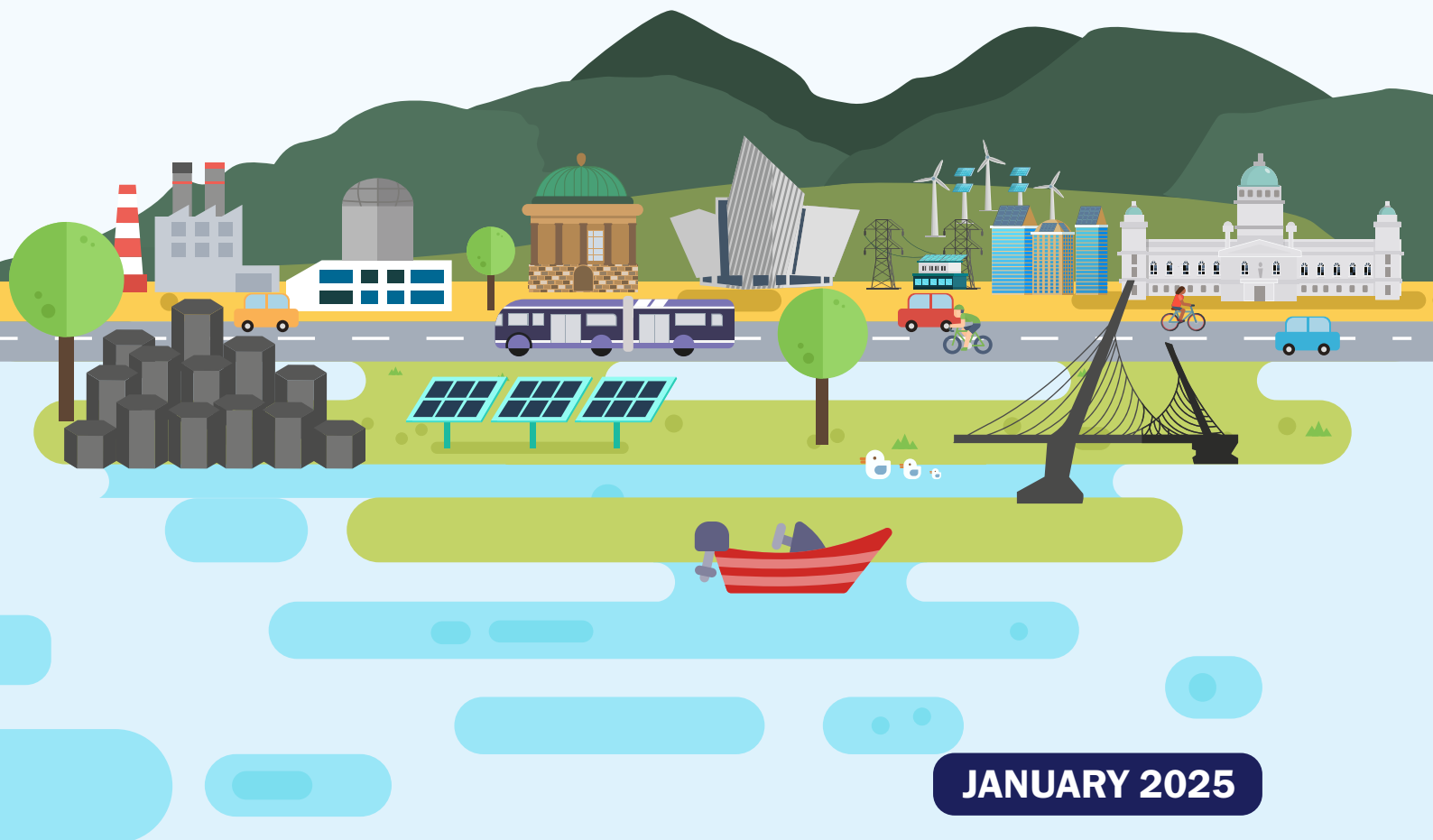




# INCREASED SOCIALISATION OF CONNECTION COSTS IN THE ELECTRICITY DISTRIBUTION NETWORK



**JANUARY 2025**

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## Ministerial Foreword

At the beginning of last year, I set out four key objectives as part of a new Economic Mission. These were to increase the number of working-age people in **Good Jobs**, to **Promote Regional Balance, Raise Productivity** and to **Reduce Carbon Emissions**.

The transition to net zero carbon emissions by 2050 is essential to fulfil our legislative requirements through the Climate Change Act (Northern Ireland) 2022. I will ensure the energy transition will fuel a greener and more sustainable economy that generates more prosperity and better opportunities for all. I will ensure a just transition for energy consumers from fossil fuels to locally produced affordable renewable energy. We have the resources including wind, biomethane and geothermal to do this. We will urgently reduce our dependency on imported fossil fuels and break the link with global energy commodity prices which have caused such financial hardship in recent years. This will help to ensure that people and businesses here pay a fair price for locally produced renewable energy.



Reforming our current connection charging policy, through socialisation of network reinforcement costs will deliver fairness for homes and businesses seeking to connect renewable technologies such as heat pumps, electric vehicles and renewable generation. This will encourage uptake of these new technologies and encourage investment across all areas of the North.

We have only 60 months to 2030, and delivering the targets for renewable electricity and carbon reduction, and we are committed to supporting homes and businesses in making the transition. This significant reform represents a key element in the delivery of my economic vision and the Executive's energy strategy and will be progressed to secure the benefits as quickly as possible.

**CONOR MURPHY MLA**  
**Minister for the Economy**

## Executive Summary

The current connection charging policy for the distribution network here, is to charge customers seeking a new connection to the distribution network for the cost of any reinforcement to the network triggered by their connection request, as well as the cost of the lines and plant directly needed to make the connection.

However, changes in our electricity networks and the way we use them have made the current policy unfair to some users and restrictive to our path forward. For example, NIE Networks is currently undertaking the largest upgrade in our network history, through its RP7 price control. But RP7 will take six years to deliver, and more work may be needed after that. Some customers connecting to the network in areas which the RP7 upgrade has not yet reached, face potentially higher charges than those in other areas. In these areas the first customer to request a connection will be required to pay for the upgrades, which can then be used by subsequent customers seeking a connection, but who may not contribute to the cost of the upgrade. This is known as “first mover disadvantage”. The proposals in this paper will help remove the unfairness of this “first mover disadvantage”.

In addition, stakeholders say that charging for the reinforcement works is a barrier to connecting more renewable generation and to consumers installing Low Carbon Technologies such as heat pumps and Electric Vehicles (**EVs**).

Moving to a policy of greater socialisation, which allocates more of the distribution reinforcement to general network costs, is likely to remove the unfairness noted above and facilitate more renewable generation here, and more adoption of such things as heat pumps, electric vehicles and renewables as part of our transition to a more sustainable, fair and secure energy system. It will help make the region a more attractive investment destination, and more competitive with neighbouring jurisdictions which already socialise more of their distribution reinforcement costs to general network costs.

