



**A Strategy for the Regulation of ESB and NIE in the
Single Electricity Market: A Consultation Paper**

AIP/SEM/07/16

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1 Executive Summary

This paper advances proposals for regulating the generation and supply activities of the ESB and NIE in the light of the emerging market structures of the SEM.

The existing market structure will be replaced by a new licensing regime. For supply it is proposed that a common form of licence based on consistent principles should be used in each jurisdiction but that this would include special conditions for those supply entities that continued to fulfil the role of a Public Electricity Supplier (PES). In the Republic of Ireland (RoI) it is intended that unless another supplier expresses interest, ESB Customer Supply (ESB CS) will be designated as the PES. In Northern Ireland (NI) the concept of a PES will be phased out but NIE Supply will be subject to similar obligations to ESB PES for the foreseeable future, and is therefore referred to as a PES. These additional licence conditions will encompass acting as a supplier of last resort (SOLR), undertaking a Universal Supply Obligation (USO), undertaking the purchase and sale of contracts for difference (CfD) and energy in a non-discriminatory manner, having their businesses strictly ring fenced from related undertakings and affiliates, and being subject to an Economic Purchase Obligation (EPO) for wholesale electricity supplies.

PSO backed contracts pose a particular problem in the furtherance of competition under the SEM since any deficit in the associated costs can be recovered from the PSO levy. Thus there may be no incentive to maximise the value of these contracts. In NI the counterparty to the PSO contracts is NIE PPB. It is proposed that NIE Supply will be required to source its physical supply of electricity from the Pool, and hedge its Pool price exposure with CfDs. A policy decision is therefore needed as to whether NIE PPB should be permitted also to offer CfDs.

NIE PPB

Two options are considered in the paper as the basis for the regulation of PPB activities in the new market. The first proposes prohibiting PPB from offering CfDs. Instead it relies on the levy borne by NI suppliers to recoup the shortfall in its costs or distribute

any surplus. Since PPA costs should be relatively predictable this would create a natural pool price hedge for suppliers. The second approach would be to permit PPB to offer CfDs but regulate these contracts with all suppliers including NIE PES. PPB would be specifically required not to discriminate in its offering of CfDs such that it could not favour other related undertakings or affiliates. The approach has the advantage of being in accord with market processes, but would require sophisticated regulatory oversight.

The paper seeks views on which of these approaches would be most appropriate in the context of the SEM.

ESB PSO contracts

In the RoI the PSO requires ESB to purchase electricity under Power Purchase Agreements (PPA) from a number of sources. These are predominantly the peat burners and other AER power sources, and the two “Capacity 05” stations. The PSO levy compensates ESB for any out of market costs that are incurred. It is proposed that output from PSO power stations that are not subject to central dispatch should be treated as negative demand in determining the exposure to Pool prices. It is further suggested that the output from the other AER plants could be used as a direct hedge for ESB PES, but the output from the Capacity 05 plants would be required to be sold to the Pool and used to back CfDs offered to all suppliers in SEM. The CfD cover would be offered to all suppliers by way of some allocation mechanisms similar to the PPB allocation options. Management of the PSO contracts would be required to be ring-fenced within ESB.

PSO levy

In NI the PSO levy passes out of market costs of projects deemed to benefit the market as a whole to all NI suppliers. In the RoI the additional costs of renewable generation and the Capacity 05 contracts are similarly treated. The Regulatory Authorities are minded to align the principles for calculating the PSO benchmark price. Determination of the benchmark price will be the subject of a separate consultation in both jurisdictions that will commence shortly

Generation regulatory framework

The objectives suggested for regulating generation include the protection of customers through the promotion of competition, encouraging market efficiency, minimising regulatory intervention, and facilitating retail competition. The regulatory framework that is proposed is based primarily on the market power mitigation strategy. This requires certain generators to offer a proportion of their output to back CfDs available to suppliers across both jurisdictions at prices set by the Regulatory Authorities.

ESBPG and NIE PPB may also be required to offer non-directed contracts to suppliers on an arms-length non-discriminatory basis. The prospects for the establishment of an effective trading platform have been consulted upon previously. Options considered were an organised exchange, a web based bulletin board and an OTC brokered market. The Regulatory Authorities will explore with ESBPG and if necessary, NIE PPB the prospects for establishing a platform for implementation prior to the commencement of the SEM.

