Electricity Distribution Tariff Reform

Call for Evidence June 2021

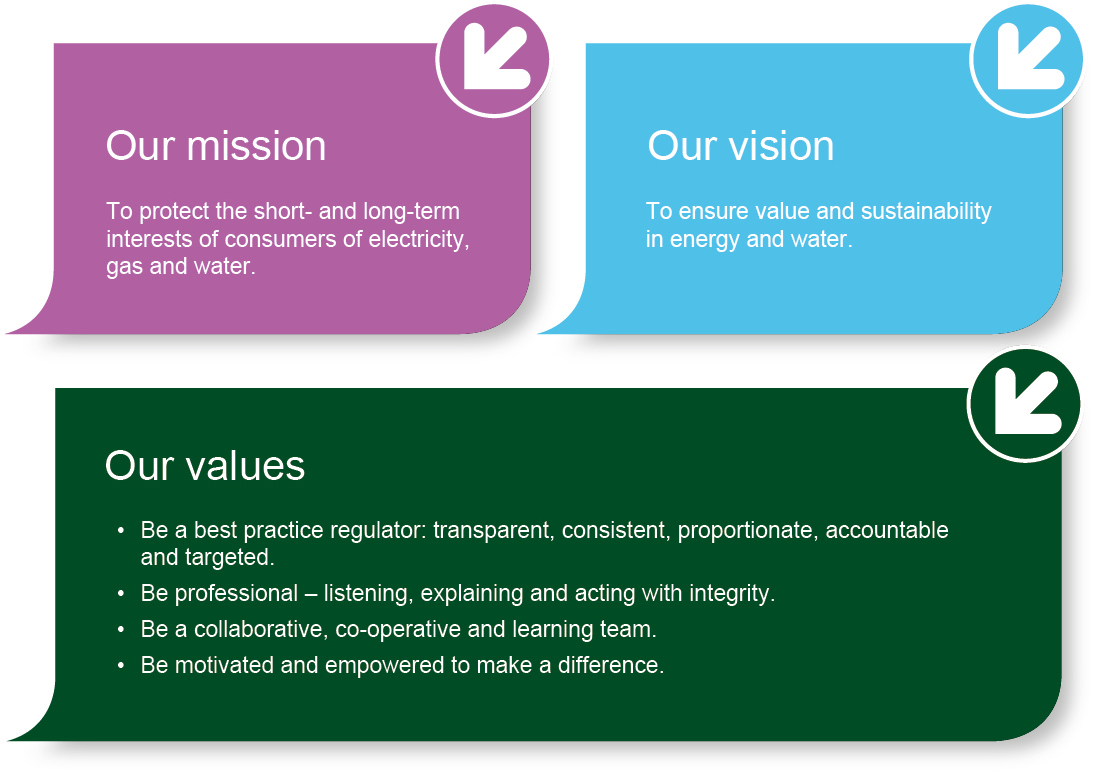
About the Utility Regulator

The Utility Regulator is the independent non-ministerial government department responsible for regulating Northern Ireland’s electricity, gas, water and sewerage industries, to promote the short and long-term interests of consumers.

We are not a policy-making department of government, but we make sure that the energy and water utility industries in Northern Ireland are regulated and developed within ministerial policy as set out in our statutory duties.

We are governed by a Board of Directors and are accountable to the Northern Ireland Assembly through financial and annual reporting obligations.

We are based at Queens House in the centre of Belfast. The Chief Executive leads a management team of directors representing each of the key functional areas in the organisation: Corporate Affairs, Markets and Networks. The staff team includes economists, engineers, accountants, utility specialists, legal advisors and administration professionals.



Abstract

This report sets out our Call for Evidence in relation to electricity distribution tariff reform in Northern Ireland. We begin by providing the context behind our review of electricity tariffs, before setting out some of the main options available for tariff reform. Combining this, the report closes with a set of five key topics that are of particular interest for our tariff review. Within each of these topics, we have set out a series of Call for Evidence questions which we are seeking views on.

Audience

This document will be of interest to electricity transmission and distribution companies, electricity suppliers, government, energy charities, environmental bodies, and customer groups or organisations which represent customer interests.

Consumer impact

The evidence gathered from responses to this report will be used to inform our later strategy and decision-making around electricity tariffs.

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Executive Summary

**Background and purpose of document**

The Utility Regulator is undertaking a review process of the distribution tariffs charged by Northern Ireland Electricity Networks (NIE Networks). This is motivated by substantial changes in the way energy is being produced and consumed. The Utility Regulator is carrying out this review guided by statutory and regulatory principles relating to transparency, efficiency, non-discrimination and cost reflectivity. The review may have important implications for tariffs and how customers are billed for electricity usage in the future.

To aid our review of tariffs, this Call for Evidence report sets out the key issues we are considering in relation to the energy transition and potential tariff reform, and invites responses to a set of questions around these issues. Specifically, we are seeking views on: (i) the priority issues associated with the energy transition; (ii) the role these play in Northern Ireland specifically; and (iii) the tariff reform options that are available to help the market adapt to these changes. The review will be cognisant of the implementation of current legislation and the Department’s work on a new Energy Strategy for Northern Ireland.

You can respond to this Call for Evidence by completing a response template, which can be found in the attached Call for Evidence Response Template. All Call for Evidence submissions must be received by 16 August 2021 for consideration. We will publish a summary report of the responses to the Call for Evidence in October 2021. In addition, the output from this process will be provided to the Department for the Economy to assist in setting its energy strategy.

**Existing Network tariff arrangements in Northern Ireland**

NIE Networks imposes four distribution network charges in Northern Ireland on electricity suppliers: (i) a fixed standing charge; (ii) variable unit charges; (iii) capacity charges; and (iv) reactive charges. The standing charge is a fixed charge, designed to reflect the indirect costs of using the grid. The value of the standing charge is based on total basic customer-related costs, and does not vary with consumption.

Unit charges, by contrast, cover the marginal cost of providing, operating and maintaining the network, and so do vary with consumption. NIE Networks levies a range of different unit charges (up to four for domestic and up to seven for commercial customers) on suppliers which cover different varying aspects of the costs of operating the electricity network. These can vary by time of year and day.

For domestic customers, the standing and unit charges they pay will depend on which group each particular customer falls into. There are two main groups of customers:

* standard domestic; and
* time of day, who can choose from a range of up to four time-varying tariffs.

Commercial and combined (which include residential / farms or small businesses) customers have similar schemes. For some options, there is a wider range of tariffs too; for example, commercial customers have a range of up to seven time varying-tariffs. Large commercial customers’ tariffs also include capacity and reactive charges (in addition to the standing and unit charges) if they are supplied at greater than or equal to 70KVA.

Depending on electricity supplier, as of 2021, annual retail domestic customer electricity bills in Northern Ireland ranged between £495 and £630 (for single rate domestic customers, assuming annual consumption of 3,200kWh).[[1]](#footnote-1) In general, around 12% of bills are made up by supply costs, 26% by network costs and 62% by wholesale costs.[[2]](#footnote-2) In 2021 Q1, Northern Ireland domestic electricity prices were 17.8p/kWh (incl VAT), very small commercial prices were 15.6p/kWh (excl VAT) and large and very large commercial prices were 9.0p/kWh (excl VAT).

For non-domestic customers, network costs and distribution charges in particular will generally reduce as a proportion of the overall bill as customer size increases.

Suppliers can choose to incorporate these variable tariffs into one unit tariff to offer to consumers. This is common for domestic tariffs within Northern Ireland.

