Approval criteria and incentive mechanisms for RP5 Fund 3 - Investments for Renewable Electricity

Consultation Paper

30 August 2012

Contents

1. Introduction

1.1. The Utility Regulator's primary duty is to protect consumers, in addition we are required to have regard to "the need to secure that licence holders are able to finance the activities". In this context we are required "to secure a diverse, viable and environmentally sustainable long term energy supply".

1.2. In recent years, government energy policy has focused on reducing carbon emissions. It has offered financial incentives for developers to increase the amount of electricity produced from renewable sources. This has attracted a large number of applications for planning permission to build wind farms.

1.3. Currently 457 MW of wind generation have been connected to the electricity network, an additional 577 MW has obtained planning permission and is in the process of obtaining a connection. This total of 1034 MW compares to NI's peak demand of 1777 MW[1] and the minimum demand of 530 MW[2].

1.4. Applications for a further 600 MW of wind generation are currently in the planning approval process. NIE are also aware of developers who are currently in the process of undertaking environmental impact assessments or are in negations with land owners for a further 800MW of generation. If successful, these would bring the total to more than 2400MW (135% of historic peak half hour demand).

1.5. In addition, the Crown Estate is currently in the process of leasing rights for renewable generation in the seas off Northern Ireland. Up to 800MW of capacity is available.[3]

1.6. NIE and SONI are obliged to make a connection offer to any generator who requests one. Any connection offers will specify the amount of firm access to the transmission network at the time of initial connection. This paper relates to the deep network reinforcement required to provide the generators with firm access.

1.7. Traditionally, generation stations have been located near to deep water ports (for import of fuel) and close to demand. The transmission network in NI has developed based on three generation nodes: Island Magee (serving Ballylumford and the Moyle Interconnector); Kilroot; and Coolkeeragh. The new renewable generation is mostly located in other areas, where there is limited demand and the existing transmission system was not designed to absorb / transport significant quantities of generation.

1.8. In its Strategic Energy Framework[4], published in 2010, DETI stated a target of 40% of electricity consumed in NI in 2020 coming from renewable sources. They

[1] *18:00 hrs on 22nd December 2010*
[2] *06:00 hrs on Sunday 27th May 2012*
[3] http://www.thecrownestate.co.uk/news-media/news/2011/the-crown-estate-opens-up-northern-ireland-offshore-renewable-energy-programme-to-industry/

also emphasised the high level of fuel poverty in NI, and estimated that the total impact on domestic bills (including the costs of developing wind farms) would be between £50 and £80 per year (2010 prices).

1.9. As a result, NIE, with assistance from SONI, have been working to develop plans to expand the transmission network to the areas where the new generation will be located. They have divided the work required into 3 phases. The short term plan (which is complete), the medium term plan (underway) and the Renewables Development Integration Plan (RIDP). RIDP is an all-island network development plan and is being developed in conjunction with EirGrid. These are described in NIE's paper "Capital Investment Requirements for the Fifth Regulatory Period".[5]

1.10. NIE have identified that they may require up to £1 billion to develop the network to accommodate enough renewable generation to meet government targets[6].

1.11. In its submission to the regulator for RP5, NIE has proposed that the costs for developing the network to accommodate the additional generation after the preliminary development stage should be assessed outside of the five yearly price control cycle.

1.12. In the draft determination for RP5[7], the Utility Regulator has recognised the potential benefits of a 2 stage approach, and has allocated the costs for accommodating additional renewables to Capex Fund 3. This allows both the construction and pre-construction costs to be assessed as the case of need for a particular project is proven and reduces the total amount of cost risk faced by both NIE and consumers.

1.13. The RP5 draft determination did not specify the criteria to be used to approve these projects or the incentive mechanism to be applied to the preconstruction costs.

1.14. The purpose of this paper is to describe the assessment criteria and incentive mechanisms that the Utility Regulator intends to apply to the Capex Fund 3 requests made by NIE.

[4] http://www.detini.gov.uk/strategic_energy_framework__sef_2010_-3.pdf
[5] http://www.uregni.gov.uk/uploads/publications/Capital_Investment_Requirements_for_RP5_NIE_Paper.pdf
[6] Page 7 of the Strategic Energy Framework
[7] http://www.uregni.gov.uk/news/regulator_launches_consultation_on_nie_td_price_control_proposals

2. Regulatory Principles and Objectives

Our statutory duties

2.1. Our statutory duties are detailed in Appendix A. Any approvals we grant must be in accordance with these duties. Based on these duties, we have identified three areas we intend to scrutinise in the development of the network for renewable generation. These are:

- Benefits to consumers
- Specification of the assets to be installed
- Schedule to which they will be delivered
- Cost of delivering the assets

2.2. Each of these is discussed below.

Specification

2.3. The Electricity Order 1992, places a statutory duty on NIE T&D to ensure that it develops and maintains an efficient, co-ordinated and economical system of electricity transmission. They are also required to facilitate competition in the supply and generation of electricity.