PES Regulatory framework

ESB PES costs are subject to a 5 year price control that runs from 2006 until 2010. NIE PES will be subject to a new control that will commence in 2007. Both Authorities believe that a change to their respective PES regulatory frameworks is necessary. In the SEM a less interventionist approach to the determination of tariffs is seen as appropriate supported by strict licence conditions.

The objectives advanced for PES regulation are the protection of customers through the promotion of competition, reducing dominance in the retail market, providing a transparent methodology for setting tariffs, and facilitating competition in generation. The regulatory framework contemplated is based primarily on an EPO in respect of wholesale electricity supplies. Under the SEM the existing EPO would be supplanted by a more comprehensive obligation. This would comprise a set of high level principles, an approved Hedging Policy Statement, contract procurement guidelines, and routine periodic reporting to demonstrate compliance.

The high level principles envisaged revolve around obtaining value for customers, providing price stability through the management of pool price risks, ensuring no discrimination between customers, and promoting transparency in setting tariffs. The hedging policy and procurement guidelines would be expected to articulate how these objectives were to be met.

The Hedging Policy Statement that would be submitted annually would describe the volume of cover that would be required for each customer class and the associated timescales. Active trading of contract cover to adjust contract volumes to match evolving demand forecasts, and a capability to model pool prices under changing generation scenarios would be expected to feature in the policy. It is important to note that each PES would submit such a statement to its relevant Regulatory Authority.

The Procurement Guidelines would support the policy statement by indicating how the contract cover was to be procured. The approach currently favoured is for an approved quantity of contract cover to be obtained through routine auctions with any residual requirements placed through the use of a contract trading platform or bilateral negotiation. The initial auctions would be arranged to coincide with the Directed Contract offerings. Periodic reporting would not only demonstrate compliance with the hedging policy but also justify prices paid for the CfD cover obtained.

Setting PES tariffs

The Regulatory Authorities have consulted upon proposals for aligning tariff years for the purpose of facilitating the setting of PES tariffs in a competitive environment. In addition to the controls of the EPO it is further proposed that each PES should gain approval for a Tariff Policy Statement (TPS) from its relevant Regulatory Authority. The TPS would justify its choice of tariff categories and the rationale for cost attribution. For customer connected at medium or higher voltage PES will offer pool price pass-through tariffs. Tariffs for domestic and SME customers would be in accordance with the approved tariff methodology and reflect the costs in the relevant price controls and those that were incurred under the EPO.

The present use of a k-factor that enables a PES to recover costs incurred in a previous tariff period is seen as problematic in a competitive market. It may undermine the incentive for the PES to act economically and distorts competition with other suppliers. It is proposed that under the SEM the application of a k-factor should be limited to costs associated with uncontrollable risks. These might include costs that flow from the supplier of last resort and universal supply obligations, and managing volume risks in the residential and other low voltage sectors that were shown to be uncontrollable.

The restricted use of the k-factor in the new market arrangements implies that the PES will shoulder a greater level of commercial risk than previously. Whilst an appropriate level of profit has yet to be determined, the Regulatory Authorities are generally of the opinion that a higher level than is currently allowed would be appropriate under the SEM.

Timetable

The Regulatory Authorities anticipate reaching a decision on the issues put forward in this consultation paper by early April, and would expect each PES to publish its hedging Policy by mid April. Directed Contracts will be allocated in June 2007 and approval for the EPO would be anticipated in August.

2 Introduction

2.1 Purpose of Document

Throughout the course of the development of the Single Electricity Market (SEM) the Commission for Energy Regulation and the Northern Ireland Authority for Energy Regulation (jointly “the Regulatory Authorities”) have been mindful of the need to ensure that benefits that arise from the introduction of the SEM are passed through to customers. To this end the Regulatory Authorities have been considering the most appropriate framework for regulating the various activities of the two incumbents (ESB and NIE) in the SEM.

This paper focuses on the commercial arrangements in the market as they affect ESB and NIE. It makes proposals in relation to the manner in which the wholesale contracts market and PES retail tariffs might be regulated in SEM. It seeks the views of respondents on the effectiveness and appropriateness of the various proposals that are made here for regulating ESB and NIE in a situation where significant market power remains and where therefore effective competition is not fully realised.