**The role of the energy transition**

The energy transition refers to the global shift away from using traditional, non-renewable energy sources, and replacing these with modern, renewable forms of energy. This impacts not just the production of energy, but development of new low-carbon technologies, demand patterns, and the structure of markets. In particular, there are concerns that electricity consumers may not currently be paying cost-reflective charges for the access to and use of the network.

National government targets for emissions reductions have accelerated the progress of the energy transition. In Northern Ireland specifically, The Department for the Economy is currently consulting on its new Energy Strategy, which is central to the nation’s approach to managing the energy transition.[[3]](#footnote-3) Five key principles have been set out by the department, which will shape the objectives and path of Northern Ireland’s energy transition: (i) placing consumers at the heart of our energy future; (ii) grow a green economy; (iii) do more with less; (iv) replace fossil fuels with indigenous renewables; and (v) create a flexible and integrated energy system.

We have undertaken in-depth research to help identify the key ‘drivers of change’ within the energy transition that have important implications for electricity tariffs. These are as follows.

* Distributed energy resources (DER). DER is the growing adoption of renewable energy generation, such as solar (PV) and wind, among households and businesses. This alters the level of electricity demand and has the potential to contribute new energy to the grid.
* Increasing popularity of electric vehicles (EVs). While increased use of EVs will drive demand from the grid, these vehicles also have the potential to store and discharge energy through their batteries. Although they will provide benefits, it is most likely that EVs will be a net cost to the grid. It is important that tariff arrangements are in place to make the most of this potential.
* Development of battery technology. The development of battery technology is a key ‘driver of change’, as it represents the potential to provide greater balance to the network through the storage, and timely distribution, of energy in line with demand.
* Emerging market for energy aggregators. Aggregators are third party intermediaries, specialising in coordinating or aggregating demand responses from individual consumers. There are several ways that aggregators can bring value to consumers, particularly with increased integration of DER and smart technology.
* Digitisation and data usage. To adapt the electricity network to the future, it will be necessary to increase its digitisation and data capabilities. Digital technology enables better, more granular monitoring of usage at the individual consumer level and more accurate billing. A number of new tariff types (such as time-of-use and demand tariffs) can also be made available through digital technology and increased data usage.

**Tariff reform**

There are a wide range of options, and associated key decisions, available if new tariff systems are to be implemented. These decisions relate both to *what* type of tariffs are introduced, and *how* this is done.

In terms of *what* tariffs are brought in, we have considered five key options, although this list is not exhaustive:

* time-of-use (TOU) tariffs;
* demand tariffs;
* rising block tariffs;
* fixed rate tariffs; and
* dynamic tariffs.

Each option has different features and addresses different issues. It is therefore vital that these are considered when making decisions over which to implement. Some of these options could be reliant on new technology being introduced. However, there may be options to exploit existing technology in the form of keypad meter, which could result in outcomes that are more economic for consumers.

In terms of *how* new tariffs are introduced, there are two overarching decisions. The first relates to the: (i) *scope*, and (ii) *speed* of the reforms. The decision on *scope* relates to how extensive the reforms should be. Reforms may apply to all customers, only a percentage, or certain groups. The *speed* of the transition relates to how quickly these changes are made. A shorter transition period means the reforms are fully operative quicker, whilst a longer period gives consumers more time to adapt.

The second decision relates to the manner in which the new tariffs are presented or offered to customers. We have considered three main approaches that have been discussed:

* allowing customers to opt-in / opt-out of new tariffs;
* offering a choice from a variety of tariffs; and
* a ‘hybrid’ system of tariff structures.

Each of these has different benefits and priority areas, and allows for different possibilities around the scope and speed of the transition. Therefore, in order to make the decisions around which options to follow, it is important that we gain a wide range of views on these points. We note that the extent to which these approaches are feasible is limited by the fact that it is electricity suppliers, not consumers, upon whom distribution tariffs are directly levied. Therefore, an evaluation of the link between NIE Networks, suppliers and consumers may be required in order for them to be implemented.

In addition, further aspects that require consideration (and which we are seeking views on) are: (i) the best approach for continual monitoring of the transition; and (ii) how to engage consumers, to ensure a successful transition.

**Key topics for tariff review**

Based on the above discussion, five key overarching topics have emerged, which appear to be of greatest relevance to tariff reform in the context of the energy transition. We have therefore structured our Call for Evidence questions in line with these, so that we can gain views on the issues of most importance. The key topics are as follows.

* Drivers of change. The key drivers of change we are seeking views on are: (i) DER; (ii) increasing popularity of EVs; (iii) development of battery technology; (iv) emerging market for energy aggregators; and (v) digitisation and data usage.
* Tariff reform options. We are interested to gain views on the tariff structure options set out above, which of these may be most appropriate in Northern Ireland, and whether there are others that should be considered.
* Approaches to managing the transition. This primarily covers questions on the scope and speed of reform, and the optimal way in which new tariffs should be offered to consumers.
* Customer engagement. In order for a reform to succeed, it is vital that customers are engaged throughout the process. Therefore, we are seeking views at this early stage on how best to engage customers.
* Other challenges and risks. Finally, there are a number of other relevant factors that fall outside of the previous key topics. These include, for instance, considerations that relate specifically to Northern Ireland.

# Introduction

## Background

### The Northern Ireland electricity transmission and distribution network is owned by Northern Ireland Electricity Networks (NIE Networks). NIE Networks are also responsible for operating the electricity distribution network, which transports electricity to 899,156 domestic and industrial & commercial customers. NIE Networks recovers its costs by charging electricity suppliers based on grid usage and costs. The Utility Regulator (UR) approves NIE Networks’ tariffs on an annual basis, as required in the Distribution Licence and in line with legislative requirements.

### Accelerations in the energy transition, and associated carbon and emissions targets, are giving rise to permanent changes in consumer behaviour and the structure of the electricity market. To keep abreast of these developments, UR is undertaking an in-depth review (on top of the annual approval process) of the electricity distribution network tariffs in Northern Ireland. This will provide a starting point, to ensure the structure of tariffs remain appropriate for network industries and customers in light of the energy transition.[[4]](#footnote-4)

## Purpose of document

### In this Call for Evidence, we are seeking views on: (i) the priority issues associated with the energy transition; (ii) the role these play in Northern Ireland specifically;[[5]](#footnote-5) and (iii) the network tariff reform options that are available to help the market adapt to these changes. This acts as a vital part in our process of reviewing electricity tariffs, and will be used to inform our future strategy and policy decisions.

### We have set out a series of questions, which we invite you to respond to; these can be found in the final chapter of this document. You can respond to this Call for Evidence by completing a response template, which can be found in the attached Call for Evidence Response Template. All Call for Evidence submissions must be received by 16 August 2021 for consideration.

### We will publish a summary report of the responses to the Call for Evidence in October 2021. In addition, the output from this process will be provided to the Department for the Economy to assist in setting its energy strategy.

## Structure of document

### The remainder of this document is laid out as follows.

###### Chapter 2 provides an overview of the existing tariff arrangements in Northern Ireland. Note that this chapter is primarily to provide context for those who are not wholly familiar with the current tariff format.

###### Chapter 3 explains the role of the energy transition and its implications for electricity tariffs.

###### Chapter 4 outlines some of the options available for tariff reform, including measures that have been taken elsewhere.

###### Chapter 5 summarises our five key overarching topics that we have used to structure the Call for Evidence questions, based on the discussions of the preceding chapters.

