

NIRIG response to NIAUR Call for Evidence on a Review of Electricity Distribution and Transmission Connections Policy

11 January 2017

The Northern Ireland Renewables Industry Group (NIRIG) represents the views of the renewable electricity industry in Northern Ireland, providing a conduit for knowledge exchange, policy development, support and consensus on best practice between all stakeholders. Committed to making a positive difference, we promote responsible development, support good community engagement and deliver low-cost electricity generation from sources such as onshore wind, solar and storage using our greatest natural resources.

We welcome the opportunity to respond to this call for evidence. Our key points are as follows:

Renewable electricity will continue to successfully grow and develop in Northern Ireland

Renewable electricity has been a success story for Northern Ireland. One quarter of total electricity consumption in Northern Ireland is now generated from renewable sources. The DS3 programme has led technological and system service developments to the point where instantaneous penetration can now reach 60%, and this will rise to a world-leading 75% within a few years.

There is a strong future for renewables locally, and efficient and cost-effective connections will facilitate this growth. Capacity still remains on the network at times when demand is high and wind speeds are low, and therefore there is still potential for further renewables deployment.

The renewables sector in Northern Ireland is a catalyst for investments and jobs. Onshore wind provides over direct 500 jobs from an industry that contributed £32 million GVA in 2014. Belfast Harbour is the construction base for GB wind farms and in 2016 the world's largest tidal turbine was launched at Harland & Wolff. Northern Ireland's first large scale solar farm opened in 2016 and will provide 27% of Belfast International Airport's annual demand. Over 20,000 local homes and businesses have installed renewable electricity technologies, and energy storage technologies will continue to facilitate more effective use of renewables and more efficient markets.

Key business groups, such as the Confederation of British Industry, agree that the NI Executive must agree, implement and commit to abide by a new energy and decarbonisation strategy, in which renewable electricity will continue to have an important part to play. The Federation of Small

Businesses¹ notes that 27% of its members believe that a low carbon economy will create more opportunities than threats for their business, as opposed to just 14% who believe the opposite.

The closure of the NIRO does not represent the end of renewables development in Northern Ireland. The Paris Agreement, which entered into force on 4 November 2016, brings all nations into a common cause to undertake take ambitious efforts to combat climate change and adapt to its effects. Renewable electricity growth will be a key element in delivering this agreement.

There is a strong case for reviewing the NIAUR licence to assess the Utility Regulator's powers with regard to connection policy

We recommend a review of the Utility Regulator's licence to assess its role in reviewing and approving connection policy, rather than just ensuring that current license requirements are properly implemented. Modification and refinement of connection policy will continue to be required: providing NIAUR with powers in this area may be more appropriate and certainly timelier than having to make regular changes to licences through legislation.

The Commission for Energy Regulation in RoI carries out these functions and it would be consistent with the Utility Regulator's current role in approving all-island policy changes in the SEM.

We believe that in the short to medium term planning permission should be a requirement for offering a grid connection

We believe that this should continue to be the interim policy until proper legislation is put in place. We note that there are a limited number of connection offers with full planning permission currently held by NIE and that their release would not cause significant impacts on capacity.

In the long-term a new policy could be developed, similar to the ENA Guide to Fair and Effective Management of DNO Connection Queues: Progression Milestones Best Practice Guide. This would allow connectees to submit grid connection applications at any time but to only be allocated capacity when certain milestones were reached, for example submitting planning applications or receiving planning permission. Such a process should obviously be fully consulted on.

Clustering should be maintained as the approach for developing shallow transmission assets

NIRIG supports the cluster approach for developing shallow transmission assets. The proposed batch process is not supported by NIRIG members, as it may not differentiate between legitimate and non-legitimate offers. Instead, the Project 40 workstream on clusters should be restarted with full regulatory engagement to reach a clear position on cluster policies.

We strongly recommend restarting the transmission network planning process to facilitate the development of the wider transmission system

¹ <http://www.fsb.org.uk/docs/default-source/fsb-org-uk/energy-report--jan-04-2017.pdf?sfvrsn=0>

Transmission reinforcements need to be delivered to reduce constraints, including for those renewable generators that have already accepted connection offers. SEM shallow access policy to provide firm access for generators must be applied.

