council

"We are using more power. You do need a resilient network that is going to service us all into the future. So if repairs and replacements must be made, then it must be made sure, while it may cost more now, it's going to protect for the future. And that makes sense, does it not?"

Focus Group A/B

"That's smart. There's no point in having them put something in now and having to do all the work again in 20 years time or 10 years time or whatever the lifespan of it is"

Focus Group C

"Well, of course, yeah, we'd all want a reliable network"

Focus Group D

"It should have been a given. It should have been done anyway. They should always be trying to future proof everything. If something breaks they should always replace it with something better or something that's going to work better."

Focus Group E

"I presume that if you have a multi touch you're constantly replacing it and passing the cost on to the consumer […] so I agree with it. It means there's a reduction in the possibility of an outage too, so there is return of the investment which is going to be passed on to us. I like that, it's smart"

Focus Group F

Participants agreed that they thought this was a good plan.

Focus Group G

""We expect to see all that. I suppose as a company, this is probably the most important thing for us in our relationship with electricity, is that it's there all the time. And so we would expect to see proactive replacement, proactive maintenance, which is what that's saying, and ensure the networks' resilience"

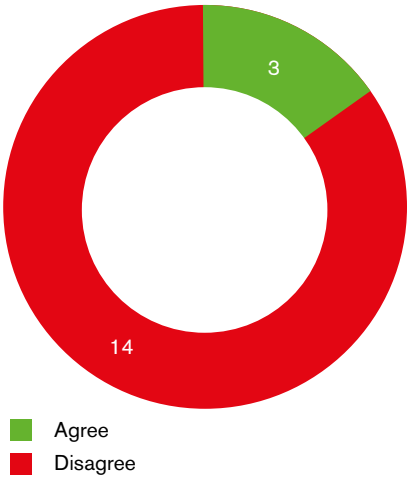
Large business services (Focus Group: Non-domestic)

"If you don't make continuous investment, sometimes you just hit a brick wall. So totally in agreement with that. It's no different than any business, you just have to keep investing in your business, keep upgrading your machinery because you just can't change it all overnight"

Food processing business (Focus Group: Non-domestic)

More stakeholders gave a specific answer to this question on maintaining the reliability of the network (Q14a) than any other and there was universal support for maintaining reliability of the network. Some respondents noted increasing dependence on electricity for heat and mobility. Another pointed out that climate change could lead to more frequent adverse weather events, implying that ensuring network reliability might require further investment.

Q14b. Would you accept a reduction in network reliability to reduce your electricity bill in the short term?



'No, reliability must be maintained, the savings are negligible so I would prefer to see increased costs for reliability.'

NIHE

'The UFU are opposed to any reduction in capital spend which could reduce network reliability.'

Ulster Farmers' Union

'The proposed reduction in electricity costs does not justify the reduction in reliability proposed.'

Northern Regional College

'we would not accept a reduction in Network reliability'

Energy Institute (NI Branch)

'In our opinion, any plan that would assume a less reliable system would be deeply flawed, involve higher costs later, and might have unforeseen safety implications.'

Maxol

'we recommend that NIE Networks test this prospect through engagement with consumers'

Consumer Council

'[We] would be averse to accepting a reduction in network reliability to reduce our electricity bill in the short term.'

Belfast City Council

"That's a progressive step going back."

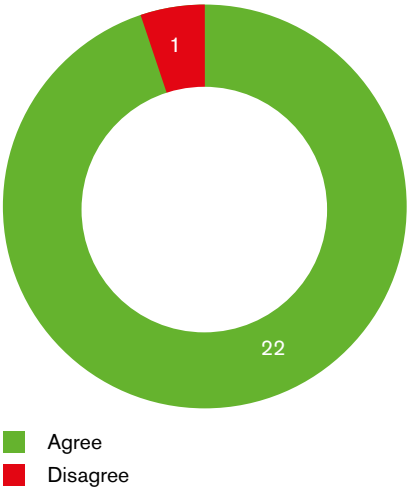
Focus Group A/B

Participants felt this question was confusing and unclear as they assumed reliability meant minimal disruptions but then the question proposes more disruptions to improve reliability.

Focus Group D

While a few respondents agreed that a reduction of network reliability could be acceptable with a reduction in the electricity bill (Q14b), the clear majority did not agree and among those who submitted comments on this question there was almost universal disagreement with any reduction in reliability, with just one stakeholder suggesting NIE Networks should test this prospect through engagement with consumers. (Consumers in the focus groups indicated disagreement.)

Q15. Our plan is to further reduce CMLs associated with faults on our network in RP7 to help offset the increased average duration of outages due to planned work on the network. To do this we propose including allowances within our RP7 baseline costs to install automated devices on our overhead line network. Are you happy that we include allowances in our plan to help minimise the impact of planned outages?



'Oracle supports the NIEN approach or targeting the 6 worst performing circuits as a cost-effective approach to improving customer service. For the remaining worst served customers some of the amelioratory measures outlined in Q15 should be considered alongside enhanced monitoring and analytics to understand in what conditions these circuits are underperforming. This should then lead into a prioritised list of interventions, based on lost energy, that NIEN can implement without undue price increases for customers.'

Oracle

'No. The UFU would question this. In RP6, NIE Network oversaw the rollout of SCADA, which was introduced to lessen the impact of faults on the LV lines. If SCADA was working efficiently surely this would improve the performance and reliability of the grid for other LCTs?'

Ulster Farmers' Union

'Translink are supportive of any allowances that will help minimise the impact of any planned outages.'

Translink

'Yes – the automated devices referenced will not only minimise the impact of planned outages, they will also enhance the overall resilience of the network. And at moderate cost per consumer type.'

WD-Associate (Support) Ltd

'Yes. Include allowances to reduce the risk and impact of planned outages.'

Northern Regional College

'YES – increased automation makes sense for both reliability and resiliency. Support of local resources including energy storage can also reduce impacts of planned outages.'

Smart Grid Ireland

'Distribution networks are experiencing a quicker than expected uptake in Low Carbon Technologies (LCTs). As already discussed in our response to Q2. Significant uptake in Electric Vehicles (Evs) is expected from 2025 onwards further to this an increased network of charge points will be needed.

In this context network automation is a vital tool in reducing the time consumers experience off supply when an interruption occurs and ensures equitable access to LCT supporting technology such as charge points. EV's are already outstripping the previous predictions for uptake and this trend will continue once the temporary rise in electricity prices has eased.'

Kelvatek

'While planned outages are not ideal, they are significantly less disruptive for consumers than unplanned outages. Therefore, the level of allowances included in the RP7 final determination should be appropriate to ensure the cost incurred to reduce planned outages does not outweigh the consumer benefit.'

'We note that during the RIIO-ED2 process Ofgem determined that they required clear evidence of how much customers would value and be willing to pay for additional improvements relating to customer minutes lost.'

Consumer Council

It was questioned by a number of participants why mitigations were not already in place, especially since NIE Networks is already aware of steps they can take to mitigate unplanned outages.

Focus Group A/B

Everyone thought the proposed plan was fair.

Focus Group C

All participants were happy for this to be included in the plan.

Focus Group D

One participant commented that NIE Networks should be trying to reduce the impact of planned outages anyway and that it should be funded from NIE Networks' own profits rather than from consumers.

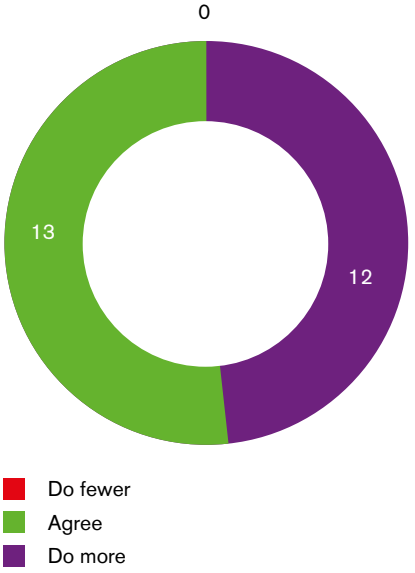
Focus Group E

"Smart. They're planning ahead. That's probably going to be cost effective for them too because the last thing they want is unplanned outages"

Focus Group F

On the question of allowances to help minimise the impact of planned outages (Q15) there was almost unanimous support for installing automated devices to reduce CMLs associated with faults. One respondent who indicated disagreement though that SCADA rollout in RP6 should already have lessened the impact of faults on the LV network. (In practice, this proposal is to go beyond the work undertaken in RP6 to further reduce CMLs.)

Q16. Do you agree with our approach of targeting the top 6 worst performing circuits only or should we aim to eradicate all existing worst served customers in RP6?



'Aim for the top 6 first, then address the rest at a later date'

NIHE

'Another approach may be to offer WSC support to install LCT incl. smart storage to enable ride-through and self-generation. It would also reduce electricity, and potentially other energy costs, for WSC who have not had good service but have paid full prices for many years. There may be other funding available under Just Transition headings within Innovate UK funding to underwrite this approach.'

The Electric Storage Company

'For the remaining worst served customers some of the amelioratory measures outlined in Q15 should be considered alongside enhanced monitoring and analytics to

understand in what conditions these circuits are underperforming. This should then lead into a prioritised list of interventions, based on lost energy, that NIEN can implement without undue price increases for customers.'

Oracle

'SONI would consider that this should be subject to a cost-benefit analysis to ensure it is non-discriminatory.'

SONI

'Since the majority of our members are located in remote rural settings, the UFU would wish to see a commitment from NIE Networks to eradicate all existing worst served customers in RP7.'

Ulster Farmers' Union

'People are becoming more dependent on electrical power, so more circuits should be upgraded.'