###### Finally, Chapter 6 sets out the Call for Evidence questions we are inviting responses to.

# Existing tariff arrangements in Northern Ireland

### As a background to our distribution tariff review process, this chapter summarises the current electricity distribution tariff arrangements in Northern Ireland. We first examine individual components of tariffs, including their calculations and application, then look at different structures consumers can be placed on. Under the existing electricity tariffs, NIE Networks levies four charges on suppliers: (i) a fixed standing charge; (ii) variable unit charges; (iii) capacity charges; and (iv) reactive charges. Reactive and capacity charges are only levied upon some commercial customers depending on the power level they are supplied at, so are not as broadly applied. Reactive charges are designed to cover costs associated with supplying at lower power factors, while the capacity charge covers capacity on the local System, which is attributed to the supply.

### Below we provide some more detail on the core standing and unit charge aspects of distribution network tariffs.

## Standing charges

### The first component of electricity tariffs is a standing charge. This is a fixed charge that is designed to reflect all the indirect costs not associated with producing additional units of electricity. That is, the standing charge covers the fixed costs of using the grid. Consequently, this charge does not vary with volume consumed.

### Costs that are included in the standing charge are capital costs[[6]](#footnote-6); basic metering; meter reading; billing; cost of service cables; terminations that are not recoverable by the connection charge; and other operation and maintenance costs[[7]](#footnote-7). These represent NIE Networks’ indirect costs that are not recoverable as part of a volume charge.

## Unit charges

### Unit charges are designed to cover the cost of delivering additional units of electricity. They will vary depending on the *volume* of electricity consumed, and, if relevant to a consumer’s tariff option, the *time* of consumption. The unit rates associated with the time of consumption can, for some tariffs, also vary by season. NIE Networks levies a charge based on the number of units delivered, which can be adapted to capture seasonal costs for larger businesses.

### For tariffs which vary depending on the time of day, these charges vary depending on the time of day electricity is consumed. There are up to seven time bands, which reflect the varying levels of costs associated with using the grid at different times. In general, these unit charges are designed to reflect the cost of delivering an extra unit of electricity at that time of day. More detail can be found in NIE Networks’ Statement of Charges.[[8]](#footnote-8)

## Domestic tariff groups and options

### For domestic customers, the standing and unit charges they pay will depend on which group each particular customer falls into. There are two main groups of customers:

##### standard domestic; and

##### time of day domestic customers.

**Standard domestic**

### Alongside a fixed standing charge, these consumers pay one unit charge on all units delivered.

**Time of Day domestic customers**

* + 1. Alongside a fixed standing charge, these consumers are offered the following unit charge options.
* **Two unit charges** on all units delivered. One charge is a reduced rate for night-time consumption, whilst the other covers the more costly consumption during the day.
* **Three unit charges** on all units delivered. The first charge covers consumption during the day, whilst the second is a reduced rate for night-time consumption. The final unit charge applies to storage and water heating consumption for 7 and 5 hours a day respectively. A similar alternative is also available to existing customers, whereby the final unit charge applies to storage and water heating consumption for 9 and 5 hours a day respectively.
* **Four unit charges** on all units delivered. Separate prices are charged across four different windows of consumption, with lower prices charged during periods of low demand.
  + 1. Keypads are available for all of the above domestic tariff options.

## Non-domestic customers

### Commercial and combined (e.g. farm and residential building) customers are offered similar tariff structures They have unit charge schemes (although these can extend up to seven periods for commercial and up to four periods for combined), off-peak (up to four different rates for commercial and up to three for combined) and unmetered. Commercial customers also have additional options, such as that their charges can vary depending on the power that supply is demanded at. Power varying charges include capacity and reactive charges, which are levied on customers supplied at greater than or equal to 70KVA. For further details on the additional non-domestic tariffs, please refer to NIE Networks’ Statement of Charges.[[9]](#footnote-9)

* 1. **Unmetered customers**

### Unmetered customers pay a single unit rate based on their deemed consumption profile.

## Overview of tariff allocation

### The majority of customers fall within the ‘standard domestic premises’ option. At the end of Q1 2021, there were 825,080 domestic customers and 74,076 business customers.[[10]](#footnote-10) Combined they generate peak electricity demand of 1817MW.[[11]](#footnote-11)

### According to the Consumer Council, as of April 2021 annual retail domestic customer electricity bills in Northern Ireland ranged between £495 and £630, depending on electricity supplier and tariff structure.[[12]](#footnote-12) In general, around 12% of bills are made up by supply costs, 26% by network costs and 62% by wholesale costs.[[13]](#footnote-13)

### In 2021 Q1, Northern Ireland domestic electricity prices were 17.8p/kWh (incl VAT, very small commercial prices were 15.6p/kWh (excl VAT) and large and very large commercial prices were 9.0p/kWh (excl VAT)[[14]](#footnote-14).

### For non-domestic customers, network costs and distribution charges in particular will generally reduce as a proportion of the overall bill as customer size increases.

### In the following section, we examine the significant changes that have occurred in the energy market and how these have led to the requirement of a review of the current tariff system.

# The role of the energy transition

## The energy transition

### The most important motivator for this review of electricity distribution tariffs is the move to a zero-carbon future, often referred to as the ‘energy transition’. In general terms, the energy transition refers to the global shift away from using traditional, non-renewable energy sources, and replacing these with modern, renewable forms of energy – such as wind, solar, and hydro. In recent years, the energy transition has become an international priority issue, as the effects of climate change – and the consequences of failing to intervene – have become apparent.

### The energy transition impacts not only in the production of energy, but also in the development of new low carbon technologies, changes in demand and the structure of markets. It is affecting the energy system end-to-end, and society as a whole.

### National governments have set in place environmental targets, which will be met through the energy transition. For example, alongside the legal requirement for net zero greenhouse gases by 2050, the UK government announced in April 2021 that it has set a new target to reduce emissions by 78% by 2035, compared to 1990 levels.[[15]](#footnote-15) Similarly in the EU, the European Green Deal covers a range of environmental targets for EU countries to achieve, including climate neutrality by 2050 and reducing greenhouse gases by 55% by 2030.[[16]](#footnote-16)

### Efforts around the energy transition are also accelerating in Northern Ireland. The Department for the Economy is currently consulting on its new Energy Strategy, which is central to Northern Ireland’s approach to managing the energy transition.[[17]](#footnote-17) Five key principles have been set out by the department, which will shape the objectives and path of Northern Ireland’s energy transition:

#### placing consumers at the heart of our energy future;

#### grow a green economy;

#### do more with less;

#### replace fossil fuels with indigenous renewables; and

#### create a flexible and integrated energy system.

### It is clear that there are direct implications of the energy transition for electricity tariffs. Therefore, we are using this Call for Evidence to improve our understanding of the key drivers of change and associated implications for the electricity market in Northern Ireland. The following section introduces some of the most significant drivers of change associated with the energy transition, and the implications for network tariffs.

## Implications for electricity distribution tariffs

### We have undertaken a process of research looking into both the central issues of the energy transition debate, as well as the steps that have been taken in other regions to adapt to the evolving market. This revealed five key ‘drivers of change’ which have major implications for electricity tariffs:

##### distributed energy resources;

##### increasing popularity of electric vehicles;

##### development of battery technology;

##### the emerging market for energy aggregators; and

##### increasing digitisation and data usage.

### These ‘drivers of change’ all relate to various aspects of low carbon technology, which is the overarching catalyst behind the energy transition and changes to the network. In this section we briefly explore the main implications of each driver for the electricity network, and on the future of tariff designs.

