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Subject: my response to UR's consultation on the 'Review of Electricity Distribution and Transmission Connections Policy'

Dear UR,

1. I am responding to your 'call for evidence' dated 9th November 2016.
2. Firstly, I would like to thank UR for turning its mind to this issue. I recognise that it is indeed a multi-faceted and complex problem. It will take a lot of work to undertake a thorough and satisfactory review.
3. The current connection policy is the bottleneck for making efficient electricity related investments in Northern Ireland. It is also a major problem for the economy in general.



4. I have focused on one issue in particular in this response – the 'full cost approach' to charging electricity customers to get connected (which then creates a 'deadweight loss' issue).
5. The points I raise in this letter are potentially worth £480m to the Northern Ireland economy. A lot of money, time and effort has been, and continues to be, wasted in this area. It is really important that the UR uses its position to avoid this wastage continuing.
6. Just to confirm - I have not yet asked Northern Ireland Electricity Networks (NIE) or System Operator Northern Ireland (SONI) for a connection to the electricity network.
7. I am requesting an urgent meeting with UR to discuss the issues raised in this response. Please let me know when UR is available. I will gladly come to the UR's office.
8. I am writing to other industry stakeholders including NIE, SONI and the DfE with a similar letter to this one.

9. The remainder of this letter sets out how the UR has: failed in its duty to protect consumers; been captured by NIE; potentially lost millions of pounds for Northern Ireland plc; and exposed customers to unnecessary capacity risk.
10. I also answer the UR's consultation questions along the way.
11. This remainder of this letter is structured as follows:
 - a. Introduction;
 - b. UR Question 1 - "Do you agree with these strategic priorities";
 - c. UR Question 2 - "Do you agree that these are the main developments we should be mindful of? Are there any other developments which are important?";
 - d. UR Question 3 - "Is there a role for connections policy to promote effective network management? If so, what are the issues which need addressed and potential solution as part of this review?";
 - e. UR Question 4 - "Should we review the distribution charging framework, with a view to making connection charges deeper? If so, how should this be designed? What are the benefits, costs and risks of doing so?";
 - f. UR Question 5 - "Should we review how the connections process and queue is managed? If so, what are the issues which need addressed and potential solutions?";
 - g. UR Question 6 - "Should we consider connections customer service, engagement and pricing transparency as part of this review? What are the issues which need addressed and potential solutions?";
 - h. Concluding remarks;
 - i. A list of recommendations; and
 - j. Proposed next steps.

Introduction

12. I am motivated to write to you because I am trying to plan for the future: in particular I am trying to establish how I could change or diversify from my current farm business. Like many other farmers in Northern Ireland, I recognise that our current farm business/land is not sustainable in its current form (beef or sheep farming is simply not viable long term).
13. The UR's consultation comes at a critical stage. NIE's next price control is due to start in October 2017 and within that price control NIE will request allowances for connections related staff and projects. Benchmarking will also take place in order to try and compare NIE to its peers in GB. While it might be a little late to incorporate within the process a very significant change to the connection policy, no decisions have been made yet and the direction of travel for this work-stream could be referenced as the underlying assumptions upon which the decisions for the next price control are based. For price control reasons alone, the UR should bring the connection policy into line with the GB policy. Moreover, the

current connection policy is clearly not-fit-for-purpose. Why are the differences to GB so significant? Why should this remain the case? What is so special about NIE/SONI & Northern Ireland or have we just got left behind?