2.4. In addition, under condition 19 of its licence, NIE T&D is required to plan, develop and maintain the total system in accordance with the Transmission and Distribution System Security and Planning Standards and the Transmission Interface Arrangements. Under condition 20 of its Licence, SONI is required to operate and direct the flow of electricity onto and over the transmission system in accordance with the Transmission and Distribution System Security and Planning Standards and the Transmission Interface Arrangements.

2.5. Under Condition 19 part 3, the Utility Regulator can request that NIE T&D review these standards. Any revisions require the approval of the Utility Regulator before they can be applied (Condition 19 part 4).

2.6. These standards were originally drafted for networks dominated by conventional thermal generation. These are listed in Table 2.1, and are published on the SONI and NIE T&D websites. They were last updated in 1992. Since then, computer modelling capabilities have improved significantly. The amount of intermittent dispersed generation has increased significantly. Network operators have increased their use of SCADA systems and telemetry. The equivalent standards for GB have been reviewed and updated on a number of occasions since 1992.[8]

[8] http://www.nationalgrid.com/uk/Electricity/Codes/gbsqsscode/

2.7. It is essential that customers are protected from unnecessary costs. Therefore the best available modelling techniques should be used to determine the assets to be installed. NIE has indicated that they have started to process of reviewing the standards in relation to transmission assets and a review of distribution will follow on from this.

Table 2.1: Transmission and distribution system security and planning standards

	Reference	Name	Last Updated
1	ER-P2/5	Security of Supply, dated October 1978, and NIE amendment sheet, Issue 2, dated 7 August 1992.	August 1992
2	PLM-SP-1	Planning Standards of Security for the Connection of Generating Stations to the System Issue 1, dated September 1975, and NIE amendment sheet Issue 2, dated 7 August 1992.	August 1992
3	PLM-ST-4	CEGB Criteria for System Transient Stability Studies Issue 1, dated September 1975, and NIE amendment sheet Issue 2, dated 7 August 1992.	August 1992
4	PLM-ST-9	Voltage Criteria for the Design of the 400kV and 275kV Supergrid System Issue 1, dated 1 December 1985 and NIE amendment sheet Issue 2, dated 7 August 1992.	August 1992
5	ER-P28	Planning limits for Voltage Fluctuations.	September 1989
6	ER-P16	EHV or HV Supplies to Induction Furnaces.	June 1975
7	ER-P29	Planning limits for Voltage Unbalance.	March 1990
8	ER-G5/3	Limits for Harmonics.	September 1976
9	ER-G12/2	Application of Protective Multiple Earthing to Low Voltage Networks.	August 1982
10	EPM-1	Operational Standards of Security of Supply Issue 2, dated 30 June 1980.	June 1980

Source: SONI[9]

2.8. NIE T&D will be required to demonstrate that the assets they have selected for each project are:

1. Necessary
2. Of the optimum size, based on best practice modelling of: network loads; intermittent generation and the risks associated with generation development.

2.9. As part of this justification, NIE T&D will be required to produce a case of need and details of the additional network capacity provided by the scheme. This should also include details of the expected utilisation of the assets, and the additional volume of renewable generation able to access the market as a result of the investment. The schemes should be presented in the context of the overall

[9] http://www.soni.ltd.uk/upload/Security%20&%20Planning%20Standards%20Index.pdf

long term plan for the NI transmission network, known as “Renewables Integration Development Plan”.[10]

2.10. NIE should explain how the proposed schemes relate to their statutory duties and licence obligations, including their obligation to provide terms for connecting generation to the distribution system and their duty to ensure that the system is efficient, economic and coordinated.

2.11. Only schemes that NIE can prove to be necessary and of appropriate scope will be considered further.

2.12. We have different statutory duties to NIE, and these must be considered in any approval that we give. In particular our duties to secure a diverse, viable and environmentally sustainable long term energy supply and to have regard to the needs of certain groups of customers. (see appendix A for details).

2.13. Details of how we will assess each scheme are contained in sections 4 and 5

Delivery Schedule

2.14. Customers should benefit from additional renewable generation through lower wholesale energy prices at times of high renewable output. These benefits are expected to be a lower requirement for imported fossil fuels and lower carbon emissions. If the network development is delayed, then not only will customers miss out on these benefits, but they may have to pay additional costs in wholesale market to constrain off new generation.

2.15. Under the current arrangements for Northern Ireland, customers fund 75% of the capital investment in the transmission network over the first 40 years of its life. They should not pay for transmission assets before they are providing a benefit to them. The remaining 25% of the cost of transmission investment is funded by generators across the island.

2.16. We intend to incentivise NIE to develop the network in the optimum order, with assets delivered as close as possible to the date when they are required. The costs associated with constraining generation until the assets are delivered should be included in all assessments of the schemes being considered.

2.17. Details of the incentive mechanism are contained in section 6

Cost of delivering the assets

2.18. Under our draft determination for RP5, we have stated that:

2.19. “This fund is limited to investment required for the development of the network to facilitate renewable generation and interconnection, including the medium term

[10] http://www.ridp2020.com/

plan, RIDP, Tyrone – Cavan Interconnector, wind farm clusters and the any upgrade to the Coolkeeragh to Magherafelt line required as part of the RIDP.