Despite the introduction of competition in both the generation and retail markets both ESB and NIE will continue to face regulatory controls. These will cover the generation and supply activities of ESB, the intermediary activities of the PPB, and the supply business of NIE. Under the SEM the Regulatory Authorities have recognised that certain entities will continue to hold market power in the market. In recognition of this the Regulatory Authorities have therefore introduced a range of measures aimed at mitigating market power. A part of this mitigation strategy involves establishing a suite of Directed Contracts. Given that these contracts do not affect the market power arising because of vertical relationships between different parts of ESB and NIE, it is necessary for the Regulatory Authorities to ensure that neither ESB nor NIE attempt to manipulate one part of the electricity market (e.g. wholesale) to the benefit of their affiliated companies operating in another part of the market (e.g. retail) to consequent disadvantages of (potential) competitors, thereby undermining competitiveness.

The Regulatory Authorities in each jurisdiction currently regulate the price of electricity supplied by ESB PES and NIE PES through the approval of both the form and level of the tariffs for most customer classes. The introduction of the SEM and the opening of the NI market to full retail competition from 1 November 2007 should encourage further competition in the supply of electricity. Eventually it should make the regulation of retail prices unnecessary, however until effective competition prevails across all customer groups some form of price regulation will continue to be required.

This paper considers mechanisms of regulating both the wholesale market and PES tariffs that could be adopted within the current legislative framework. In undertaking this review the Regulatory Authorities has been mindful of the potential impact that any approach will have on the customer. It is important that as competition develops the regulatory framework should be capable of further evolution to reflect the liberalisation of the market.

2.2 Outline of the Paper

This paper deals with a wide range of related topics under a number of sections.

Section 3 describes the current market structures for generation and supply in Ireland and Northern Ireland.

Section 4 addresses the licensing framework for the retail market in the SEM.

Section 5 looks at the regulation of the incumbent generators in the SEM and at what controls, if any, will be put on generators other than those required to mitigate market power.

Section 6 examines the treatment of PSO related generation contracts in the SEM and other issues relating to the PSO, including the determination of the PSO benchmark price.

Section 7 reviews the framework of PES regulation in each jurisdiction. It considers how the role of the PES will develop with the arrival of the SEM. A regulatory framework for setting PES tariffs under the SEM is then proposed which has an economic purchasing obligation as its cornerstone.

Practical aspects of formulating PES tariffs under the SEM and their underlying philosophy are then considered in Section 8 together with a timetable for tariff development.

Finally, Section 9 of the paper outlines the timetable for implementing the elements of the RAs proposed regulatory framework

2.3 Responding to this consultation

The Regulatory Authorities welcome the views and comments of interested parties on not only the specific questions raised in this paper, but also more generally on the ideas

and approaches that are suggested. It is intended to publish all comments received. In the event that any respondent wishes parts of their submission to remain confidential then these should be submitted as an annex marked "Confidential". Comments on this paper should be forwarded to Alan O'Kelly and Lisa Mullan, preferably in electronic form, to arrive no later than **12.00 noon** on the **Tuesday 20th March 2007**.

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3 Existing Market Structures

3.1 Current market arrangements in the Republic of Ireland

3.1.1 ROI Wholesale market

The current wholesale electricity market in the Republic of Ireland is a bilateral contracts market for the physical supply of electricity coupled to a balancing mechanism. The energy component of the retail electricity price is determined primarily by the terms of the bilateral contracts between suppliers and generators. A levy is applied to all supplies to recover the difference between the costs of PSO generation contracts and a benchmark price derived from the notional costs of a Best New Entrant (BNE) generator.

The revenues allowed to ESB Power Generation (ESB PG) are largely regulated through the ESB PG/ ESB PES vesting agreement, which establishes the allowed transfer price between ESBPG and PES. ESB PG effectively has responsibility for balancing generation and demand through its role in the imbalance market. The prices at which it can sell imbalance energy in the imbalance market and at which it buys from the independent generators are also regulated. Primary Top-up prices are set by the Commission on an *ex ante basis* based on the notional costs of a Best New Entrant (BNE) generator and secondary Top Up prices are based on the allowed transfer price. Spill prices in each trading period are determined *ex post* from the decrement of price offered (subject to a floor) by the marginal generating unit that is producing in each trading period in the *ex post* unconstrained schedule (EPUS). Spill prices thus tend to reflect short-term market prices for gas, coal or oil depending upon the plant type at the margin in each half hour.

