



RP5 STAKEHOLDER EVENT

Load Related Connections

23 May 2011



Overview

- It is proposed to cover the following areas
 - Load Related Connections – Licence requirements
 - Getting connected - processes involved
 - Providing value for money
 - Impacts on costs
 - Demand projections
 - UR Consultation Connections Policy
 - 'Next Steps' - Load Connections Issues



Background

- NIE is the owner of the electricity transmission and distribution systems in Northern Ireland
- NIE is authorised by means of a Licence granted by DETI under the Electricity (Northern Ireland) Order 1992
- NIE is regulated by the Northern Ireland Authority for Utility Regulation
- All existing demand customers are connected to the distribution system
- Under the Licence NIE is responsible for the planning, development, maintenance and operation of the distribution system
- NIE is the only party in Northern Ireland entitled to offer terms to connect, or to modify an existing connection, to the distribution system



Licence Requirements

Licence obligations placed upon NIE

- Condition 32
 - Set connection charges at a level that will enable NIE to recover:
 - The appropriate proportion of costs directly or indirectly incurred in carrying out any works to provide and maintain connections
 - A reasonable rate of return on the capital represented by such costs
 - In setting charges for connection, NIE shall not restrict, distort, or prevent competition in the generation, transmission, distribution or supply of electricity
 - Required to prepare and publish annually a statement, approved by the UR, setting out the basis upon which charges will be made for connection to the distribution system



Distribution Network Statistics

- The distribution system – 33kV, 11kV & LV
 - 24,000km of HV overhead lines
 - 3000km at 33kV
 - 21,000km at 11kV
 - 14,000km of underground cable (all voltages)
 - 396 secondary substations (33/11kv or 33/6.6kV)
 - 76,500 distribution substations
 - 14,500km of LV network (O/H, U/E and U/G)
- Connecting approx 820,000 customers
- Max demand - approximately 1,700 MW



Customer Standards

Customer Standards for Load Connections

- Connections Related Standards
 - Guaranteed Std GS4 – providing a cost estimate (quotation) for a new electricity supply
 - 7 days (service connection only)
 - 15 days (network extension)
 - Applicable to 52% of load connections
 - Overall Std OS3 – provision (construction) of new supplies for connection
 - 30 days (domestic customers)
 - 40 days (non-domestic customers)
 - Applicable to 52% of load connections
 - 100% compliance achieved against GS4 and OS3 over the past 7 years



Connection Categories and Charging Arrangements

Getting connected

- Customer categories
 - Over 1MW and Authorised Generators
 - All Others
- Charging arrangements
 - Based on estimated cost of proposed works
 - Least cost technically acceptable (LCTA)
 - Sharing connection assets & rebates
 - De-energisation and decommissioning charges



Connection Charging

Determining a connection charge

- Application
- Design and costing
 - Balance between accuracy and effort required
 - c20% of quotations never accepted
 - Detailed design and estimate
 - Simplified desk top pricing
 - Standard connection charges
- Application of statement of charges
 - >1MW – 100% of estimated costs
 - Others – 60% of estimated costs and 40% recovered through the network tariffs
 - Housing developments > 12 Houses - 60% of estimated costs and 40% recovered through the network tariffs
 - Exceptions



