

NIRIG response to the NIE Consultation on Greater access to the Distribution Network in NI

20 May 2019

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, tidal, solar and storage using our greatest natural resources.

NIRIG welcomes the opportunity to respond to NIE's Consultation on Greater Access to the Distribution Network in NI. The further decarbonisation of our entire energy sector is a crucial element of our contribution to national and international climate targets. The UK Clean Growth Strategy outlines how the low-carbon sector can help to increase both competitiveness and productivity in our economy.

General comments

We do not believe that the 'low risk, least regrets' approach proposed by NIEN aligns with the recognition that:

'Climate change legislation is forecast to create significant growth in technologies in turn requiring major changes in how the electricity industry manages and operates the network.'

Levels of renewable integration and management on the all-island system are extremely sophisticated and at a TSO level the DS3 programme has delivered benefits to consumers and the environment. We believe that decarbonisation of the power system requires more ambitious approaches to both conventional network investment and system operation at distribution level.

A key aspect of decarbonisation is the need for increased levels of renewable electricity in order to address climate change. This will require the connection of substantially more renewable generation to the NIE transmission and distribution system. NIRIG acknowledges and supports that the electricity system will have to become 'smarter' to allow this change,

but this will not take away from the need to continue to develop the transmission system with conventional technologies.

We again urge that conventional reinforcement be progressed as a network solution in parallel with, rather than instead of or delaying, more innovative solutions. NIE Networks needs to invest conventionally, i.e. upgrading existing and new transmission circuits and investing in existing substations to bring up to modern standards.

There is an immediate need for NIE Networks and SONI to bring forward the appropriate conventional and smart transmission solutions to provide firm transmission access for all contracted wind generation. For a substantial amount of non-firm generation the transmission works are either not advancing or progressing extremely slowly.

We request that these works are prioritised going forward and SONI and NIE Networks communicate regularly with generator on progress on these works. Considering the long timeline to develop transmission infrastructure it is critical that SONI and NIE start works on new projects that can increase the capacity of the transmission system in the West of Northern Ireland.

CONSULTATION Q1: Do you believe that passive consumers are suitably protected by the DNO to DSO evolution proposed? If not, please provide examples of suitable protections.

Wind energy has paid back to consumers in Northern Ireland: £4 per consumer, per year, every year from 2000-2020.¹ The deployment of wind energy has displaced imports of fossil fuels and has reduced fossil fuel consumption by 72TWh, saving £1 billion. Wind has also avoided 9 million tonnes of power sector CO2 emissions. Overall, the gross costs of wind energy of £0.7 billion are outweighed by a gross benefit of £0.8 billion. Wind farms reduce consumers' exposure to the price of gas.

The bulk of domestic consumer bills, whether passive or active, comprises wholesale electricity costs, and wind energy acts to depress these. We therefore believe that an evolution which facilitates higher levels renewables should be prioritised for the benefit of all consumers.

CONSULTATION Q2: Do you agree that there are currently no policy or regulatory inhibitors preventing the commencement of the DNO to DSO evolution? If not, please provide rationale.

We agree that there are currently no obvious policy or regulatory inhibitors that prevent the *commencement* of the evolution. The greater inhibiting factor is that current policy is not fit for purpose, or that the necessary policy updates will not be implemented in a timely enough manner to keep up with the energy system transition.

¹ <http://www.ni-rig.org/wp-content/uploads/2017/02/NIRIG-The-Wind-Dividend-Report-WEB.pdf>

The believe that the growing complexity of network operations, the additional flexibility needed and the increase in prosumers, among other factors, may lead to increasing digitalisation which requires capabilities that traditional network operators may not be able to provide, and which current policy does not cater for.

CONSULTATION Q3: Do you agree with the identified policy inhibitors that may become prevalent in the medium term? If not, please provide rationale.

We agree with the identified policy inhibitors, but there are other issues that we believe need to be addressed. NIRIG believes that a fundamental review of the policy and legislation underpinning energy in Northern Ireland is required. New technologies, new markets, increased interconnection, the growth in flexible demand and an increasing number of disruptors will all mean that the energy system in the next decade will be significantly different to the current one. NIAUR and policy-makers must prepare for these changes by ensuring that policy and regulation facilitates and promotes decarbonisation, flexibility, coordination, innovation and cost-effective modernisation.

For example, existing legislation only facilitates competition in the supply and generation of electricity, which effectively restricts competition in the distribution of electricity. It allows exemptions for connections based on capacity, which is now impacting upon the connection of low-carbon generation. Existing legislation prevents rapid responses to necessary policy changes such as rebate policy and we understand that it is hampering EV charge-point delivery. There are likely to be other issues that cannot be progressed under existing legislation.

Should the proposed model be adopted we urge that the interface between SONI / TSO and NIEN / DSO will require a streamlined and barrier-free communication mechanism. Our members have experienced delays and mis-communication in cases of generator connections involving both SONI and NIE. If the interface between SONI and NIE is not able to function effectively for a connection then it does not give confidence that more complex interactions will run smoothly. We recommend a comprehensive and clear Transmission Interface Agreement, developed with appropriate consultation and deploying rapid response mechanisms for identifying and rectifying any problems as they may arise. More policy is also needed in data management beyond the increased roll-out of metering.

We recommend a review of the duties and obligations of public bodies, including to strengthen requirements for sustainability, and a review of NIAUR powers to enable more flexible policy-making.

CONSULTATION Q4: Do you agree with the proposed architecture for the Network Capacity Allocation Platform? If not, please provide an explanation.