**Distributed energy resources (DERs)**

### Distributed energy generation refers to the growing adoption of renewable energy generation, such as solar (PV) and wind, among households and businesses. DER alter the demands on the grid from the households and businesses that use them, and also have the potential to contribute energy to the grid. This makes them an important ‘driver of change’, as they have the potential to assist in the balancing of the network, which in turn can be facilitated through appropriate tariff structures.

### Within DER, there are two aspects which present complexities for the electricity market: (i) intermittency of generation; and (ii) distribution of generation.

### *Firstly*, these sources of generation are inherently intermittent, due to them usually relying on natural resources such as light and wind, which cannot be guaranteed at all times. This poses an issue for distribution system operators (DSOs), as the possibility of temporary failures in generation demands that there be a more flexible means of providing power as back-up.

### Another complexity is that peak generation for solar energy does not coincide with peak demand. This can prevent the ability of these sources to mitigate peak demand, meaning they may not alleviate grid investment costs to the same extent that they reduce non-renewable consumption.[[18]](#footnote-18) However, DER combined with the uptake of batteries by domestic and commercial consumers, or even electric vehicles (EVs), does have the potential to reduce this peak demand and, therefore, network investment costs as well.

### Some further key issues around the intermittency of DER generation include:

###### Consumers who supply their own power will be less dependent on the main grid, meaning their bills could decrease substantially. Meanwhile, grid-dependent customers would bear a disproportionate amount of the network costs. Similarly, there is the potential for prosumers (individuals who both produce and consume energy) to gain value from their additional energy capacity and security, whilst not paying in proportion to this value.

###### Early adopters gain benefits from being connected to the grid, being able to sell surplus electricity to other consumers. This can lead to them reducing their net electricity usage and sidestepping the costs associated with their use of the distribution system.[[19]](#footnote-19)

###### Calibrating the appropriate balance of charges between traditional consumers and prosumers is likely to be complicated by the fact that self-generators are often not completely self-sufficient, due to the self-generation mainly occurring at off-peak hours. As a result, early adopters of PV are also likely to be consuming energy at peak times.[[20]](#footnote-20)

### Given this move toward self-generation is likely to continue, it will be important for the design of network tariffs to take account of these changes.

### *Secondly*, there may be complications associated with the geographic distribution of DER, as there are likely to be regional differences in the concentration of DER generation. As a result, blanket national tariff structures may have unequal impacts on consumers in regions with differing levels of DER.

### Possible solutions to this issue include introducing time-of-use tariffs (described in Chapter 4), varying tariffs based on location (under the 2020/21 Statement of Charges, location is one factor determining eligibility for a charging category for customers over 1MW), or recalibrating the balance between fixed and variable charges.[[21]](#footnote-21) However, there are potential equity concerns with such an approach that would need to be accounted for in the tariff design:

###### Prices could differ systematically between consumers for reasons out of their control. For example, rural versus urban locations; or could vary transitorily, based on localised demand. This issue will be especially acute if the areas that incur a higher tariff coincide with lower income areas.

###### It is possible that more affluent areas could end up receiving lower energy prices. Because DER is relatively expensive, it is likely that uptake will be higher in affluent areas. As a result, the cheaper renewable energy generated through these devices, and the resulting reduction in pressure on the network in the areas they are located, could lead to lower prices in more affluent areas.

**Increasing popularity of electric vehicles (EVs)**

### EVs are rapidly growing in popularity, and this will drive additional demand from the grid. However, there is also the potential for the batteries of the EVs to be used as an asset to contribute to the grid during periods of high demand, where it is advantageous to do so. Therefore, because EVs can serve as both an asset to the grid or a liability (though overall we would expect them to be a net liability) we consider them a key ‘driver of change’.

### Unlike more passive DER generation, like solar and wind, energy from EV batteries can be discharged into the network at any time of day. They can therefore be used in conjunction with conventional DER technologies, utilising low-cost energy to charge during the day, and discharging their batteries to support the grid at peak times.

### The way in which EVs are integrated into the grid will determine whether they can become a net asset or cost. In 2018, the UK government made £30m of funding available to promote the development of ‘Vehicle to Grid’ (V2G) technology, to enable these vehicles to be used in this manner.[[22]](#footnote-22) It is thought that the owners of these vehicles can be paid for their contributions to the grid in the same way as electricity storage unit operators.

### It has been suggested that cost-reflective pricing, enabled by more flexible tariff structures, will be key to ensuring that consumers are incentivised with the correct price signals to adjust their use of the network, as well as encouraging uptake of these technologies.[[23]](#footnote-23)

**Development of battery technology**

### The development of battery technology is a key ‘driver of change’ as it represents the potential to provide greater balance to the network through the storage, and timely distribution, of energy in line with demand. For example, as outlined above, EVs have the potential to act as batteries to be used to contribute to the grid at peak times, essentially transferring energy generated using DER at a low cost to periods where it is most needed. This concept is also being adopted more broadly to store the energy generated by renewable means to alleviate pressure on the grid at peak times. At the same time, the use of battery storage will need to be managed effectively, to ensure that associated imports from or exports to the network do not overly exert pressure on the grid.

### Adoption of new battery and energy storage technologies can allow customers to: (i) sell stored energy during peak hours; and (ii) be self-sufficient on energy during hours when generation is low. However, one key barrier to the adoption of new battery technology is the high cost. Whether this is viable for a given customer will depend on the costs involved as well as the amount of energy the renewable system can generate.[[24]](#footnote-24) Reassuringly, evidence from Australia indicates that the cost of batteries has fallen in recent years and is expected to continue doing so.[[25]](#footnote-25)

### Increased network tariff flexibility may again be vital to facilitating the full positive effects of battery technology. Tariffs should provide the right incentives to consumers – both to adopt the technologies in the first place, but also to incentivise use of the technology in a way that maximises the benefit to the grid.

**Emerging market for energy aggregators**

### Aggregators are third party intermediaries specialising in coordinating or aggregating demand responses from individual consumers. An aggregator can set up agreements with consumers through which they can temporarily reduce their electricity consumption during periods of high demand for electricity. Aggregators can also act on behalf of groups of consumers who are engaging in DER by selling their electricity back to the grid. Aggregation can be carried out by both traditional suppliers and new entrants, referred to as ‘independent aggregators’.[[26]](#footnote-26) These developments enable consumers to alter demand on the network at strategic times, and so we consider energy aggregation a key ‘driver of change’ in the context of electricity tariffs.

### The ability of consumers to change their demand patterns as a result of this price signal is referred to as demand side response (DSR). To date, DSR has been relatively limited in both the GB market and internationally, with most of the networks’ flexibility being derived from scaling up conventional generation methods. However, there is a significant opportunity for consumers taking a more central role in this process given the increasing levels of DER in the population. The increased use of DSR is reflected in the National Grid’s target of procuring 30-50% of its balancing service from DSR by 2020, up from 6% in 2016.[[27]](#footnote-27)

### There are a number of different ways in which aggregators can add value:

###### Contributing to operational balance.

##### Demand can be turned up or down, in order to balance usage on the network.

##### Consumers can reduce costs by manipulating their usage pattern away from peak times, to periods of lower cost.

###### Provision of capacity.

##### Aggregators can lower demand at times of peak stress, reduce outages and enhance network security.

###### Benefits to network operators.

##### There is a lower requirement for reinforcement of the network; and reduced capital investment costs for both the network operator and, ultimately, consumers.