Value for Money

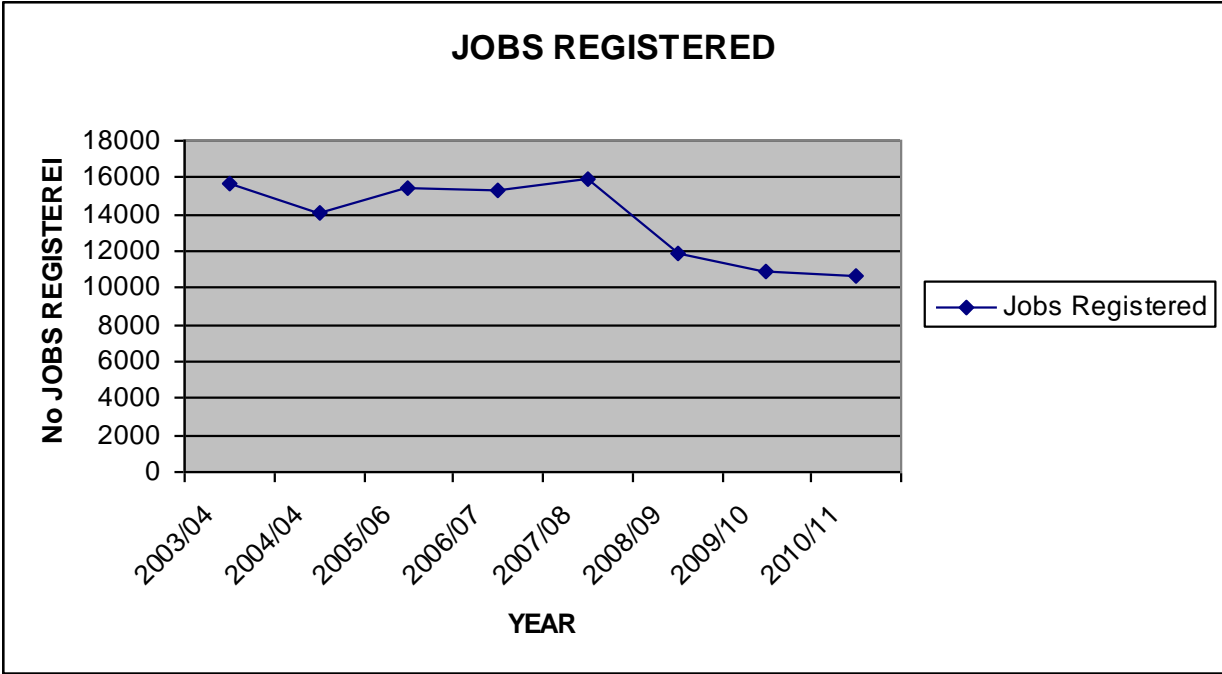
Managing connections costs – providing value for money

- The right design
 - LCTA (least cost technically acceptable)
 - Accuracy of estimates
 - Cost reflective
 - No cross subsidising
- Delivered efficiently
 - Labour costs
 - Material costs
 - Bought in services



Profile of Jobs Registered

Connections demand





RP5 Demand?

RP5 connections demand

- Customer demand
 - Driven by the economy and availability of money/credit
- Variation in work types
 - Housing sites – boom & collapse
 - Reduced speculative building
 - Home improvements – small alterations
 - Impact of Planning Regulations (PPS 14 and 21)
 - BT Broadband cabinets high volume low cost
- Variation in costs within work types
 - Cost reflective pricing
 - Significant variations within job types



RP5 Demand?

RP5 connections demand

- Volumes
 - Economic recovery expected to be slow
 - Tighter controls on availability of credit
 - Low consumer confidence
- Work types
 - Planning Regulations
 - Connection charges - locational signals
- Variations in costs
 - Connection charges
 - Cost reflective pricing
 - Locational signals



RP5 Demand?

RP5 connections demand

- Approach applied
 - Assumed no change to Connection Charge Policy
 - Slow paced economic recovery
 - 1% growth in new connections
 - No proposed Planning Regulation changes
 - Historic variation in costs remains



Looking Forward

UR Connections Policy Consultation – ‘Next Steps’

- Load Related Issues
 - 40% subsidy
 - High cost connections
 - Vulnerable customers
 - Rebates
 - Contestability



Looking Forward

UR Connections Policy Consultation – ‘Next Steps’

- Load Related Issues - 40% subsidy
 - The UR is considering removing the 40% subsidy from the start of RP5. Any further decisions on the removal will be taken as part of NIE’s next regulatory price control period RP5 consultation process
 - NIE would support the move to cost reflective charging to facilitate competition in connections and therefore the removal of the 40% subsidy for domestic and smaller commercial connections. However, it should be noted that O&M costs would then need to be added to the Connection Charge



