Approval Criteria and Incentive Mechanisms for RP5 Fund 3 – Investments for Renewable Electricity

A Response by SONI Ltd.

27th September 2012

1. SONI welcomes the opportunity to respond to the Utility Regulator's consultation on the Fund 3 investment process as part of RP5. SONI is the Transmission System Operator in Northern Ireland and the holder of a licence to participate in the transmission of electricity granted by the Department of Enterprise, Trade and Investment in exercise of the powers conferred upon it by Article 10(1)(b) of the Electricity (Northern Ireland) Order, 1992 ("the Order"). As set out in Article 12(2)(a) of the Order it is the duty of a holder of a licence under 10(1)(b) "to develop and maintain an efficient, co-ordinated and economical system of electricity transmission". The development of the necessary transmission infrastructure under RP5, and Fund 3 in particular, is therefore of considerable importance to SONI in the fulfilment of its role.

2. Visibility of the transmission investment programme is critical to enabling SONI to meet its licence obligations in respect of the granting of connection offers, providing information concerning available transmission access, calculating generator TUoS tariffs and producing the seven year transmission capacity statement.

3. SONI agrees with the Utility Regulator that it is important there is a cost benefit framework in place which justifies the overall development of transmission infrastructure. It is important however that this cost benefit framework can adapt to the current level of uncertainty in the evolution of the Northern Ireland network and Northern Ireland generation portfolio. We further discuss the management of this uncertainty in the accompanying box.

4. It is also important that the evaluation framework is reflective of the fact that the transmission arrangements in Northern Ireland are not currently carried out by a single entity but by two distinct and separately owned companies SONI and NIE, each with their own respective licence remit, with the only relationship between them being the regulated Transmission Interface Arrangements (TIA). If the framework as suggested by the Authority in this paper were to be implemented it would be incumbent upon the Authority to bring forward the necessary changes to the basic architecture of the arrangements to support it.

5. The cost benefit arrangements must be such that they do not in and of themselves become overly cumbersome and/ or have the potential to slow down the progress of necessary and NPV positive transmission investment. Moreover the cost benefit framework and the timeframe for its completion must dovetail with the other business processes which are dependent upon the visibility of the transmission investment programme including the provision of access and calculation of locational generation TUoS.

6. A number of the projects which are envisaged to be considered by the Fund 3 process are cross border in nature and must therefore take into account the obligations and responsibilities of parties in Ireland. The process envisaged should therefore be consistent with enabling all parties on the island (including EirGrid) to meet their own obligations and in a manner which ultimately delivers for customers.

7. The arrangements in general for the development of transmission infrastructure must also be consistent with the basic underpinnings of the industry arrangements as they pertain in Northern Ireland and across the island. SONI and NIE are obliged to offer terms for connection to the transmission and distribution system respectively and SONI must offer terms for use of the all island transmission networks to all connected parties. The Single Electricity Market is supported by a shallow connection policy whereby generators are accorded firm access on the completion of any Associated Transmission Reinforcements

('deep works'). The SEM, and the property rights arrangements which underpin it, are not currently consistent with the provision of enduring non firm access and in the event that the originally identified reinforcements are not ultimately progressed the generator is provided with the full Firm Access Quantity (FAQ) with consumers bearing the cost of any associated constraints in lieu of the avoidance of the infrastructure costs.

8. The assessment of the benefits of transmission infrastructure, and the cost of its non provision largely falls within SONI's remit including:

    - the potential impact on energy price;
    - the provision of additional access;
    - balancing costs;
    - the need for system support services; and
    - non financial benefits including security of supply

9. Given this it is clear that it is SONI, as opposed to NIE, who is in fact better placed to carry out the sort of cost benefit analysis envisaged with the primary input from NIE being the identification of the proposed scheme and the provision of the costs of the proposed infrastructure. Equally SONI has a core role in the identification of requirements and specification of overall standards for the Northern Ireland transmission system as part of its general duty of operating a safe, secure and reliable system.

10. There are specific references to SONI's involvement/ input to the Fund 3 assessment process. It is not clear to SONI how it is assumed that these will be fed into the process but include:

    - The need to understand the difference the assets will have on SONI's ability to dispatch renewable generation in accordance with the grid code and associated market rules (page 13)
    - We would expect to see [NIE and] SONI prioritising investment where possible to reduce the constraint costs while maintaining security of supply (page 16)

    These require further engagement with the Utility Regulator and may require the Utility Regulator to bring forward changes to the TIA and associated arrangements.

11. In relation to constraint costs it is important that there is clarity that in the case of building transmission infrastructure associated with generation connections and access arrangements that the incidence of these is split; while a proportion may fall upon the Imperfections charges paid by customers a proportion will also fall on the non-firm generators which are seeking the associated access rights (ultimately costing customers through either the need for higher rates of return to be paid to the generators to compensate them in equilibrium or in higher wholesale costs should the generator not proceed or not proceed as rapidly). Equally non provision of the associated infrastructure – either as a result of this evaluation process or for other reason outside of SONI's control - will affect the dispatch balancing costs against which SONI is incentivised and this may need to be considered as part of that process.

12. The assessment of the need for transmission infrastructure, and the Fund 3 process, should be related to the assessment of transmission infrastructure alone; it is not an overall cost benefit assessment of the entire value chain as would be carried out by a central planner and is bounded by an obligation to connect all plant under licence and provide connection and access to renewable plant under the Renewables Directive regardless of that plant's individual location or technological make-up (s.t. meeting Grid Code obligations). It is the other work streams which have been progressed under the auspices of the SEM Committee, including locational Generation TUoS and the review of System Services, which provide the incentives to plant as to where they should locate or look at the requirements to support the portfolio which is expected to emerge. These again are within SONI's remit[1].