This consultation puts forward a number of options for increasing the level of distribution reinforcement which is charged to general network costs. It sets out the benefits and likely costs of each option. The options have been developed drawing on experience from our near neighbours. The options set out which costs will still fall to customers seeking a new connection and discuss the use of a “High-Cost Cap” to ensure consumers do not pay for excessive reinforcement of the network because of individuals seeking a difficult or remote connection to the grid.

This policy proposal is consistent with the Minister for the Economy’s statement in the Assembly on 29 April 2024 that he intends to introduce further socialisation of grid connection costs. The Minister noted that the further socialisation of connection costs is an important step in removing the high-cost barrier to the mass adoption of heat pumps and electric vehicles. It creates an opportunity for businesses to decarbonise and is a key enabler in meeting our net zero targets.

The Department's preferred policy option is Option 4, full socialisation of network reinforcement costs for customers connecting to the distribution network. This would apply to both homes and business requesting connections for such things as heat pumps, or other electricity demanded and to renewable generators seeking a connection to the electricity distribution network.

This consultation builds on the joint [Call for Evidence](#)<sup>1</sup> which the Department published with the Utility Regulator (**UR**) in July 2023<sup>2</sup>. The Department has worked with UR to develop the options put forward in this consultation and will work with UR to review the responses and develop the path forward.

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1 [Call for Evidence - Electricity Connection Policy Framework Review \(www.uregni.gov.uk\)](#)

2 This review considered all aspects of electricity connections to the distribution network apart from: the Standard Connection Charge within NIE Networks' Statement of Connection Charges (for housing developments of more than 12 dwellings); the connection charging policy for generation cluster developments and any issues to do with future offshore connections as this is the subject of a separate DfE workstream.

## 1. Background

- 1.1** The Minister for the Economy stated in the Assembly on 29 April 2024 that he intends to introduce further socialisation of grid connection costs. The Minister noted that the further socialisation of connection costs is an important step in removing the high-cost barrier to the mass adoption of heat pumps and electric vehicles. It creates an opportunity for businesses to decarbonise and is a key enabler in meeting our net zero targets.
- 1.2** The current distribution connection charging policy creates a barrier to some new connections by charging the first customer connecting, the full cost of reinforcements needed for the electricity network triggered by their connection, as well as the direct connection costs. This frequently creates an unfairness to first movers as those connecting after the reinforcements have been made won't pay towards them.
- 1.3** The nature of rural networks leads to the current distribution connection charging policy unfairly disadvantaging rural consumers.
- 1.4** Stakeholders have advised that the current distribution connection charging policy is a barrier to connecting more renewable generation and to consumers installing Low Carbon Technologies such as heat pumps and EVs.
- 1.5** We already socialise much of the reinforcement/development costs for the electricity network through works approved under the regulatory price control process e.g. RP7, and these are currently already recovered from customers through electricity bills. The proposals in this consultation would extend this existing level of socialisation, allowing a higher proportion of connection costs to be added to NIE Network's Regulated Asset Base and then spread across all customers over the lifetime of the asset. For more information on NIE Network's Regulated Asset Base see [Annex 6 – NIE Networks Regulated Asset Base](#).
- 1.6** The actual reinforcement costs here, associated with equipment etc are similar to those in Britain and Ireland. However, the proportion of those costs borne by the individual requesting the connection to the distribution network is higher here and the proportion of those costs socialised to all customers is lower here.
- 1.7** This consultation relates to those seeking a connection to NIE Networks' distribution network. Connection to the transmission network is outside the scope of the consultation.<sup>3</sup>

3 [SONI-Transmission Connection Charging Methodology Statement April 2019 \(www.soni.ltd.uk\)](#)

- 1.8** For homes and businesses, especially in rural areas, adding a heat pump or an electric vehicle charger can require a larger connection, and that can be the trigger that necessitates some reinforcement to local lines. Currently, they would be liable for the cost of upgrading that local line, even though other customers share that line, and could add their own EV or heat pump after the first customer had paid for the upgrade. Domestic customers, who have paid for reinforcement, could potentially apply for some compensation, if a future customer benefits. However, this provision is complex and difficult for domestic customers to understand and therefore many may not access the provision. This makes adopting new low carbon technologies unfairly less feasible for many people, particularly in rural areas, or among households and business unable to afford the current up-front costs.
- 1.9** Moving to modern electric heating from fossil fuel has the potential to provide many benefits to rural customers. Electricity is a clean convenient, regulated and safe fuel source. Oversight by the Utility Regulator ensures that: electricity suppliers provide prepayment meter options; vulnerable customers have protection from disconnection; customers receive accurate clear and regulated information on bills; and electricity suppliers are required to comply with the protections contained in codes of practice on, for example, providing assistance for the disabled. So removing barriers to moving to a heat pump provides a range of benefits to rural and vulnerable customers.
- 1.10** While the problem applies to domestic customers wishing to connect low carbon technologies to the distribution network, it also applies to businesses and larger customers wanting to connect such technologies to improve their businesses and reduce their carbon intensity. The Department has received submissions from Electric Vehicle Charge Point Operators wishing to install public Electric Vehicle Charge Points, saying that the current distribution connection charging policy is an inhibitor for doing so here. Likewise, housing estate owners or housing developers<sup>4</sup> face similar connection charging policy risks if they wish to install large heat pumps to service or upgrade a housing development with low carbon heating.
- 1.11** The “first mover disadvantage” also applies to generators connecting to the distribution network. This can make the region a less competitive place for renewable generators and others to invest. It may also cause some renewable developers to hold back new developments hoping for another developer to be the first mover and bear the initial cost. For examples on how the proposals in this paper will affect connection costs see [Annex 5 – Potential Cost Effects on Example Connections](#). Large generators connecting to the transmission network are outside the scope of this paper.

<sup>4</sup> The recent change made by NIE Networks regarding the standard connection charge for 12 dwellings is separate to this consultation. It relates to increases in costs linked to underlying unit cost increases. Socialisation, of connection costs may affect this policy by reducing the reinforcement element included in the standard charge for 12 dwellings or more

## Will reinforcing the distribution network mitigate the issue of high connection costs?

- 1.12** In the next 6-year price control period (**RP7**) NIE Networks will spend over £2 billion in operating and developing the electricity network (both distribution and transmission), to help change from a fossil fuel-based system to a renewables based energy system.
- 1.13** UR has published its final determination on RP7<sup>5</sup>. This sets out an investment package of £2.23 billion that will support our journey to net zero. RP7 will facilitate the transition away from fossil fuels to renewable energy sources. It will also help to secure a robust and resilient network to support innovation and provide increased capacity, while securing long-term value for the region's electricity consumers.
- 1.14** While reinforcement work planned under RP7 will eventually reduce the reinforcement charges associated with connections here, NIE Networks cannot do all of its proposed network upgrades at once. A customer connecting in an area where NIE Networks has not finished the RP7 upgrades would currently be charged any necessary reinforcement costs, whereas a customer in an area where NIE Networks had completed its RP7 upgrades could face no additional reinforcement charges. We continue to encourage NIE Networks to plan and build its network efficiently. However, the timing issue for RP7 reinforcements is likely to create a type of regional unbalance for customers seeking to connect, or increase their connection, to the network. Further socialising network reinforcement costs would remove this unbalance.
- 1.15** The socialisation of connection costs being considered in this paper relates only to costs to reinforce the existing network leading up to the customer's network connection point. Customers will still be liable for any new poles or lines etc. required to connect their premises to the existing network, and for any upgrades to electrical equipment on their side of the connection point. The proposals in this paper do not mean that network connections will be free of any charge.