### Aggregators are active in Northern Ireland, however there is scope to improve the way they are used, especially with future integration of DER and smart technology.[[28]](#footnote-28) There are existing programmes in Northern Ireland to help facilitate the integration of DSR and energy aggregators into the network, such as the FlexTech Integration Initiative (part of Eirgrid’s DS3 programme)[[29]](#footnote-29), and NIE Network’s FLEX projects[[30]](#footnote-30).

**Digitisation and data usage**

### Increasing digitisation and data capabilities is a vital aspect of the future of the energy network. Digital technology enables better, more granular monitoring of usage at the household / business level, and more accurate billing for customers. A number of new tariff types (such as time-of-use and demand tariffs, described in the following chapter) can also be made available through digital technology and increased data usage. These impose changeable tariffs based on the timing of the consumer’s energy use with corresponding effects on consumer energy usage. Such developments hold the potential to influence consumer behaviour with regard to their energy usage, and so we consider digitisation and data usage to be a key ‘driver of change’ for electricity tariffs.

### Smart meters are one of the primary developments from increasing digitisation and data capabilities. At present, the Department for the Economy has no plans to install smart meters in Northern Ireland.[[31]](#footnote-31) However, its recently published Energy Strategy Consultation on Policy Options document sets out the intention to undertake a cost benefit analysis (CBA) of electricity and gas smart meters as required by the Electricity Directive. In addition to measuring the financial costs and benefits, it proposes that this CBA should take into account the broader role of smart meters to facilitate an energy transition that benefits consumers. While respondents to the call for evidence had largely supported the introduction of smart meters, it was also recognised that the rollouts in GB had not yet delivered the benefits that were expected.[[32]](#footnote-32)

### Aside from smart meters, in Northern Ireland the increased uptake of prepayment meters has already helped to progress the level of flexibility in how consumers pay their bills. Prepayment meters allow customers to pay their bills in a number of different ways, and offer information on usage to improve awareness and engagement. In the domestic sector, approximately 45% of customers use electricity prepayment meters.[[33]](#footnote-33)

# Tariff reform

### There are a wide range of options available, if changes are to be made to the distribution tariff system in Northern Ireland. These options cover both the types of tariffs that could be introduced, and the approach used to incorporate these into bills. As part of our tariff review, it is important to understand what the different options are and their associated implications. Therefore, in this chapter we set out some of the key tariff reform options and approaches to implementing these. We are subsequently seeking specific views on these in our Call for Evidence questions.

## Options for tariff structures

### While there are a large number of different tariff structure options, in this section we provide detail on five specific alternatives, which emerge as being the most frequently used and discussed. Although these tariffs are set out individually, they can also be combined, both with each other and as import / export tariffs. In practice, some combination of tariff structures (similar to the existing arrangements in Northern Ireland) is likely to be the best solution.

**Time-of-use tariffs**

### Time-of-use (TOU) tariffs aim to influence consumption patterns in order to reduce peak demand. They do this by charging higher prices during the times of day when demand is at its greatest (e.g. evenings after work), and lower prices for the remainder of the day. As such, consumers are incentivised to use less energy at peak times. This maximises grid resources, and can help to postpone the need to reinforce the network to deal with surges in demand.

### As higher costs of delivering electricity are aligned with higher prices, this makes TOU tariffs cost-reflective. This can improve value for consumers, including for low income groups, whom research has shown are happy to respond quickly to changes in tariff structure. There is evidence of this in other regions where TOU tariffs have been implemented, such as in the US.[[34]](#footnote-34)

### However, it is possible that TOU tariffs could simply result in the time of peak demand being moved. Consumers may respond to higher charges during certain hours by moving large loads to either side of these higher tariff periods, thereby changing the time at which congestion occurs instead of solving it.

### Another concern is that TOU tariffs do not provide strong enough incentive to solve peak demand issues. One possible addition to address this may be to incorporate an above-cost ‘penalty’ to further deter peak-time consumption.

### The Australian Energy Council expressed concerns about applying TOU tariffs to large areas.[[35]](#footnote-35) The principle aim of these tariffs is to manage congestion, which is by definition a localised problem. It therefore raises the question of whether it is fair to raise prices in one area with no congestion, simply to manage congestion in another area. Given that Northern Ireland has a smaller, denser population, this may be a less pertinent issue.

### One recent concern with TOU tariffs is if events such as extreme weather cause substantial changes to demand patterns outside of customers’ control, leading to vast bill increases. This would require protection such as through fixed price caps and floors on distribution network tariffs, or a provision to allow intervention under certain conditions.

**Demand tariffs**

### Demand tariffs are based on a user’s maximum individual level of electricity consumption – higher charges will be levied on consumers who have a higher individual maximum consumption. Similarly to TOU tariffs, they aim to reduce the peak demand placed on the grid by sending price signals to consumers to encourage them to limit their maximum demand. This has been found to decrease pressure on the grid.[[36]](#footnote-36) These tariffs are also closely tailored to each individual, meaning costs are borne by those that incur them .

### However, the Council of European Energy Regulators (CEER) argues that the individual nature of demand tariffs makes them harder to understand.[[37]](#footnote-37) If consumers do not understand *why* they are being charged, the price signals may not be effective at reducing peak demand. In addition, demand tariffs are facilitated by live usage monitoring technology such as smart meters. Without these, customers will only be signalled to reduce or alter consumption after they have been charged.

**Rising block tariffs**

### Rising or increasing block tariffs (IBRs) break down tariffs into different usage bands, which are based on consumption over a time period. Each time a consumer exceeds a consumption limit, they move into a higher charging band. Bands are structured in such a way that ‘necessary’ consumption (e.g. fridges, lighting) is covered by the lower bands, whilst ‘discretionary’ consumption, which is not deemed to be essential, would take consumers into more expensive bands. Again, the principle aim of this structure is to encourage consumers to reduce their consumption and place less pressure on the grid.

### IBRs expose consumers to little price volatility as the pricing bands are clearly set out and consumers are likely to know which they fall into, making it easy to anticipate the value of future bills.[[38]](#footnote-38) This benefits low income consumers, whose electricity bills will make up a large proportion of their monthly budget.[[39]](#footnote-39) Smaller users are captured within the cheaper blocks, so their electricity bills are likely to fall under this scheme.

### Precedent suggests that this structure has some shortcomings in its ability to reduce peak demand. This is partly because it is not grounded in a strong cost-basis; the tariff each user pays does not accurately reflect the marginal cost of delivering that unit of electricity. This lack of cost-reflectivity can encourage inefficient usage.

### The design of IBRs would also need to take into account the changing ways that electricity is consumed. For example, in becoming more energy efficient consumers may actually increase their electricity consumption, such as through using EVs and heat pumps. Therefore the way in which IBRs are implemented would need to ensure that these consumers are not penalised by being placed in a higher charging band.

**Fixed rate tariffs**

### Under fixed rate tariffs, users simply pay a fixed ongoing charge to gain access to the grid. Regardless of how much they subsequently consume, the tariff rate will not vary, meaning there is minimal tariff volatility.

### Given that the high fixed costs of operating and maintaining the grid, fixed rate tariffs can be considered to be broadly cost-reflective, though not fully. In addition, CEER have noted that the simplicity of this structure makes it simple for consumers to understand.[[40]](#footnote-40) These tariffs also most closely emulate the Ramsey Rule to maximise social welfare whilst covering costs.

### Fixed rate tariffs ensure that the burden of fixed costs is shared across all users, and avoids some customers subsidising others. This provides a solution for self-generating customers who benefit from security of supply but would underpay on variable tariffs because of artificially reduced usage.