- No ex-ante allowance will be calculated or included in the tariffs.
- Will include an explicit obligation for spend to be incurred efficiently.
- Each item of work will be approved individually, up to a ceiling price, subject to the delivery of the specified functionality.
- Costs beyond the ceiling price will only be considered if they could not have been reasonably foreseen by a competent network developer.
- All costs in this fund will be added to a separate dedicated RAB. This RAB will have a separate WACC applied to it."

2.20. For each scheme we require NIE to submit a cost report which details the impact that the investment will have on customers. This should include the cost of the total investment (pre-construction and construction costs) and the associated revenue over the 40 year depreciation period.

2.21. As NIE has a duty to ensure that the system is economic and efficient, we expect the cost report to include an assessment of the impact that the scheme will have on the costs within the wholesale market. NIE will have to request some of this information from SONI. The details of this assessment will depend on the wholesale market arrangements at the time but, as a minimum, should include:

- the impact on the average unit cost of electricity in Northern Ireland;
- any balancing costs;
- the cost of any changes in the amount of energy lost in the distribution and transmission systems; and
- the costs for any additional ancillary services required to support changes to the generation mix that result from this scheme .

2.22. Further details on how we intend to measure efficiency and incentivise NIE to install the assets in an efficient manner (both cost and timing) are contained in section 6.

Other regulatory principles to be applied

2.23. In addition to the areas we are targeting for incentivisation, there are a number of regulatory principles that will be applied to the assessment and approval of the Fund 3 requests. These are:

- NIE T&D is able to finance the work required to develop the network to accommodate the increase in renewable generation;
- Costs must only be recovered once;

2.24. Each of these principles is discussed below

NIE T&D ability to finance network

2.25. The Utility Regulator has a statutory duty to ensure that regulated companies are able to finance their activities. This means that the allowances awarded must be sufficient to cover the efficient costs of undertaking the development, including the provision of resources used to develop the least cost solution.

2.26. This does not mean we will provide NIE T&D with unlimited resources and they must also share some risk related to the estimation of pre-construction costs and timely delivery of the assets.

Costs only recovered once

2.27. The preliminary costs for renewable development have been included in the opex allowance for RP5. These cannot be added to the RAB, even if this would be permitted under the relevant accounting rules. The full scope of preliminary work must be delivered in exchange for this allowance, and none of these costs can be included with the funding awarded under other stages of the project. The RP5 final determination will detail any efficiency incentives applied to these costs.

2.28. The method for the recovery of preconstruction costs (expensed or added to the RAB) will be specified in the relevant approval letter. There is no option to change the recovery method during the development of the project.

2.29. Initially we intend to continue with the precedent set for the medium term plan and Tyrone - Cavan interconnector. For these projects, pre-construction costs have been expensed and recovered via the TUoS tariff in the year that they are incurred. This will be kept under review.

2.30. Construction costs will be recovered via the RAB. The treatment of interest during construction or the addition of actual spend to the RAB will be specified in the RP5 final proposals for Fund 3.

3. Overview of Proposed Process

3.1. NIE has proposed a process to follow for the approval of investments associated with the development of the network for renewable generation. Having considered and discussed NIE's proposals with them we propose the following process.

Preliminary Work

3.2. This work is funded via NIE's opex allowances in RP4 and RP5. This covers the assessment of generation developments and the formulation of a high level plan. During this stage, individual projects will be identified and cases of need established.

3.3. Once the preliminary work is complete, NIE submit requests for funding to us. These requests cover the work required to develop the project to the point of awarding construction contracts.

3.4. Details of how we propose to assess the pre-construction costs can be found in section 4.

Pre-Construction Work

3.5. The pre-construction phase of the project includes all work required to obtain all statutory consents for the scheme and procurement of the construction contracts.

3.6. Once the project has obtained planning permission, NIE will submit an intermediate assessment of the project to allow us to undertake an initial review of the proposals, including a cost benefit analysis. The results of this will be provided to NIE, however we would not expect to publish them as the estimates that NIE use for the construction costs will be commercially sensitive.

3.7. Once NIE have reached the stage of preferred bidder, we will update our initial cost benefit analysis and review our assessments. The results of this will then be provided to our board, which will make the final decision. Please note the board will be kept informed throughout the process as each stage develops.