## Call for Evidence Responses

- 1.16** Responses to the Department and UR joint [Call for Evidence](#)<sup>6</sup> generally supported moves to facilitate more low carbon connections to our electricity distribution system. Responders recognised the benefits to our net zero targets, and the benefits of facilitating more renewable energy here.
- 1.17** Some responses to the Call for Evidence also emphasised that any material increase to a customer's bill, given the current economic landscape is likely to be difficult to accept, especially for those in fuel poverty. The Department has been conscious of this in developing the proposals in this consultation and affordability has been a key concern. Therefore, we have focused on analysing all effects so that this consultation will provide stakeholders with the relevant information. In addition, the regulatory process here works to ensure that costs are as low and as efficient as possible for consumers and mitigated where possible. Full detail on the responses to the Call for Evidence can be found at [Annex 3 – UR/DfE Joint Call for Evidence - Responses](#).

5 [RP7 Price Control Final Determination published \(www.uregni.gov.uk\)](#)

6 [Call for Evidence - Electricity Connection Policy Framework Review \(www.uregni.gov.uk\)](#)



## 2. Socialisation Options

**2.1** Options for the socialisation of connections to the electricity network are shown below. These refer to:

**2.1.1** the level of the network at which the customer seeking a connection pays for the cost of reinforcement that their connection triggers, and

**2.1.2** the level at which those costs are paid by all consumers under general network charges.

**2.2** Within these options there are two types of assets to understand:

**2.2.1 Connection Assets:** any new wires and equipment needed to connect from the connection point on the existing network to the customer's meter connection. Designed and built (generally) by NIE Networks. They become part of the enlarged network.

**2.2.2 Network Reinforcement Assets:** any wires and equipment needed to reinforce any part of the existing network, triggered by the customer's connection request. Designed and built by NIE Networks.

**2.3** The Table below set out who pays for the different types of assets in the different levels of socialisation.

**Table 1. Description of proposed options.**

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Option 1</b> | <p><b>Status quo – remaining with the current connection policy.</b></p> <p>Homes, businesses and generators seeking connection to the distribution network pay for:</p> <ol style="list-style-type: none"> <li>1) Their own assets to the connection point</li> <li>2) Reinforcement at their connection voltage level</li> </ol> <p>Reinforcement at one voltage level up from the connecting level</p>                                           |
| <b>Option 2</b> | <p><b>Partial socialisation.</b></p> <p>Homes, business and generators seeking connection to the distribution network continue to pay for:</p> <ol style="list-style-type: none"> <li>1) Their own assets to the connection point</li> <li>2) A weighted portion of the network reinforcement at their connection voltage level, and one voltage level above</li> </ol> <p>The balance of distribution network reinforcement cost is socialised</p> |

**Table 1. Description of proposed options.**

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Option 3</b>      | <p><b>Full socialisation for homes and businesses, partial socialisation for generators.</b></p> <p>This option is similar to the one currently used in Britain. Homes and business pay for</p> <ol style="list-style-type: none"> <li>1) Their own assets to the connection point</li> </ol> <p>Any distribution network reinforcement cost is socialised.</p> <p>Generators– continue to pay for:</p> <ol style="list-style-type: none"> <li>1) Their own assets to the connection point.</li> <li>2) A portion of the network reinforcement at their connection voltage level.</li> </ol> <p>The balance of distribution network reinforcement cost is socialised.</p> |
| <b>Option 4</b>      | <p><b>Full socialisation.</b></p> <p>Homes, businesses and generators only pay for their own assets to the connection point.</p> <p>Any distribution network reinforcement cost is socialised.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>High Cost Cap</b> | <p>Options 2-4 will each include a High Cost Cap. This will manage the effect on cost to the consumer and deter unreasonable requests.</p> <p>The proposed High Cost Cap is £1,720 per kVA for demand customers and £200/kVA for generation customers.</p> <p>See <a href="#">Annex 4 – High Cost Cap</a> for a discussion of the ‘High Cost Cap’ concept, and relevant questions</p>                                                                                                                                                                                                                                                                                     |

## Requirements

**2.4** The factors we considered when assessing the need for socialisation of connection costs and the effect of the options in this paper included:

**2.4.1** Fairness to those seeking a connection

**2.4.2** Vulnerable customers

**2.4.3** Climate Change and Net Zero / the removal of barriers to the take up of low carbon technologies such as heat pumps and electric vehicles

**2.4.4** Regional balance, and

**2.4.5** Investment

### 3. Detail on Consultation Options

- 3.1** This section provides further detailed explanation of the options. Full details on the costs and benefits of each option are included in [Annex 1 – Further Analysis of Costs and Benefits of Options](#) and [Annex 2](#). The Department considers that there are 4 options, 3 of which are viable for the future connection charging policy on the distribution network here. We have included Option 1 “Remain as Status Quo”, for benchmarking purposes against the other Options. However, currently we do not consider it is a viable option to reduce high connection charges and deal with the issues set out in section 1 of this paper.
- 3.2** It is proposed that options 2-4 will be subject to a “high cost cap”. The high cost cap is outlined in [Annex 4 – High Cost Cap](#). The Department’s preferred option is Option 4, full socialisation of network reinforcement costs for demand (households and businesses seeking to use electricity) and generation connections to the distribution network.
- 3.3** At present, a customer connecting to our distribution system is required to pay for the assets necessary to:
- 3.3.1** Connect the customer to the existing distribution system (connection asset); and
  - 3.3.2** Reinforce the distribution system at the connection voltage level and one voltage level above (network asset)<sup>7</sup>.
- 3.4** The Status Quo will not be considered as a valid option. However, we have included it in the options for benchmarking purposes.

<sup>7</sup> In the case of a customer connecting at 33kV, if needed, they will pay for the reinforcement at 33kV and to reinforce the transmission system at 110kV.

A customer connecting at low voltage would pay for any needed reinforcements at the low voltage network, and at the 11kV, but would not pay for any reinforcements needed at the 33 kV level.

