



NIRIG response to the Consultation on the Connection Policy to the Northern Ireland Distribution System

10th January 2011

Introduction

The Northern Ireland Renewables Industry Group (NIRIG), a collaboration between IWEA and Renewable UK, welcomes the opportunity to respond to the consultation on the on the Connection Policy to the Northern Ireland Distribution System. Following the publication of the Strategic Energy Framework for Northern Ireland there is now a target of 40% electricity to come from renewable sources by 2020. This will involve an increasing number of generator connections to the electricity system, therefore it is important that there is clarity on the connection policies to enable more efficient connection processes.

Comments specific to the consultation are provided in the following sections. We have also added some other comments which we believe are relevant to the consultation but have not been included in the consultation document.

Specific Comments

Connection of micro-generation

Micro generation is defined by renewable energy order Northern Ireland as generation with a net export capacity of 50kW or less. Views are sought on whether subsidies should be provided to micro generators which are recouped via use of system charges. From the consultation document it seems that subsidies are being proposed for connection to the electricity system, however from follow up discussions it appears that it is the support mechanism that is being consulted on. The uncertainty over this needs to be clarified and a more detailed proposal is required.

More generally, on the basis of wide penetration of micro-generators, the consultation discusses the risk that large scale grid compliant controllable generators may need to be curtailed to allow micro-generators to operate.

The issue of network security is also raised. In practical terms, this is understood to mean the exposure of the generator to scheduled and unscheduled outages. Currently, the level of system security is not specifically defined in connection offers. It is proposed that the charging mechanism associated with the level of system security be considered in on a case by case basis during the connection process.

NIRIG position:

- NIRIG supports the introduction of the revised and financially attractive ROC tariffs introduced on 1st April 2010 to support micro and small scale generation. This has sent a strong signal to the

market resulting in widespread deployment of micro generation technology and wind in particular. NIRIG would like to see detail of the form and level of additional support which the regulator is considering.

- We support the consultation's point that a high penetration of micro generation should not result in a material increase in the level of constraint and curtailment of large scale grid compliant generators and welcome proposals as to how this may be achieved.
- More generally, small scale generation (i.e. generators > 50kW) is attracting much development interest at present. If this translates into wide spread build out of uncontrollable plant, it may well result in large scale generator curtailment. We propose that some form of system operator control be considered so as not to unfairly discriminate against larger controllable generators.
- We agree that system security be addressed on a case by case basis during the connection process.

Rebates for Generators and Customer

The *Statement of Charges for Connection to the Northern Ireland Distribution System* entitles existing domestic customers that funded existing Connection Assets to receive a partial rebate of their original connection charge from NIE if a new customer is connected using the same Connection Assets within five years. The Transmission Connection Charging Methodology Statement provides for a similar arrangement but the time period is ten years instead of five and the rebate is not restricted to any class of customer.

The Utility Regulator is considering a ten year period for rebates for shared connection assets and the application of rebates to all classes of customers connected to the distribution system.

There is need for a review of the rebate arrangements as there is no obvious justification for (a) having different periods of rebates for Distribution and Transmission connectees and (b) restricting rebates under the Distribution System to domestic customer connectees only. The shorter the period of rebates the greater the likelihood that initial developers will not be financially compensated for making the initial investments.

NIRIG Position:

- NIRIG supports the extension of period of rebates for Distribution System connectees from five years to ten years.
- NIRIG supports the provision of rebates to all classes of Distribution System connectees.
- NIRIG proposes a further review to consider lengthening the period of rebates to the lifetime of the Connection Asset (e.g. 50 years) or term of connection agreement for the generation connectee(s) who originally funded the Connection Assets. Any rebate policy should cover rebating of distribution and transmission shallow assets. In the context of the review of the RoI extension from 10 to 50 years for transmission assets NI should also now review the transmission time period.
- NIRIG proposes that clause 6.8 of the *Statement of Charges for Connection to the Northern Ireland Distribution System* be reviewed to provide clarity and remove further inherent inequalities. For instance, the current provisions restrict the rebate to existing customer(s) that "connected within the preceding five years" of the connection of the new customer. This means that in a scenario whereby a new customer C is connecting to Connections Assets funded by

customer A connected six years and customer B connected 4 years ago, only customer B obtains a rebate. The wording should be changed to make the rebate payable to all customers that contributed to the shared Connection Assets when the new customer accepts a connection offer (not when the new customer connects) with the period of rebate. The period of rebate would then either be defined from the connection of the first customer or from the connection of the last customer.