UR - “Do you agree with these strategic priorities?”¹

14. No – I do not.
15. Firstly, the UR has failed to identify the ‘deadweight loss’ issue with regards to the current connection charges. By charging connecting parties the actual and full cost amount (at connection level and one level above) (hereafter referred to as the ‘full cost approach’) there is an inherent cross-subsidy to future customers and an overcharge to the connecting party, when additional network assets are needed for that particular connection. This is undue discrimination against the connecting party.
16. Would anyone in Northern Ireland benefit from Natural Gas if the first customer was charged the full cost of the connecting assets? No: there would be no first customer and no-one thereafter would be able to access or benefit from Natural Gas. What is the difference between rolling out a new gas network, such as Gas to the West, and investing in electricity infrastructure? Is Natural Gas now more important than electricity? The UR should recognise a strategic priority to balance the costs & interests of current electricity customers with the costs & interests of future customers.
17. The UR’s consultation document states “We want to ensure wider consumers are protected: they should only have to pay what is necessary as a result of a connection and so bills should be kept as low as possible”.
18. The UR implies here that access to the electricity grid is a luxury. It is not. In fact it is written into primary legislation that customers should be able to access electricity. It is not for the UR, SONI or NIE to block this access because of short-sightedness.
19. The UR implies that somebody (presumably NIE or SONI) should decide whether something is “necessary”. That is not NIE’s or SONI’s role and nor is it the role of the UR to facilitate the same.
20. The priority for UR, NIE & SONI should in fact be that connection costs are efficient. Somehow all three parties appear to have forgotten this (even though all three have duties with regards to efficiency).
21. The UR should instead have a strategic priority to establish what exactly ‘efficient connection costs’ look like. How much should it cost to connect different types of customer, in different areas, using different assets? How can the UR know whether connection costs are efficient if it does not have a benchmark for connection efficiency?
22. The UR states a strategic priority to keep bills “as low as possible”. This is not in line with the UR’s duty (which is actually to protect customers). If importing customers do not have access to electricity they are not protected – they are in fact, exposed (balancing risk). In addition,

¹ See this question and UR’s other questions here: <https://www.uregni.gov.uk/sites/uregni/files/media-files/Electricity%20Connections%20call%20for%20evidence%20November%202016.pdf>

by blocking efficient generation investment the UR is not protecting other customers – it is in fact, also leaving them exposed (cost risk and capacity risk).

23. There would be no investment in any new assets for NIE (or any of the other utilities) if the UR had a duty to keep bills “as low as possible”. The UR should instead recognise that there is a balance to be struck between costs and benefits. The current connection policy does not properly charge for upgrades to the network even if they are efficient. Indeed the UR’s connection policy blocks investments which are more efficient than: historical investments; ‘Clusters’; and investments by network operators in GB.
24. Has the UR compared the benefit of making an electricity investment to the benefit of investing in gas or water infrastructure? The UR has responsibilities, knowledge and remit across all these areas but there doesn’t appear to be any proportionality test applied to electricity investments.
25. There is a risk that customers are charged multiple times for the same thing. The following charges can overlap:
 - a. the use of system charges (due to price control allowances);
 - b. balancing costs;
 - c. connection rebates (both within and after 5 years of the connection);
 - d. connection charges; and
 - e. locational use of system charges.
26. The UR should have a strategic priority to ensure that customers are not charged more than once for the same thing.
27. Lastly, the UR itself notes that it has allowed NIE to breach its obligation to provide connection offers within 3 months. The UR is guilty of regulatory capture. How can stakeholders have any confidence in the UR’s review if it doesn’t ensure that NIE are compliant with its licence? What is the point of this work-stream if NIE can breach licence conditions? Can NIE simply convince the UR that it is too difficult to meet its obligations even after this review? Never mind failing in its own duties, the UR is inflicting more pain on itself by not holding NIE to account. The UR’s costs of handling complaints must very large because there is no deterrent here for NIE. This is sub-optimal regulation.
28. Is the UR monitoring closely NIE’s performance in the areas of connections? If not – what good can come of this review? If any changes come about as a result of this review, how would the UR know whether NIE is compliant in the future? For these reasons the UR should have a strategic priority to protect customers from NIE breaching its licence conditions or any other connection related rules.
29. To summarise – the UR is short-sighted in its approach: its strategic priorities should be more in line with its duties. The UR is taking a different approach to electricity than it takes to gas and water. The UR has been captured by NIE and the UR does not recognise that there is a balance to be made between current customers and future customers. The UR has also failed to recognise the balance between the cost and benefit of electricity investments. The UR has not identified how it will ensure NIE is compliant nor how it would monitor its compliance (with either its current or future obligations).

UR - “Do you agree that these are the main developments we should be mindful of? Are there any other developments which are important?”