## Option 2 – Detail in relation to Partial Socialisation

The table below summarises what costs would be paid for by the customer seeking a connection to the network and what costs would be socialised.

**Table 2 – Connection charging regime for Option 2**

| Connection level                                                   | Option 2 - Demand                                                                               | Option 2 - Generation                                                                           |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>The customer's line to the connection point</b>                 | Continues to be paid by the customer seeking a connection                                       | Continues to be paid by the customer seeking a connection.                                      |
| <b>Reinforcement works at voltage level of connection</b>          | Part paid by the customer seeking a connection. And part socialised through the network charge. | Part paid by the customer seeking a connection. And part socialised through the network charge. |
| <b>Reinforcement works at one voltage level above connection</b>   | Part paid by the customer seeking a connection. And part socialised through the network charge. | Part paid by the customer seeking a connection. And part socialised through the network charge. |
| <b>Reinforcement works at &gt;1 voltage level above connection</b> | Not chargeable to the customer connecting.                                                      | Not chargeable to the customer connecting.                                                      |

**3.5** Option 2 proposes that both demand customers and generators seeking a connection would pay for:

**3.5.1** all of their connection assets; and

**3.5.2** part of any network reinforcement assets required for their connection (or to increase their connection capacity) at their connecting voltage and one level above (subject to a high cost cap). This would be based on the proportion of the increased network capacity that this reinforcement created. This method is similar to neighbouring jurisdictions.

**3.6** These customers would not pay for:

**3.6.1** any network reinforcement assets at voltage levels higher than one level above their connection voltage, (that would be fully socialised).

### Option 3 – Full socialisation for homes and businesses, partial socialisation for generators.

**3.7** The table below summarises what costs would be paid for by the customer seeking a connection to the network and what costs would be socialised.

**Table 3 – Connection charging regime for Option 3**

| Connection level                                                   | Option 3 - Demand | Option 3 - Generation                                                                           |
|--------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------|
| <b>New connection assets</b>                                       | Fully Chargeable  | Fully Chargeable                                                                                |
| <b>Reinforcement works at voltage level of connection</b>          | Not chargeable    | Part paid by the customer seeking a connection. And part socialised through the network charge. |
| <b>Reinforcement works at one voltage level above connection</b>   | Not chargeable    | Not chargeable                                                                                  |
| <b>Reinforcement works at &gt;1 voltage level above connection</b> | Not chargeable    | Not chargeable                                                                                  |

**3.8** Option 3 proposes that demand customers seeking a connection would pay for:

**3.8.1** the new connection assets from the existing distribution network to their premises (either for a new connection or when increasing the capacity of their existing connection). For example, this would apply to homes or businesses installing Low Carbon Technologies and other forms of increased demand.

**3.9** These customers would not pay for:

**3.9.1** any network reinforcement assets required for their connection (subject to a high cost cap).

**3.10** Option 3 proposes that generators would pay for:

**3.10.1** all of their connection assets; and

**3.10.2** a portion of the network reinforcement assets needed to connect them (or to increase their connection capacity) at their connecting voltage. This portion would be based on the proportion of the increased network capacity that their reinforcements created. This method is similar to neighbouring jurisdictions;

**3.11** These generators would not pay for:

**3.11.1** any network reinforcement assets at any voltage above their connection voltage.

## Option 4 - Full Socialisation

- 3.12** This is similar to Option 3. However, it would apply full socialisation to reinforcement costs for network connections for both demand and generation. The table below sets out how the customers would be charged.

**Table 4 – Connection charging regime for Option 4**

| Connection level                                                   | Option 4 - Demand | Option 4 - Generation |
|--------------------------------------------------------------------|-------------------|-----------------------|
| <b>New connection assets</b>                                       | Fully Chargeable  | Fully Chargeable      |
| <b>Reinforcement works at voltage level of connection</b>          | Not chargeable    | Not chargeable        |
| <b>Reinforcement works at one voltage level above connection</b>   | Not chargeable    | Not chargeable        |
| <b>Reinforcement works at &gt;1 voltage level above connection</b> | Not chargeable    | Not chargeable        |

- 3.13** Option 4 proposes that both demand customers and generators seeking a connection would pay for all of their connection assets
- 3.14** These customers would not pay for any network reinforcement assets, subject to a high cost cap

## Link with Cluster Methodology

- 3.15** NIE Network's cluster methodology was first introduced in 2011 with aims to improve access to the network for renewable generation by grouping stations to an ideal location, thus creating a more efficient connection with reduced environmental impact. As outlined the proposals in this paper relate only to those connecting to the distribution network. At present many connecting to the distribution network at 33kV at present do so through NIE Networks' cluster policy. NIE Networks recently consulted on changes to aspects of the connection charging policy at generator clusters – [Cluster Sub-station Update Consultation](#)<sup>8</sup>.

## Costs

- 3.16** NIE Networks has provided a forecast of the likely additional costs per year on consumer bills in 2030/31 for the different socialisation options. See [Annex 1 – Further Analysis of Costs and Benefits of Options](#) for the costs and benefits of each option.
- 3.17** The forecasts apply a high cost cap in their calculation (see [Annex 4 – High Cost Cap](#) for further detail on this concept). The forecast costs range from an additional £2.20 to £3.05 per annum for each domestic customer per year (decreasing to zero over the life of the assets). Costs for larger users are set out in [Annex 2 – Cost Tables](#).

## 4. Benefits of Socialisation

- 4.1** The level of charges for connection to the distribution network in Northern Ireland has been cited as a blocker to new renewable generation and of consumers taking up Low Carbon Technologies. Stakeholders have also reported that those seeking a connection here face higher charges here than in Britain and Ireland. The following gives a brief outline of some of the benefits. Further analysis of benefits is included in Table 5.

### Fairness

- 4.2** The current distribution network connection charging policy imposes potentially significant costs on a small section of connecting customers in weak network areas, where their proposed connection triggers a requirement for network upgrades. In contrast to this, where NIE Networks has recently conducted routine network reinforcement, the customer seeking a connection will not be required to pay for any network reinforcement asset costs. It is seen as unfair for some customers to pay for network reinforcement assets while others benefit from existing socialised network strength.

### Vulnerable Customers

- 4.3** Customers who heat their homes with gas or electricity are protected by UR through codes of practice which prohibit such things as disconnection of vulnerable customers in winter. By removing barriers to the uptake of low carbon electric heating we can extend these protections and the convenience of modern heating to more vulnerable people.

### Climate Change and net zero

- 4.4** A major part of our transition to a clean energy economy depends on adequate investment in renewable generation. Stakeholders have told the Department and UR that our current distribution network connection charging policy is a disincentive to investment in renewable generation. Where our two neighbouring jurisdictions have materially lower up-front charges for connecting renewable generation it makes us a less attractive and a less competitive place for developers to invest. Socialising connection reinforcement costs for renewable generation, removing the investment cost disadvantage, will facilitate achieving the Climate Change Act renewable generation targets.
- 4.5** Electrification of heating and transport are two of the major elements of our path to net zero. Socialising connection reinforcement costs will help us achieve the targets in the Climate Change Act, and the Energy Strategy, and a just transition.