NIHE

'With respect to the 67% and the options, I am inclined to be a bit more granular regarding those affected. Having been a commercial customer on a line suffering from swan strikes and wet plastic bags, it made quite a difference to our operations when the tripping out was in some way eliminated. This had a positive effect on our daily operations and, being a foreign direct investment business, on the perceptions of our German parent company. On the domestic side, there may be people working from home, charging mobility scooters or even reliant on home dialysis that may be affected. Accordingly I tend towards eradicate all. Failing that, I tend towards a qualitive approach rather than a quantitive one, based on deserving cases or at least recognising those more critical than others.'

WD-Associate (Support) Ltd

'Yes. The balanced approach seems most appropriate.'

Northern Regional College

'Work towards eradicating all. Especially include assessment of local investments to help improve performance of these circuits as was done in Western Australia.'

Smart Grid Ireland

'Council disagree that only the 6 worst performing circuits should be targeted. All residents and businesses within the borough should be able to depend on a reliable and secure electricity supply.'

'No business or resident should be disadvantaged by lower levels of network performance.'

Armagh City, Banbridge and Craigavon Borough Council

'Targeting the worst performing circuits may be less costly, but factors such as future microgeneration potential, should be factored in when deciding additional circuits that should be targeted.'

Advice NI

'NI Water considers the maintenance and reliability of the network of paramount importance.'

NI Water

'Yes, the financial trade-off is too high to address all worst served customers within the RP7 period.'

Kelvatek

'RCN believes the investment programme for worst served customers (WSCs) in remote rural areas should seek to eliminate all WSCs as the costs of the additional cost of the additional work required is reasonable when spread across all NIE customers over the RP7 period.'

Rural Community Network

'Yes, however we feel NIE should retain the ambition to eradicate all existing worst served customers should this become possible without impacting adversely on domestic and commercial customers.'

Belfast City Council

The consensus was that everyone should be entitled to a good electricity network.

The general opinion was also for NIE Networks to aim to eradicate all existing worse served customers since they felt that it was a basic necessity everyone should have. Moreover it was suggested that this investment should be prioritised since they too are paying for electricity like everyone else and are entitled to it.

"In this day and age I think if you're connected to electricity network you should be able to turn your light on and have electric."

Focus Group A/B

Everyone thought that NIE Networks should aim to eradicate all existing worst served customers and not just those on the six HV circuits.

The participants thought that the price to help all existing worst served customers was reasonable.

Focus Group C

All participants felt that the cost associated with eradicating the issue for all existing worse served customers was nominal and agreed it should be implemented, rather than just the proposed six HV circuits.

Focus Group D

"Sort that out and then work your way back until everything's fixed."

Focus Group E

Participants were happy to pay the extra yearly cost to eradicate all existing worse served customers, and not just those on the six identified HV circuits.

However, the point was made that the cost might be too much for some families.

Focus Group G

Participants said they would prefer that all worst served customers should be focused on and not just those on the six HV circuits. They commented that they were happy to pay the extra yearly cost of 49p to eradicate all existing worse served customers since they felt that the cost was not very high.

Focus Group H

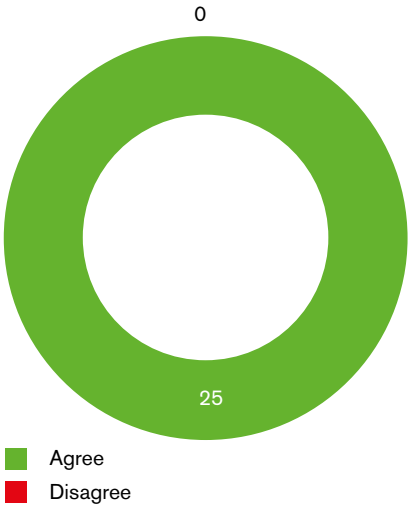
"You can't do everything […] I understand like everybody, you have to balance what they get in and what goes out and prioritising needs and that sound sensible to me without having the details"

Large business services (Focus Group: Non-domestic)

While approximately half of the respondents agreed with our proposal to target only the top six worst

performing circuits, the other half disagreed and thought we should go further. While stakeholders, especially households, are aware of the costs in targeting more circuits, there were many comments about the necessity of a reliable network, particularly in the context of increasing electrification. There was some nuance in the comments, where some who disagreed thought six circuits should be targeted first, followed by other poor performing circuits.

Q17. Our current proposals for RP7 include investment to improve the number of customers that we can keep on supply following a HILP event and move closer to the GB average. Do you agree that we should invest in this area?



'SONI supports NIE Networks' proposals to improve the number of customers that can be kept on supply following a HILP event. However, since these events occur very infrequently SONI considers that it is important to ensure that appropriate protections are in place for the NI consumer whilst progressing this initiative. SONI looks forward to working with NIE Networks on this to help ensure a secure electricity supply is maintained for consumers in the future.'

SONI

'Yes. Investment is needed to counter HILP events. 70% is still better than what would happen if not addressed.'

Ulster Farmers' Union

'Yes. People are becoming more dependent on electrical power for safety and communications, also increasingly for heat and transport.'

NIHE

'Yes – as per previous commentary, citizens expect the lights to stay on and will also expect some short term outages. However outages of days or weeks even would not in my view fulfil the concept of security of supply.'

WD-Associate (Support) Ltd

'Yes, if it minimises risk of prolonged outages.'

Northern Regional College

'Businesses, in particular, cannot afford to be without power for lengthy periods of time. They need to have certainty that business is not at risk of interruption, in order to maintain competitiveness in an increasingly difficult operating climate. Additionally, home-working and electric vehicle trends mean that many people now rely on dependable supply at home.'

Armagh City, Banbridge and Craigavon Borough Council

'Given the rare occurrence of these events, and given the high priority need to future-proof the grid for decarbonisation, any investment in this area should be weighed against the investment priorities of decarbonisation.'

Advice NI

'It is critical that the dial be shifted on HILP events for NI towards levels currently enjoyed by GB. Ideally parity with the 82% level should be targeted if the financial case can be made. As we have seen with several events in GB in the past couple of years, events that were considered low probability are increasing, the impact of storms, associated flooding and critical damage being cause to the distribution network is a very real possibility. Lessons must be learned from the significant impacts that events like Storm Arwen & Storm Barra had on the GB network.'

Kelvatek

'We agree that appropriate investment should be made in the network in Northern Ireland to achieve the same reliability standards experienced in GB.'

Maxol

There was the view that NIE Networks should invest in this area to move closer to the GB average, with some questioning why GB should have a better system than NI. It was further suggested that NIE Networks should try to beat the GB target; this was based on the assumption that it would not require large amounts of investment since NI is geographically smaller.

Focus Group A/B

The focus group was split on this subject.

"If its low probability, but sure, can they not invest more money somewhere else?"

Focus Group C

All participants felt that the cost associated with high impact low probability event goal was nominal and agreed it should be implemented.

Focus Group D

In relation to high impact, low probability events, participants put forward the view that NI consumers should not be treated any differently and that priority should be given to at least match GB's supply ratio. They felt that the difference could have resulted from a lack of investment which might have resulted in the lower percentage. There was general agreement, as long as customers did not bear an additional cost to do so.

Focus Group E

All participants thought that NIE Networks should invest in moving closer to the GB average.

Some wanted to know how much it would cost customers per year.

Others commented that they felt that this would be important considering the increasing reliance on electricity in people's homes.

Focus Group H

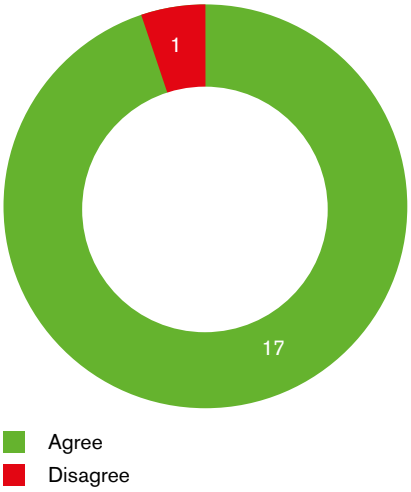
"It's got to be based on the probability. So, I think a risk-based approach is basically what I would call that. So not necessarily, not if

it's going to cost a huge amount of money for something that had a tiny probability of happening"

Large business services (Focus Group: Non-domestic)

In line with responses to other questions about reliability, in response to this question on improving the number of customers that we can keep on supply following a HILP event every stakeholder who provided a clear answer agreed with our proposal to improve the number of customers that we can keep on supply following a HILP event. Reasons included increasing reliance on electricity and moving up to the benchmark in GB. That said, a smaller number of comments emphasised the need to balance the costs of this work against the low probability of the scenario.

Q18. Do you think we are going far enough to adapt our network for climate change in RP7?



'It's a step in the right direction, however a big consideration is the export of electricity form home generation and the impact on loads for the network. Load increase for the NIE network would be my main area of focus.'

NIHE

'NIEN are taking actions in line with what Oracle sees as international norms.'

Oracle

'Although this appears to be challenging SONI would consider this to be a realistic approach and looks forward to working collaboratively with NIE Networks in the future.'

SONI

'key decarbonising considerations such as moving away from SF6 gas use, quantifying and reducing embodied carbon footprint and reducing network losses must take precedence over measures like decarbonising the business.'

Alliance Party of Northern Ireland

'Over RP7 then this is the correct level of investment. However, extreme weather will intensify with greater levels of global warming so this will need to be kept under review.'

Centre for Advanced Sustainable Energy

'We would urge NIE Networks to assess whether there is an overriding safety concern when carrying out vegetation management during the breeding season. NIE Networks should plan ahead to conduct necessary works where possible outside of the breeding season. All routine maintenance works should be scheduled in advance outwith the breeding season.'

RSPB

'The investment in infrastructure development must be ambitious and NI Water see that on balance, NIEN are adopting a balanced approach.'

NI Water

'The answer to this question is highly dependent on the funding secured from the utility regulator around network resilience and HILP events. If the funding I secured to support network automation and building the inherent resilience of the network to HILP events, we believe that within the margins of uncertainty the plan that NIE Networks have put forwards should protect the network from the worst impacts of climate change over the RP7 period.'