3.8. Details of how we propose to assess the projects can be found in section 5.

Construction

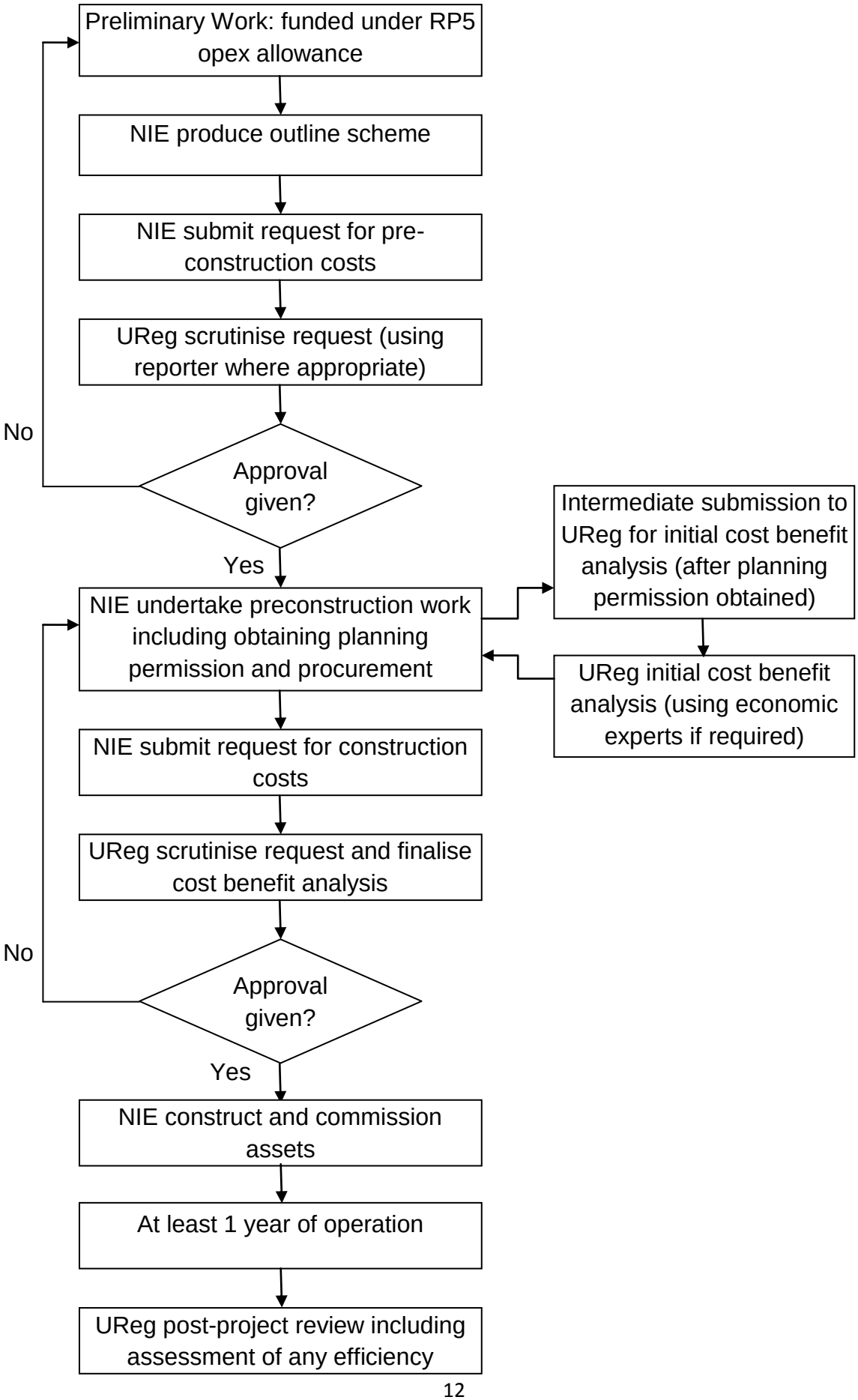
3.9. During the construction phase, NIE will provide us with regular progress reports. The frequency and format of these will depend on the scale of the project.

Post Project Review

3.10. As described in section 6 below, we propose to assess any efficiency incentives and any other performance criteria specified for the project after one full year of

operation. This time could be extended if the first year of operation is affected by abnormal operating conditions such as extreme weather or generation availability.

Figure 1: Proposed Approval Process for Fund 3 Capex



4. Approval of Preconstruction Costs

4.1. Once we have received a request from NIE for approval of pre-construction costs, we will consider three aspects of the submission in detail. These are:

- the need for the project and value for consumers;
- the timing of the pre-construction work;
- the amount of money that NIE request.

4.2. Each of these are discussed in turn.

Need

4.3. As part of the preliminary work, NIE will have established a case of need for the project based on their duties and obligations. We verify any assumptions and claims made by NIE in this document and review how the assets will be used both in the short term and after completion of the RIDP. Based on this we will determine if the proposed scheme appears to be necessary for NIE to be compliant with its statutory duties and licence obligations. Please note: a full assessment of the case of need cannot be made until further information is available after all necessary consents have been obtained towards the end of the pre-construction work.

4.4. In addition, we will review each scheme with respect to our statutory duties. These include:

- protecting consumers;
- the requirement to promote competition where appropriate (in this case competition in the generation of electricity);
- the need to secure a diverse, viable and environmentally sustainable long term energy supply;

4.5. This will require us to ensure that scheme fits in with the long term needs of the network (i.e. it is compatible with the RIDP and/or network 25)

4.6. We will need to be confident that progressing with this scheme will not disproportionately advantage or disadvantage any particular generation company in the SEM, beyond that inherent in developing the network in stages.

