



**Consultation on Electricity  
Connection Policy to the Northern  
Ireland Distribution System**

A Response by SONI

10 January 2011

## Executive Summary

SONI welcomes the opportunity to provide a response to this important consultation on Connection Policies to the Northern Ireland Distribution System. As the licensed independent Transmission System Operator in Northern Ireland SONI has a direct interest and involvement in the ongoing connection of generators to the distribution system and also the settlement for these generators in the Single Electricity Market. While the consultation document clearly states that connections to the transmission network are out of scope SONI believe that there are a number of significant issues raised by the document that require comment.

SONI is responsible for the operation of the Northern Ireland Transmission network and, in conjunction with EirGrid, operates the Single Electricity Market. For a Distribution connected generator in excess of 10MW this requires SONI to:

- a) Have the capability to schedule and dispatch the generator
- b) Have in place a TUoS Agreement with generator
- c) Ensure the generator is Grid Code compliant
- d) Ensure the generator is correctly registered in the Single Electricity Market and that all relevant processes and procedures are in place to facilitate market settlement for the energy produced.

While SONI do not have responsibility for the design, development or operation of the distribution network we believe that, specifically with regard to generation in excess of 10MW, the method of connection of several such generators can have a direct impact on the operability of the whole system.

SONI believe that for distribution connected generation, this consultation fails to fully recognise the interactions that are required between SONI / NIE and SONI and the connecting generator. This is both from a policy perspective and the delivery of connection processes. This paper sets out our response to the issues raised in each chapter and specifically responds to the relevant questions.

## **Structure of SONI Response**

The remainder of the SONI response addresses each of the relevant Chapters in the consultation document in turn.

1. Introduction
2. Section 6 – Connection of micro-generation
3. Section 7 - Rebates for generators and customers
4. Section 8 – The definition of “connection assets” and associated costs
5. Section 9 – Timing of Connection Offers and Connections
6. Section 10 – The treatment of charges for Connecting Groups of Generators
7. Section 11 – Other issues

In each SONI provides some general commentary in relation to the subject matter and responds to relevant question posed. In other instances where the questions are outside SONI's direct area of responsibility, competence and expertise SONI has not provided a specific answer.

## **1. Section 1 - Introduction**

We note your reference to Directive 2009/28/EC and the statement, "the use of energy from renewable sources requires guaranteed access to the grid for renewable generators and the current rules in place meet the terms of this directive". SONI is not aware that the terms of this directive have been fully transposed into Northern Ireland law. The Utility Regulator should clarify the source of the transposition.

The statement also refers to access to "the grid" and this is a significant point. The connection of a generator to the Distribution system does not necessarily mean that it has access to the grid as it may be the case that the associated transmission network has insufficient capacity to absorb the generation. In this case SONI would have to, on occasion, restrict the output of the generator. We do not believe the full implications of this have been fully thought out in this consultation and the methodologies discussed do not allow for the necessary interactions between NIE / SONI and NIE / SONI and the connecting generator that would clearly identify when a connecting generator has full access to the grid – distribution and transmission.

The worst outcome for all concerned is that a generator proceeds with a distribution connection and, due to insufficient transmission network capacity, SONI is unable to offer a UoS Agreement. All parties need to clearly understand what rights are being inferred and what liabilities are being undertaken when entering into a NIE Distribution Connection Agreement and a SONI TUoS Agreement.

SONI believe that, as part of the overall larger scale generation connection process, the availability/ unavailability of transmission network capacity, the possible constraint level on the generator and the timing of transmission reinforcement should all be taken into account. SONI are willing to discuss this further with all stakeholders.

## **2. Section 6 – Connection of micro-generation**

As Transmission System Operator SONI is responsible for the safe, secure, reliable and economic operation of the transmission system. With increasing levels of renewable generation connected to the distribution system this task becomes more complex. SONI would agree with the Utility Regulator that, to retain system balance, we can only manage the generation that we can control and, under the present rules, that would mean only larger scale generation can be curtailed. SONI believe that the issues surrounding small scale generation connected to the distribution system and the operation of the system have to be considered in depth but would accept that this consultation is not the correct forum.

The document states "The standard of network security that generators connecting to the distribution system should expect is not specifically defined". SONI would also point out that the Operating Standard for these generators is not specifically defined. SONI has a responsibility to manage transmission constraints to ensure system security but also to minimise costs. There is ambiguity surrounding the payment of constraints to distribution connected generators. Should a generator that accepts a single line connection be paid for constraints if the single line is out of service? For a wind farm cluster connected via a single 110kV circuit should all the wind farms be paid constraints if the 110kV line is out of service? If there is no agreed standard to plan and operate the system too then there will be continuing confusion regarding the payment of constraints. It is also worth noting that the operation of the distribution network can restrict the output of generators depending on the network design. Should there be a constraints budget available for the distribution network?

The document states "Micro generation is not required to be Grid Code compliant and therefore does not provide reactive power, inertia or reserve to the system operators". Micro generation connected to the distribution system should be Distribution Code compliant and, if the Distribution System Operator requires these services or, if the Grid Code requires these services from the Distribution System Operator then they should be provided by a connecting generator. As increasing levels of renewable generation are connected it is imperative that the Distribution Code and the Grid Code are developed as necessary and enforced to ensure that the changing technical requirements of the system can be achieved. This compliance requirement must be extended to all parties wishing to connect to and use either the distribution or transmission system.