NIE/SONI have not brought forward a transmission development plan, despite a commitment to publishing such a strategy for almost 10 years for a transmission development plan. Transmission reinforcement needs to be strategically addressed.

As well as building more network assets there could also be opportunities in the future to increase network capacity with new smart grid technologies as well increased capacity from the introduction of storage and controllable demand.

Proactively facilitate innovation

Development of the wider transmission system could be facilitated by innovative practices. Innovation could involve reviewing the ratings of the network, assessing the margin of safety to allow greater network capacity. It could allow for new schemes such as Special Protection Scheme, to allow export of higher ratings, or increased use of DLR schemes. The decision on where to concentrate innovative measures should belong to SONI and NIE, but facilitated by NIAUR through price controls such as RP6.

Revisit approaches to storage and zero export

Connection policy should prioritise DS3 projects, including storage projects that can provide relevant services. In 2016 the Republic of Ireland made the decision to give priority to DS3 projects, which facilitates the connection of storage projects. Any similar policy implemented in Northern Ireland should include options for co-location. Such applications should be subject to having planning permission.

Establish a working group including the Department for the Economy, NIAUR, SONI, NIEN and industry representatives

To implement the necessary licence changes NIRIG proposes the establishment of a working group including DETI, Utility Regulator, NIE, SONI and industry representatives. Whatever approach is decided upon, whether it is the batch approach or reinstating the requirement for planning, a thorough legal review will be required to ensure the new connection policies are robust to challenge and implemented within an agreed timescale.

Responses to the specific Call for Evidence questions are below:

Q1. Do you agree with these strategic priorities?

Broadly. However, the additional text included under each strategic priority does not provide any further clarity, and should be removed.

- **Additional strategic priority suggestion: Ensuring the regulatory framework is robust**

Northern Ireland needs a regulatory framework that can appropriately manage the development of connection policy. What should be relatively straight forward changes to connection policy - such as making planning permission a pre-condition grid connection application or introducing rebates for generation connections - should not require legislative changes.

There will continue to be fundamental changes to the design of energy systems, such as the further penetration of renewables for heat and transport and increased use of storage devices and smart distribution systems. These changes will need substantial and on-going modifications to connection policies. NIAUR should have the powers to make these regulatory changes.

New connection variations such as co-location, over-installation and zero export connections are emerging. We are also seeing the introduction of smart connection policies such as managed connections. Demand customers also require new forms of connection, offering demand side services to the network operators. These changing requirements will continue in the future, reinforcing the need for ongoing modifications of connection policy and the need for a robust regulatory framework to manage these changes.

We recommend that the Department for the Economy and NIAUR review the role of NIAUR in setting connection policy. DfE will continue to be responsible for setting energy policy but the NIAUR could have a wider role in setting connection policy. This is also consistent with NIAUR's current role in setting all-island policies in the SEM, which includes connection access policies.

- **High levels of quality of service and transparency in the provision of connections**

There is a need for greater transparency on network and generator information. In RoI more information is published by DNOs, such as up-to-date information on connections, contracted generation and applications. This information is not published here due to concerns of data protection. However, concerns on data protection have been overcome by the CER in RoI. We therefore request the publication of better and timelier network and generator information in NI.

- **Effective and cost-effective connections**

NIAUR must actively facilitate the delivery of connections to allow our 2020 RES-E targets to be reached. It should not be assumed that just because sufficient grid capacity is issued that all these projects will be delivered by 2020, particularly with changing renewable support schemes.

- **Timely, robust and flexible connections process**

There is now a critical need to review whether NIAUR should have greater power in setting connection policy rather than just ensuring the current license requirements are properly implemented. Requiring legislative change for changes to connection policy is not appropriate at a time of ongoing and fundamental energy system design changes, and will continue to slow down

the connections process. For example, NIRIG has been requesting a change in rebating policy since 2011, but after many years of discussion this has not progressed as it requires legislative change.