4.7. We will need to understand the difference that these assets will have on SONI's ability to dispatch renewable generation in accordance with the grid code and associated market rules. We will work with SONI to determine the most appropriate method to assess and document this.

4.8. If these qualitative assessments show that the scheme is necessary, we will assess the timing of the scheme.

Timing

4.9. Any pre-construction work that is undertaken too far in advance of likely construction, could result in survey data becoming invalid (particularly environmental surveys). Any developments in the planning policy, the outcome of ongoing public enquiries or even the number of generators accepting connection offers could affect the solutions chosen and the timing of any construction work.

4.10. It is not in the best interests of customers to undertake preconstruction work too far in advance of construction, as rework is an inefficient cost. We are therefore obliged to ensure that the timing of the pre-construction work is appropriate.

4.11. Conversely, the volume of generation connecting to the system over the coming years, has the potential to reduce the average price of electricity across the island of Ireland. Any delays to critical network reinforcement projects will mean that customers could be paying more than is necessary. Timely delivery is essential to protect consumers.

4.12. Once we are satisfied that the timing of the pre-construction work is appropriate, we will assess the cost of the work.

Cost

4.13. When assessing the cost of pre-construction work, we will primarily consider three aspects of the submission:

- is the scope of work proposed by NIE sufficient to progress the project to tender award, including all necessary consents;
- is the cost proposed for this work efficient;
- is the sharing of risk between NIE and customers appropriate for the project.

4.14. Where appropriate, we will use an expert consultant or the reporter to assess these aspects of the submission.

4.15. Any approval for pre-construction costs will include:

- How the costs are to be accounted for (expensed or added to the RAB)
- The work that is to be completed for the amount agreed
- How the risk of any cost overruns are to be treated
- Any efficiency incentives that may be applied to this work

4.16. We are aware that making savings in the pre-construction phase of a project can result in a higher construction cost that is necessary. Therefore any efficiency incentives applied to the pre-construction phase of the project will be assessed

in the context of the delivery of the entire project, and no payments will be made until NIE have demonstrated at least one year of satisfactory operation of the scheme.

4.17. Having identified the outputs that NIE will deliver, an allowance will be approved. Outperformance while delivering the defined outputs will be retained by NIE as efficiency. It should be noted that these assessments will take place over a number of years and therefore we do not believe that it is appropriate to be prescriptive about the sharing of risk or the definition of further incentives at this time. These aspects of the approval will be project specific.

4.18. The costs allowed must be sufficient to allow NIE to finance the investments they are required to make under legislation and their licence, but should also be efficient in order to protect consumers.

Role of the reporter

4.19. We will review NIE's request for pre-construction costs and address any initial queries directly with NIE. We would expect to resolve these concerns before any costs associated with using the reporter are incurred.

4.20. Once we are content that the submission is complete and initial queries are resolved, we will use the reporter to examine any aspects of the request that require specialist knowledge.

4.21. The terms of reference for this work for the reporter (or other expert consultant) are expected to include:

- Verification of the power flows associated with the case of need
- Confirmation that the assumptions made are appropriate and are in compliance with the relevant standards
- Validation that the scope of work proposed is sufficient to develop the project up to the point where construction contracts can be awarded
- Validation of the proposed costs as being efficient

5. Approval of Construction Costs

5.1. The approval of construction costs will be done in two stages. Once all necessary consents have been obtained, we will undertake an initial assessment. This will be followed by a further assessment after the construction contracts have been tendered and a firm price for the work is known.

5.2. The purpose of the initial assessment is to provide tenders with confidence that the project is viable, based on the best information available. It should also speed up the final approval process to ensure that contracts are signed within the validity period. The further assessment is to ensure that any changes as a result of the procurement process do not change this conclusion and to ensure that any incentives are based on the cost and construction programme that were supplied by the successful tenders rather than NIE's own estimates.

5.3. Once we have received the information from NIE for the initial assessment of construction costs, we will consider three aspects of the submission in detail. These are:

- the timing of the project;
- the amount of money and risk sharing arrangement that have NIE requested;
- the need for the project (including a cost benefit analysis).

5.4. These are the same criteria that we will use to assess the pre-construction costs; however, the order of the assessments will be different.

Timing of the project

5.5. During the initial assessment, we will assess if the timing of the construction contract is appropriate. The factors that are likely to determine this are:

- The amount of generation that has accepted connection offers from NIE and are likely to be connected before the commissioning of the project. The amount of firm and non-firm generation will be considered.
- The interaction with other network investments, the availability of outages and the impact on constraint/balancing costs.

5.6. We would expect to see NIE and SONI prioritising investment where possible to reduce the constraint costs while maintaining security of supply.

5.7. As part of the submission, we will expect NIE to provide information about the interdependencies between projects and the dates that the project should be operational by. Examples of this could include: the assets cannot be fully utilised before the Tyrone Cavan interconnector is operational; or the project is required to coincide with the commissioning of a specific cluster. Any wholesale market

costs that would be incurred as a result of delays should also be specified in the initial submission.

5.8. If the timing of the investment is confirmed as being appropriate as part of the initial assessment, we will then consider the amount of money requested by NIE.