13. However the assessment of transmission infrastructure itself should be a societal one: that is it is the impact on production costs as opposed to consumer prices which matters, and the reduction in total constraints as opposed to simply those funded under the SEM arrangements. If the full societal costs are not taken into account then overall society, and ultimately consumers who comprise society, will be worse off. The sharing of the societal benefit between consumers and other participants is a matter for the underlying market arrangements but where there is societal value then Pareto improving solutions that leave everybody better off are always capable of being derived.

14. As with all investment decisions the decision to build transmission infrastructure should be made with the best information available at the time. The framework as proposed appears to suggest that there will be an *ex post* assessment also to determine whether the events forecast have actually transpired and incentives and returns calibrated accordingly. It would appear to SONI that such an approach has the potential to increase risk and therefore also to increase the cost of capital for the regulated utility investing. *Ex post* and retrospective regulation, or even with the potential of retrospectivity, is not in SONI's view best practice and incentives work best when the basic framework is well understood and clearly communicated up front.

15. As SONI has articulated in its engagement with the Utility Regulator in relation to TSO Certification, it is clear that an industry model which does not split the responsibility for the identification of network requirements from the party which can best assess their overall requirement (i.e. SONI) is clearly preferable and will deliver benefits to Northern Ireland customers.

16. The current arrangements under the Transmission Interface Agreement (TIA) are extremely limited in respect of SONI's role in network development. SONI can only operate within its own responsibilities under the current licensing framework and cannot of its own accord bring forward amendments to improve the situation to the benefit of customers. As we have outlined above the arrangements put in place must respect the fact that under the current, sub-optimal, arrangements the TSO tasks as set out in Article 12 of EC Directive 2009/72 are carried out by two distinct and separate entities.

[1] SONI notes the proposal of the Utility Regulator to utilise, and ask NIE to utilise, the Northern Ireland Guide to Expenditure Appraisal and Evaluation in its assessment of transmission infrastructure benefits. SONI believes it may be beneficial for the Utility Regulator to further consider whether straight line discounted cash flow analysis at a real rate of 3.5% sufficiently captures the benefits and option value of long term strategic transmission investments. In particular the Utility Regulator may wish to consider non linear discounting for longer term projects consistent with the emerging literature in the economics of sustainability and climate change.

17. SONI would urge the Authority to consider and bring forward such changes as are necessary consistent with its own remit of protecting final customers. Unfortunately the current arrangements fall well short of the ideal and impose needless additional cost on consumers. SONI would be happy to further engage with the Utility Regulator in this regard.

Box 1 Investment in Electricity Transmission Infrastructure – Addressing Uncertainty

The electricity arrangements in SEM are such that, with a shallow connection policy in place, the costs of transmission infrastructure are socialised among consumers. Generators are, however dependent upon the completion of associated transmission infrastructure in order to gain financially firm access in the current market arrangements which then protects them from constraint costs. If generators value this firm access, which they appear to do, then it is likely they will not be in a position to invest until such times as they know it will be granted to them; however, if the case for network build is dependent upon generators making 'firm' commitment to build then this certainty may not be forthcoming. Should this arise there is effectively the potential for a dual equilibrium (generation investment, network investment: no generation investment, no network investment) or Catch 22 situation to arise. This may be particularly problematic if the lead time to build new generation assets is considerably shorter than new transmission assets (which it generally is) and if the investments themselves are largely capital intensive, sunk and irreversible (which they are).

We know that situations characterised by large sunk and irreversible investment decisions are characterised by Real Options value and 'value to waiting'[2]. Yet this 'hold up problem or absence of co-ordination can ultimately lead to sub optimal outcomes as compared to the situation developed by a central planner or social engineer. A key question which the Northern Ireland regulatory regime will have to address in advancing network build in the RP5 period and beyond is how this "hold up" problem and underlying uncertainty can be overcome. While it may not have the totality of the solution SONI is happy as part of this response to proffer some guiding points.

1. *Reduce the uncertainty where possible* – for example generators may be required upon signing connection offers to make binding financial commitments which can be drawn down in the event they do not proceed with the project. Indeed the regime in Northern Ireland whereby generators are required to have invested the time and money in acquiring planning permission prior to being granted a connection offer represents one such commitment mechanism.

2. *Signal a general intent in terms of transmission development* – while there is uncertainty in relation to the progress of specific projects the underlying natural resources and other factors driving the generation portfolio – particularly the wind portfolio – are well known and identifiable and the transmission developer can apply a diversification/ portfolio approach to the overall build. If the general direction of transmission build is well signalled but able to flex where necessary then enhanced confidence can be provided to new generation projects that the requisite network will ultimately be delivered should they proceed.

3. *Support the arrangements with other economic signals* such as locational signals associated with the cost of network provision and/ or dispatch.

4. *Recognise and allocate the associated risk profile* – it may be that in the value in waiting to determine the optimal investment for each project that the optimal programme as a whole is not ultimately delivered. There would appear to be a general concern that assets may not always be built optimally and that there is the potential for the 'stranding' of transmission assets should the assumptions made at the time of an investment decision not ultimately transpire. It may be some assets are not ultimately fully utilised but this risk should be weighed against a counterfactual of non development. The Utility Regulator must determine whether to allocate this risk to network utilities (with a need to reward them with an associated higher cost of capital) or to consumers (through the socialisation of the associated infrastructure costs in network tariffs).

[2] Dixit and Pindyck (1994) – *Investment under Uncertainty*: Princeton University Press