ESB Power Generation (ESB PG) is the largest incumbent generator. It owns a portfolio of 18 plants with a varied fuel mix of coal, peat, hydro, oil and gas. Over recent years a number of independent generators have entered the market thus eroding the ESB PG market share. Further Independent Power Producers (IPPs) are expected to commence generation in the near future. Competition will be encouraged following an agreement made on the 29th November 2006 between the Commission and ESB that will result the

divestment and closure by ESB of some 1,300 MW of its generating capacity, the sale of 200MW of peaking units and the creation of a land bank of prospective sites for new entrants.

The current arrangements under which ESB PG is regulated were established by Regulation 3 of S.I. 60, but will fall away with the implementation of the Single Electricity Market (SEM) on 1st November 2007.

3.1.2 ROI Retail market

Full retail market opening in Ireland was achieved on the 19th February 2005. ESB Customer Supply (ESB CS) designated under licence as the Public Electricity Supplier (PES) and is the largest supplier in the Republic. It is anticipated that it will also be the largest supplier in an all island market, and therefore the largest purchaser of CfDs in the SEM. ESB PES is licensed under an interim licence [CER/06/078] that will apply until the introduction of SEM. Given that ESB PES is the largest supplier in the market and that it acts as the PES ESB is at present subject to regulatory controls. The Commission currently reviews ESB PES revenue and approves the final form of tariffs that are offered to all customers. Each year the Commission undertakes a detailed review of the underlying costs of each tariff and decides the tariff levels. As part of the last price review the Commission decided to limit the tariffs that ESB PES can offer to larger customer with only existing PES large customers and pre-approved customers permitted to avail themselves of PES tariffs. In 2005 the Commission approved a five year control in relation to ESB PES supply costs. The control period will run until 2010. The Commission is not proposing to re-evaluate these costs.

ESB PES is subject to an Economic Purchase Obligation (EPO). This obligation is met through a combination of contracts with renewable generators under the Alternative Energy Requirement (AER) Programme, Edenderry (a peat station), two new gas fired IPPs, and a residual requirements contract with ESB PG.

3.2 Current market arrangements in Northern Ireland

3.2.1 NI Wholesale market

Prior to 1992 a single state owned company (Northern Ireland Electricity - NIE) was responsible for generation, transmission, distribution and supply of electricity in Northern Ireland. In 1992, the state-owned electricity industry in Northern Ireland was privatised under the Electricity (Northern Ireland) Order 1992. The four power stations that constituted the NIE's generation assets prior to vesting, Belfast West (now closed), Ballylumford, old Coolkeeragh and Kilroot were sold by tender to independent investors. The new 400 MW gas fired plant at Coolkeeragh is owned by ESB International (ESBI); whereas the 1,076 MW mixed fuel plant at Ballylumford is owned by Premier Power, and the 578 MW coal plant at Kilroot is owned by AES.

The remaining electricity industry activities in Northern Ireland were privatised by public flotation. Transmission, distribution and supply activities were vested in a new Northern Ireland Electricity (NIE), now a subsidiary of the Viridian Group, and a Power Procurement Business established as part of the new NIE plc

The PPB was designated as the single Northern Ireland electricity system power procurer and buys power under long term power purchase agreements (PPA). With the closure of Belfast West and the change of ownership of Coolkeeragh, only Ballylumford and Kilroot remain under contract with NIE PPB (plus some GT plant at Coolkeeragh which is still contracted to PPB). The PPB also acts as the counterparty for the balancing mechanism and sells top-up electricity and buys spill.

Previously all licensed suppliers, including NIE PES, were required to purchase their electricity from NIE PPB under the terms of a Bulk Supply Tariff (BST). However, this limitation was changed in 1999 to allow suppliers to buy from any producer so that now only the PES is obliged to procure power on the basis of the BST. The BST is derived from the long run marginal costs of generation and is subject to regulatory approval. Any difference between the PPA costs and the BST are recovered by way of a levy pursuant to the Public Service Obligation (PSO). The NI PSO also recovers additional non-PPA costs. Power purchased under the PPA that is surplus to that required for the BST can

be sold to second tier suppliers on fixed duration contracts. PPB is incentivised to maximise these sales and hence reduce the BST unit price.

3.2.2 NI Retail market

Opening of the retail market in Northern Ireland commenced on a phased basis from April 2001. NIE Supply acts as the PES and is the largest supplier in the market. While NIE Supply will not be the largest supplier in an all island market it will still hold a significant market share in an all island context. At this stage it is not known if the existing second tier supply companies will enter into competition in the domestic sector. It is planned that during the initial years of retail competition in the SEM that NIE Supply will continue to perform many of its current PES roles for Northern Ireland.