In RoI the CER has been able to introduce and amend rebating policy multiple times since it started to regulate connection policy in the 1990s. Under section 34 of the Electricity Regulation Act 1999, the CER may give directions to the Transmission System Operator (TSO) and Distribution System Operator (DSO) for the terms and conditions of access to the distribution and transmission system. Specifically section 34(2)(c) provides that directions given by the CER to the TSO or DSO may outline *“the terms and conditions upon which an offer for connection to the transmission or distribution system is made”*.

Q2. Do you agree that these are the main developments we should be mindful of? Are there any other developments which are important?

3.1 We agree that the way electricity is supplied has changed considerably in recent years. However, there will continue to be further fundamental changes to the design of energy systems. The deployment of renewables in electricity systems will increase through not only penetration of renewables in electricity but also substantial electrification of heat and transport. There will also be the increased use of storage devices and the need for smart distribution systems including deployment of smart metering.

It would be prudent to prepare the regulatory framework to ensure these changes can be implemented without multiple legislative changes. This reinforces the need for DfE and NIAUR to review the role of the UR in setting connection policy.

3.2 The NIRO has been successful in progressing the RES-E target of 40% consumption by 2020. However, NIAUR must actively facilitate the delivery of connections to allow our 2020 targets to be reached. It should not be assumed that the grid capacity issued will automatically lead to all related projects being delivered in time to meet the 2020 targets.

3.11 Similarly, the applications noted here will not all be installed.

3.12 It is stated incorrectly that *“many areas of the network have little or no capacity left to carry additional electricity”*. At times of high wind generation and low demand, it is true that parts of the transmission network in NI are saturated and the wind generators are constrained. However, there are times of higher demand or lower wind generation when this same network can still ‘carry additional electricity’. As well building more network assets there could also be opportunities in the future to increase network capacity with new smart grid technologies. There could also be increased capacity from the introduction of storage and demand side units.

3.14, 3.15 Connected and contracted wind generation require transmission reinforcements to become firm. NIAUR must address the slow development of the transmission reinforcements

required to provide firm access to a large number of windfarms that are connected and/or contracted. **These delays are inconsistent with SEM connection access policy.**²

As well as new transmission circuits, existing transmission circuits can be upgraded to increase the capacity of the system. NIAUR should be encouraging innovative practices to address transmission reinforcement needs. In GB, Ofgem's price control framework is now based on an incentive-based model called RIIO (Revenue= Incentives + Innovation + Outputs) to encourage network operators to adopt innovative rather than conventional capital intensive solutions.

It is stated that investing in more network capacity is expensive and increases wider network consumer bills. However:

- In the first half of 2015 the average wholesale price of electricity for the Irish market was down 9% compared to the same period in 2014 with the delivery of wind energy (EirGrid)
- The European Commission states that *'for wind electricity in Spain and Ireland the benefits for electricity consumers in terms of reduction in wholesale prices outweigh the costs of subsidies'* (http://ec.europa.eu/energy/doc/2030/20140122_swd_prices.pdf March 2014)
- A 2015 report stated that an increase in the number of onshore wind farms in use will contribute to a fall in the wholesale power price in Ireland over the next three years (Moody's Investor Service's Report https://www.moody.com/research/Moodys-Irish-power-price-will-continue-to-fall-amid-a--PR_328955)
- If Ireland deploys wind capacity to meet 2020 targets the wholesale price will fall by €2.10/MWh by 2020 (Poyry: the value of wind energy to Ireland – March 2014)

3.17 European Network Codes will require controllability of >100kW generation by 2018, which will give network operators increased scope for network management.

3.20 The development of the 2nd North-South interconnector is vital for Northern Ireland, as noted. NIRIG also strongly supports the timely implementation of the DS3 Programme. NIEN's review of managed connections is only one part of Project 40, which has now been delayed. Project 40 needs to be reinvigorated. This will also help address other key connection policy work streams.

3.24 In RP6 there should be greater emphasis in allowing NIE and SONI to explore innovative and smart grid solutions. Restrictions in previous price controls have limited NIE and SONI to be leaders in innovation, especially considering the substantial renewable resources in Northern Ireland.