30. I agree with the UR that it has highlighted many connection related developments.
31. The UR will play a crucial role in bringing the various elements together into a cohesive connection system.
32. However, what is clear from the UR’s consultation is that the UR is not carefully considering connection developments in GB and how the lessons learned in that market can be applied to the NI market to avoid similar mistakes and to prevent future inefficiency. The UR is regulating by reacting instead of regulating by preventing.
33. The UR is incorrect in assuming that NIE and SONI do not need to offer a connection ‘where there is a lack of network capacity’. The UR offers no evidence for this statement because it is false. Ofgem take the opposite view in interpreting the same law – there is no reason in law regarding capacity that excuses NIE or SONI from providing a connection. If there is a reason then the UR should show it to stakeholders and contrast it with GB law.
34. If NIE do not provide access then no-one can get access. NIE have no right to refuse a connection because it would be unfair to allow them to do so: it owns a monopoly electricity network. In addition, this is why NIE have a £24m allowance (+50% for any overspends + a WACC) within their price control – to provide customers with access, in line with their legal and licence obligations. The question isn’t about capacity it is about cost.
35. The UR highlights that Managed Connections ‘may not be economically feasible’. This is good news because Managed Connections are unduly discriminatory on marginal electricity customers. This is an economic problem (‘deadweight loss’) not an engineering one.
36. I disagree with the UR’s focus on legal decisions that it has made. Especially where these appear to be contradictory to the status quo. The UR should focus on economic regulation of electricity connections and try not to become a full time dispute resolution body. Does the UR not agree that once a connection has gone to a dispute that it has clearly failed to protect customers in the first instance?
37. The UR also reveals again that it has been captured by NIE and/or SONI. It is not the UR’s role to resolve network capacity issues for NIE and/or SONI nor is it the UR’s role to relax or waive rules and standards which NIE and/or SONI are supposed to adhere to. The UR states, among other things, that “If more renewable generation is connected, beyond that which is connected and committed.... there are likely to be significant electricity output reductions imposed on controllable generation.” The UR is clearly operating outside its vires, remit and expertise. It is not the UR’s role to sympathise with NIE and/or SONI about how difficult it is for NIE and/or SONI to meet their obligations. In doing so the UR becomes the bottleneck for innovation and network solutions. Clearly, if the UR interferes, there is no incentive for NIE and/or SONI to operate the networks efficiently: they are protected (and limited) by the UR’s attempt to solve any issues on their behalf.

38. If NIE and/or SONI “lack visibility and control over SSG renewable electricity” as the UR claims – should this not call into question the efficiency of NIE and/or SONI? How have NIE and/or SONI tried to increase their visibility and control, while balancing the cost, before deciding to constrain/curtail? What balance has NIE and or SONI struck? Notwithstanding this – how does self-consumed generation differ from reduced demand? Is there a big difference between the connected party consuming its own generation and the connecting party simply consuming less? How does the UR know for sure whether the claims made by NIE and/or SONI are robust or whether they are just anecdotal?

UR – (Q3) “Is there a role for connections policy to promote effective network management? If so, what are the issues which need addressed and potential solutions as part of this review?”