- It is suggested in the paper that the proposals will be applicable from a 'future date' to be determined by the Regulator, NIRIG believes this to be too open ended and the date should be set in the past. One possibility would be to align the date with ROI, where it was made applicable from 2005, the beginning of Gate 1 (http://www.esb.ie/esbnetworks/en/commercial-downloads/joint_tso_dso_gpa_final_pricing_2010.pdf).

Current provisions which restrict the rebate to Distribution System domestic customer connectees and limit the period of rebate for Distribution System connectees to five years mean that generators who initially fund Distribution Connection Assets which are then used to connect subsequent customers are financially disadvantaged.

The definition of "connection assets" and associated costs

NIRIG Position:

- NIRIG welcomes the regulators proposals for transparent and fair connection costs which limit the financial burden placed on generators at the connection stage.
- NIRIG welcomes the proposal of moving towards a shallow connection policy. There is only limited detail on the proposed changes in the consultation paper. As part of the next steps in the consultation process greater detail, including examples, should be provided for further comment by industry.
- A shallow charging connection policy based on the minimum required connection assets should be applied to generators. This is in line with the decision of the utility regulator as part of the AIP decision on generator connection policy in Sept 2006. **AIP/SEM/114/06**

Generators greater than 10 MW already make an ongoing contribution towards the cost of transmission assets through the TUoS capacity charge. The major change in moving towards a shallow connection charge is that generators will not have to contribute towards deep 110 kV assets. The contribution by generators towards these assets is included for in the TUoS capacity charge. NIRIG does not believe there is a requirement to introduce ongoing DUoS charges for generators.

Timing of Connection Offer and Connections

Condition 30 of NIE's Licence specifies a 3-month timescale for NIE to offer terms for connection or modification to an existing connection. There are no requirements defined for the time allowed to NIE for carrying out the work.

Two issues noted in the current consultation are negative feedback from customers about the performance of NIE on issuing of connection offers and lengthy connection times. A further

important issue which is not highlighted in the consultation is the timing of the connection agreements.

NIRIG position:

- NIRIG supports any approach that provides binding connection dates but would need to assess the whole package to ensure that any changes would actually deliver genuine improvements without introducing new commitments that potential connectees cannot live with. At a minimum, indicative timelines should be included in connection offers - e.g. for detailed route design, all environmental studies associated with a planning application, planning consent, wayleaving, construction and connection, which can be firmed up after connection offer acceptance.
- We propose the introduction of defined timings for the execution of NIE and SONI connection agreements. There is also the requirement for a review of the standard format of the NIE connection offer letters and agreements, arrived at after proper consultation. The current approach leads to drawn-out negotiations which delay the connection process.
- NIRIG views the 3-month period for the preparation of a connection offer sufficient in general but would propose the consideration of a reduced period e.g. one month for projects with minimal works.
- We propose a review of NIE resources to ensure adequacy to deliver to defined timing requirements.
- We propose contestability as a means of achieving faster connection timings.
- NIRIG proposes a formalized policy of advance work packages that potential connectees can opt for e.g. surveys done at the potential connectee risk.
- NIRIG proposes that the timing of SONI TUoS agreement be aligned with NIE connection offer so that all conditions that impact on project can be available at an early stage, ideally before connection offer acceptance.

The treatment of Charges for Connecting Groups of Generators

In the NIE Consultation Report submission to UREGNI of 15th Oct 2010 referred to in this consultation, NIE puts forward a proposal based on its considered position and responses to its previous discussion paper of 16th Mar 2010 which outlined 4 options for consideration / comment.