Kelvatek

'No, the electricity network is the key service going forward, and there therefore has to be complete assurance that the network will be robust and be able to withstand global climate change. It will therefore be necessary to have a number of scenarios that can be implemented quickly, and be flexible enough to respond to new/updated data'

Energy Institute (NI Branch)

'It is reassuring that NIE has carried out a hazard assessment and we would encourage further development of these to understand vulnerability and exposure for its assets in order to fully assess climate risk if that has not already occurred. Belfast has completed an Infrastructure Risk Assessment and would be keen to share and integrate the findings from this with any future risk assessment undertaken by NIE. Belfast will be developing a climate action plan in 2023 and would encourage active engagement of NIE to develop an integrated plan for adapting to climate change.'

'Strategic opportunities for increased tree cover in the city should be explored across NIE Estate.'

Belfast City Council

"I think that's a total no brainer. It's very clear that they need to do that really and to adopt changing circumstances with climate and whatever. And if you didn't do it, you would be really remiss in that."

Focus Group A/B

Participants said yes but were also fearful that this would incur an additional cost to the customer.

Focus Group D

They were unsure if NIE Networks was doing enough but did agree that NIE Networks needed to be proactive in preparing for climate change.

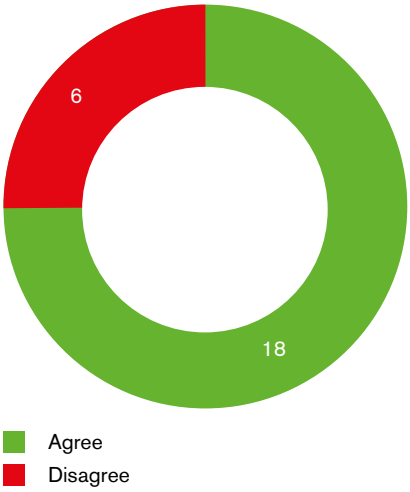
Focus Group G

Most respondents who expressed a view concurred that we are proposing a plan that is balanced and sufficient to adapt our network for climate change during the RP7 period. However, a few additional comments said:

- no, more must be done to protect the key service that is delivered by the electricity network;
- there must be flexibility to react to climate change scenarios;
- there should be ongoing risk assessment; and
- more could be done to positively impact ecology.

A.4 Meeting the needs of our customers (Q19 – Q22)

Q19. Do you think we should seek allowances through the RP7 price control to spend on direct measures or initiatives to help those customers who are worst impacted by the energy crisis? For example, we could seek funding to provide solar panels for such customers. If you do think we should consider initiatives such as this, how ambitious should we be?



'I don't believe it's necessary, requesting funding for solar panels for a home [that] struggles to pay for the electricity over complicates the solution.'

NIHE

'I'm not convinced that NIEN is the right entity to lead on this unless they are specifically advised to do so by the regulator. For example, is NIEN in a position to determine who should receive the benefits of this in a fair way? Supporting government backed initiatives would be more appropriate.'

QUB

'For low-income families living in social housing or private landlord housing there are mechanisms that could build on the experience of Project Girona to equip those homes with the means to lower the electricity bills, increase uptake of LCT without undue stress on the network and enable those families to progress towards net zero on a fair, just basis. Landlords can access funds to support the capital investment, NIE Networks should be funded to support beyond the meter. We would be delighted to work through use cases to provide evidence for such initiatives especially in the case of Vulnerable Customers with high dependence on medical devices in their homes.'

The Electric Storage Company

'it is important that any direct measures that are allocated as a result of RP7 are appropriately target to those customers most in need. NEA would encourage NIEN to embrace the ethos of 'Help the Worst impacted First' and 'No postcode lotteries' when designing interventions. We would be happy to lend our expertise in this area or contribute in any other ways that could support these processes.'

National Energy Action NI

'SONI considers that this activity does not sit with a natural monopoly. The services proposed should be open to competition and any funding may be via government subsidy initiatives rather than via electricity tariffs.

In addition, it is our understanding that NIE Networks are prohibited from involvement in generation related activities. This would need to be factored into the role that NIE Networks would undertake if such an initiative is progressed.'

SONI

'The UFU would like to see this expanded to include non-domestic consumers, i.e farmers. By way of an example of the impact of the energy crisis on dairy farmers, pre-crisis, electricity prices were amounting to £40/cow on a 100 cow dairy farm. In October 2022 it is £180/cow.'

Ulster Farmers' Union

'Introducing measures such as funding for solar panels should be backed with enhanced communication and promotion of energy saving advice first of all. There needs to be more emphasis on making households as energy efficient as possible before installing renewables. The investment should be targeted in stages such as the

promotion of energy education, smart meter availability (monitor and measure usage). Then once the household is more efficient solar panels or other LCT could be installed. I don't think there is a benefit of installing LCT to inefficient properties without optimising energy usage first of all.'

Derry City and Strabane District Council

'Coordinate with DfE and others. There is a role for NIE but this should be agreed with other agencies, Councils and government. One thing that is important is for there to be one access point for services, LCTs, advice, support for bills etc. This may then be promoted actively rather than having a piecemeal approach and will result in more efficient, effective and cost optimal support for the most vulnerable energy (not just electricity) customers.'

Centre for Advanced Sustainable Energy

'It is likely to be better to deliver well advised and integrated upgrade packages via a 'one stop shop'.

Winter sunshine is weak and less likely to relieve fuel poverty stress then.

Wind energy is more available in the winter months.

It could be appropriate to spend money researching and developing heat networks with large scale long duration thermal storage, which can limit the size of the electricity generation system required and cut carbon emissions.'

NIHE

'I think that it be beneficial to society generally and our citizens if NIE Networks was as ambitious as they can be – ambition to the max!'

'Nobody in Government is likely to bring forward any initiatives any time soon. If it does happen then that's a bonus. I would encourage NIE Networks to be as supportive as they can afford in cost and resource to promote and facilitate energy efficiency and cost mitigations as per Key Theme #3'

WD-Associate (Support) Ltd

'Yes. It is critical that allowances are sought to protect vulnerable customers. This should be government subsidised support programmes to help achieve low carbon targets also.'

Northern Regional College

'While funding for solar panels would be attractive for many residents and businesses in the borough and also Northern Ireland as a whole, a priority needs to be ensuring that there is the capacity for any customers installing solar panels to be able to export into the grid.'

Armagh City, Banbridge and Craigavon Borough Council

'Advice NI agrees with this proposal as we believe it would encourage more microgeneration, especially from those who experience the worst fuel poverty.'

'We would recommend however that a proposal such as the one suggested in the report should be done in tandem with other Departments and agencies who are responsible for fuel payments and for energy efficiency and generation funding.'

Advice NI

We would advise studying the significant promise the initially successful green deal initiative that occurred in GB and learn how to make impacts of that scheme more equitable for consumers, more flexible and importantly asset transferable. Certainly, there is work to be done in terms of basic housing stock upgrade for energy efficiency (Lighting, insulation, Double glazing) that could deliver more benefits than solar PV and have a lasting effect on both energy consumption and a subsequent downward pressure on induvial customer bills.'

Kelvatek

'IoD do think that NIE Networks should seek allowances through the RP7 price control to spend on direct measures or initiatives to help those customers who are worst impacted by the energy crisis. We believe there is an opportunity here to leverage UK Government Support -the UK Infrastructure Bank which will help to finance important projects in every region and nation of the UK in sectors including clean energy, transport, digital, water and waste.

The UK Infrastructure Bank will have an initial £12 billion of capital to deploy and will be able to issue £10 billion of government guarantees, helping to unlock more than £40 billion of overall investment. Northern Ireland must ensure we are maximising the funding that is available via the UK Infrastructure bank. We should also exploit funding opportunities via Levelling up and Peace Funding.'

IOD NI

'Bryson would strongly support initiatives to help those customers who are worst impacted by the energy crises and do not have the resources to invest in renewable technologies. However, before renewable technologies are considered the emphasis must be on energy efficiency measures in the first instance. There needs to be a concentration on insulation of homes which has the benefit of not only making houses more comfortable, but also reduces bills and creates job opportunities. Bryson are currently targeting four areas with resources to address the root causes of fuel poverty, this targeting includes poor insulation alongside employment, education and training needs.'

Bryson Energy

'No, MEL do not believe funding allocation to NIEN to provide solar panels would be appropriate. Micro-generation is a topic which MEL considers a strategic review is needed of (as an element of appropriate joint whole energy system planning, as outlined in Question 2 above) and development of governmental policy around any support which is considered appropriate.'

Mutual Energy

'Yes, given fuel poverty (proportion of households spending more than 10% of their income on fuel) is 80%, this should be a priority. NIE should be ambitious in helping those most vulnerable in society – understanding their needs, the resources required, and establishing a programme that

addresses these or seeks resources to do this.'

Belfast City Council

'While we support the sentiment of this proposal we feel that it should go further. Initiatives should be expanded beyond installing PV systems. [...] rather than investing in large-scale battery storage, the UR and NIEN should consider how aggregated thermal and electrical storage, controlled by smart home energy management systems, installed at scale in social housing, could provide local congestion management and power quality control while increasing the uptake of renewable energy and improving the load factor of network assets.

Also, large heat pumps connected to district heating in urban areas could create a flexible resource by ramping up consumption when excess wind is available, and switching to stored energy or combustion (of low-carbon fuel) in back-up boilers during network peaks.

Remuneration for the provision of these services could be targeted to the most vulnerable.

The UR and NIEN should therefore go beyond straightforward deployment of PV to consider how strategic investment in customer-owned LCT assets (prioritising the most vulnerable households), combined with complementary market arrangements to maximise the value of those assets to the customer and the system, could alleviate fuel poverty, develop local enterprises and reduce costs for all electricity consumers.'