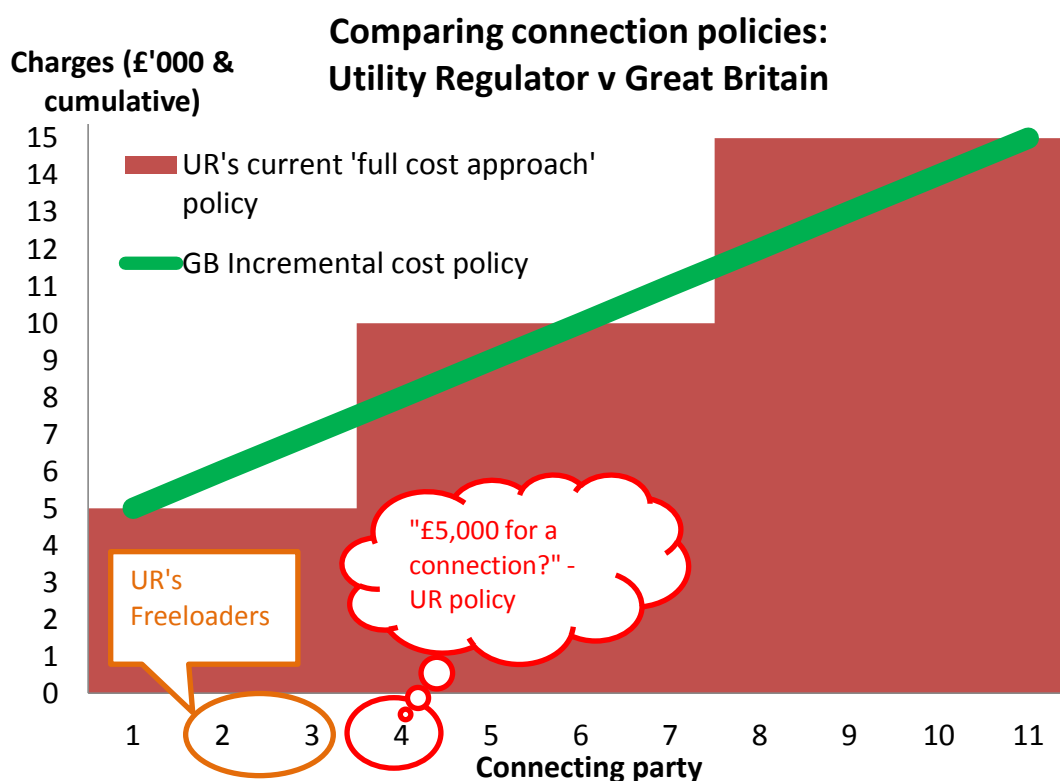
39. Connections policy plays a key role in an effective electricity network. Moreover, the connection policy will play a crucial role in an effective electricity system and an effective Northern Ireland economy. The UR should not underestimate the importance of the connection policy. UR should instead ensure that the current problems get the full resourcing they deserve: the UR cannot fulfil its duties without doing so.
40. The UR seems to reveal more regulatory capture in the wording of this question. It is not the UR’s role to manage the NIE electricity networks. The UR should focus on economic regulation with regards to connections.
41. The UR should try and create proper incentives on NIE and SONI to encourage NIE and SONI to operate efficiently. It should not be about minimising the size of the system, or about minimising the short term costs at the expense of other industries or at the expense of future electricity customers who are then exposed to capacity risk and cost risk.
42. The UR should think again about how it can incentivise within a long term connection policy. The correct questions for the UR are as follows:
- a. How can the UR incentivise NIE & SONI to provide & operate connections efficiently?
 - b. How can customers be charged in a way which contributes towards an efficient electricity system (not just network)?
 - c. How can generation be encouraged to the benefit of the end user?
43. The UR should insulate itself from NIE before it tries to answer these questions.
44. These are whole life cost & benefit questions. The UR should not pigeon-hole this as a network issue only. This is much bigger than a network issue. The UR should focus on end customers and how different types of import customers and export customers are affected and incentivised by the connection policy. The UR correctly identifies how the industry has changed but the UR has failed thus far to properly recognise its role and get ahead of the current issues or stop new ones arising. I believe this is because the UR is not thinking independently. The UR should avoid unique approaches unless UR is absolutely confident that unique approaches are necessary.

UR - (Q4) “Should we review the distribution charging framework, with a view to making connection charges deeper? If so, how should this be designed? What are the benefits, costs and risks of doing so?”

45. The connection charging framework is the single biggest problem for the connection policy. It is wildly out of date and hugely sub-optimal. It is more than 20 years behind the GB equivalent².
46. Obviously the charging framework in GB is complex and may not be wholly suitable or proportional for application to Northern Ireland. However, does the UR think that the complications that have arisen in Northern Ireland have not also arisen in GB? Obviously there is a lot that the UR can learn from GB in this area.
47. Perhaps there should also be a charging methodology that is common across Ireland. There may be complications to overcome in terms of currency but these are probably not insurmountable if the UR were to focus on capacity & Purchasing Power Parity. A fundamental review would consider this but this is probably not appropriate for the UR to consider unless it first accepts that there is a huge issue with the current charging framework in the form of a ‘deadweight loss’ (see below). However a fundamental review of the electricity connection policy would consider closely how the separate and different connection frameworks in Northern Ireland and the Republic of Ireland unduly distort the effectiveness of the Single Electricity Market. Has the UR checked whether the current level of cross-subsidy between customers is consistent with EU legislation or with the UK?
48. The UR asks whether connection charges should be made “deeper”. The UR implies that the connecting customer currently does not pay enough towards reinforcement and that the cross-subsidy between connecting customers and other electricity customers should, in fact, be greater than it currently is.
49. I agree with the UR that this is indeed the fundamental question to answer in this review and the main reason why the connection policy is so fundamentally flawed at the moment.
50. However the way the UR has asked the question suggests that the UR does not fully understand the current connection policy: some customers are charged nothing for capacity which they use whereas other customers are charged in full for the capacity used by others. The answer to the UR’s question is: the customers who are ‘free-loaders’ should be charged more and the customers who are charged for the actual and full costs of their connection (and one level above) should be charged less. This can be achieved by notional charging: for example - by charging everyone for the capacity they use. Otherwise there will be a ‘catch-22’ situation where no-one wants to pay for an upgrade because typically the upgrade releases much more capacity than any one customer needs.