Six of the seven respondents to the original NIE consultation expressed a preference for option 3 charging mechanism which was based on per/ MW charging for shared assets.

There was discussion regarding

- the maintenance of an individual connection option where clusters were not justified
- incurring delays due to cluster proposals
- the common denominator for the per/MW cost allocation
- the refund position should assets be reclassified.

In this consultation paper the Regulator seeks comments on the NIE submission, which essentially proposes Option 3 as outlined in the original proposal. It is referred to as a hybrid scheme with the

costs of the first transformer together with the other shared assets being split per/MW using the transformer capacity as the denominator.

They then describe the methodology for developer charges requiring increased transformer capacity as using the Option 2 methodology; i.e. the total cost charged up front with rebates on subsequent shared usage.

The proposal commits to no additional payments for initial developers for subsequent capacity extensions. However the worked example they include seems to maintain the per MW and transformer capacity denominator for all participants, initial and post capacity increase, rather than any hybrid approach.

NIRIG Position:

- NIRIG supports in general the methodology described in Option 3 and as illustrated in the worked example.
- NIRIG supports the commitment to no retrospective charges to initial participants should capacity increases be required. NIRIG believes the use of the common denominator of the installed transformer capacity to be flawed unless NIE install transformers to allow for future generator connections. In some cases NIE could install transformers of only 45 MVA or 60 MVA rating if only the immediate grid connections are considered. Whilst doing this, the cluster substations are designed and built to accommodate two transformer bays and are fed by lines having a minimum capacity of 120MW and more likely nearer 188MW. NIRIG proposes that the standard 90 MVA transformer should be the default size unless there is clear evidence that the requirement for future generation will not arise in the medium term. It is felt that a denominator of 90MVA (if not the line capacity) would go some way to offset the enhanced design criteria.
- The proposal that any new connection driving the need for a second transformer is charged initially in full for this asset appears excessive. NIRIG would propose that this asset should also be part funded by DUoS if there are other generation projects in the consenting process in the area that are likely to share the second transformer.
- Commitment must be given that a cluster development will proceed on planning clearance of the first associated development. Waiting for a critical mass to be achieved could impose unacceptable delays to developers
- Formal rebate terms need to be published to cover the re-designation of any shared assets.
- While supporting the cluster proposal in general it is imperative that the individual connection option is included where no cluster proposal exists.

Operation and Maintenance (O&M) costs

Windfarms are charged 2% for O&M of the shallow connection assets. Until recently this charge was generally capitalised and included in the connection cost, adding approximately 23% to the connection cost. Some developers have requested that the charge is charged annually. NIE has agreed to this request but it is still a 2% charge. NIE has suggested that a decommissioning bond may also be required with an annual O&M charge.

2% charges for O&M are particularly excessive for equipment such as special protection schemes. Applying average O&M does not seem very equitable for different type of connection methods.

O&M charges include rates payments for substations but not for overhead lines and cables.

NIRIG position:

- O&M charges vary across the UK and Ireland, ranging from 0.9% to 2.5%. NIRIG proposes a review and consultation on O&M charges, covering methodology for the calculation of O&M costs and the level of charges. O&M charges should be calculated for each standard piece of connection equipment to provide the transparency required. For example, O&M charges per km of 33 kV of overhead line. The level of charge should be bench marked against other utilities.
- Generators should have the option to pay a capitalised or annual O&M charge.
- No decommissioning bond should be required.

Grid Code and Trading and Settlement Code tests

Communication costs for the TSO to control wind farms are not currently explicitly listed in connection offers. NIRIG agrees that all connections costs should be transparent and later in this response requests further detail on the costs of connection assets for generators to be included in NIE's statement of charges.