## Regional Balance

- 4.6** Investment in renewable generation will support sustainable growth in our economy. Much of that inward investment and job creation will be in regional areas where the better quality wind resources are typically found.
- 4.7** Socialising connection reinforcement costs introduces the potential for more investment in these regions. Promoting regional balance is one of the Minister's four key economic priorities.



Table 5. Benefit Analysis Chart of the Proposed Options

| Option                                   | Benefit                                                                                                                                                                                                                                                                                                                                                                        | Ranking  |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <b>1</b><br><b>No Change</b>             | <b>Fairness</b><br>No additional benefit                                                                                                                                                                                                                                                                                                                                       | 4        |
|                                          | <b>Vulnerable Customers</b><br>No impact to customers' bills                                                                                                                                                                                                                                                                                                                   | 2        |
|                                          | <b>Climate Change and Net Zero</b><br>No additional benefit                                                                                                                                                                                                                                                                                                                    | 4        |
|                                          | <b>Regional Balance</b><br>No additional benefit                                                                                                                                                                                                                                                                                                                               | 4        |
|                                          | <b>Investment</b><br>No additional benefit                                                                                                                                                                                                                                                                                                                                     | 4        |
|                                          | <b>Overall Ranking</b>                                                                                                                                                                                                                                                                                                                                                         | <b>4</b> |
| Option                                   | Benefit                                                                                                                                                                                                                                                                                                                                                                        | Ranking  |
| <b>2</b><br><b>Partial Socialisation</b> | <b>Fairness</b><br>Removes first mover disadvantage. There will be some benefits in terms of fairness but lower than options 3 and 4. This is because, while some of the first mover disadvantage has been removed by partial socialisation, there will still be cases where the first customer to connect pays more than others who connect to the same line at a later date. | 3        |
|                                          | <b>Vulnerable Customers</b><br>This option is cheaper than options 3 and 4 by £0.80 and £0.85 per year respectively. It therefore impacts vulnerable customers' bills. However, it has a lower impact on vulnerable customers potentially getting access to modern low carbon heating. As such it is ranked equal to options 3 and 4.                                          | 2        |
|                                          | <b>Climate Change and Net Zero</b><br>Partial benefit, but lower than options 3 and 4 because there would not be as much of an incentive to connect low carbon technologies and connection charges would continue to be a barrier to take up.                                                                                                                                  | 3        |
|                                          | <b>Regional Balance</b><br>Partial benefit, but lower than options 3 and 4 as connection charges in some regions could still be higher than others.                                                                                                                                                                                                                            | 3        |
|                                          | <b>Investment</b><br>Less significant benefits for the economy than options 3 and 4, as not as much support given to investment by businesses with the upfront cost of reinforcement.                                                                                                                                                                                          | 3        |
|                                          | <b>Overall Ranking</b>                                                                                                                                                                                                                                                                                                                                                         | <b>3</b> |

| Option                                                                                                                       | Benefit                                                                                                                                                                                                                                                              | Ranking  |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <b>3</b><br><b>Full socialisation for demand customers only (homes and businesses). Partial socialisation for generators</b> | <b>Fairness</b><br>Improves fairness to homes and business but some unfairness remains for generators seeking a connection to the distribution network.                                                                                                              | 2        |
|                                                                                                                              | <b>Climate Change and Net Zero</b><br>Further incentive for the uptake of low carbon technologies such as heat pumps and electric vehicles. However, no improvements in uptake of renewable generation due to connection charges continuing to be seen as a barrier. | 2        |
|                                                                                                                              | <b>Regional Balance</b><br>Significant benefit, but lower than option 4 as there may still be barriers to the uptake of renewable generation.                                                                                                                        | 2        |
|                                                                                                                              | <b>Vulnerable Customers</b><br>Cost to consumers is £0.80 higher than option 2 but only £0.05 lower than option 4. It therefore impacts on customer bills. It however enables access to modern low carbon heating.                                                   | 2        |
|                                                                                                                              | <b>Investment</b><br>Significant benefit for homes and businesses as more support given for investment with the cost of network reinforcement being socialised. The benefit for generators is less significant than in option 4.                                     | 2        |
|                                                                                                                              | <b>Overall Ranking</b>                                                                                                                                                                                                                                               | <b>2</b> |

| Option                                | Benefit                                                                                                                                                                                                                                                                                                                | Ranking  |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <b>4</b><br><b>Full Socialisation</b> | <b>Fairness</b><br>Improves fairness to homes, business and generators connecting to the distribution network.                                                                                                                                                                                                         | 1        |
|                                       | <b>Climate Change and Net Zero</b><br>Further incentive for the uptake of low carbon technologies such as heat pumps and electric vehicles. This will also benefit renewable generation seeking a connection to the distribution network. This option performs best in relation to the removal of barriers to connect. | 1        |
|                                       | <b>Regional Balance</b><br>Biggest benefit to the economy through support given to investment with reinforcement being socialised. This option has the most significant benefit for demand and generation customers in all regions compared to options 2 and 3.                                                        | 1        |
|                                       | <b>Vulnerable Customers</b><br>While this is the highest cost option, it is only £0.05 higher than option 3. It impacts on customer bills however enables access to modern low carbon heating.                                                                                                                         | 1        |
|                                       | <b>Investment</b><br>Eliminates network reinforcement costs for homes, businesses and generators. This provides the highest benefits to customers by stimulating investment here and achieving our Climate Change and Net Zero targets.                                                                                | 1        |
|                                       | <b>Overall Ranking</b><br>This is therefore the preferred option.                                                                                                                                                                                                                                                      | <b>1</b> |

## 5. Questions

- 5.1 Question 1:** Consultees are invited to provide their comments on the costs and benefits of the proposed options.
- 5.2 Question 2:** Consultees are invited to provide their views on which of the proposed options is the best proposal to move forward, including their views on the Department's preferred option 4.
- 5.3 Question 3:** Consultees are invited to provide their comments on the proposal to institute a high cost cap. Issues on which stakeholders may wish to comment include:
- 5.3.1** Should both, or either, of demand and generation connections be subject to a high cost cap;
  - 5.3.2** How should any high cost cap be calculated;
  - 5.3.3** Should we adopt the high cost cap value used in Britain;
  - 5.3.4** Should we calculate a percentile level for the high cost cap (using local values), and if so, what percentile of reinforcement charges should set the high cost cap?