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?

There are new connection types such as co-location, over-installation and zero export connections. We are also seeing the introduction of smart connection policies such as managed connections. The needs from demand customer from connections are also changing, for example controllable demand. These changing requirements from grid connections will continue, again reinforcing the need for ongoing change of connection policy in the future and the need for a robust regulatory framework to manage these changes.

² SEM Generator Connection Policy Decision Paper, 2006, AIP/SEM/114/06

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?

The all-island SEM transmission charging policy is a shallow charging policy. There has been a very slow development of the transmission reinforcements required to provide firm access to a large number of windfarms that are connected and/or contracted. **These delays are inconsistent with SEM connection access policy.** The SEM Generator Connection Policy Decision Paper from 2006 (AIP/SEM/114/06) states:

“The Regulatory Authorities consider that firm access should be provided only from the actual completion date of deep reinforcements, but that the system operators and network owners should be obliged to complete such reinforcements in a timely manner.”

We believe that there is merit in considering a move to a deeper distribution charging policy for connections at voltages less than 33kV, in order to provide better cost reflective signals to connectees at these voltages levels.

NIRIG supports the cluster approach for developing shallow transmission assets. The proposed batch process is not supported by NIRIG members, as it may not differentiate between legitimate and non-legitimate offers. Instead, the Project 40 workstream on clusters should be restarted with full regulatory engagement to reach a clear position on cluster policies.

Q5. Should we review how the connections process and queue is managed? If so, what are the issues which need addressed and potential solutions?

We strongly recommend that interim arrangements for the connection process i.e. planning as a requirement, should continue for the medium term. We note that there are only a limited number of connection offers with full planning permission currently held by NIE and that their release would not cause significant impacts on capacity.

In the long-term a new policy could be developed, similar to the ENA Guide to Fair and Effective Management of DNO Connection Queues: Progression Milestones Best Practice Guide. This would allow connectees to submit grid connection applications at any time but to only be allocated capacity when certain milestones were reached, for example submitting planning applications or receiving planning permission. Such a process should obviously be fully consulted on.

We here reiterate our recommendation that NIAUR powers be reviewed regarding their role in setting connection policy going forward.

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?

NIRIG has been requesting a change in rebating policy since 2011, but after many years of discussion this has not progressed as it requires legislative change.

In RoI the CER has been able to introduce and amend rebating policy multiple times since it started to regulate connection policy in the 1990s.

Requiring legislative change for changes to connection policy, such as rebating, is not appropriate at a time of ongoing fundamental changes to the design of energy systems, and will continue to slow down the connections process. It again highlights the potential for NIAUR to have greater power in setting connection policy.

Q7. Are there other issues we should review? Which issue(s) are in your view the most material and why?

- **Renewable electricity will continue to successfully grow and develop in Northern Ireland: efficient and cost-effective connections will facilitate this growth.**
- **We recommend a review of the Utility Regulator's licence to assess its role in reviewing and approving connection policy, and the establishment of a working group including the Department for the Economy, NIAUR, SONI, NIEN and industry representatives to facilitate the development of the necessary licence changes**
- **We believe that planning permission should be a requirement for offering a grid connection and that this should be the interim policy until proper legislation is put in place. In the long-term a new policy could be developed, based on delivery milestones.**
- **Clustering should be maintained as the approach for developing shallow transmission assets. The proposed batch process is not supported by NIRIG members. The Project 40 workstream on clusters should be restarted with full regulatory engagement.**
- **Transmission reinforcements need to be delivered to reduce constraints, including those renewable generators that have already accepted connection offers. SEM shallow access policy to provide firm access for generators must be applied.**
- **Development of the wider transmission system could be facilitated by innovative practices. The decision on where to concentrate innovative measures should belong to SONI and NIE, but facilitated by NIAUR through price controls such as RP6.**
- **We recommend a review of approaches to storage and zero export, including the prioritisation of DS3 projects, such as those storage projects that can provide relevant services.**

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