4 Licensing of Supply in the SEM

As part of the development of the SEM the Regulatory Authorities are in the process of reviewing the licensing framework in the all island market. In relation to the licensing framework for the retail market the Regulatory Authorities have considered two models.

- The first model would involve the development of a specific supply licence for the PES entity and a separate supply licence for all other suppliers. This is currently the model employed in both jurisdictions.
- The second model would involve the development of one supply licence for all suppliers in both jurisdictions (i.e. a single supply licence for NI and a single supply licence for ROI). This licence would have a certain set of conditions that would apply solely to the designated PES and other conditions that apply to equally to all licensees. In addition conditions that relate solely to the affiliates of the PES may also be required such as those relating to ring fencing arrangements.

The Regulatory Authorities are proposing that the second model is adopted in the all island market. In the absence of an alternative proposal from the market the Regulatory

Authorities propose to designate ESB Customer Supply as PES in the Republic of Ireland. While the concept of a PES is to be phased out in Northern Ireland NIE Supply will continue to carry licence obligations similar to those of the PES in Ireland.

While this paper refers to the PES businesses throughout it should be understood that references to either PES refer to the businesses currently carrying out the PES role in each jurisdiction i.e. ESB and NIE Supply.

It is proposed that the designated PES business, or its equivalent, in either jurisdiction will be subject to a number of licence obligations not required of other suppliers. These obligations will be contained within similar licence conditions and will set out responsibilities in relation to the following:

- In the absence of alternative proposals from the market, a requirement to act as Supplier of Last Resort,
- A similar requirement to provide to meet all reasonable requests for electricity supply i.e. a Universal Supply Obligation (USO) requiring the licensee to offer terms to all customers including those whose load or credit rating are such that no other supplier is prepared to offer terms,
- Non-discrimination obligations not to favour affiliates in buying and selling CfDs or energy,
- Strict ring fencing provisions where necessary, for example, between the PES and its affiliates – including NIE supply and PPB, and ESB PES's management of PSO generator contracts,
- Economic Purchase Obligations.

The Regulatory Authorities request the views of interested parties on each of the following proposals:

- The development of a single supply licence based on equivalent conditions to apply in each jurisdiction,
- The proposal to invite expressions of interest from licensed suppliers to act as PES in the ROI market. The functions of SOLR and USO will then be assigned to that supplier. In the absence of interest from others in the PES role the RAs will designate ESB Customer Supply as PES,
- The proposal to impose the SOLR and USO obligations in Northern Ireland on NIE Supply.

5 Generation regulatory framework

5.1 High level objectives

The framework contemplated by the Regulatory Authorities for the regulation of the incumbent generation has the objectives of:

- protecting the interests of final customers, with the promotion of competition as the favoured means of doing this (where appropriate);
- encouraging contract liquidity, controlling market power, encouraging efficiency and avoiding undue discrimination as a means to achieving that end;
- minimising the need for regulatory intervention in the generation market where possible; and
- Facilitating competition in the supply of electricity in the retail market.

These objectives will be delivered mainly through the inclusion of conditions in the generation licences for ESBPG and NIE PPB conditions covering the regulatory strategy for mitigating the market power of these licensees, and requirements regarding non-directed contracts that will aid the evolution of a competitive supply market. Implementation of the associated policies is likely to have implications for the activities of both incumbents.

5.2 Market Power Mitigation

The market power mitigation strategy put in place for the SEM has a number of features. Directed Contracts comprise the major part of the regulatory framework for generators with market power. Other measures covering the bidding behaviour of generators in the Pool include monitoring of the market, and the continuation of the existing ring fencing provisions that apply to ESBPG and PPB. The full details of the market power strategy can be found in the Regulatory Authorities paper “Market Power Mitigation in the SEM - Decision Paper” [AIP/SEM/31/06].

As part of this strategy the Regulatory Authorities will direct generators with significant market power to make available two way contracts for differences (CfDs) on a common basis to all suppliers, including the PES businesses in each jurisdiction. The quantity, form, price and method of offering these directed contracts will be determined by the Regulatory Authorities in accordance with methodology set out in “Market Power Mitigation in the SEM- Directed Contracts Quantification Methodology decision paper,”¹ These CfDs will provide a hedge against movements in the Pool price, although it will be up to each supplier to decide whether or not they take up their entitlement.