Ardent Energy et al.

While the Housing Executive is probably in a better place than NIE Networks to take the initiative, it would be useful if NIE Networks provided guidance and reassure people about its benefits.

Others suggested that it could be the responsibility of councils and planning regulations by incentivizing new builds and retrofitting houses, to insulate them to reduce the amount of power needed.

Focus Group A/B

"I think it's spot on. 100% they should take priority"

Focus Group C

"Yeah, that's an affirmative. Definitely they should seek funding to provide solar energy because it's going to help achieve those targets again, isn't it? But there are other points as well. Like, I mean, insulating homes, for instance, reducing the amount of heating that people will need"

Focus Group D

"I think they should be doing more not just for people who are worst impacted, we should be doing more for everybody."

Focus Group E

Some were sceptical of the impact of solar panels.

Focus Group G

Participants commented that all government departments need to work together in order to have an holistic view on each matter and for things to move forward.

Focus Group H

Opinion was somewhat split on this topic. On one hand the clear majority of stakeholders recognised the need for households, particularly vulnerable or energy poor customers, to be supported in some way. Some comments encouraged greater ambition on the part of NIE Networks, collaboration with other stakeholders, appropriate targeting of such measures and offered support and expertise. Others proposed that education, smart meters and efficiency/insulation should be the first interventions.

On the other hand, others thought this was not a role for NIE Networks, that such an initiative should be open to competition or delivered through DfE's proposed 'one stop shop', or that policy on microgeneration should be reviewed.

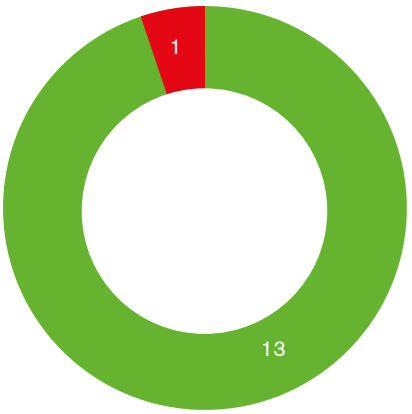
Households and consumer bodies generally welcomed the proposal, but commented on the need for coordination across stakeholders.

Businesses were also generally supportive, also suggesting more ambition would be in order, including extending the proposal to farms, but noted the importance of energy efficiency.

Public sector bodies were generally more cautions, commenting that this kind of initiative should be delivered by, or in coordination with a one stop shop, councils, the government and its agencies. There was also comment on the priority to be associated with energy efficiency and the need for capacity in the grid for solar panels.

Energy industry respondents were clearer that this is not the role of NIE Networks.

Q20. Do you think that we should be fitting a new innovative device aimed at deterring birds from roosting on overhead lines in areas known for bird fouling issues? As a customer, would you be happy that the costs to resolve bird fouling issues are spread across our customer base and ultimately reflected in your bill?



'Depends on how effective the deterrent is, and how much it would increase the bills.'

NIHE

'The NIHE has had bird fouling issues with solar panels. Overhead lines are not natural features and reducing bird's use of them at some locations is appropriate if done humanely.'

NIHE

'Yes, I be happy to contribute to improving somebodys life quality who are suffering with this problem. It could be that the cables over their property are carrying power to my house.'

WD-Associate (Support) Ltd

'Yes. But don't agree that customers should pay for this as it doesn't cause concern for a majority of customers. An extended trial should be completed to ensure success in all cases.'

Northern Regional College

'Justified investments in reliability improvement (automation, tree wires, local resources, animal guards, etc.) are usually spread across all customers. We don't see any need to change this philosophy assuming that these are the most prudent investments for improving reliability with respect to bird fowling.'

Smart Grid Ireland

'We understand the distress caused to NIE Networks' customers by extreme levels of bird fouling. As a bird conservation charity, we would need to receive further detail on this bird deterrent device. Until further details are provided, the following general advice should be followed:[...]

RSPB NI would be happy to offer further advice when the details of the deterrent that NIE Networks plans to use has been clarified.'

RSPB

"I could say, well, actually, I'm having to pay extra because I have to keep my fridge running [for medical reasons] and I don't get money for that…and if everybody gives their two pennies worth for what they need funding for, for extra, where do you draw the line? I can see how stressful is. I'm not undermining that at all. And you're talking 20p, I could give 20p, but it's kind of the moral of it."

"It sounds good, we're doing this, we're targeting these vulnerable groups or whatever, but at the end of the day, it doesn't really justify the expense."

"Birds are there first. The houses were built in the wrong place."

Focus Group A/B

All the participants agreed that the technology should be fitted for customers affected by bird fouling.

However, there were concerns that the customers should not have to pay for this expense. Some thought the power companies should put some of their profit towards the maintenance of the network.

Focus Group C

Everyone agreed that customers affected by bird fouling should be fitted for the new technology and they were happy for the cost associated with this to be reflected in their bill.

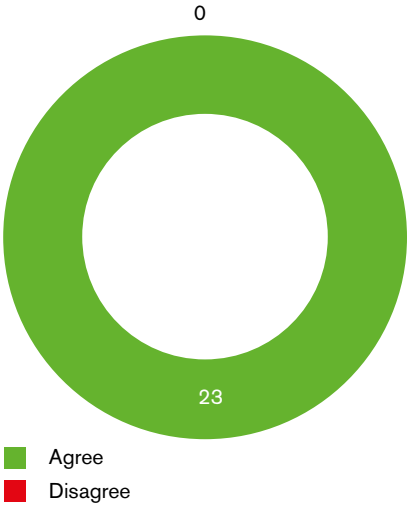
Focus Group D

Participants commented that they were happy, as customers, to meet the cost to resolve bird fouling.

Focus Group G

Respondents were generally sympathetic to the problem of bird fouling, although some commented that the cause of the issue was siting of the house. There was less consistent opinion on whether the costs should be paid by all customers, though a small majority thought so. A bird conservation charity would need more details before offering an opinion and offered its advice on this topic.

Q21. Do you think a 'low regrets' type of approach should be considered for metering in RP7?



'The reasons to install Smart Metering have become more pressing, so a 'no regrets' approach seems appropriate. Pilots to resolve the potential in Smart Metering and Demand Side Response are likely to have a high value.'

NIHE

'on the topic of smart meters is shocking that this has been batted backwards and forwards between NIAUR and Energy Division for maybe 10 years now. And here we are in the middle of an energy crisis and not a smart meter about the place. But we are getting another cost / benefit analysis even though there is a roll out in every region of the British Isles except Northern Ireland.

This is another case of avoiding the real issue, a compromise to avoid making a decision. What smart meters would be installed and where and when? What does it mean to be turned on at a future date, in the event of a smart metering roll-out? Either we roll out smart meters or we don't.

Smart meters need tariff reform – time of day and flexible tariffs for consumers to avail of lower cost at off peak times and to be incentivised to consume at off peak times. Important then to recognise the role of the electricity suppliers and the business model and cost packages that they offer to end users. Also need in this context to address the parallel approach to the end user who is a customer of the supplier and also a customer of NIE Networks.'

WD-Associate (Support) Ltd

'Yes. A balanced approach of a low regrets initiative will accommodate future needs for smart functionality.'

Northern Regional College

'In response we would suggest that smart meters should be installed in households and businesses Irrespective of approach. The question should possibly be – why install a smart meter at all? Whether it is a "low regrets" approach or not, smart meters are central to our shift to a cleaner, more flexible energy system.'

Smart Grid Ireland

'A low regrets approach to smart metering would be sensible, although it is important to note that it would only be low regret if the smart metering data communication standard and data transfer protocol remained unchanged in that period. [...] NIE Networks have a significant chance to influence the configuration

and regulation of smart metering compared to GB DNO's as they will have far more influence over the metering itself, this would lend itself to a whole host of beneficial network operator specific use cases for smart metering data that any specification may want to consider. We would strongly recommend that a full review of the limitations of the SMETS2 standard in relation to network operators and the data they receive is undertaken if a low regrets approach and a mirroring of current GB SMETS standards is being considered.'

Kelvatek

General support for smart meters, but not specifically for the low regrets option.

Focus Group A/B

All participants agreed with the forward-thinking approach to install smart meters. They commented that it would be more efficient to install now instead of having to go back again at a later stage.

Focus Group C

Everyone agreed in principle that smart meters should be fitted to be prepared for the future. They were not deterred by the fact that the meters would not be used right away or possibly ever.

Focus Group D

All participants were positive about smart meters and agreed that they should be installed in homes. But silent on 'low regrets' approach.

Focus Group F

Overall, participants said they were happy with the implementation of smart meters provided that it would not incur an additional financial cost for the occupier/homeowner.

Focus Group G

General support for smart meters, but not specifically for the low regrets option.

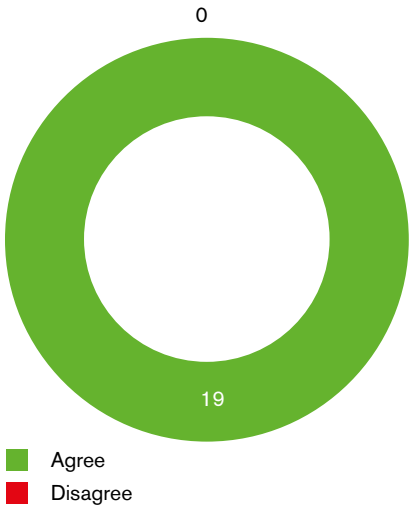
"Smart metering and smart grid. [...] for me, that is the most important thing that they need to do now"

Large manufacturing business (Focus Group: Non-domestic)

Where respondents demonstrated a clear opinion, there was unanimous support for taking a no-regrets approach to installation of smart meters. Indeed a number of respondents expressed concern that smart meters are not already rolled out in Northern Ireland. One contribution also recognised the need for retail tariff reform and the role of suppliers.