### However, because consumers do not pay for additional usage, under fixed rates there may be less incentive for consumers to reduce volume or improve efficiency. Additionally, fixed rates could potentially increase bills for small customers and reduce them for large customers. Managing this to ensure fairness and equity between different groups is crucial.

**Dynamic tariffs**

### Dynamic tariffs constantly modify prices to match demand, in order to promote the most efficient usage possible. As a consequence, instead of consumers knowing what price they will pay for each time of day or usage level, prices will fluctuate depending on the total market demand and the marginal cost of delivering electricity. This promotes efficiency and maximises the grid’s resources.

### However, given that dynamic tariffs are constantly adjusting, CEER have highlighted that it is difficult for consumers to understand and plan what price they will pay ahead of time. ‘Bombarding’ customers with too many price signals may create the opposite effect to what is intended, and result in prices being ignored altogether. To help dynamic tariffs to be fair and effective, consumers need to see what price they are paying. However, live monitoring technology is currently required for this. In addition, collaboration with electricity suppliers – who are ultimately responsible for how consumers see their bills – would be required to ensure consumers can see and understand the tariff.

## Options for how new tariffs are introduced

### In addition to *what* new tariffs are introduced, there are further decisions around *how* they are introduced. In terms of how new tariffs are introduced, there are two overarching decisions. The first relates to the choices around (i) the *scope*, and (ii) the *speed* of the reforms. The decision on *scope* relates to how extensive the reforms should be. Reforms may apply to all customers, only a percentage, or certain groups. The *speed* of the transition relates to how quickly these changes are made. A shorter transition period means the reforms are fully operative quicker, whilst a longer period gives consumers more time to adapt. Balancing speed and scope to suit Northern Ireland’s unique demographic will be key to making the reforms successful.

### Alongside the scope and speed of reforms, the second overarching decision relates to the manner in which the new tariffs are presented or offered to customers. At a high level, there are three different approaches that can be used:

##### allowing customers to opt-in / opt-out of new tariffs;

##### offering a choice from a variety of tariffs; and

##### gradually phasing in a new system.

### Each of these then allows for different possibilities around the scope and speed of the transition. Taking the three approaches in turn, in this subsection, we expand on the associated mechanisms and implications, and how they relate to the scope and speed of transition. We note that the extent to which these approaches are feasible is limited by the fact that it is electricity suppliers, not consumers, upon whom distribution tariffs are directly levied. Therefore, an evaluation of the link between NIE Networks, suppliers and consumers may be required in order for them to be implemented.

**Opt-in / opt-out**

### This approach gives customers a binary option of whether to adopt a new tariff structure upon its introduction, or to remain on the existing plan. This can allow customers to decide whether they would like to adopt the new system depending on whether it is likely to benefit them.

### In terms of the scope and speed of transition, this option prioritises scope (i.e. the authority can specify which / how many customers are given the choice), over speed. Due to its flexibility for consumers, regulators have freedom make reforms as extensive as they wish to, but customers are not forced to respond quickly.

### The extent to which this system can be used in Northern Ireland is limited by the fact that electricity suppliers are not *required* to pass through distribution tariffs to customers. Changes to distribution tariffs therefore have a direct impact on suppliers, but not necessarily customers. Consequently, an opt-in / opt-out approach may first require alternative arrangements between NIE Networks, suppliers, and consumers if it is to be implemented effectively.

**Offering choice from a variety of tariffs**

### Alternatively, consumers could be offered a ‘menu’ of multiple tariff structures from which they can choose the option that is most beneficial for their circumstances. Over time, if authorities choose to do so, the size of the ‘menu’ can be reduced, pushing consumers towards the generally preferred reform option. This gives authorities more control over the speed of reform.

### Similarly to opt-in / opt-out, this option encourages customers to shop around and increase engagement. As customers can choose the option that suits them best, this should reduce volatility in bills. However, as there are more options to match to individual situations, this creates added complexity, potentially making price signals harder to identify.

### As above, the extent to which this is currently feasible in Northern Ireland is limited due to the way in which electricity suppliers are charged distribution network tariffs, and subsequently charge customers. However, a mid-ground may be achievable if suppliers themselves were offered the choice from a variety of tariffs. Alternatively, different tariffs could be applied for different customer segments or locations. These options would, however, require careful consideration to ensure customers are treated fairly, and that suppliers are not disincentivised to participate in the market, and require licence arrangements between the Utility Regulatory and NIEN that made this strategy viable.

**‘Hybrid’ of tariff structures**

### Instead of imposing an immediate switch from one set of tariffs to another, a ‘hybrid’ of tariff structures can be offered until the new system is fully in place. For instance, a small time-of-use price ratio could be introduced initially, with this ratio gradually increasing over time. Another example would be to offer vulnerable groups bill protection to prevent a sudden bill increase. This would be done by placing a limit on how much bills can increase as a consequence of the new tariffs, with the limit reducing each year until customers are fully exposed.

### This scheme prioritises scope over speed; regulators can easily vary the reach of reforms, but full implementation could take longer to achieve. Compared to other options, it provides vulnerable customers with the most targeted protection. Although bill protections would result in the reforms needing to be phased in over a number of years, authorities can determine the time period unilaterally without relying on customer responses. Before implementing this scheme, we need to be sure they can raise the funds necessary to protect bills.

## Other considerations for the transition

### Irrespective of which approach is adopted for managing the transition, there are a number of other factors that need to be considered. Specifically, the importance of (i) monitoring the impact of reforms, and (ii) ensuring customers are engaged throughout, are highlighted as key issues.

### First, it is important to monitor the extent to which the reforms have had their desired effect, and that changes in consumer behaviour align with expectations. For example, this could involve conducting ongoing customer research through surveys. These would monitor how customer behaviour adapts to the changes over time, and could entail analysing electricity usage; complaints and queries analysis; and billing questions.[[41]](#footnote-41) Helpfully, such an approach can be implemented using data that is already collected. Ongoing monitoring can identify problems early on in the transition process, meaning disruptions can be avoided; costs of redesign are minimised for both consumers and regulators; and higher trust levels are maintained.

### Second, ensuring that consumers remain engaged with the reforms will also help the transition to be successful. Lack of trust and satisfaction with electricity companies, both in the UK as a whole and specifically in Northern Ireland, is a major barrier to consumer engagement.[[42]](#footnote-42) Without sufficient understanding and awareness, customers could view energy companies as only seeking to maximise profitability, even at the expense of harm to their customers. This creates a risk that customers will see the changes as being designed to increase profit (and consequently bills) and so will resist making changes.

### Engagement in reforms to *distribution* *network* tariffs specifically may require a cooperative approach between NIE Networks and electricity suppliers, because it is the latter with whom customers are more closely involved. In addition, distribution tariffs are ‘hidden’ within customers’ retail bill provided by suppliers. Therefore, supplier involvement may be crucial to ensuring that changes to the distribution aspect of bills are made clear to customers.

### Some possible methods to improve customer engagement include:

###### increasing education and understanding;[[43]](#footnote-43)

###### separating bills into component parts to improve clarity and impact of pricing signals; and

###### explaining cost-cascading, how the tariff system treats different customer types, and how costs are allocated.[[44]](#footnote-44)

## What is being done elsewhere

### In this section we provide examples of how the different distribution network tariff reform options have been implemented in other jurisdictions. While there is precedent for all the reform options discussed here, overall the schemes have been implemented with varying degrees of success. In some cases, the new tariff structures are discontinued and replaced, as they failed to satisfy their intended aims. Learning from mistakes in other regimes will help to improve the outcome for Northern Ireland.