5.9. Unless there is a material change in circumstances, we would not expect to review the proposed timing as part of our final assessment.

Cost (including contingencies)

5.10. As stated above, the funding approved must be sufficient to allow NIE to finance the investments they are required to make under legislation and their licence, but should also be efficiently incurred in order to fulfil our duty to protect consumers.

5.11. As part of the initial assessment , we will undertake a robust assessment of the proposed costs submitted by NIE to ensure that the scope of their solution is appropriate.

5.12. We will also verify that the procurement strategy is designed to give the best outcome for customers. This includes ensuring that the risk sharing mechanism between NIE and the contractor complements the assumptions made when we set the rate of return[11]. This assessment is to ensure customers do not pay twice for the construction risks, i.e. that NIE are not rewarded (via their rate of return on the RAB) for risk that has been passed onto the contractor as part of the procurement process, and which is subsequently embedded in the actual construction cost which is added to the RAB.

5.13. The assessment of risk allocation will also determine an efficient amount for contingencies. We expect all submissions (and subsequent progress reports) to include a risk log to demonstrate how the risk has been identified and managed.

5.14. Where appropriate, we will use external experts, including the reporter, to ensure that the estimates that NIE make as part of the initial submission reflect efficiently incurred costs. This will improve the validity of the initial cost benefit analysis and should speed up the final assessment of contract costs.

5.15. The best estimate of the appropriate construction cost, including contingencies, will be used in the cost benefit analysis to assess the need for the project.

5.16. We will review our assessment of the project costs and contingencies once the final contract prices and risk sharing arrangements are known.

[11] This will be specified in our final determination for RP5.

Demonstration of need

5.17. As part of their initial (and final) submissions to us, NIE will include evidence to prove that the project is required to ensure they fulfil their statutory duties and licence obligations. We have a duty to ensure that NIE can finance these activities, and therefore must take this evidence into account, However, we also have additional statutory duties which include promoting competition where appropriate and securing a diverse, viable and environmentally sustainable long term energy supply.

5.18. We intend to use cost benefit analysis techniques to confirm the need for the project. This will be undertaken based on the initial submission, with a appropriate sensitivity analyses. This will then be verified based on the final contract costs and project risk log.

5.19. This means our appraisal must include:

- the directly measurable financial costs and benefits
- The non-financial benefits that arise from the project, such as competition between generators gaining firm access to the wholesale market as a result of the scheme and the value obtained from the more diverse and sustainable generation portfolio.

Directly measurable financial costs and benefits

5.20. The measureable costs and benefits are:

- the increase in network charges as a result of the investment; and
- changes to the costs in the wholesale market as a result of additional generation having firm access.

5.21. We expect NIE to include a year by year calculation of the impact that the project will have on its regulated entitlement within the submissions. We also expect them to have considered the impact on the wholesale market[12], in order to demonstrate compliance with the duty to ensure the system is efficient and economic. Details of the impact and the assumptions behind it must be included in the submission.

5.22. The wholesale market is currently being reviewed to ensure compliance with EU directives. The analysis should reflect the market mechanisms for:

- energy price
- balancing costs (e.g. constraints)

[12] The wholesale market is currently being reviewed to ensure compliance with EU directives. Details can be found at http://www.allislandproject.org/en/TS_Current_Consultations.aspx?article=41f5681a-ef37-41ca-ab7d-7a1bdd7db385

- ancillary services (incremental costs associated with supporting changes to the generation portfolio

5.23. We will ensure that the assumptions and costs/benefits provided by NIE are validated before including them in our analysis.

Non-financial costs and benefits

5.24. We have a duty to ensure a diverse, viable and environmentally sustainable long term energy supply. In our cost benefit analysis, we propose to include a measure of the benefits that these projects can be proven to contribute towards this objective. Variables that we will consider here are:

- the reduction in the amount of greenhouse gases that can be attributed to the investment. This could be modelled using the same data required to calculate the impact on prices in the wholesale market. The reductions could be valued at the price of carbon allowances (e.g. EUETS or UK carbon reduction commitment credits);
- the reduction in fossil fuel imports as a result of using renewable sources of electricity;
- the increase in the firm access to the transmission system that is provided by the project.

5.25. Different types of renewable generation will offset different amounts of conventional plant. Investments that benefit predictable synchronous renewable generation (for example biomass or anaerobic digestion) will provide higher benefits under these criteria than intermittent non-synchronous plant (wind and marine).

5.26. The amount of non-synchronous generation that can be used on the island of Ireland is currently set at 50% but the opportunity to increase this level is being assessed by the transmission system operators under their DS3 programme[13]. As they adjust operating parameters and develop new system services, the amount of non-synchronous generation that can be used should increase. The most up to date information will be used to assess the benefits.

5.27. Many changes in energy policy and priorities can occur over the course of the Network 25 investment period (up to 2025). We do not propose to be prescriptive over the costs and benefits (financial and non-financial) that will be used in each analysis, as there must be flexibility to reflect changes in our statutory duties, market structure and generation technology over time. However, comments are welcome on any factors that respondees believe are relevant to this analysis.