Q22. With regards to meeting the needs of our customers –

- **Are there any Customer Measures or Commitments that we might have missed, and if so, what else would you like us to consider and why?**
- **Are there any specific customer metrics that NIE Networks should be measuring performance against on during RP7?**
- **Do you consider that a Customer Satisfaction Incentive metric should be introduced to drive improvements in customer service in RP7?**
- **Are there any gaps/areas that you feel are missing from the plan?**



'We have had considerable, negative feedback from our clients on the nature, timeliness, cost and communication during the Connection Process. We are frequent users of the G99 process on their behalf. We would suggest a metric on the average cycle time and target achievement reports to achieve connections could be developed.'

'The ability of customers to interact digitally with you is not being measured, encouraged or incentivised. This should be a target for NIE Networks and supports your digitalisation strategy below.'

The Electric Storage Company

'We would encourage NIE through the RP7 to put in place measures to monitor the efficiency and security of supply in the energy system.'

National Energy Action NI

'Alliance welcomes NIE's continued customer engagement and supports a customer satisfaction incentive metric to further improve customer service. However, this must not take precedence over central commitments to achieving net zero and ensuring overall value for money.'

Alliance Party of Northern Ireland

'It is likely to be cost effective to serve the needs of 'Early Adopters' who may be prepared to invest more in innovation than is economically rational for personal or ethical or R&D reasons. E.g. By providing half hourly metering and demand control to domestic premises at a concessionary rate.'

NIHE

'Customer feedback opportunities must be considered alongside metrics at every opportunity.'

Northern Regional College

'We welcome NIE Networks' commitment to engage with customers and stakeholders, and we agree that a measure to assess customer satisfaction should be introduced. This can only help improve the service being delivered to customers. As noted earlier, we have concerns regarding overall staffing/resourcing levels and the ability of the business to keep up with customer requirements.'

Energy Institute (NI Branch)

Participants expressed the opinion that, in terms of rating customer service, they would expect this to happen. They commented that this happens in other businesses whereby you would receive a link via email to rate services.

There was a general agreement that NIE Networks should be providing good customer service irrespective of other conditions and that it should not be financially incentivised.

A comment was made that financially incentivising customer service would make customers feel like the service was not genuine.

There was also agreement that this felt like an internal matter for NIE Networks to sort out themselves rather than taking it to the customer.

Focus Group A/B

Initially, participants were happy for NIE Networks to measure customer satisfaction. However, once the incentive aspect of the plan was explained, concerns were expressed with where the money would come from to provide the incentive. Similarly, many participants did not think it was fair for NIE Networks to be given a financial incentive for doing their jobs well.

"No one gives me an incentive for doing my job better. You get the same money for doing it, just to do it good all the time"

Focus Group C

"Yeah, just right. We get penalised in our own line of work if we're not meeting our target. So I don't see why NIE shouldn't be any different"

Focus Group F

Participants agreed that NIE Networks should have an incentive metric to improve their customer service. They thought this would make NIE Networks more efficient and easier to work with in the long run.

Focus Group G

Again, those who expressed an opinion were unanimous in their support for introduction of a customer satisfaction incentive metric. Besides support there was some commentary around why a financial incentive should be necessary, the need for customers to interact digitally with us and remarks on the connections process.

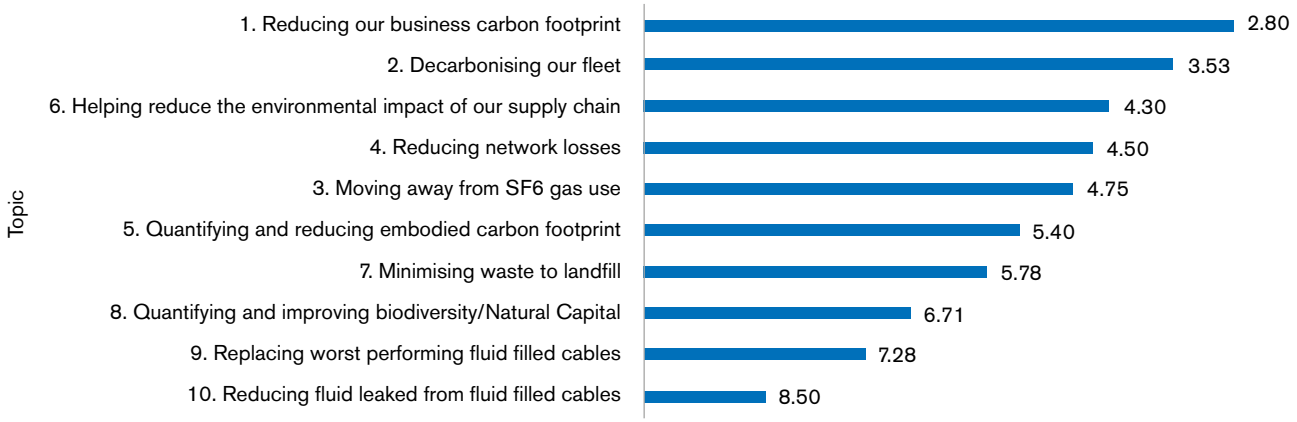
A.5 Preparing our business for a digital and environmentally sustainable future (Q23 – Q24)

Q23. With regards to our environmental considerations –

- **Please rank your priorities in each of our Environmental Action Plan commitments 1-10.**

1. **Reducing our business carbon footprint.**
2. **Decarbonising our fleet.**
3. **Moving away from SF6 gas use.**
4. **Reducing network losses.**
5. **Quantifying and reducing embodied carbon footprint.**
6. **Helping reduce the environmental impact of our supply chain.**
7. **Minimising waste to landfill.**
8. **Quantifying and improving biodiversity / Natural Capital.**
9. **Replacing worst performing fluid filled cables.**
10. **Reducing fluid leaked from fluid filled cables.**

- **What do you think of our Environmental strategy? Are there any areas missing?**



The rationale for this response is to primarily focus on prevention first, rather than cure. This is always more cost effective, efficient and less damaging in the first instance for any business. I then prioritise the idea of 'getting the house in order' as a second focus, under this we have point 2, of which points 3-9 naturally forms a part under the SBTi scopes 1 - 2. Finally I have placed 'Quantifying an improving biodiversity', but this does not mean that I do not place less value on this element. With NI being ranked the 12th worst provider of biodiversity in the world this is extremely important, and should indeed be focused on for any business who has an opportunity to help improve upon this situation, but, as discussed, the rational in my ordering is solely placed on the principles of prevention first, getting the house in order second and making a positive contribution third.'

Triterra

'There is no focus on your buildings. Real Estate accounts for 40% of carbon footprint typically, surprising that this is not on your road map. Perhaps you have this on your RP6 plan.'

The Electric Storage Company

'Your environmental strategy is very comprehensive with clearly defined goals.'

Derry City and Strabane District Council

'Using more renewable electricity selectively for heat and power in NIE premises.'

NIHE

"'It is very difficult for us to rank the commitments from the Environmental Action Plan as RSPB NI are not fully briefed on the environmental impact of these commitments in an NIE Networks context. It is essential to prioritise action where there is the greatest threat to the environment and supplement this with environmental improvements.

The actions that NIE Networks commits to in its environmental plan should follow the SMART acronym to make sure that environmental action is meaningful and tangible. This means that objectives should be specific, measurable, achievable, relevant and time-bound. Many of the targets here would benefit from being more specific in terms of what they will achieve and by when.'

RSPB

'The biggest overall impact that NIEN has is the opportunity to foster is the transformation and decarbonisation of the Grid. The order for prioritisation must be biggest environmental impact first.'

NI Water

'The main issue for NIEL is the need for NIE Networks to set SMART targets for reducing its environmental impact. While the ten priorities listed are all good principles, the question is to what extent will those principles be applied and by when?'

'… NIEL would instead encourage NIE Networks to reduce its GHGs by at least 48% by 2030.'

'In relation to the proposed goal for 70% of NIE Networks' fleet to be electrified by 2030, NIEL would encourage NIE Networks to aim higher and have a 100% electric fleet by 2030. NIEL understands this is likely to involved greater costs earlier in the process of electrification but as the consultation document says (on page 49) not only are net savings compared to continuing with diesel vehicles to be expected as a result but NIEL believes it is important that NIE networks should lead by example. NIEL believes it would send out an important positive message if NIE Networks were to commit to having a completely electric fleet of vehicles.'

'NIEL supports the development of renewable energy as a means of tackling climate change but we face both a climate crisis and a biodiversity crisis as illustrated by the declaration of both a climate crisis and a biodiversity crisis by the Northern Ireland Assembly on 3rd February 202011. Any new renewable energy developments designed to tackle the climate crisis should not have a negative impact on biodiversity.'

Northern Ireland Environment Link

'MEL believes that reduction in SF6 equipment and replacing / addressing fluid-filled cable issues both provide high environmental return on investment. Similarly, decarbonisation of the NIEN fleet would also offer a 'quick win'. Reducing network losses is a much greater challenge and should be addressed on an incremental basis as part of the asset replacement programme, rather than as a specific objective in and of itself. The reduction of waste to landfill'

Mutual Energy

'The most effective environmental consideration is to facilitate the targets for renewable electricity and the use of EVs and Heat Pumps.'