## 6. Stakeholder Feedback and Timelines

- 6.1 Options Feedback** The Department invites stakeholders to respond to this consultation by email with the Option they feel is best suited for our future connections policy. In demonstrating their preferred option we request respondents to highlight their rationale for this choice and where possible provide evidence to reinforce their view.
- 6.2** This consultation will also be hosted online at the following website: NI Direct - Citizen Space [Increased socialisation of connection costs in the electricity distribution network](#)<sup>9</sup>. The Citizen Space website has been specially designed to be as user-friendly and welcoming as possible for those who wish to complete the consultation. It also allows the Department to rapidly collate results. For this reason, we would encourage anyone who is interested in responding to this consultation to utilise Citizen Space as the method of their response.
- 6.3** If this is not possible and you would prefer to provide a written response, please email your response to [connectionchargingreview@economy-ni.gov.uk](mailto:connectionchargingreview@economy-ni.gov.uk)
- 6.4** When responding via email or in writing, please state whether you are responding as an individual, or representing the views of an organisation (please state the name of the organisation). Please also quote the following reference in your response: “Increased socialisation of connection costs in the electricity distribution network”.
- 6.5** Following closure of the consultation, responses will be analysed with the UR, and a summary response drafted and published. The Department will include a list of organisations that responded, unless the submission is marked confidential. Respondents should note that their responses may be made available as a result of Freedom of Information or Environmental Information Requests. However, any disclosure of personal data will only be in accordance with data protection legislation.

### Next Steps

- 6.6** We will take the results of this consultation, and the results of the earlier joint Call for Evidence on the subject (from which these Options were developed), and we will decide which option to proceed with.
- 6.7** UR will develop, and consult on, any necessary changes to the licence conditions of the NIE Networks distribution owner and operator licence.
- 6.8** NIE Networks will develop a new Statement of Charging which reflects the new distribution reinforcement connection charging policy and the new licence conditions.
- 6.9** We currently expect these steps to work through in the middle half of 2025.

<sup>9</sup> [Increased socialisation of connection costs in the distribution electricity network \(nidirect.gov.uk\)](#)

## Timelines

- 6.10** The closing date for responses to the queries raised in this paper is 23:59 on 24 April 2025, a consultation period of 12 weeks. Please note any responses that are provided after the deadline will not be considered in our final decision.

## Treatment of existing and in-flight connection applications

- 6.11** Our potential reforms will not affect the reinforcement contributions required from connection applications made prior to the implementation of our reforms (in the statement of connection charges). However, it is the customer's right to terminate their connection application and reapply should they wish to take advantage of a shallower connection charging boundary following implementation. In making this decision, customers should consider the effect this could have on their position in the connection queue and therefore the completion date of their connection.

## 7. Annex 1 – Further Analysis of Costs and Benefits of Options

### Option 1 – Status Quo – Minimal Socialisation

- 7.1** No change to existing charges to customers seeking a connection or consumers, in relation to connection charging. Charges would be neither increased nor decreased from the current regime.

### Option 2 – Partial Socialisation

#### Cost to Customers

- 7.2** NIE Networks has forecast the cost for partial socialisation of distribution reinforcement connection costs for demand and for generation over the period 2025 to 2035 as approximately £2.20 extra per customer per annum for domestic customers<sup>10</sup>, decreasing to zero over the 40 year life of the assets.

**Table 6. - Cost estimates if Option 2 is implemented.**

| Cost of socialised reinforcement over 10-years | Average socialised cost per year | Additional Cost to domestic consumer per year | Socialised Cost over 40 year life of the asset |
|------------------------------------------------|----------------------------------|-----------------------------------------------|------------------------------------------------|
| £93.4M                                         | £9.34M                           | £2.20                                         | £172M                                          |

### Option 3 – Full socialisation for homes and businesses, partial socialisation for generators.

#### Cost to Customers

- 7.3** NIE Networks has forecast the cost for full socialisation of distribution connection reinforcement costs for demand and partial for generation over the period 2025 to 2035 as approximately £3 extra per customer per annum for domestic customers, decreasing to zero over the 40 year life of the assets.

**Table 7. - Cost estimates<sup>11</sup> if Option 3 is implemented.**

| Cost of socialised reinforcement over 10-years from 2025 | Average socialised cost per year from 2025 | Additional cost to domestic consumer per year | Socialised Cost over 40 year life of the asset |
|----------------------------------------------------------|--------------------------------------------|-----------------------------------------------|------------------------------------------------|
| £116.4M                                                  | £11.64M                                    | £3.00                                         | £214.5M                                        |

### Option 4 – Full socialisation

- 7.4** NIE Networks has forecast the cost for full socialisation of distribution connection reinforcement costs for demand and generation over the period 2025 to 2035 as approximately £3.05 extra per customer per annum for domestic customers, decreasing to zero over the 40 year life of the assets.

<sup>10</sup> Calculated as at 2030/31 price control year.

<sup>11</sup> NB some of these figures are estimates provided by NIE Networks, some figures have been calculated by UR/DfE through information provided by NIE Networks.

**Table 8. – Cost estimates if Option 4 is implemented.**

| <b>Cost of reinforcement over 10-years (from 2025)</b> | <b>Average socialised cost per year from 2025</b> | <b>Cost to domestic consumer per year from 2025</b> | <b>Cost, if we continue to socialise over 40 year life of the asset (capex costs plus return on the asset)</b> |
|--------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| £117.8M                                                | £11.79M                                           | £3.05                                               | £217M                                                                                                          |

**Table 9. - Effect of options on reinforcement charges for different customers seeking a connection.**

All customers seeking a connection will continue to pay full connection asset costs.

| <b>User Type</b>                                                            | <b>Option 2</b>                                      | <b>Option 3</b>                                                            | <b>Option 4</b>                                                            |
|-----------------------------------------------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>HV connected onshore wind farm</b>                                       | Reduced distribution connection reinforcement charge | Reduced distribution connection reinforcement charge                       | Full socialisation of distribution reinforcement costs                     |
| <b>HV Distribution connected onshore wind farm via cluster methodology.</b> | No direct effect.                                    | No direct effect.                                                          | No direct effect.                                                          |
| <b>Small demand connected solar farm (generating)</b>                       | Reduced distribution connection reinforcement charge | Reduced distribution connection reinforcement charge                       | Full socialisation<br>Full reduction of distribution reinforcement charges |
| <b>EV charging infrastructure for fleet of delivery vehicles</b>            | Reduced distribution connection reinforcement charge | Full socialisation<br>Full reduction of distribution reinforcement charges | Full socialisation<br>Full reduction of distribution reinforcement charges |
| <b>Domestic household installing a heat pump and EV charger</b>             | Reduced distribution connection reinforcement charge | Full socialisation<br>Full reduction of distribution reinforcement charges | Full socialisation<br>Full reduction of distribution reinforcement charges |



**Table 10. Forecast costs for 4 Options for distribution network reinforcement costs**

The table below shows the cost to the consumer for distribution network reinforcement costs under all 4 options.