Looking Forward

UR Connections Policy Consultation – ‘Next Steps’

- Load Related Issues - High Cost Connections
 - It is the UR’s view that subsidies should not be provided to any connections regardless of price to ensure full cost reflectivity. Current policy in this area will remain unchanged
 - NIE agrees that the charging of the full cost of a connection for a new dwelling or business premises would act as a locational signal to future developers



Looking Forward

UR Connections Policy Consultation – ‘Next Steps’

- Load Related Issues - Vulnerable Customers
 - Having consulted on issues surrounding vulnerable customers and their ability to pay for a connection to the distribution system the UR is now mindful of the cross utility implications that this brings with regard to utility connections. UR is proposing no change to policy in this area but may consider any future proposals on a cross directorate level
 - NIE would support the allocation of resources to developing a policy framework, to be determined by the Utility Regulator in conjunction with CCNI, for connection of vulnerable customers



Looking Forward

UR Connections Policy Consultation – ‘Next Steps’

- Load Related Issues – Rebates
 - The UR will liaise with DETI and will ask DETI to consider modifying the Electricity (Connection Charges) Regulations (NI) 1992. In seeking this change the UR will recommend that the prescribed period for the purposes of these Regulations is changed from 5 years to 10 years
 - NIE does not believe it is appropriate to extend the period for rebates for shared connection assets on the distribution system to 10 years for all distribution system load or generator connections.
 - Furthermore, whilst NIE would support a change that sees rebates applied to all classes of customer connected to the distribution system, careful consideration would need to be given to how this should be implemented



Looking Forward

UR Connections Policy Consultation – ‘Next Steps’

- Load Related Issues – Contestability
 - It is proposed that the UR will investigate further the introduction of contestability for connections. This programme of work will run in parallel with the RP5 programme
 - NIE would support a move towards competition in connections. Deciding which activities are suitable for competition will require the compilation and agreement of a list of contestable (suitable for competition) and non-contestable (not suitable for competition) activities



Looking Forward

UR Connections Policy Consultation – ‘Next Steps’

NIE welcomes the ‘Next Steps’ paper and looks forward to working with the Utility Regulator to develop positive outcomes for all stakeholders



RP5 STAKEHOLDER EVENT

Large Scale Generation Connections

23 May 2011



Presentation Approach

- General background with respect to large scale generation connections
- Presentation based largely on main issues contained in the Utility Regulator's "Next Steps Paper on Electricity Connection Policy for the Northern Ireland Distribution System" dated 10 May 2011 together with NIE's response
- Issues relating to small scale generation will be presented at the workshop scheduled for 6 June



Generation Connection Environment

- NIE has a licence obligation to connect in most cases
- Connection does not imply an ability to flow energy on the backbone system at all times (or a TUoS Agreement)
- Generators in the North and West are likely to be progressively more constrained in operation until backbone work is completed



Work on the backbone system

- Short term plan – work approved and largely completed
- Medium term plan (750 – 800MW total wind)
 - Part 1 plan developed and submitted
 - The Utility Regulator has carried out technical scrutiny but has yet to provide approval
- Long Term Plan
 - Option reduction process is on-going with input from a range of consultees
 - Approval is likely to be “in principle” for the plan but spending approval is likely to be circuit by circuit as timely need is proven
- Detail on network development and cost will be discussed at the workshop on 20 June



Security Standards and Constraints Information

- Security Standards
 - Customers should only pay for the level of security which they require
 - Standards affect connection time and cost
- NIE response
 - NIE and SONI also intend a standards review
- Constraints
 - Developers need to understand constraints as part of their decision making process
- NIE response
 - SONI is working to produce such constraints reports
 - We need to seek a mechanism to inform smaller generators not intending to sign a TUoS agreement. Our approach would be to ask SONI to advise us of constraints affecting successive 10MW blocks of such generation. We can then pass that message on to generators