In a number of existing connection offers NIE has listed costs associated with communication for special protection schemes. In some cases costs of £350k have been detailed in connection offers. There is an expectation from industry that NIE would further examine these costs as SPS schemes are installed. The initial budgets were included in connection offers in 2007 and to-date NIE has not provided more accurate costs. As part of any review of communication costs it is critical that NIE immediately reviews these communication costs. NIRIG requests that the method of communication for windfarms is also consulted with industry, for example fiber vs. radio. NIRIG also requests that NIE and SONI should share communications assets for windfarms where possible.

In this section of the consultation paper there is reference for the requirement for the TSO to complete studies to identify the impacts that generators have on the transmission system and the costs of these studies are not included in connection offers. NIRIG would agree that greater co-operation is required between NIE and SONI in the preparation of distribution connection offers. This may require additional studies. NIRIG requests greater details on the type of studies to be carried out, the level of costs associated with this work and how this additional information would be included in NIE's connection offers.

Contestability

NIRIG believes that contestability at both transmission and distribution level is required immediately. Wind farm developers should be entitled to take control of the delivery timelines for their shallow assets. Developers have been contesting shallow connections for transmission connections in ROI for approximately 10 years and are very satisfied that the assets can be delivered in a timeline that suits the project and to a quality that is acceptable to the TSO/DSO. Contestability at a distribution level is now also available in ROI, and contestability is fully approved in GB.

NIRIG position:

- NIRIG believes that contestability at both transmission and distribution level is required immediately.
- Allowing the customer to take on the responsibility for the planning and construction of the grid connection would go towards resolving the issues with NIE resources and incentives.
- NIRIG would require both the hybrid approach (i.e. NIE do the planning and wayleaving and the developer does the construction) and full contestability, similar to ROI, are implemented.
- Approving contestability will improve harmonisation of connection rules within the all Ireland electricity market.

NIRIG appreciates the implementation of this will require regulatory, legal and technical input and it is important that all these are investigated and put in place and/or worked upon in parallel.

Other relevant issues but not included in consultation

Payment Schedule

The payment schedule should reflect the real committed spend of NIE. The most recent payment schedule communicated by NIE to developers is shown below:

Milestone	%
Acceptance of Offer	10
Pre Planning Submission	20
Post Planning Approval	20
Pre Ordering Materials	30
Pre Construction	20

NIRIG position:

- NIRIG believes that this payment schedule is not reflective of the real spend for a grid project. Paying 100% of the connection charges before the works move into construction will not incentivise NIE to complete the works on schedule. A more appropriate schedule should ensure NIE are kept cash positive without putting unnecessary financial burden on developers.
- Each grid development project will have clear deliverables and milestones. It is also our belief that in order to incentivise NIE and SONI to bring the wind farm to a state of readiness for grid code compliance test, a certain percentage should be withheld until the tests are scheduled. NIRIG suggests this should be 10%.
- It is envisaged that some projects with shared assets will be constructed in phases. Even where full planning permission has been secured, full build out of the project may not be feasible for various reasons such as landowner issues and WTG availability. The flexibility to reflect this in the connection charge would be welcomed. This flexibility would enable

associated costs to be split on a per MW basis and be payable in tranches upon completion of each related phase. A Connection Charges Bond/Parent Company Guarantee could be put in place by the developer to secure the full cost of the connection. If the capacity is not utilised within a certain time frame the PCG could be either drawn down or the capacity could be released to another project in the area.

- NIRIG believes that if a wind farm project is terminated at any point by a developer that NIE should endeavour to refund any connection charges that have not been committed. This scenario should be included in the new rebate policy.

List of standard costs and expansion of standards

NIE publish a limited number of connection asset costs in the NIE charging statements. It can be difficult for developers to estimate connection costs or to review costs in connection offers as the current costing structure is not transparent. Currently only NIE can consent and construct connection assets. As this is a monopoly position, the level of connection assets costs should be periodically reviewed by the regulator to ensure they are reasonable and in line with international standards. NIE's next price review is currently ongoing so it is timely for a full review of these charges.