### **TOU**

###### TOU distribution tariffs have been used successfully in Portugal since 1997. Households can choose from a menu of three different TOU tariffs.

###### Other jurisdictions to implement TOU are Sweden, UK and Canada (Ontario).

### **Demand tariffs**

###### The California-based energy company PG&E offer a form of demand tariffs whereby consumers pay a reduced price if they minimise their consumption on hot ‘SmartDays’, which they are notified of in advance. PG&E claim this scheme can reduce summer bills by 20%.[[45]](#footnote-45)

###### Following a 2012 marketing campaign, 100,000 customers joined the scheme by the end of the following year, out of a customer base of 5 million. However, many of these exited the scheme after exposure to only two or three SmartDays.

### **IBRs**

###### Italy introduced IBRs for distribution and transmission tariffs (which are not separated in bills) in the 1970s, with different customer groups being determined by the level of kWh usage.

###### However, the Italian Parliament and Government believes the current structure to be ineffective and outdated. It plans to replace them with linear tariffs. IBRs have also previously been used in California, but similar reforms are planned there.

### **Fixed tariffs**

###### The Netherlands introduced fixed distribution network tariffs in 2009 to create a simpler, more cost-reflective structure. Specifically, domestic consumers’ distribution tariffs are made up only of a fixed element and a capacity-based element, with no volume-based charges. Meanwhile small non-domestic consumers’ tariffs are purely capacity-based, and large non-domestic consumers’ consist of a capacity and volume component.

###### A concern with this structure is it favours those who have a high volumetric usage, but low connection capacity, and puts low volume, high connection capacity users at a disadvantage. To mitigate this concern, during the transition households were offered favourable rates to reduce their connection capacity, and those who could not were compensated. This resulted in DSO incomes failing to rise in line with the expected cost reductions.

### **Dynamic tariffs**

###### France’s TEMPO program and Spain’s real-time-pricing (RTP) scheme are the best examples of dynamic tariffs. Both schemes inform consumers of prices a day in advance.

###### Consumers that are enrolled on RTP have an average price elasticity of 0, meaning that there is, on average, no response in demand to a change in price.[[46]](#footnote-46) This ineffectiveness has been hypothesised to be due to a combination of lack of awareness, poor cost information and automated demand.

### **Ofgem initiatives**

###### The Targeted Charging Review[[47]](#footnote-47) assessed the split of residual charges between generation and demand, in addition to the mechanism for collecting this charges and how to implement them. Ofgem concluded fixed charges would be levied on both households and businesses.

###### Reform of network access and forward-looking charges[[48]](#footnote-48) analyses how to continue using the network efficiently and flexibly in the future. It examines the benefits using new technologies to send signals to consumers to impact their behaviour against the additional costs these add to energy bills. Its shortlisted options include more ‘granular’ charging zones, looking at using more accurate TOU bands, and reducing/removing contributions to reinforcement costs.

### Evidently, there are a number of key choices to be made for reforming tariffs, both in relation to *what* tariffs are introduced and *how* this transition is managed. Whichever is the ‘right’ option will depend on the solution the reforms are looking to achieve, and which is most suitable for the needs and market arrangements in Northern Ireland. Therefore, we are using this Call to seek views on these specific factors.

# Key topics for tariff review

### Based on the preceding discussion, a number of overarching key topics emerge. These are issues which are vital to understand in order to review and potentially alter electricity distribution tariff structures. Therefore, in order to use this Call for Evidence to focus on addressing the issues of most importance, we have categorised our questions within each of these overarching topics. There are five key topics covered by this Call for Evidence, set out below.

## Drivers of change

### There are a number of factors that represent changes in energy markets. At a high level, this is shift is largely driven by the transition to meet zero-carbon targets, developments in energy technology, and the associated changes in consumer behaviour. Understanding more about the specific drivers of change will help to uncover why tariff reform might be necessary, and subsequently what the objectives of reform should be.

### As set out in Chapter 3, there are five main drivers of change that emerge as being priority areas in existing research, which primarily relate to different aspects of low carbon technologies. These are:

#### distributed energy resources;

#### increasing popularity of electric vehicles;

#### development of battery technology;

#### the emerging market for energy aggregators; and

#### digitisation and data usage.

### These will be explored further in this Call for Evidence.

## Tariff reform options

### There are a range of alternative tariff structures that can be adopted, should reform be deemed necessary, many of which are currently used in other regions. Different structures prioritise particular factors and outcomes, such as reducing volatility, cost reflectivity, efficiency, and fairness. Some of the main tariff options include:

###### time-of use;

###### demand;

###### rising block;

###### fixed rate; and

###### dynamic.

### We are seeking views on these priority factors and tariff structures, and how they align with the market structure and needs in Northern Ireland.

## Approaches to managing the transition

### Whichever path is chosen for the future of electricity tariffs, there are decisions to be made around how to introduce any new policies in relation to the energy transition, including changes made to tariff structures. As outlined in Chapter 4, the first overarching decisions around the approach relate to:

#### the scope of the reform; and

#### the speed of the reform.

### In this Call for Evidence we are seeking views on both of these factors, paired with how reforms are offered to customers (e.g. opt-in / opt-out, range of options, or phase in an entirely new system).

## Customer engagement

### The introduction of new policies and tariff structures will have a direct impact on people across Northern Ireland. Therefore, in order for a reform to succeed, it is vital that customers are engaged throughout the process. If customers are engaged, this will help to ensure maximum uptake and understanding of any new policies, allowing them to be as effective as possible. There is some evidence to suggest that in other jurisdictions a number of factors have limited the level of customer engagement, and so we are seeking views at this early stage on how best to engage customers.

## Other challenges and risks

### Finally, there are a number of other relevant factors that fall outside of the previous key topics. These include, for instance, considerations that relate specifically to Northern Ireland. We have therefore included an additional category to include questions that capture these issues.

# Call for Evidence questions

### We invite views on the questions listed below. To respond to this Call for Evidence, please complete the attached response template. You only need to answer the questions that are most relevant and important to you. Given the nature of this exercise, we would encourage you to provide supporting evidence, facts and data to support any views expressed.

### **Drivers of change**

###### Which of the key drivers outlined present the largest impact for you or your organisation?

###### In addition to the key drivers mentioned (distributed energy resources; increasing popularity of electric vehicles; development of battery technology; the emerging market for energy aggregators; and digitisation and data usage), are there any others that you consider to be a significant factor in affecting future electricity use?

###### Do you consider that economy and efficiency should continue to be key factors in the Utility Regulators role in the transition process?

###### Which of the key drivers outlined do you think present the largest impact for Northern Ireland specifically – and why?

###### How important and valuable do you consider energy aggregators to be?

###### In what ways could the electricity market in Northern Ireland be changed to make better use of energy aggregators?

###### Do you think that digital technology, which offers customers live information on consumption and bills, is necessary for tariffs to provide adequate pricing signals?

###### Is there existing technology in NI that could be used enable more efficient transition?

###### If changes were made to tariffs, should this wait until all customers have access to up-to-date technology that allows the change to have maximum impact?

### **Tariff reform options**

###### Different tariff structures place emphasis on different factors such as cost-reflectivity, managing peak demand, simplicity, reducing price volatility, and providing more information to customers. Which objectives do you think tariffs should be designed to prioritise?

###### With regard to non-discrimination and cost reflectivity, are there deficiencies in the current tariff system which could be remediated?