|                                                                                                     | <b>Overall Reinforcement Cost £M</b> | <b>Socialised Cost per annum £M</b> | <b>Additional Cost per domestic consumer £p.a.</b> | <b>Total Socialised Cost to Consumers over asset lifespan (40 years) £M (2024 £s)</b> |
|-----------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Option 1 – Status quo</b>                                                                        | 11.78 per annum<br>117.8 total       | 0.00                                | 0.00                                               | 0.00                                                                                  |
| <b>Option 2 – Partial Socialisation</b>                                                             | 11.78 per annum<br>117.8 total       | 9.32                                | 2.20                                               | 171.84                                                                                |
| <b>Option 3 – Full socialisation for homes and businesses, partial socialisation for generators</b> | 11.78 per annum<br>117.8 total       | 11.63                               | 3.00                                               | 214.54                                                                                |
| <b>Option 4 – Full Socialisation</b>                                                                | 11.78 per annum<br>117.8 total       | 11.78                               | 3.05                                               | 216.7                                                                                 |

**Note:** Forecasts are inherently subject to a range of assumptions and uncertainties, this is especially relevant for costs forecasts which extend out ten years from now. Annual cost to consumers will decrease to zero over the life of the assets.

## 8. Annex 2 – Cost Tables

**Table 11. – Estimated annual cost increase per year for customer bills for socialisation options between 2025 and 2035 calculated for the billing year 2030/31<sup>12</sup> and decreasing to zero over the life of the assets (40 years expected).**

| Customer Category                | Option 1 p.a. | Option 2 p.a. | Option 3 p.a. | Option 4 p.a. |
|----------------------------------|---------------|---------------|---------------|---------------|
| <b>Domestic Customers</b>        | £0            | £2.20         | £3.00         | £3.05         |
| <b>Small business &lt; 70kVA</b> | £0            | £8.10         | £10.10        | £10.20        |
| <b>LV SME</b>                    | £0            | £121.40       | £151.60       | £153.40       |
| <b>HV SME</b>                    | £0            | £404.60       | £505.10       | £511.20       |
| <b>HV LEU</b>                    | £0            | £917.60       | £1,145.60     | £1,159.40     |
| <b>33kV LE+U</b>                 | £0            | £1,756.40     | £2,193.00     | £2,219.40     |

**Note:** Forecasts are inherently subject to a range of assumptions and uncertainties, this is especially relevant for costs forecasts which extend out ten years from now.

- 8.1** Total reinforcement costs which would be socialised over the period 2025 to 2035, range from a high of £118 million to a low of £93 million under the different proposals, between £11.8 million and £9.3 million per year.
- 8.2** Currently, the options proposed, and their forecast costs relate only to increased socialisation of connection reinforcement costs incurred between 2025 and 2035. These will be recovered over the 40 year life of the asset. See [Annex 6 – NIE Networks Regulated Asset Base](#) for an explanation of NIE Networks' RAB and how the socialisation costs are paid by electricity consumers.
- 8.3** The costings in this paper represent the costs of the proposed level of socialisation to 2035. The effect of the RP7 reinforcements will be reviewed in order to inform the decisions in the next price control period.
- 8.4** Rather than requiring consumers to pay for all the reinforcement up front, the additional reinforcement assets paid for by consumers will be treated like standard network assets and added onto NIE Networks' RAB and paid for over their lifetime (usually 40 years) to cover depreciation and NIE Networks' borrowing costs. The actual effect on consumers' bills will depend on various factors, such as the level of demand due to the uptake of EVs and heat pumps, cost of materials, inflation and rate of return.

<sup>12</sup> The 2030/31 year (April 2030 to March 2031) is the furthest out year for which DUoS bill projections are valid, because these projections rely, in part, on a number of values which are set in each Price Control. Items such as the WACC, beyond 2030/31 will be covered by RP8.

- 8.5** The total cost to consumers of the £118m of distribution network reinforcements being spread over 40 years (the economic life of the assets) will be approximately £217m (in real terms) under the highest socialisation proposal and current economic values.
- 8.6** NIE Networks has forecast the total and average costs of socialising distribution network reinforcement costs per year to 2035 across different connection boundaries/socialisation options. In the table below those costs are separated between demand and generation connections (regardless of voltage).

**Table 12. – Socialised costs results (Generation and Demand)**

| Case              | Total distribution reinforcement cost to 2035 (£M) | Average distribution reinforcement cost per year (£M) | Average additional socialised cost per year to 2035 (£M) |      |       |       |
|-------------------|----------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|------|-------|-------|
|                   |                                                    |                                                       | Option                                                   |      |       |       |
|                   |                                                    |                                                       | 1                                                        | 2    | 3     | 4     |
| <b>Overall</b>    | 117.8                                              | 11.78                                                 | 0                                                        | 9.34 | 11.66 | 11.78 |
| <b>Generation</b> | 18.2                                               | 1.82                                                  | 0                                                        | 1.46 | 1.68  | 1.82  |
| <b>Demand</b>     | 99.6                                               | 9.96                                                  | 0                                                        | 7.88 | 9.96  | 9.96  |

## 9. Annex 3 – UR/DfE Joint Call for Evidence - Responses

- 9.1** On 7 July 2023, UR and the Department published a joint [Call for Evidence](#)<sup>13</sup> on the Electricity Connection Policy Framework<sup>14</sup> for the distribution network, which closed on 6 October 2023. The Call for Evidence did not extend to connections for the transmission network which are covered separately, under SONI’s connection charging policy and are outside the scope of this paper. We followed this up by publishing the Call for Evidence responses in full, along with a summary<sup>15</sup> of these responses.
- 9.2** Most stakeholders expressed a favourable inclination towards a more socialised connection charging policy, and therefore more socialisation of network reinforcement costs (this view was expressed mainly by generators, developers and building suppliers).
- 9.3** A smaller, but significant segment of respondents (mainly 3rd party/consumer representatives) noted the potential short-term financial burdens of socialised connection costs on the fuel poor and other vulnerable groups.
- 9.4** The majority of respondents considered that our present charging arrangements may hinder the roll-out of low carbon technologies across the energy system and that current charging arrangements are causing distortions and barriers to investment on our distribution network.

13 [Call for Evidence - Electricity Connection Policy Framework Review](#) ([www.uregni.gov.uk](http://www.uregni.gov.uk))

14 This review considered all aspects of electricity connections to the distribution network apart from: the Standard Connection Charge within NIE Networks’ Statement of Connection Charges (for housing developments of more than 12 dwellings); the connection charging policy for generation cluster developments and any issues to do with future offshore connections as this is the subject of a separate DfE workstream.