CONSULTATION Q5: Do you agree with the proposed running sequence of the NCAP, as outlined in Figure 11? If not, please provide an explanation.

CONSULTATION Q6: Which, if any, PoA arrangement do you believe should be used in the Network Capacity Allocation Platform? Please provide rationale.

CONSULTATION Q7: Do you agree with the phased approach regarding the delivery of the Nodal Controller solution? If not, please provide rationale.

NIRIG supports the work that NIE / SONI have done to date in progressing the roll out of the nodal controller in NI. The roll out of the nodal controller is essential and while we understand that it needs to be done on a phased basis we urge that the nodal controller is rolled out as quickly as possible to allow distribution connected generators to contribute to system services as quickly as possible. We suggest that if an approach similar to that already trialled by ESBN is adopted then a further year trial is not required by NIE/SONI. This would serve to speed up the roll-out of the nodal controller further.

We would appreciate further information on the following:

- Has consideration been made as to how the services will be procured from other flexible distributed energy resources (DER) and what basis?
- Will volume requirements per node be published on a regular basis to provide market signals to prospective providers?
- When delivering the service, how will the service be quantified, by measuring the reactive power at the DER connection point or the reactive power delivered at the T & D boundary node? Remote DER (from the T & D boundary) will be significantly less effective in delivering reactive power to the T & D boundary: will there be any prioritisation criteria and what will that be?

Currently there seems to be a connection design policy to oversize connection assets to enable this service to be delivered by projects connected via long lines (e.g. voltage rise criteria for long connections) which is network -inefficient and provided at high cost to connectee. We request that this policy be reviewed and that design takes into account the fact that service requirement of full export of reactive power at times of high voltage is not a valid study assumption. The ESB Networks policy that specifies reactive power capability requirement according to type of connection is a good example of an appropriate approach.

Figure 14 suggests that the service will only be sought from Wind farms only. We request clarification that all DER that can deliver the services (regardless of technology) are eligible to provide this service.

CONSULTATION Q8: Which service provider option do you feel should be adopted by NIE Networks? Please provide rationale for your selection.

There is no doubt that the services identified are useful in addressing system critical event but none of the four proposed service provider options appear to be suitable. This is because all options involve the DSO providing the services to a certain extent yet the DSO role is supposed to be a neutral market facilitator in the provision of such services.

It can also be argued that NIE Networks actions in opening breakers or reducing tap positions to reduce demand in response to system events does not make NIE Networks a provider as such. Rather, it can be argued that in this case NIE Networks is only facilitating the services and that it is the affected consumers whose demand is reduced in the process that are ultimately providing the services. These consumers can therefore be regarded as the service providers and be paid for the services.

NIE Networks can be compensated costs incurred as a DSO in facilitating the service delivery. With the advent of smart metering it should be possible to utilise smart meters to quantify the volumes of service that the affected consumers are providing during such events and appropriately remunerate them. Such an appropriate mechanism would also send appropriate market signals to consumers willing to participate in these services. In time NIE Networks do not have actively take such actions but the smart functions in consumer installations would respond to frequency signalling and automatically provide such services. It is recognised that suggested model may take time to put in place, thus in the interim the DSO could perhaps continue to provide such services.

CONSULTATION Q9: Do you agree with the proposed approach, outlined in Figure 21, for managing congestion on the electricity network? If not, please provide rationale.

NIRIG would support the approach shown in Figure 21 as it does consider multiple options to facilitating distribution connections. It is important that NIE actively engages applicants/developers through the process of deciding on the options to be considered for their project and ultimately the option to be provided for their connection. Considering the network is becoming more dynamic and variable, it must be more efficient long term to develop the network with more smarter solutions as well as conventional reinforcement.

CONSULTATION Q10: Do you agree with the proposed connections process for micro generation and G99 fast track as outlined in Figure 26? If not, please provide rationale.

CONSULTATION Q11: Do you believe that NIE Networks should consider providing an option for a flexible connection in the future? If so, do you have a preferred method of

flexibility to be implemented? How much detail do you require in relation to hours of constraint and connection offer lifetime?

There is already an all-island policy for non-firm transmission access. We understand that NIE/SONI will shortly be consulting on non-firm transmission access for distribution connections. NIRIG will be responding to this important consultation. We still believe that the best solution for renewable generation growth in NI is significant investment in the network to allow for the full potential of renewable wind resource to be realised and that non-firm access can only be a short-term solution that allows generation to connect in parallel with the essential network development required.

We understand that NIE currently only offer firm access distribution connections. We would support NIE consulting on changing to non-firm/flexible distribution access as a short-term solution only. Options of how constraint should be considered, for example the pro-rata and the last on-first off approach should be considered. It is important that existing projects do not suffer excessive constraints as a result of non-firm access, so if pro-rata is adopted then it has to have a threshold applied above which non-firm distribution projects will have constraints applied in a last-on, first-off approach.

If NIE do bring in non-firm distribution connections, from the experience of having non-firm transmission access for over 10 years, it is vital that NIE provides regular and up to date constraint analysis to applicants and also the input data for applicants to complete or commission their own constraint analysis. We do not believe that existing constraint analyses are sufficiently detailed.

CONSULTATION Q12: Please indicate if you would like to be included on a circulation list for this subsequent consultation and provide contact names and email addresses.

Yes. ni-rig@ni-rig.org

CONSULTATION Q13: Do you agree with the indicative implementation timescales illustrated in Figure 33? If not, please provide rationale.

We urge that this timeline be assessed against the likely target of 70% renewable electricity by 2030 and the expected growth of electrified heat and transport to judge whether it is sufficiently ambitious.

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