###### Do you think there are factors other than price that effectively incentivise consumers to change their behaviour? Which of these (including price) would you expect to be the most powerful incentive?

###### Do you think that tariffs should be more tailored to individuals’ energy usage, or be more a reflection of overall demand?

###### Because there are fixed costs to using the grid, costs are not exactly proportionate to consumption. Do you think that tariffs should be more reflective of the service that is being provided through the network connection?

###### To what extent do you think tariff structures should rely on new modern technology and data capabilities?

### **Approaches to managing the transition**

###### Would you expect tariff reforms to be introduced quickly over a short time period, or to be eased in gradually?

###### Would you expect tariff reforms to be applied to all consumers, or only certain subgroups or a certain proportion?

###### Do you have views on whether new tariff structures should be opt-in, opt-out, or mandatory?

###### In addition to (i) opt-in / opt-out, (ii) offering a choice from a range, or (iii) gradually phasing in a new system, are there other methods of offering new tariffs to customers that should be considered?

###### Do you think consumers would respond positively, if offered a range of options, or should one type of tariff be used for everyone?

###### Do you have views on whether consumers could modify their behaviour, if the incentive to do so was right? Or are usage patterns largely fixed by factors outside of their control?

###### There are a range of options for monitoring the impact of reforms, such as surveys, analysis of complaints, billing questions, and usage monitoring analysis. Which do you think would be most effective?

###### Should consumers be protected from large bill increases caused by the reforms even if this needs to be funded by a cost elsewhere? If so, how long should the protections be in place for?

### **Customer engagement and market understanding**

###### How engaged do you think consumers currently are on their energy usage and tariffs? For example, are they more, less, or adequately engaged relative to what would be expected?

###### Would you identify particular demographics as having lower engagement? If so, why is this the case? Is it more due their own unwillingness to engage, or that the market is not very accessible?

###### Do you have views on best method to engage customers more?

###### Should unengaged customers be encouraged to increase their understanding of the market, or can they be trusted to opt-in?

###### At what stage in the reform process would it be optimal to engage consumers and (how) should this vary over time?

### **Other challenges and risks**

###### Are there any unique features of the Northern Ireland electricity distribution market that are particularly important to account for in the transition?

###### There are a number of examples of tariff reform that have taken place in other countries. Are there specific examples that can be closely compared to the market in Northern Ireland? How important is it that the adopted reform approach is one that has been tried and tested elsewhere?

## How to respond

### Representations may be made on or before 5pm on 16 August 2021. Responses can be sent in writing to or by emailing:

### Alan Craig

### The Utility Regulator

### Queens House

### 14 Queen Street Belfast

### BT1 6ED

### e-mail: [alan.craig@uregni.gov.uk](mailto:alan.craig@uregni.gov.uk)

### and

### e-mail: [Electricity\_Networks\_Responses@uregni.gov.uk](mailto:Electricity_Networks_Responses@uregni.gov.uk)

### Our preference is for responses to be submitted by e-mail.

## Confidentiality

### Please note that we intend to publish all responses unless marked confidential. While respondents may wish to identify some aspects of their responses as confidential, we request that non-confidential versions are also provided, or that the confidential information is provided in a separate annex.

### As a public body and non-ministerial government department, the Utility Regulator is required to comply with the Freedom of Information Act (“FOIA”). The effect of FOIA may be that certain recorded information contained in consultation responses is required to be put into the public domain. Hence it is now possible that all responses made to consultations will be discoverable under FOIA, even if respondents ask us to treat responses as confidential. It is therefore important that respondents take account of this. In particular, if asking the Utility Regulator to treat responses as confidential, respondents should specify why they consider the information in question should be treated as such.

### The Utility Regulator has published a privacy notice for consumers and stakeholders which sets out the approach to data retention in respect of consultations. This can be found at https://www.uregni.gov.uk/privacy-notice or, alternatively, a copy can be obtained by calling 028 9031 1575 or by email at [info@uregni.gov.uk](mailto:info@uregni.gov.uk).

### This paper is available in alternative formats such as audio, Braille etc. If an alternative format is required, please contact the office of the Utility Regulator to request.

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3. <https://www.economy-ni.gov.uk/consultations/consultation-policy-options-new-energy-strategy-northern-ireland> [↑](#footnote-ref-3)
4. NIE Networks are responsible for both the transmission and distribution networks, however this Call for Evidence relates only to *distribution* tariffs. [↑](#footnote-ref-4)
5. We note that, while we focus on Northern Ireland specifically, the Commission for Regulation of Utilities (CRU) has indicated in its 2021 workplan that it also intends to consult on the approach to transmission and distribution tariffs in electricity networks. This may provide further information to supplement the discussion here. [↑](#footnote-ref-5)
6. These costs are metering and service / termination. [↑](#footnote-ref-6)
7. Other operation and maintenance costs are meter reading, customer profiles, billing, KPM, and UMS inventory in addition to further meter and service / termination. [↑](#footnote-ref-7)
8. <https://www.nienetworks.co.uk/documents/regulatory-documents/duos-statement-oct2020-sept2021.aspx> [↑](#footnote-ref-8)
9. <https://www.nienetworks.co.uk/documents/regulatory-documents/duos-statement-oct2020-sept2021.aspx> [↑](#footnote-ref-9)
10. <https://www.uregni.gov.uk/publications/transparency-reports-2021> [↑](#footnote-ref-10)
11. <https://www.uregni.gov.uk/understanding-your-electricity-charges> [↑](#footnote-ref-11)
12. <https://www.consumercouncil.org.uk/sites/default/files/2021-04/electricity_price_comparison_table_190421.pdf> [↑](#footnote-ref-12)
13. <https://www.uregni.gov.uk/market-overview-0> [↑](#footnote-ref-13)
14. <https://www.uregni.gov.uk/publications/transparency-reports-2021> [↑](#footnote-ref-14)
15. <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035> [↑](#footnote-ref-15)
16. <https://ec.europa.eu/clima/policies/eu-climate-action_en> [↑](#footnote-ref-16)
17. <https://www.economy-ni.gov.uk/consultations/consultation-policy-options-new-energy-strategy-northern-ireland> [↑](#footnote-ref-17)
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20. Ibid., pg. 34. [↑](#footnote-ref-20)
21. We note that the current Distribution Licence restricts the use of locational tariffs. [↑](#footnote-ref-21)
22. <https://www.gov.uk/government/news/30-million-investment-in-revolutionary-v2g-technologies> [↑](#footnote-ref-22)
23. ‘Integrating Distributed Energy Resources for the Grid of the Future.’ Australian Energy Market Commission, Economic Regulatory Framework Review (2019), pg. 6. [↑](#footnote-ref-23)
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33. ‘Retail Market Monitoring: Quarterly Transparency Report.’ Utility Regulator (2021), pg. 8. [↑](#footnote-ref-33)
34. ‘Designing distribution network tariffs that are fair for different consumer groups.’ Lu, L. and Price, C.; Centre for Competition Policy (2018). [↑](#footnote-ref-34)
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36. Ibid. [↑](#footnote-ref-36)
37. ‘Paper on Electricity Distribution Tariffs Supporting the Energy Transition.’ Distribution Systems Working Group; CEER (2020). [↑](#footnote-ref-37)
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39. 19% of people in Northern Ireland are in poverty. See: <https://www.communities-ni.gov.uk/news/northern-ireland-poverty-bulletin-201819-released#:~:text=19%25%20of%20individuals%20were%20in,%2F18%20estimate%20of%2016%25> [↑](#footnote-ref-39)
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