² See for example a GB DNO connection charging methodology here: <https://www.ukpowernetworks.co.uk/internet/en/about-us/documents/CCMS-May16>. See also a guide from Ofgem here: <https://www.ofgem.gov.uk/ofgem-publications/87259/guideelectricitydistributionconnectionsolicy.pdf> and other related documents here: <https://www.ofgem.gov.uk/electricity/distribution-networks/charging-arrangements>

51. To illustrate this graphically, and in a stylised way, the connection policies can be compared as follows:

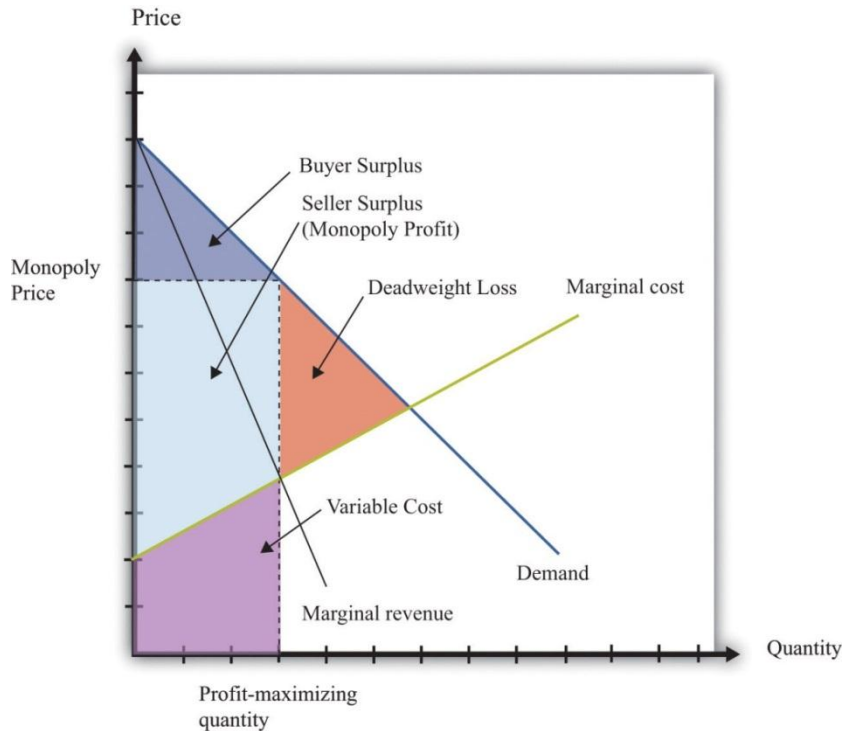


52. The UR should conduct an economic analysis. The analysis should consider:

- a. To what extent should connecting customers pay for network reinforcement or network upgrades to facilitate their connection, regardless of whether the upgrade is required now or in the future? For example;
 1. Should there be a cap on the subsidy from 'wider customers' to connecting customers (eg the GB DNO's seem to set this at £200/kwh³);
 2. Should there also be a cap on the charge to connecting customers on the basis that some customers will be unduly discriminated against (eg at certain points in the queue / cycle of upgrades, or given their location, even though their connection may bring benefits to the system such as greater resilience);
 3. Should these caps be different for different types of electricity customer;
 4. Should the caps reflect the geographical location due to, for example, the tendency for wind generation to be in the West (in addition, the GB cap may be reflective of GB circumstances but sub-optimal for Northern Ireland); and / or
 5. Should there be a notional long run incremental cost policy (LRIC).
- b. How should different electricity customers (for example import or export, different voltage levels, different locations etc) be charged differently for:

³ See for example paragraph 5.15 here: <https://www.ukpowernetworks.co.uk/internet/en/about-us/documents/CCMS-May16>