Rebates

- Present Position
 - Only some classes of customer are entitled to rebates of connection charges
 - Rebates only apply for 5 years
- Respondents
 - The spread of request is for rebates to be paid for up to 10 years at the minimum or up to 50 years at the maximum
 - Most believe that 10 years is correct for most customers
- Utility Regulator's next step
 - Recommend that the prescribed period in the Electricity (Connection Charging) Regulations (Northern Ireland) 1992 is changed from 5 years to 10 years
- NIE Response
 - NIE recognises that for high cost distribution system load and generator connections that an extended timeframe for rebates should be considered
 - NIE notes that there is a need to change primary legislation to ensure that such a change can be applied to all classes of customers. For this reason, there may be some delay in implementation of the initiative. NIE supports an early approach by the Utility Regulator to DETI to make the changes



Definition of Connection Assets and Associated Costs

- Present position
 - Generators and over 1MW customers connecting to the distribution system pay the whole cost of reinforcement at the connection level and one voltage level above
- Respondents
 - Want a reduced system development burden on generators; general support for shallow charging
 - IWEA worries about 33kV individual windfarms having to pay for 110kV reinforcement
 - Two respondents want shallow distribution connection and no DUoS
 - Two respondents worry that over-incentivisation of small scale generation will affect operating opportunities for large scale renewables and that working to deliver lower voltage opportunities is not valuable with the level of constraints on the transmission system
- Utility Regulator's next step
 - There is a need to engage with the SEM and CER to take this issue forward



Definition of Connection Assets and Associated Costs

- NIE Response
 - NIE believes that the responses relate mostly to small scale generation and detail on this is best discussed at the workshop on 6 June
 - In general however, a study is needed to determine the best approach to commercial policies. That would better inform stakeholders of the consequences



Timing of Offers and Connection Agreements

- Present Position
 - NIE has an obligation to make an offer within 3 months
 - There is no contractually binding timetable for works
- Respondents
 - NIE perceived as slow in implementing process and works
 - Some respondents want a contractually binding timetable
 - Additional timing incentives from developers may or may not be helpful
 - SONI want an offer timetable linked to firm TUoS (this is likely to be a larger scale issue)
 - Connection Agreements need to be available at an early stage to provide a firm legal platform for the parties
- Utility Regulator's next steps
 - The UR believes that further investigation is required on both timing and resources
 - Incentives should be examined as part of the next price control
 - The UR will be transparent in making public its findings



Timing of Offers and Connections and Resources

- NIE Response
 - NIE believes that most of the frustration arises around small scale generation and recognises that the sudden increase in the number of connections has needed more staffing; NIE has recruited for that; there is a learning curve. We will deal with those issues at the small scale generation workshop
 - We are sceptical about the value of contractually binding timetables. We cannot see how to provide guarantees on issues outside our control. These include all forms of permission to build
 - We agree with SONI that more detail around firmness and factors determining it needs to be included in agreements
 - We agree that Connection Agreements should be available early, but that means that developers need to provide all equipment data early
 - We will co-operate fully with the UR in investigating timing and staffing levels. Whilst we are increasing resource levels, we need to point out that there is still considerable uncertainty around the eventual volume of work associated with small scale generation.
 - We are open to a discussion around incentives



Clusters of Generators

- Respondents
 - A range of issues
- Utility Regulator's next step
 - A decision paper has been issued on the matters
- NIE Response
 - We have responded to the comments, shared that response with the industry, taken views from the industry and agreed the way forward with the industry and the Utility Regulator
 - We are proposing an immediate addendum change to the Distribution Connection Charging Statement to reflect this agreement. Wider scope changes will follow
 - In the interests of ensuring that the environmental benefits of clusters happen where appropriate, we intend to include a clause which indicates that when we make an Offer to connect to an appropriate cluster, that will fulfil our obligation to make a connection offer