### **3. Section 7 - Rebates for generators and customers**

SONI has no objection to adopting a ten year period for the allocation of rebates for shared connection assets. SONI would point out that, with the pass through of costs between the connecting generator, NIE and SONI the rebate process could become rather cumbersome. This issue will be covered further in Section 7 below.

### **4. Section 8 – The definition of “connection assets” and associated costs**

The distribution system cannot absorb the predicted level of larger scale wind generation connections without transmission reinforcement. If this reinforcement is not achieved it is an inevitable consequence that the connection of generators to the distribution system should be limited at a point in time to the capability of the transmission system to absorb the generation. Encouraging connections by reducing connection charges without delivering the transmission reinforcement will result in failure to meet the Government targets. The change in definition proposed introduces a “semi-shallow” connection policy. However, the policy is incomplete as it makes no reference to the firmness of access of the resultant connection. The Distribution connection can be firm but the transmission access, because of reinforcement requirements,

is non-firm. SONI believe that the agreements that currently require to be put in place, the Connection Agreement and the TUoS Agreement, do not cater for this situation. Can NIE insert transmission access arrangements into a Distribution Connection Agreement? Can SONI issue a TUoS agreement for some time in the future when transmission reinforcement has been completed? These agreements would need to be amended to reflect the new policy and perhaps a new agreement will have to be developed between NIE and SONI. SONI are happy to enter into discussions with the Utility Regulator, NIE and other stakeholders to deliver the necessary changes.

SONI would be willing to contribute to any subsequent discussions regarding Distribution UoS charges to the extent that they may impact on present TUoS tariff setting methodologies.

#### **5. Section 9 – Timing of Connection Offers and Connections**

As stated in the Executive Summary SONI has a direct involvement in the connection process for certain distribution generators. Increasingly there is insufficient transmission capacity available to facilitate export from distribution connected generators and transmission network reinforcement is required. It is extremely important that the availability of transmission capacity is considered when a distribution connection offer is being made and delivered.

If a generator cannot export due to inadequate transmission capacity being available then SONI cannot offer a UoS Agreement and the generator will not be able to register in the Market. If transmission reinforcement is required and the actual distribution connection is made this introduces firm and non-firm capacity issues and results in payment of constraints. Is there an advantage in incentivising connections to the distribution system if the transmission system cannot accommodate the generation and there are potential constraint costs to be paid for limiting the output of distribution connected generators?

SONI is willing to discuss with the Utility Regulator how the TUoS Agreement can be developed to incorporate the granting of non-firm access to the transmission network. It may also be necessary to develop and implement a methodology for determining transmission constraint levels for distribution connecting generators. These transmission constraint levels will need to be quoted to the generator along with the connection offer so that the generator can make a fully informed decision. For a distribution connection who is responsible for requesting transmission capacity?

If the required transmission works are defined along with the connection works at the connection offer stage and is all included in the connection timeline this could mean a significant change in the NIE / SONI / generator business processes and interactions. With the present difficulties being experienced in gaining planning approvals for transmission infrastructure development in Northern Ireland SONI do not think it reasonable for a

contractually binding connection works duration to be included in offers. The government targets for renewable generation will not be met by simply connecting generators to the distribution system that are severely constrained due to transmission system limitations.

#### **6. Section 10 – The treatment of charges for Connecting Groups of Generators**

SONI note the contents of the NIE Consultation Report on “Charges for connecting groups of generators to the Northern Ireland Distribution System”. SONI understand that the generators in this configuration will be distribution connected and therefore the connection point will be at 33kV. The role of SONI in the overall “connection” arrangement that includes the development of the transmission network is unclear. While SONI accept NIE’s present responsibilities regarding the transmission system it still appears that SONI involvement is required.

Regarding a cluster arrangement the change in definition of “connection assets” suggested by the Utility Regulator infers that the 110kV circuit becomes a “system asset” and the associated costs will be recovered through TUoS. SONI would need to enter into discussions with the Utility Regulator to understand how constraints costs would be applied to these generators for the loss of the single 110kV circuit or transformer. SONI would also refer to the lack of a suitable planning or operating standard for this scenario and request that the Utility Regulator give consideration (or request the parties – NIE and SONI) to develop suitable standards for discussion with all interested parties. If the generators accept a single circuit connection do they also accept that no constraint payments will be made for the loss of the single circuit at both 33kV and 110kV?

#### **7. Section 11 – Other issues**

Regarding Section 11.2 SONI would advise that our present practice is to recover the cost of initial installation of the necessary SCADA and communications systems from the generator via NIE. SONI advise NIE of their costs per generation connection, NIE include this in the connection quotation and then, on payment of the connection fee, NIE pass the relevant monies to SONI.

SONI do not currently recharge the applicant via NIE for relevant studies, Grid Code compliance, any resource costs associated with the distribution connection or ongoing maintenance of installed equipment. SONI is presently discussing the recovery of these costs with the Utility Regulator as part of the SONI Price Control process.

SONI would prefer that all costs associated with connection processes, communications, TUoS Agreements, Grid Code compliance and Market registration for relevant distribution connected generators is recovered directly from the generator rather than via NIE. This would, in our opinion, also make the rebate process a lot simpler and transparent. SONI

consider that the UoS application and offer process that were recently introduced can be developed to accommodate this arrangement.

SONI also note that it is possible for an existing distribution connected generator to request to be registered in SEM. SONI will require certain works (SCADA, communications, etc) to be carried out at the generators expense. This may entail a quotation, acceptance, payment, etc. As SONI do not have a direct relationship with the distribution connected generator all interactions and costs would have to be processed via NIE. SONI would request the Utility Regulator to consider if this is the most efficient process.