15 [Connections Policy Framework in Northern Ireland – Call for Evidence – responses published](#) | Utility Regulator ([www.uregni.gov.uk](http://www.uregni.gov.uk))

## 10. Annex 4 – High Cost Cap

- 10.1** One of the concerns relating to socialisation of network reinforcement costs is that it provides no locational signal. Consumers wishing to create a new connection will be indifferent to the effect on the network, the cost to the network operator of providing their connection, or where they seek their connection to be located. It could be argued that network reinforcement connection charges should provide a signal to consumers to seek connections in strong areas of the network which do not need reinforcement, and in which there is spare capacity.
- 10.2** Socialisation will reduce the locational signals and without a high cost cap the general consumer base could be asked to pay for unreasonable requests for connection.
- 10.3** One solution, to prevent the wider consumer base paying excessively high amounts for the benefit of a relatively small proportion of connecting customers, is to make connection reinforcement costs which are socialised subject to a cap, a high cost cap. A high cost cap allows new connections the benefit of socialisation, but charges them the cost of network reinforcement above that cap. It takes away a lot of the inhibition factor of high reinforcement charges, while ensuring that new connections are not fully indifferent to the cost to consumers of their connection.
- 10.4** It is important to consider the size of the high cost cap, and whether to make it a fixed cap, or based on the cost per MW or kW of the requested connection.
- 10.5** In Britain, the [high cost cap](#)<sup>16</sup> was set at the 95th percentile of connection reinforcement costs i.e. £1,720/kVA for demand and £200/kVA for generation. This required significant data to develop a reliable number, and significant resources to collate and calculate it, and even then required significant assumptions to be made due to some parts of the required data not being collected/available. The high cost cap in Britain was calculated using data which included a number of Distribution Network Operators (**DNOs**) covering networks with similar characteristics to NIE Networks. It was set at a level such that the cap was triggered in not more than 5% of connections in any of those regions. On that basis there is a good basis for comparability with our system.
- 10.6** UR and the Department consider the market for new connections here to be too small to provide a reliable value for the 95th percentile of reinforcement costs, with the value likely to fluctuate over relatively short periods of time, and thus be unreliable. Like Britain, some parts of the needed data are not collected here. On that basis, the alternatives for setting a high cost cap here appear to be to:
- 10.6.1** use local data, knowing it is likely to be incomplete and volatile;
- 10.6.2** use a value informed by this consultation, and then subsequent experience; or

16 [Demand HCC development methodology \(www.ofgem.gov.uk\)](#)

**10.6.3** assume that as overall costs for reinforcement in Britain are similar to ours, the Value of the 95th percentile in Britain is a useful value to commence with.

**10.7** In Britain, the high cost cap triggers a liability to pay for all reinforcement costs larger than the high cost cap. Up to the high cost cap, any reinforcement costs are paid for by the customer in proportion to the amount of new capacity their connection has triggered. This only applies at the voltage level of connection. The DNO socialises the cost of any reinforcement at the voltage level above the connection.

## 11. Annex 5 – Potential Cost Effects on Example Connections

**11.1** The table below sets out some hypothetical, but representative, the Department examples prepared by NIE Networks in response to a costing request by and UR, detailed in the attached document from NIE Networks. They are based on current prices and current network standards.

**Table 13. – Examples of potential cost effects of different options on different scenarios**

|                                       | Total Cost of Works | Unsocialised Network asset Reinforcement Cost | Connection Assets for Customer | Total Cost for Customer |           |           |           |
|---------------------------------------|---------------------|-----------------------------------------------|--------------------------------|-------------------------|-----------|-----------|-----------|
|                                       |                     |                                               |                                | Option                  |           |           |           |
|                                       |                     |                                               |                                | 1                       | 2         | 3         | 4         |
| <b>Large Factory connecting at HV</b> | £460,000            | £275,000                                      | £185,000                       | £460,000                | £356,875  | £185,000  | £185,000  |
| <b>Domestic Rural Connection</b>      | £11,917             | £7,407.67                                     | £4,509.48                      | £11,917                 | £7,176.24 | £4,509.48 | £4,509.48 |

**11.2** For the Large Factory connecting at High Voltage, in the worked example, the factory requires 3,500 KVA of electrical capacity. The reinforcements needed to provide that amount of capacity will actually provide 5,600KVA of electrical capacity. Under the partial socialisation option, the factory will pay 3,500/5,600 of the reinforcement costs i.e. £171,875/£275,000, or 62.5% of the reinforcement cost.

**11.3** For the rural connection the increased demand is 18kVA, while the new capacity from reinforcement is 50 kVA, so for a partial socialisation charging option the customer would pay 18/50 of the reinforcement cost of £7,407 which is £2,667 or 36% of the reinforcement cost.

## 12. Annex 6 – NIE Networks Regulated Asset Base

- 12.1** NIE Networks funds its capital operations through a structure called the Regulatory Asset Base (**RAB**). See the OECD document “The Regulatory Asset Base and Project Finance Models - An Analysis of Incentives for Efficiency” for a discussion of the RAB model<sup>17</sup>.
- 12.2** The RAB model is designed to spread the cost to consumers of network assets over the useful lifetime of the assets, rather than requiring them to pay for them upfront.
- 12.3** When NIE Networks purchases or constructs a new asset, such as a transformer, the value of the asset is placed onto the NIE Networks RAB.
- 12.4** Usually NIE Networks finances these purchases by borrowing (bonds), and incurs an interest bill until the bonds are paid off.
- 12.5** NIE Networks is paid, each year, through electricity charges, two elements in relation to assets which have been placed on its RAB. The first is an amount for depreciation, and the value of the asset on the RAB is then reduced each year by the amount of depreciation paid to NIE Networks. Over the useful life of the asset these depreciation payments reduce the value of the asset on the RAB, eventually to zero.
- 12.6** The depreciation payments are designed to return to NIE Networks the amount of money it paid for the asset.
- 12.7** The second is an amount for a return on NIE Networks’ investment in the asset, and it is paid on the remaining value of the asset in the RAB, until that value has been depreciated to zero and the return thus reaches zero.
- 12.8** The return payments are designed to pay for the cost of interest on the bonds used to fund the purchase, and to provide NIE Networks with a return to run its business and an amount of profit.
- 12.9** Because NIE Networks is a monopoly business, i.e. it is the only network owner and consumers have no choice or competition, the depreciation and the return are set by UR in its Price Control determinations e.g. RP7. UR sets them to be the most efficient possible for electricity consumers, while still providing NIE Networks with enough funds and profit to run its business.
- 12.10** Where an asset is placed on a RAB, the total cost paid will always be higher than the initial purchase price, because it is paid for over the life of the asset, usually 40 years for network assets.
- 12.11** The total cost of payments on the socialised reinforcement/network assets is given in the tables in this document. As noted above, they are larger than the initial reinforcement costs because of the delayed payment mechanism of the RAB, which avoids electricity consumers from having to pay for the reinforcements upfront in the year they are built.

<sup>17</sup> [The Regulatory Asset Base and Project Finance Models \(www.itf-oecd.org\)](http://www.itf-oecd.org)