Cost of Connection and Published Information

- Respondents
 - Connection cost should not be a barrier to entry
 - NIE charges appear expensive
 - More detailed costs should be published
- Utility Regulator's next steps
 - Instruct NIE to restructure the charging statement and provide more information
 - Examine a more harmonised approach on the island
 - Examine and audit estimated and outturn costs
- NIE Response
 - We will co-operate with the UR and the industry to restructure the cost information in the charging statement however we caution that costs are very dependant upon physical conditions and obstacles
 - We have already opened discussion with ESB on their approach
 - We agree with the UR that an appraisal of outturn costs and estimated costs is good practice. We will work with the UR to do what is required to satisfy stakeholders that the Statement of Charges reflects efficient outturn costs



Operation and Maintenance Charges

- Present Position
 - Charges are calculated for the life of the Connection Agreement and capitalised
- Respondents
 - The charge should be annual
 - The quantum of charge is large (2% per annum)
- Utility Regulator's next step
 - As part of the RP5 review the UR will scrutinise O&M charges
- NIE Response
 - NIE will implement annual O&M charges for all sizes of generator
 - NIE has recently reviewed O&M charges and is satisfied that the level is in the round correct. However, we will co-operate with the UR's review



SCADA Costs and Control Limits

- Respondents
 - Control limits
 - There are a few differences between the Grid Code requirements and the D- Code requirements
 - Cost of SCADA and Communication created by the D-Code requirements for small generators
- Utility Regulator's next steps
 - The UR will request the Distribution Code Review Panel to re-examine the rules surrounding connection
 - The UR will review SCADA and communication costs as part of the RP5 price control discussions
- NIE Response
 - SONI's Grid Code requirements reflect the aggregated management of the entire system whilst the D-Code reflects the need to more accurately target the management of voltage in small distribution areas
 - The latter issue will be dealt with at the workshop on 6 June as it applies to small scale generation



Consultation Issues all sizes of Generation

- Contestability (10 respondents)
 - Contestability in connection works required
- Utility Regulator's next step
 - The Utility Regulator will investigate further the introduction of contestability for connections. This program of work will run in parallel with the RP5 programme
- NIE Response
 - NIE is comfortable in principle with contestability in connection asset works, however there are issues which need to be considered and further work is required. Examples are:
 - NIE believes that, for the moment the planning of the connection, should not be contestable
 - The built assets will need to be adoptable by NIE, so the design needs to be acceptable for such purposes
 - NIE would need to advise on the standards to be applied to adoptable assets and ensure that assets are developed in line with the standards
 - How are adopted assets to be valued for refunds?
 - How are safety and records issues to be managed?
 - How are the range of permissions issues to be managed?
 - NIE is in the process of adopting an overhead line asset built by a windfarm developer



SPS and Communications Charging

- Respondents
 - Charging should reflect shared and sole use assets
 - NIE should review the costs of SPS schemes
 - More detail should be published on SPS costs
 - More detail required on how much network constraint the schemes create
 - SONI Communication charges should be separately identified in NIE charging statement
- Utility Regulator's next step
 - The UR intends to ensure that Grid Code charges are transparent in the Connection Offer
- NIE Response
 - NIE agrees with all these points in principle
 - On publishing more breakdown on costs, we foresee a difficulty in that these schemes are designed as bespoke systems for individual circumstances. Our approach to date has been to offer developers "actual cost" charging principle on a reasonably open book approach. As experience grows we may be better placed to provide menu pricing
 - We agree to approach SONI to enable us to include appropriate detail of their various charges



NIE T&D Resources

- Respondents
 - Additional resources are required to meet existing and future workload in this area
 - NIE needs to be able to meet the timescales for the quotation of generation connections
 - A review of NIE's resources is required to ensure adequacy
- Utility Regulator's next step
 - It is proposed to review this area as part of the RP5 price control discussions in tandem with the review of timing of connections
- NIE Response
 - NIE has already recruited and committed additional staff in the generation connections area
 - As part of the RP5 submission NIE has outlined the additional resources required to meet the future workload in this area