1. connection works; and
 2. operation of those connection works, over the lifetime of the connection assets;
- c. How should the connection charges, both installation and on-going, reflect the different types of benefit that connecting customers provide to the system overall (some customers are more costly than others and some customers may cost the system very little if anything – ie zero export & self-sustaining customers);
 - d. In a notional electricity network, how can the connection charges incentivise efficient electricity connections, on an incremental basis, without unduly discriminating against different sizes of generation or location of generation, or without putting undue weight on historical network investment decisions (these should not influence future decisions); and
 - e. To what degree should the electricity charges reflect reduced fault levels or other consumer benefits.
53. The most important thing for the UR is to get the connection methodology, policy and costs as close to optimal as it can, using all the evidence (actual & notional costs) and precedent (GB, ROI) that it reasonably can. Obviously this could be a large exercise but the UR should at least conduct a preliminary or scoping exercise to secure that the connection policy is fit-for-purpose and that it incentivises the correct outcomes in line with the UR's duties.
54. The UR should focus on the 'deadweight loss' risk as depicted by the following graph:



55. To do so obviously requires careful thought and analysis. The UR needs to show evidence to stakeholders that it has met its consumer duty with regards to the profit maximising quantity and the monopoly price that NIE & SONI are charging for connections.

56. By deepening the connection charge does the UR intend to increase the NIE & SONI monopoly prices? This would seem to reduce the quantity supplied (export) and consumed (import) to the overall loss of all stakeholders (larger deadweight loss).
57. There is an optimal point and a balance to be struck. It is vital that the UR tries to find out the efficient variable cost and how it can be incorporated within the connection policy and connection charges. My instinct is that a brand new connection policy and set of charges are required. However, this should not deter the UR – it is its duty.
58. In addition, and should the UR have sufficient resources (balancing the benefit and cost of conducting a larger review) the UR should also conduct a policy analysis on connection charges. The analysis should try to answer questions such as:
- a. How can the connection policy be consistent with renewable energy incentives and intentions (on the one hand renewables have been incentivised but on the other they have been blocked from accessing the electricity system by the current connection policy);
 - b. How can the connection charges remain consistent and avoid charging customers more than once for the same thing (an incremental cost charging regime would probably avoid the rebate issue altogether);
 - c. How can the reinforcement charges be best monitored for any subsequent rebates that are due – how could the UR best monitor or control whether rebates are due and the quantity & application of those rebates;
 - d. Should the connection charges favour particular import / export customers where those customers are more beneficial to the overall total electricity charge;
 - e. How can NIE be exposed to the same level of reinforcement costs in their price control as the GB DNO's are exposed to in the equivalent GB price control;
 - f. Given the future expected arrangements for the electricity energy market – how can the connection policy ensure that charges reflect the end benefit to electricity customers;
 - g. How should the UR's approach to connection charges remain consistent with charges for use of system (incentivising low cost & off-peak usage, or in the case of generation – incentivising on-peak export);
 - h. Is it optimal that electricity customers are charged in full up front (ignoring the amount of the charge)? For example – the current connection policy is probably sub-optimal in the following two ways:
 1. Customers can-not benefit from spreading the cost over the life of the asset in a similar fashion to other large purchases (or the profiling of gas charges in Northern Ireland). It seems sub-optimal for network assets to be paid at the consumers' cost of capital instead of the monopoly company's cost of capital; and
 2. Charging customers an application fee, or any other fee prior to receiving a quote would seem sub-optimal because it simply creates a barrier to access.

This rarely happens in non-monopoly businesses – companies should encourage customers to take their product, not create barriers for them.