[13] Further details can be found at http://www.eirgrid.com/operations/ds3/

5.28. Benefits due to competition between generators will be reflected in the calculation of the financial benefits, therefore it is not repeated in the non-financial criteria.

5.29. Under its RIIO process, Ofgem have defined environmental outputs that it will incentivise the TSO's and DNO's to deliver. We have reviewed these to determine if they should also be reflected in the benefits delivered by the Fund 3 investments. They are not considered to be relevant to this type of investment.

Cost benefit analysis

5.30. Any cost benefit analyses will be undertaken by appropriately qualified staff or external consultants. We do not expect the reporter to provide these skills.

5.31. The project timings will be those provided by NIE and verified as part of the validation of the project timing.

5.32. The cost benefit analysis will reflect the guidance contained in the Northern Ireland Guide to Expenditure Appraisal and Evaluation[14], with the costs and benefits considered in line with our statutory duties. The analysis period will reflect the depreciation period for network assets of 40 years.

5.33. Where a number of individual schemes are required to remove a network constraint, the cost benefit analyses should cover the entire scope of work. For example, the capacity of a section of new overhead line may be greater than that of the substation immediately upstream of it. Therefore the cost benefit analysis should consider both the short term situation before the substation is up-rated and the long term situation where the full capacity of the line can be utilised.

[14] Details of the current guidance can be found at http://www.dfpni.gov.uk/index/finance/eag.htm

6. Incentivising Efficiency

6.1. In order to fulfil our duty to protect consumers, it is imperative that the costs we allow to be recovered are occurred efficiently and that projects are delivered in a timely manner. For each project, all approvals will define the date by which the project (or project milestones) should be completed by, with associated incentives. Efficient management of costs will also be incentivised.

6.2. The cost and timing incentives will be weighted according to the circumstances of each project. For example, where the project is needed urgently to reduce constraint costs and maximise output from renewable sources, the incentive mechanism will be focused on how long it takes to deliver the project. However, if a project is dependent on another scheme to be fully utilised, the focus will be on cost.

6.3. As with all construction projects, there is a balance to be struck between the investments in preparatory works and the overall cost of the project. Spending less on ground investigation and survey work might result in savings against the preconstruction cost budget; however the contractors tendering for the work might build in additional costs to protect themselves against the risks associated with tendering with limited information.

6.4. It is essential that NIE T&D is incentivised to make decisions that reduce the total cost of the project. Therefore, any payments that we approve under an incentive mechanism must reflect the total cost of the project, not just one element.

6.5. Any incentives associated with the pre-construction phase would only be calculated once the asset is delivered and NIE has demonstrated that it meets the objectives defined in the pre-construction cost approval (for example 90MW of additional firm capacity between A and B).

6.6. Where possible, the total cost of the project should reflect all costs incurred by customers as a result of the work. This can be deemed to include the cost of generation constraints recovered in the wholesale market. This would incentivise NIE T&D to minimise the duration of network outages associated with the development of network. The significance of these costs and the method of calculating them will depend on the revisions to the wholesale market that are required to meet EU requirements. The approval letter should specify if they are included in the costs being considered for incentivisation.

We would expect the Reporter to assess the delivery of the project and any claims for the payment of efficiency incentives. Any efficiency incentives are only calculated and paid out after the relevant asset has been in use for one calendar year and the performance is verified as matching that originally proposed;

7. Consultation Process

7.1. We have not posed specific questions in this paper, but instead invite stakeholders to express a view on any aspect of the paper or related matter. Responses should be received by 1700 on 27 September 2012 and should be addressed to:

Sarah Friedel
Electricity Directorate
Utility Regulator
Queens House
14 Queen Street
Belfast BT1 6ED
Tel: 028 9031 6349
E-mail: sarah.friedel@uregni.gov.uk

7.2. Our preference is for responses to be submitted by e-mail, although hard copy responses are also acceptable.

7.3. Individual respondents may ask for their responses not to be published (in whole or in part), or for their identity to be withheld from public disclosure. In either case, we will ask respondents to supply us with a redacted version of the response that we can publish.

7.4. As a public body and non-ministerial government department, we are bound by the Freedom of Information Act (FOIA) which came into effect in January 2005. According to the remit of FOIA, it is possible that certain recorded information contained in consultation responses can be put into the public domain. Hence it is now possible that all responses made to consultations will be discoverable under FOIA – even if respondents ask us to treat responses as confidential.

7.5. It is therefore important that respondents note these developments and when marking responses as confidential or asking responses to be treated as confidential, should specify why they consider the information in question to be confidential.

7.6. This paper is available in alternative formats such as audio and Braille. If an alternative format is required, please contact the office and we will be happy to assist.