Belfast City Council

'I just thought they would 100% have all electric vehicles already, so that's a bit strange. Obviously, they're working on that'

Retail business (Focus Group - Non-domestic)

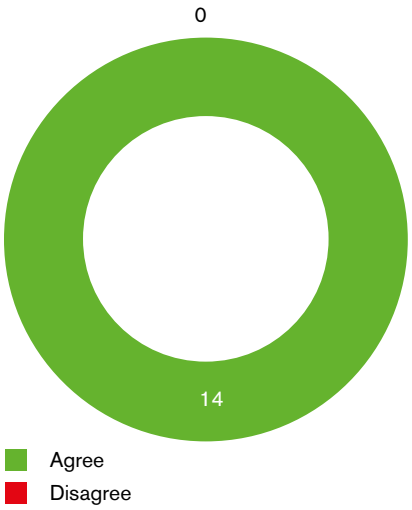
There was broad agreement among stakeholders who ranked our proposed environmental action plan commitments. Some particular comments suggested:

- Focus on decarbonisation of the electricity supply would have the greatest impact on our customers' decarbonisation efforts.
- There is an opportunity to contribute positively to biodiversity in our network developments.
- Environmental actions could be more specific in terms of specific and time-bound (SMART) targets.
- We should include a focus on our own real estate.
- There is an opportunity to demonstrate leadership through early and full decarbonisation of our vehicle fleet.

Q24. With regards to the enablers identified –

- Do you agree that these commitments are necessary enablers of transformational change in the RP7 period? Do you support their inclusion in our RP7 business plan?
- Are there any other necessary enablers that we might have missed, and if so, what else would you like us to consider and why?

Q24a. Agree that commitments are necessary enablers of transformational change?



'From what I can see there seems to be a reasonably robust strategy overall that looks at your own environmental impacts across scopes 1 to scope 3, which in principle I am in support of. Awareness raising / education for customers / stakeholders has been mentioned which I think will be critical in reaching our targets .... Within the list of 10 priorities above you also focus on biodiversity / natural capital, and so positively contribute to the environment too.

it might also be useful to consider how you can play a part in contributing to those who are vulnerable, if possible, such as through the likes on an energy cloud system which is operating in ROI (https://www.energycloud.org/).'

Triterra

'Yes this is very comprehensive.'

NIHE

'Yes. All listed commitments are essential for successful transformational change. Continued and future development in staff and skills will be critical to deliver on implementation of RP7.'

Northern Regional College

'Employee up skilling on data from data literacy, data science and data management.

Data is the new engine that will drive operational performance improvement and monetize value. What gets measured get managed more effectively.'

Smart Grid Ireland

'We suggest that the Skills, Expertise and Knowledge should include training on identifying and understanding the particular issues of vulnerable customers and those on the Medical Customer Care Register. We also suggest adding a further enabler dedicated to decarbonisation to emphasise its importance and ensure that employees are fully informed about the challenges ahead.'

Advice NI

'These are all enablers that Kelvatek will support and indeed work in partnership with NIE Networks to deliver. As an NI based company, we are committed to 10X Economic Vision and to do this we need to develop happy, skilled, talented, ambitious workers and convince them to commit to Northern Ireland and its economic acceleration.'

Kelvatek

'NIE Networks play a key role in the life and economy of Northern Ireland. With the essential changes being faced on the road to zero carbon, it is essential that your employees are motivated and committed, and we support the inclusion of enablers to "workforce resilience" as a key element in RP7.'

Maxol

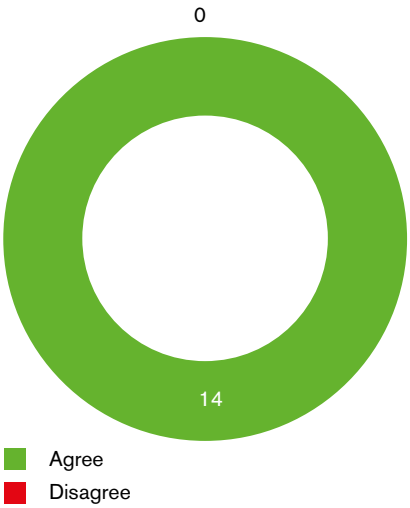
'The proposals for RP7 represent a significant step-change in investment for NIEN. Due consideration needs to be given to the wider power industry constraints in terms of availability of resources, and supply chain capacity. Deliverability is key in ensuring that RP7 objectives are met.'

Mutual Energy

All responding stakeholders agreed that our commitments are necessary enablers of transformational change. The most common theme supported in comments was people and skills required for deliverability of the plan.

A.6 Cost of investment (Q25)

Q25. Our vision is to provide an electricity network that is capable of facilitating Northern Ireland's overall plan to address climate change, which aims to achieve net zero carbon and affordable energy by ending our society's reliance on fossil fuels and associated price volatility. In this context, we would welcome stakeholder feedback on our analysis of the monetary impact of our proposals and the benefits it will bring to our customers and wider society.



'I think the investment being made is worthwhile, and if it requires some contribution from customers then it would be a necessary one.'

NIHE

'Figures look impressive.'

Warrenpoint Harbour

'We believe that a 10% increase in network volume during RP7, compared to RP6, may prove an underestimate. Customers will drive the pace in electrification of transport and heating. The current Energy Crisis will change customer behaviour and technology adoption rates. This argues for the enabling investments to be front-loaded, in late RP6 (via some form of re-opening mechanism) and early RP7 so customers gain confidence early to make the transition, use the network more and achieve 3 outcomes.

Firstly, more indigenous generation of electricity, secondly lower average network charges and finally, less exposure to imported fuel price volatility.'

The Electric Storage Company

'SONI recognises the scale of investment needed, however, in the context of both supporting the government policies in relation to decarbonisation and the age of the transmission and distribution networks, the need for the investment is clearly presented.'

SONI

'The UFU acknowledge NIE Networks vision and commitment to provide an electricity network that is capable of facilitating Northern Ireland's overall plan to address climate change, which aims to achieve net zero carbon and affordable energy.

We recognise that this is an awkward time to be having this conversation with being in the midst of a cost of living crisis but we need to be looking at the figures now and the monetary impact is one which needs to be discussed. For too long the policy debate has not progressed in how the Governments aspirations towards net zero targets will be paid for and sometimes it seems like the commitments are to be met with a magic money tree. NIE Networks by asking for views on the monetary impact is one of the first to have this debate and the UFU welcome this. We as an industry are making our moves to address climate change and this needs to be recognised where possible.'

Ulster Farmers' Union

'Northern Ireland must provide significant levels of investment in order to make the transition to a low carbon future. NIE Networks along with other agencies such as SONI / government departments must work together to make this investment as streamlined as possible'

Derry City and Strabane District Council

'As stated previously, Translink has an ambitious fleet strategy that will be see the full bus and rail fleet Net Zero by 2040, along with committing to the Climate Action Pledge NI, which has an ambitious target of reducing its greenhouse gas (GHG) emissions by 50% by 2030. The electricity network will be one of the key enablers that will enable Translink to achieve these goals.'

Translink

'Generally agree with the uplift in investment from RP6 to RP7. However, there is still uncertainty over many of the requirements to achieve 2050 plans so there should be flexibility to revisit investment levels if major new requirements become clear before the end of RP7.'

Centre for Advanced Sustainable Energy

'You estimate that the amount of electricity transferred via your network may be 10% higher in the RP7 period. This looks inadequate to set us firmly on the path to zero emissions.

It may be that grid charges should be removed at times or even made negative to increase the uptake of renewable power for heat and industrial uses, and to increase the volumes of electricity transferred.

Property owners have a much higher cost of capital than utilities, and may not benefit directly from investments in energy systems, so require a bigger incentive to invest in shifting loads to co-incide with renewable generation.

Displacing imported heating fuels retains money in the local economy, but energy security and environmental costs have been loaded onto electricity and not onto heating fuels. To maximise benefits we need to prepare to use more electricity for heat.'

NIHE

'The impartial and comprehensive analysis provides confidence to a range of stakeholders.'

Northern Regional College

'Given the societal benefits that are expected to result from greater electrification in Northern Ireland, the case for extensive investment to ensure that the network is fit for purpose is all the stronger. The

anticipated increase of £18.8 billion in GVA alone concludes that there will be a significantly high return, but only if the necessary investment is made to the existing electricity network. This can only be done when the targets for all industries, local authorities, businesses and residents are fully understood and appropriate strategies are put in place to ensure that these targets will not be hampered by an electricity network that is not fit for purpose.'

Armagh City, Banbridge and Craigavon Borough Council

'The move away from fossil fuels needs to start immediately, but the move towards renewable energy will not be truly sustainable unless it is done in harmony with nature. It is therefore essential that environmental sustainability in the energy trilemma encapsulates both low emissions and low ecological impact. To deliver a sustainable energy transition in harmony with nature, climate and nature must be at the heart of our economic Green Recovery and energy transition to build a just, sustainable and resilient future.'

'The low carbon transition will present a plethora of job opportunities many areas, including the energy sector. At the same time, there will inevitably be job losses in other sectors related to the fossil fuel industry for example. Therefore, training and re-skilling will be essential to ensure that no community is disproportionately impacted and that job losses in any given sector are compensated for by emerging opportunities in new growth sectors.'

RSPB

'The priority has to be decarbonisation because if it not, we are told by scientists the world over that the earth will become uninhabitable. Costs and smarts meters and satisfied customers will not matter much in that context. Advice NI understand that the monetary cost of decarbonisation will be enormous, and yet we understand the need to move uncompromisingly towards life-saving decarbonisation. We are concerned about how it will impact on ordinary people and how, if handled badly, it has the potential to deepen poverty and fuel poverty.'

Advice NI

'The increase in cost for the customers on the network must be set within the context of decoupling from the price volatility and geopolitical risk associated with a fossil fuel system.'

NI Water

'We believe NIE Networks plan offers fair value for money to energy consumers and will play a key role in delivering both the Energy Strategy for Northern Ireland, which itself underpins the 10X Economic Vision while enabling a fair transition to Net Zero.'

Kelvatek

'The requirement to move to zero carbon requires significant investment to transition from fossil fuels for heating and transport, and convert to electrification. As momentum gathers in this fundamental change, it is vital that NIE Networks invest now to future-proof the network for the increased demand. The overall approach in RP7 seems to facilitate this, while ensuring that the investments proposed are appropriate, timed correctly and bring value for money. We also look forward to your findings on potential cost savings which will accrue to customers from the displacement of fossil fuel usage. In summary, we welcome the NIE Networks' goal to increase capital investment in the grid.'