59. The benefits of conducting a thorough review in these areas are potentially quite large but I hope the UR can find the resource given the following potentially huge benefits.
60. By way of example, the opportunity cost of not conducting a full and proper review of prices is that European grant funding⁴ will not be taken advantage of by Northern Ireland. The local councils who administer the funding explicitly exclude renewable technologies⁵ and renewable projects from applying for grant funding because of connection issues. GB and ROI councils did not do this. I estimate Northern Ireland has, to date, lost £100million - £200million because of this and will lose another £100million - £200million over the coming 4 years.
61. In addition, I estimate a further knock-on effect on energy charges alone to amount to at least £10m per annum for Northern Ireland's electricity customers.
62. In total therefore the estimated cost of the current connection policy compared to a more optimal policy could be between £280 million – £480million over a period of 8 years.
63. Furthermore, if the UR changes the connection policy to incorrectly deepen the charges, there is a risk that the UR could make this cost even greater.
64. There is a risk that the UR could put in place new barriers to reaching an effective connection policy and inadvertently make the current situation even worse. For example the UR appears to imply that it is a good idea to discriminate against customers in geographical locations where there is no capacity (mostly the West) in favour of geographical locations where there is more capacity (mostly the East). This could create more perverse incentives and undermine the effective operation of efficient competition in generating, buying, selling and transporting/distributing electricity.

UR - (Q5) “Should we review how the connections process and queue is managed? If so, what are the issues which need addressed and potential solutions?”

65. From the date of the customers connection application, regardless of whether NIE & SONI refer to this point onwards as a queue or not, both NIE & SONI should have an obligation to inform customers on a bi-weekly basis:
- a. the customer's position in the queue;
 - b. the forecast installation date;
 - c. the forecast energisation date;

⁴ For example see the Rural Development Fund here: <http://martinamep.eu/wp-content/uploads/2014/04/Gateway-to-E.U.-Funding-Martina-Anderson-MEP.pdf>. It is worth €454million over the period 2014-2020. A similar scheme operated before 2014.

⁵ For example see the 'ineligible expenditure' as applied by one of the Northern Ireland council's (my local council - Causeway Coast and Glens) here: https://www.causewaycoastandglens.gov.uk/uploads/general/Scheme_Sheets_Final.pdf

- d. the forecast customer cost of the connection (split between contestable and non-contestable);
 - e. the latest design specification for the customer's connection; and
 - f. the actual cost of the connection (split between contestable and non-contestable).
66. Other important information (such as deadlines by when the customer must be 'Ready') are likely to increase transparency and reduce frustration.
67. More generally, the UR should try and incentivise NIE and SONI to keep its connecting customers happy: this is only possible if the information is gathered and used to create an incentive (such as a penalty when NIE or SONI has left its customers unhappy or frustrated).

UR - (Q6) "Should we consider connections customer service, engagement and pricing transparency as part of this review? What are the issues which need addressed and potential solutions?"

68. The UR should of course consider customer service and pricing transparency. However I am not sure what the UR means by 'engagement' so I don't think this should be considered. In addition, the 'deadweight loss' issue identified above seems much more important than these three smaller issues combined.
69. In recognition of the problems with the connection industry, other regulators such as Ofgem (GB) and the Commission for Energy Regulation (CER in ROI) have both tried to stop the network owners from being the bottleneck.
70. CER has tried to reduce the role that network owners have in the process by implementing a group application policy and standardised connection charges for generators. Although far from perfect this does at least level the playing field a little when compared to Northern Ireland's connection policy.
71. UR should publish how NIE and SONI's perform in the area of connections and create a suite of penalties for poor performance. For example, there should be an automatic penalty for breach of licence conditions such as no valid connection offer being issued within 3 months.

Concluding remarks

72. The right to access an electricity system is a basic human right: it was not denied to rural customers even though it cost more to connect them, per capita, than urban customers. In addition, natural gas is not charged using the 'full cost approach' or by being 'managed'. The first natural gas customer in Northern Ireland wasn't charged the full cost of laying pipes to its connection point.
73. Electricity is a basic raw material for the economy: every business (and every person) needs this product.
74. Ofgem have incentivised the DNOs for issuing connection offers quickly and for doing the associated works quickly. UR should do the same, but only if it is sure it can calibrate and monitor such incentives (I recommend penalties) properly, and only after fixing the 'deadweight loss' issue.