There is also a need for a mechanism for new standards in connection assets to be introduced to allow for advances in technology and changes in demand and capacity of connections, for example, a new size of conductor or transformer.

NIRIG position:

- NIRIG proposes that NIE publishes within their charging statement an extensive list of connection assets for generators. The charges should be updated annually with additional assets added as necessary. The level of these charges should be reviewed by the regulator and consulted with industry as part of NIE's five year price review.
- Additional asset sizes and technology should be added to the list as necessary. NIE should continually review changes in technology and in the demand and capacity of connection, driving the need for new assets to be added to the standard connection asset list. Industry should have the opportunity to propose new assets sizes and technology.

See below a proposed list of standard assets to be included in the NIE charging statement:

- 33 kV metering
- 33 kV bay at windfarm
- 33 kV OHL (different sizes)
- 33 kV cable (different sizes)
- 33 kV bay in 33 kV substation
- 33 kV bay in 110 kV substation
- 90 MVA 110/33 kV transformer
- 60 MVA 110/33 kV transformer
- 3 bay 110 kV substation
- 4 bay 110 kV substation

- Tail 110 kV substation
- New 110 kV bay in substation
- 110 kV OHL (different sizes)
- 110 kV cable (different sizes)
- 110 kV metering
- TSO RTU/SCADA
- Survey per km for 33kV and 110kV circuits.
- SPS and telecoms costs

Special Protection Schemes and Telecommunication costs

NIRIG position:

- NIRIG welcomes the recent 50% price reduction for the SPS but are disappointed a similar price reduction for the telecommunications has not been implemented.
- NIRIG believes there should be sufficient information available at the time the offer is being issued to include a more site specific cost for Telecommunications. We understand NIE has been working on this for some time and these schemes have a significant cost implication on connection charges.
- NIRIG believes that the charging mechanism for the Special Protection Schemes and telecommunications should have been included as part of the discussion on clusters. These schemes are shared assets of significant cost and should be split on a per MW basis in line with the cluster charging mechanism. It is our view that the schemes consist of sole use asset and shared assets and these shared assets should follow the same rules as the HV/MV/LV asset charging mechanism.
- In relation to SPS NIRIG is still not clear how these schemes will be designed to operate at each WFPS. More technical clarity is also required at this time.
- Wherever possible NIE and SONI should share the use communication infrastructure to the generation connectee site.

Resources

With the increasing amount of wind generation coming on the system in the coming years, there will be many generators connecting to the distribution network. While the cost of connection is covered by generators it is essential that there are sufficient resources available in NIE to cope with the increasing workload. Adequate resources are required within the generation planning, connection policy development and the project delivery areas.

NIRIG position:

- NIRIG believes it is essential that there are sufficient resources available in NIE to cope with the increasing number of connections to the electricity system.

- It is essential that there are incentives in place to ensure that the resources available are used efficiently, and that potential delays are minimized through the use of meaningful incentives.
- It is essential that any external consultants are used and managed properly to ensure that proposed budgets are not exceeded.
- NIRIG requests that the option of contesting shallow connection assets is introduced. Resources will be required within NIE to develop the policies, procedures and functional specifications to facilitate the introduction of contestability.

Format of connection offers and agreements

NIRIG believes the current documents relating to connection agreements and connection offers do not reflect the many recent changes in the electricity network and market. Consultation on and agreement of new standard documents would minimize the time to review and eliminate requests for amendments by connecting parties.

NIRIG position:

- NIRIG believes that a full review of the connection agreements and connection offers documentation is required.
- New standard documents agreed by all parties should be put in place.
- Input from the TSO to be included in the NIE connection offer.

The deep reinforcements associated with projects receiving firm access, and removing the need for SPSs, should also be included in the connection offer.

Conclusion

NIRIG welcomes the opportunity to comment on the Consultation on the Connection Policy to the Northern Ireland Distribution System as there are a number of important issues that need to be resolved to accommodate increasing levels of renewable generation onto the electricity system in Northern Ireland. Our response highlights the main areas of concern to NIRIG.