Appendix A Utility Regulator Statutory Duties

The principal objective of the Utility Regulator in carrying out its electricity related functions is:

> *to protect the interests of consumers of electricity supplied by authorised suppliers, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the generation, transmission, distribution or supply of electricity.*

The interests of consumers include their interests in the fulfilment by the Authority when carrying out its functions as designated regulatory authority for Northern Ireland, of the objectives as set out in Article 36(a) to (h) of the Electricity Directive.[15]

And also having regard to:

> (a) *the need to secure that all reasonable demands in Northern Ireland or Ireland for electricity are met; and*
>
> *(b) the need to secure that licence holders are able to finance the activities which are the subject of obligations imposed by or under Part II of the Electricity Order or this Order* (the Energy (NI) Order 2003)

In performing its duty, the Utility Regulator shall have regard to the need to protect the interests of

> i. *individuals who are disabled or chronically sick;*
>
> *ii. individuals of pensionable age;*
>
> *iii. individuals with low incomes; and*
>
> *iv. individuals residing in rural areas;*

This however does not imply that regard may not be had to the interests of other descriptions of consumer.

Subject to (a) and (b) above, the Authority is required to carry out its respective electricity functions in the manner which it considers is best calculated:

> *I. to promote the efficient use of electricity and efficiency and economy on the part of persons authorised by licences or exemptions to supply, distribute or participate in the transmission of electricity;*
>
> *II. to protect the public from dangers arising from the generation, transmission, distribution or supply of electricity;*

[15] European Parliament and Council Directive 2009/72/EC concerning common rules for the internal market in electricity

III. to secure a diverse, viable and environmentally sustainable long-term energy supply;

IV. to promote research into, and the development and use of, new techniques by or on behalf of persons authorised by a licence to generate, supply, distribute or participate in the transmission of electricity; and

V. to secure the establishment and maintenance of machinery for promoting the health and safety of persons employed in the generation, transmission, distribution or supply of electricity;

The Utility Regulator is also to have regard, in carrying out the above functions, to the effect on the environment of activities connected with the generation, transmission, distribution or supply of electricity.

Recent legislation from Europe Directive 2009/72/EC ("IME3 Directive") has amended and expanded our duties and functions. Amendments to the principle objective and original general duties are accounted for above, with additions and other changes outlined below.

For the purposes of implementing the IME3 Directive, the Department have made Regulations which implement the necessary changes into domestic law. This includes the Utility Regulator being designated as the national regulatory authority (NRA) for Northern Ireland. Designation as a NRA necessitates a blend of assuming additional responsibilities and a requirement to reinforce and ensure the organisation's independence while carrying out its activities. Additional responsibilities include:

- electricity transmission and distribution ownership unbundling ;
- publishing consumer guidance [16];
- a duty on the Authority to consult and co-operate with other authorities (Agency for the Cooperation of Energy Regulators (ACER), GB, and other Member States);
- and increased industry monitoring duties.

The strengthening of the Utility Regulator's independence takes the form of a general requirement to be independent, as well as specific measures to be applied to the Utility Regulator's activities. The Utility Regulator is now to function as the issuer of licences, including for a newly created distribution licence category, without the requirement for Departmental consent. The newly created distribution licence category includes the requirement to separate the current combined transmission and distribution licence held by NIE T&D.

[16] http://www.uregni.gov.uk/uploads/publications/UR_Implementation_of_IME3_July_11.pdf

Certain functions in relation to electricity have been added specific to monitoring activities. These are drawn from Article 37 of the IME3 Directive and are detailed below. Please note the paragraph lettering refers to the original lay out in the Directive.

> *(g) monitoring investment plans of the transmission system operators, and providing in its annual report an assessment of the investment plans of the transmission system operators as regards their consistency with the Community-wide network development plan referred to in Article 8(3)(b) of Regulation (EC) No 714/2009; such assessment may include recommendations to amend those investment plans;*
>
> *(h) monitoring compliance with and reviewing the past performance of network security and reliability rules and setting or approving standards and requirements for quality of service and supply or contributing thereto together with other competent authorities;*
>
> *(i) monitoring the level of transparency, including of wholesale prices, and ensuring compliance of electricity undertakings with transparency obligations;*
>
> *(j) monitoring the level and effectiveness of market opening and competition at wholesale and retail levels, including on electricity exchanges, prices for household customers including prepayment systems, switching rates, disconnection rates, charges for and the execution of maintenance services, and complaints by household customers, as well as any distortion or restriction of competition, including providing any relevant information, and bringing any relevant cases to the relevant competition authorities;*
>
> *(k) monitoring the occurrence of restrictive contractual practices, including exclusivity clauses which may prevent large non-household customers from contracting simultaneously with more than one supplier or restrict their choice to do so, and, where appropriate, informing the national competition authorities of such practices;*
>
> *(m) monitoring the time taken by transmission and distribution system operators to make connections and repairs;*
>
> *(q) monitoring the implementation of rules relating to the roles and responsibilities of transmission system operators, distribution system operators, suppliers and customers and other market parties pursuant to Regulation (EC) No 714/2009;*
>
> *(r) monitoring investment in generation capacities in relation to security of supply;*
>
> *(s) monitoring technical cooperation between Community and third-country transmission system operators;*

(t) monitoring the implementation of safeguards measures as referred to in Article 42.