75. An increase in efficient generation would improve the efficiency of the Single Electricity Market (or equivalent) and reduce end energy prices.
76. An increase in efficient investment in Northern Ireland will have knock on effects for the wider economy, employment, and business.
77. The problem with the current connection policy is that it blocks efficient investment: it does not distinguish efficient projects from inefficient ones.
78. Consider the following hypothetical example:
- a. Based on the current policy, if a certain section of the grid has spare capacity, a generator can get connected without having to pay towards any new assets (or any of the old ones which it is using) even though new assets may need purchased (or the old ones replaced) at a later date. This generator could also be utilising those assets with potentially inefficient generation apparatus.
 - b. However, a different generator, who may have generation apparatus that is a lot more efficient and lower all round costs (including network costs), may be required to pay a huge sum to get connected, simply because the system had no capacity left for that generator (at the time of connection and/or at the geographic location that the generator wished to connect – usually the case in the West where there is no capacity).
79. This sub-optimal situation with perverse incentives is actually very real.
80. As generation technologies have got more efficient, connecting parties have had to pay for more expensive connection costs: earlier and less efficient generation technologies have used up the capacity on the system for free.
81. What this means is that, not only is efficient investment blocked from entering the Northern Ireland economy but the older and less efficient investment is protected against competing with the newer technologies.

A list of recommendations

82. I hope that my points above have convinced UR that things need to change, but obviously the UR will need to confirm these things for itself, and therefore, my first recommendation is that you ensure that the UR's staff look into these matters as soon as possible, especially those with experience of Long Run Incremental Cost (LRIC) pricing experience. I note that the UR intends to set up a working group⁶. I do not think it is a good idea to expect this group to solve the 'full cost approach' problem.
83. I recommend that UR verify or contest the points I make in this letter. In particular the claims I make about different legal interpretation between UR and Ofgem (no connection offer because there is no capacity) and my claim about deadweight loss and incremental notional charges. I am confident that the people with the correct experience will be able to give UR more detail on the issues I have raised in this letter. I expect they will confirm that

⁶ As per paragraph 5.8 here: <https://www.uregni.gov.uk/sites/uregni/files/media-files/Electricity%20Connections%20call%20for%20evidence%20November%202016.pdf> this is to be called a 'Connections Review Working Group'.

the current arrangements are sub-optimal, and hopefully, they will confirm what UR needs to do in order to change the situation for the better. I am sure DfE and other stakeholders will support the UR in looking for solutions.

84. Even if I am wrong, (in believing for example that the 'full cost approach' is sub-optimal) the risk that I am right far outweighs the cost of proving me wrong.
85. I recommend that you talk to other stakeholders in the market to confirm whether they would like a similar review to the one I recommend above. I can assure you that I am only an observer at this point and therefore unlike other stakeholders – I am neutral and have no sunk costs (other than trying to understand the current framework and writing this letter).
86. I also recommend that you seek independent advice with regards to how to fix this problem. NIE will say they have 'no choice' or 'who will pay for upgrades if connecting parties don't pay?' but the reality is that:
 - a. NIE have been given an allowance for this type of work (and are likely to get another allowance for it in the next price control); and
 - b. In addition, there are many variants of sharing/spreading the cost of shared assets.
87. The UR should not assume that 'contestability' will fix the connection problems: it won't. The main problem I describe above is a cost-reflective charging problem. In any case, Ofgem have tried to bring competition to the GB market and it appears they are still struggling with that some 10 years later.
88. The model employed in GB seems far superior to the one in Northern Ireland and alignment of the connection market in both jurisdictions is likely to be beneficial in other ways.
89. I recommend that UR does not expect 'the industry' (NIE/SONI/stakeholders) to fix this problem. Clearly, and by their very nature, regulated markets need checked and redirected every so often, to make sure that they are working effectively. The UR is the only stakeholder that can lead, drive and facilitate the economic analysis that I believe is at the heart of this problem.
90. There is also a risk of a referral to the Competition and Markets Authority, perhaps by one of the generators or suppliers, in an attempt to resolve the connection issues. Such a referral could be more costly and risky than, for example, the UR conducting a more thorough review at this stage.

Proposed next steps

91. I hope that this information is well utilised in your organisation, and put to action as soon as possible, for the betterment of all the electricity customers in Northern Ireland and for the Northern Ireland economy in general. I would like to meet with UR to discuss this letter in more detail.
92. I am available on my email address (pmccloskey06@qub.ac.uk) to respond to any queries and to receive any UR response to this letter. I hope to hear from UR about whether it has received and understood the points I make in this letter. I look forward to seeing what UR is able to do about it, and in particular, if it intends to do anything about my claims.

93. I hope that this letter helps UR to fulfil its duties and helps UR find a way forward for this difficult area.
94. Please do get in touch if I can help you in any way with this matter: I would be more than happy to speak.