Maxol

'MEL appreciate the quantification of most (if not all) of NIEN's proposals in terms of monetary impact on consumers bills, which is useful for considering them both individually and in totality.'

Mutual Energy

'The areas of investment identified throughout the report appear to be appropriate. We would encourage minimal impact economically on those most vulnerable in society and commercial and domestic customers given the cost-of-living crisis and ongoing economic uncertainty.'

Belfast City Council

"It's imperative that we do reach 70% zero carbon by 2030 because the crisis is already here. So, it's almost like there's not a choice. It has to be done. And it's the political will of the government to invest in these new technologies to support people to kind of do that"

Focus Group D

Within the discussion comment was made that the level of trust consumers have in utility suppliers has decreased due to price rises and growing profits, particularly referencing Shell and BP making large gains.

Focus Group E

Most participants did not have any feedback on the monetary impact of the plan other than continuing to express concern over any potential increase in cost to the customer. However, one concern was raised that the proposal would have a similar effect as the push to move from oil to gas in the participants area.

"All the country roads were ripped up for all these gas lines. […] and then they put the price of gas through the roof. So people who did move to gas are moving back to oil because it's just too expensive"

Focus Group F

"It's a bit reassuring that you're not increasing our rate to accommodate that £2.6 billion. They're not saying we need more money so we're going to increase your bill overall, but they're just expecting a return from the consumption overall"

"I don't trust them anyway. I give them six months and they'll hike up the tariffs. What were their profits for last year and this year? What's the difference between last year and this year? And can they not take part of that out of their profits?"

Focus Group G

With regard to the charges, some wanted more clarity on what it would cost and were worried about the cost increasing with time.

Focus Group H

Respondents were generally neutral on this topic, though those who expressed a non-neutral sentiment were generally positive.

All groups of stakeholders were

conscious of the costs associated with the transformational nature of the RP7 proposals, and households in particular would value clarity on the effect on customer bills over time. However, stakeholders also commented on:

- The necessity of the scale of planned investment in the network to facilitate a low carbon future. Indeed, some respondents thought the forecast load growth could be bigger.
- The reassurance provided by NIE Networks' analysis, in support of the proposed investment.
- The anticipated societal benefits of the investment, including how it will underpin the 10X Economic Vision and enable decarbonisation and decoupling from fossil fuel volatility.

Households and consumer groups expressed particular support for decarbonisation but were conscious of the potential for costs to deepen poverty and fuel poverty. We have also noted a number of comments expressing how customers have lost trust in the energy industry.

Businesses acknowledged the vision and commitment demonstrated in our proposals and were grateful for an honest conversation about the costs of delivering the future network. Investments should be appropriate, timely and represent value for customers.

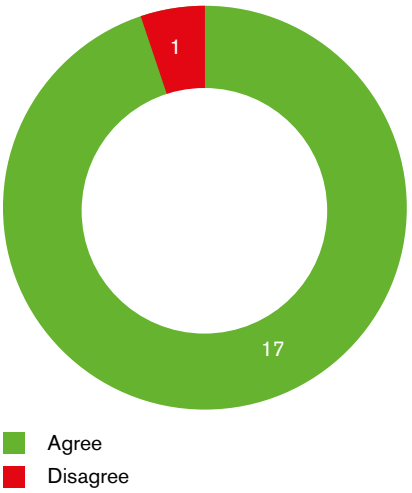
Public sector respondents noted the necessity of the investment plans, the need for flexibility to allow for uncertainty and the positive impact on GVA that will be facilitated by a network that is fit for the future.

A not for profit organisation emphasised the need for network development to fully consider its ecological impact.

Energy industry commentators noted the forecast increase in demand might be underestimated but recognised the scale of the challenge and that the need for our plan is real.

A.7 Managing uncertainty (Q26)

Q26. Do you agree with our principles for managing uncertainty in RP7?



'We agree with your principles for uncertainty, but may we suggest that they could be enhanced by combining elements of Principles 2 & 3 into a 4th Principle: Install monitoring and trial solutions late in RP6 to provide evidence for allowance adjustments early in RP7.'

The Electric Storage Company

'Oracle believes that on balance the approach proposed in the RP7 consultation in proportionate to the challenges of delivering the low carbon economy for Northern Ireland and is consistent with what we see in other markets globally. Oracle considers that business systems will need to be more agile and processes, such as asset management, more frequent and interactive as network complexity increases. This will ensure that customer service standards are maintained, low carbon technology connections are enabled, and customers encouraged to provide services into the energy sector and local markets.'

Oracle

'SONI recommends that NIE Networks seek elements of anticipatory investment in order to allow the flexibility to progress new workstreams quickly and avoid lost opportunities that may occur by having to seek additional funding during the price control period.'

SONI

'Yes. The UFU welcome this commitment from NIE Networks to manage the uncertainty in the context of the uptake of LCTs across society. However, the UFU are concerned by the uncertainty generated by the lack of direction on the part of Government, specifically DfE and Energy Strategy.'

Ulster Farmers' Union

'It could be conceived that one or major investments in LCTs (pumped storage hydro or offshore wind farms) could conceivably be started before the end of RP7 if suitable legislation and priority planning procedures are introduced. It would be prudent to make allowances to re-open the question of planned investment if such circumstances arose (admittedly unlikely in NI).'

Centre for Advanced Sustainable Energy

'Aiming to 'touch the network once' is attractive for planning upgrades but on its own may not maximise the value in the upgrade. Extra effort is required to ensure that all capacity is used effectively and promptly for reducing carbon emissions, displacing and then driving out the use of fossil fuels for heat.

We have some certainties. Direct resistance heating equipment is controllable familiar and affordable. It can heat individual rooms and hot water. Half the 500k private oil systems in NI lack adequate controls, but there is at least one hot water cylinder for each. A percentage of existing heating and hot water demand can be met with existing infrastructure if suitable controls are provided. Materials and personnel for upgrading the insulation performance of homes are limited. There are relatively few very cold days in this climate so that heat pumps can meet heat demands in existing homes on most days, and the power system meet demands at most times, though assistance is needed from stored fuels or heat at other times.'

NIHE

'All proposals for managing uncertainty have been carefully considered for the benefit of all stakeholders.'

Northern Regional College

'In principle YES

However, to strengthen the organizations ability to act using decision frameworks, these are available at the Centre for Competitiveness for helping management master business complexity for getting better at getting better. Meeting or exceeding customer requirements for quality, cost and delivery remains necessary for predictable, profitable growth, but it's no longer sufficient.'

Smart Grid Ireland

'We do not believe these principles properly appreciate the urgency of the climate crisis or that were are in a climate emergency. For example, as stated elsewhere in this response, no mention is made of how you mitigate energy shortages due to disrupted of energy supply; or of energy consumption reduction as a means of decarbonisation. Advice NI would also recommend including a principle that prioritises the most vulnerable and fuel poor customers.'

Advice NI

'Yes, the monitoring strategy early in the period will be vital for reducing the 'error bars' on any uncertainty calculations. Network monitoring, especially when targeted in a way which many of the GB DNO's have adopted will allow NIE Networks to target the correct intervention, at the right time, in the appropriate part of the network. As has been well publicised one of the primary impacts of the transition to net zero is the impact on the low voltage network both in terms of reliability and network constraints. Narrowing the uncertainties around these factors will play a critical role in how NIE Networks targets its interventions to support this area while ensuring value for money for the consumer. The touch the once network principle is important to consider, especially when considering large scale deployments or upgrades of existing equipment and the potential labour costs associated with this.

Mid-term re-openers tend to be a blunt instrument and leave less time to implement informed decisions, modelling and accurate monitoring of the output in comparison to real world network conditions would seem to be the most sensible approach, although we would support much tighter condition-based reopeners where uncertainty remains extremely difficult to reduce such as in increased frequency of climate related incident and their impact on the frequency HILP events.'

Kelvatek

'The timing and overall adoption of LCT technologies is hard to quantify so uncertainty exists in both the scale and timing of the investments required in the network. To this end, we see it as vital that appropriate mechanisms for managing uncertainty are adopted and agree with the general principles included in RP7.'

Maxol

'MEL believe RP7 requires appropriately designed (suitably flexible and agile) uncertainty mechanisms, to balance risks which both consumers and NIEN would be exposed to if overly relying on ex-ante business planning, including missed opportunities to invest optimally for future net zero pathways.

We believe the uncertainty mechanisms proposed – namely; (i) project approval mechanisms for large, individual projects; (ii) reopener mechanisms for cost recovery of specific projects where monitoring and trial solutions evidences a need/benefit of additional expenditure, and; (iii) for LCT related investments, a proportionately variable allowance mechanism relative to uptake – appear to achieve this aim.'

Mutual Energy

'The Consumer Council believe that it is important that the uncertainty mechanisms appropriately reflect customer needs and priorities. When making the business case to UR for inclusion of specific uncertainty adjustments, NIE Networks should be required to evidence customer need, benefit, or support for the activity.'

Consumer Council

Stakeholders who responded to this question were generally supportive of the proposed principles for managing uncertainty, commenting specifically on

- the value of monitoring;
- the need for anticipatory investment;
- the need for efficient flexibility in allowances to respond to adoption of LCTs and condition monitoring, avoiding losing opportunities through delay relating to seeking additional funding; and
- that uncertainty mechanisms should be driven by evidence of customer need.

Households and consumer organisations noted in particular the need for urgency, a principle relating to vulnerable or fuel poor consumers and that spend on the network should reflect the needs and priorities of customers. One comment from a consumer organisation disagreed with our approach, desiring more information on ensuring security of supply and consumption reduction to aid decarbonisation.

Businesses and business organisations showed broad support for our proposals.

Energy industry stakeholders agreed with our proposals and noted the need to avoid lost opportunities, which might occur through slow requests for additional funding.

B. List of Consultation Questions

General question on approach and strategy

Q1. Do you think we are taking the right approach to and have the right strategy for RP7. All thoughts and comments are welcome.

Facilitating net zero through a flexible and integrated energy system

Q2. We are interested in your views on our scenarios of future customer behaviour. Do you think they are realistic? Do you think our 'best view' scenario reflects the likely changes in the RP7 period?

Q3. Do you agree with the mobilisation of an NIE Networks Local Area Energy Planning team to support wider stakeholders including local authorities and councils in their journey to net zero? If so, what type of support should the team provide?

Q4. Do you think we are being ambitious enough with our proposal to fit monitors on 50% of our LV network or should we aim for higher?

Q5. What do you think of our "Open Data Portal"?

Q6. Do you agree with our 'Flexibility First' approach?

Q7. Do you agree with us including wider societal impacts in our decision making between FLEX and conventional reinforcement?

Q8. Do you agree with our approach of going further, faster, with FLEX markets?

Q9. Do you agree with our proposed RP7 innovation principles?

Q10. On top of your feedback on our approach to innovation in RP7 we want to understand what you feel is an appropriate scale of allowance. In RP6 our innovation allowance amounted to approximately 2% (approx. £6m) of our total Network Investment Plan. Do you feel that a similar percentage would be appropriate for RP7? This would represent an allowance of approximately £20m.

Q11. In respect of assessing where to invest in the network, do you agree with our proposed approach of including only LI5 sites in our base line plan for RP7? Should we be going further?

Q12. Do you agree with our proposal to replace all 5kVa transformers as soon as possible during RP7?

Q13. Regarding the building of new substations or upgrading existing substations, which can be a lengthy process and can in some cases take several years, we would welcome your opinion on which option presented at the end of page 32 we should adopt in RP7.

Maintaining a safe, reliable and resilient network

Q14. Do you agree with our position of maintaining the reliability of the network? Would you accept a reduction in network reliability to reduce your electricity bill in the short term? For context, a £50m reduction in capital spend would result in an approximate £1.90 saving on the average annual domestic electricity bill during RP7. For our commercial customers this represents an annual decrease between £7.50 for a small business and £118 for a medium business.

Q15. Our plan is to further reduce CMLs associated with faults on our network in RP7 to help offset the increased average duration of outages due to planned work on the network. To do this we propose including allowances within our RP7 baseline costs to install automated devices on our overhead line network. Are you happy that we include allowances in our plan to help minimise the impact of planned outages?

Q16. Do you agree with our approach of targeting the top 6 worst performing circuits only or should we aim to eradicate all existing worst served customers in RP6?

Q17. Our current proposals for RP7 include investment to improve the number of customers that we can keep on supply following a HILP event and move closer to the GB average. Do you agree that we should invest in this area?

Q18. Do you think we are going far enough to adapt our network for climate change in RP7?

Meeting the needs of our customers

Q19. Do you think we should seek allowances through the RP7 price control to spend on direct measures or initiatives to help those customers who are worst impacted by the energy crisis? For example, we could seek funding to provide solar panels for such customers. If you do think we should consider initiatives such as this, how ambitious should we be?

Q20. Do you think that we should be fitting a new innovative device aimed at deterring birds from roosting on overhead lines in areas known for bird fouling issues? As a customer, would you be happy that the costs to resolve bird fouling issues are spread across our customer base and ultimately reflected in your bill?

Q21. Do you think a 'low regrets' type of approach should be considered for metering in RP7?

Q22. With regards to meeting the needs of our customers –

- Are there any Customer Measures or Commitments that we might have missed, and if so, what else would you like us to consider and why?
- Are there any specific customer metrics that NIE Networks should be measuring performance against on during RP7?
- Do you consider that a Customer Satisfaction Incentive metric should be introduced to drive improvements in customer service in RP7?
- Are there any gaps/areas that you feel are missing from the plan?

Preparing our business for a digital and environmentally sustainable future

Q23. With regards to our environmental considerations –

- Please rank your priorities in each of our Environmental Action Plan commitments 1-10.

  1. Reducing our business carbon footprint.
  2. Decarbonising our fleet.
  3. Moving away from SF6 gas use.
  4. Reducing network losses.
  5. Quantifying and reducing embodied carbon footprint.
  6. Helping reduce the environmental impact of our supply chain.
  7. Minimising waste to landfill.
  8. Quantifying and improving biodiversity / Natural Capital.
  9. Replacing worst performing fluid filled cables.
  10. Reducing fluid leaked from fluid filled cables.

- What do you think of our Environmental strategy? Are there any areas missing? Q24. With regards to the enablers identified –
- Do you agree that these commitments are necessary enablers of transformational change in the RP7 period? Do you support their inclusion in our RP7 business plan?
- Are there any other necessary enablers that we might have missed, and if so, what else would you like us to consider and why?

Cost of investment

Q25. Our vision is to provide an electricity network that is capable of facilitating Northern Ireland's overall plan to address climate change, which aims to achieve net zero carbon and affordable energy by ending our society's reliance on fossil fuels and associated price volatility. In this context, we would welcome stakeholder feedback on our analysis of the monetary impact of our proposals and the benefits it will bring to our customers and wider society.

Managing uncertainty

Q26. Do you agree with our principles for managing uncertainty in RP7?

C. Consultation Respondents

The following organisations submitted some form of response to our consultation:

ABO Wind NI

Action Renewables

Advice NI

AgriAD

Alliance Party of Northern Ireland

Ardent Energy et al.

Armagh City, Banbridge and Craigavon Borough Council

Belfast City Council

Bryson Energy

CBI NI

CBI NI EV Infrastructure Working Group

Centre for Advanced Sustainable Energy

Commissioner for Older People for Northern Ireland

Consumer Council

Department of Finance

Derry City and Strabane District Council

Electricity Association of Ireland

Energy Institute (NI Branch)

Energy Networks Association

ESB (Group)

ESB ecars

EVANI

Fermanagh and Omagh District Council

GE Grid Solutions

Gemserv

IOD NI

Kelvatek

Major Energy Users Council (MEUC)

Maxol

Mutual Energy

National Energy Action NI

National Franchised Dealers Association (NFDA NI)

NI Chamber of Commerce and Industry

NI Water

NIHE (2)

Northern Ireland Environment Link

Northern Regional College

Oracle

Phoenix Natural Gas

QUB

Re-Gen Group

RenewableNI

RES

RSPB

Rural Community Network

SIB

Sinn Féin

Smart Grid Ireland

SONI

Taggart Homes

The Demand Response Association of Ireland

The Electric Storage Company

Translink

Triterra

Ulster Farmers' Union

Ulster Wildlife

United Renewables

Warrenpoint Harbour

WD-Associate (Support) Ltd

We have also considered feedback from the focus groups.

Focus Group A/B:

A: Customers who experienced frequent outages.

B: Customers on the Medical Care Register and customers affected by bird fouling.

Focus Group C: Lone parents; young families; and the working poor.

Focus Group D: Aged 65 and older; empty nesters; and include representation ABC1C2DE groups.

Focus Group E: Older families with teenage kids.

Focus Group F: Aged 24-40; own residence; working; and representatives from the ABC1 socioeconomic groups.

Focus Group G: Aged over 50; living in rural areas; and limited internet access.

Focus Group H: Aged over 50; living in urban areas; and limited internet access.

Focus Group: Non-domestic

How We Categorised Respondees

Business organisations

CBI NI

CBI NI EV Infrastructure Working Group

IOD NI

Major Energy Users Council (MEUC)

National Franchised Dealers Association (NFDA NI)

NI Chamber of Commerce and Industry

Ulster Farmers' Union

Businesses (except energy businesses)

Focus Group: Non-domestic

GE Grid Solutions

Gemserv

Kelvatek

Maxol

Re-Gen Group

Taggart Homes

Triterra

Warrenpoint Harbour

Energy industry

ABO Wind NI

Action Renewables

AgriAD

Ardent Energy et al.

Electricity Association of Ireland

Energy Institute (NI Branch)

Energy Networks Association

ESB (Group)

ESB ecars

Mutual Energy

Oracle

Phoenix Natural Gas

RenewableNI

RES

Smart Grid Ireland

SONI

The Demand Response Association of Ireland

The Electric Storage Company

United Renewables

WD-Associate (Support) Ltd

Households and consumer organisations

Advice NI

Commissioner for Older People for Northern Ireland

Consumer Council

Focus Group A/B

Focus Group C

Focus Group D

Focus Group E

Focus Group F

Focus Group G

Focus Group H

Not for profits (unless captured elsewhere) (includes political bodies)

Alliance Party of Northern Ireland

Bryson Energy

EVANI

National Energy Action NI

Northern Ireland Environment Link

RSPB

Rural Community Network

Sinn Féin

Ulster Wildlife

Public sector bodies

Armagh City, Banbridge and Craigavon Borough Council

Belfast City Council

Centre for Advanced Sustainable Energy

Department of Finance

Derry City and Strabane District Council

Fermanagh and Omagh District Council

NI Water

NIHE (1)

NIHE (2)

Northern Regional College

QUB

SIB

Translink

D. Focus Group Composition

A: Customers who experienced frequent outages.

B: Customers on the Medical Care Register and customers affected by bird fouling.

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G: Aged over 50; living in rural areas; and limited internet access.

H: Aged over 50; living in urban areas; and limited internet access.

Non-domestic:

	Sector	Size	Location
1.	Manufacturing	Large	Urban
2.	Agriculture	Medium	Rural
3.	Construction	Small	Urban
4.	Hospitality	Large	Urban
5.	Retail	Large	Urban
6.	Business Services	Medium	Urban
7.	Personal Services	Small	Urban
8.	Food Processing	Small	Rural


Northern Ireland
Electricity
Networks
CUSTOMER SERVICES
03457 643 643