To the extent that the directed contracts are taken up by suppliers, the contracts will mitigate market power by reducing the incentive for ESBPG and NIE PPB to submit bids into the SEM above (or below) competitive levels for the purposes of influencing current pool prices or future contract prices. It is anticipated that the final volume and pricing formula for determining the strike prices of directed contracts will be made available during May 2007. Suppliers will be required to make their election for available contracts by the end of July. Strike prices will be determined by movements in underlying fuel costs during the hedging window.

The Regulatory Authorities will implement a three part strategy for controlling local market power.

¹ AIP/SEM/208/06

- First, there is the monitoring of compliance with the bidding principles by the Market Monitoring Unit (MMU). If these are adhered to then no further control should be needed.
- Second, where the administration of these principles becomes burdensome, because the number of inquiries is excessive or the matters in a particular inquiry become intractable, the Regulatory Authorities will impose a cap on constraint payments to limit the consequence of the local market power. This provides a strong signal for a change in bidding behaviour and prevents the generator obtaining a windfall profit.
- Finally, if these measures prove ineffective the Regulatory Authorities would direct a full Reliability Must-Run (RMR) status for the relevant generating plant.

5.3 Non-directed Contracts

Suppliers and independent generators are likely to seek to hedge the bulk of their exposure to Pool prices in the SEM for the quantum of electricity they expect to supply or produce. The Regulatory Authorities will require the PESs to auction off their residual contract requirements, as described in Section 7 below. Other suppliers should have access to suitable hedge contracts from a number of sources:

- Generation produced by independent generators which is made available to suppliers;
- imports across the Moyle Interconnector;
- directed contracts; and
- NIE PPB, if the Regulatory Authorities decide to require NIE PPB to sell CfDs for the generation portfolio it has contracted to it under long-term PPAs (see Section 6).

The Regulatory Authorities are keen to ensure that suppliers and independent generators are able to contract with ESBPG and PPB NIE on fair terms. The specific obligations which could be imposed on NIE PPB are outlined in section 6.

In the case of ESBPG, the Regulatory Authorities are not proposing to impose any specific regulatory requirement on it to offer CfDs to the market other than the volume of directed contracts required to mitigate its market power. Notwithstanding this, any contractual arrangements it enters into must abide by the basic regulatory principles which will also apply to NIE PPB. The Regulatory Authorities are proposing that ESBPG and NIE PPB will be required to deal with market participants in the contracts market on an arms-length (from its affiliates) and non-discriminatory basis, and on fair commercial terms.

6 PSO Backed Contracts in the SEM

An important challenge for the Regulatory Authorities is the treatment of the PSO backed contracts in the SEM. These contracts provide a major source of contract volume and the Regulatory Authorities wish to put in place arrangements such that that these contracts are available to all market participants in a manner that is fair, transparent and non-discriminatory. These contracts are unique in that any financial surplus or deficit in the costs of these contracts is guaranteed through the PSO levy. It follows that the counterparty currently has little or no financial incentive to maximise the value of these contracts. It is necessary to develop incentive mechanisms to ensure that the value of these contracts is maximised (or losses minimised), but which do not undermine competition and new entry at either the retail or wholesale level.

6.1 *PSO Contract options*

6.1.1 *PPB role under the SEM*

Under the current trading relationships NIE PPB is contracted to generators through Power Purchase Agreements (PPAs). NIE PPB then sells this power to the PES at the BST and sells surplus PPA power to second tier suppliers on fixed duration contracts. Under the SEM there will be no BST and NIE PPB will bid all its contracted capacity (PPAs) into the pool. Like all other suppliers, NIE Supply will buy all its requirements from the pool. NIE Supply, like other suppliers, is likely to want to enter into CfDs with generators to manage pool price risk.

It is unlikely that revenues from the pool will exactly match NIE PPB's costs under its contracts with Ballylumford, Coolkeeragh and Kilroot. PPB will therefore face either a revenue shortfall or surplus. These will have to be recycled to NI customers. The obvious route is via the PSO.

A key decision is whether NIE PPB should offer CfD's for the generation portfolio it has contracted and, if so, the basis upon which it will be required and/or permitted to enter into such contracts.

Two options are considered below. However, irrespective of which option is ultimately adopted the PPB will be obligated under its licence to bid the PSO generation into the pool at Short Run Marginal Cost (SRMC).

Option 1: PPB performs no role in financial contracts.

Under this option PPB would be prohibited from entering into CfDs with suppliers (or anyone else). PPB's sole role would be to bid its contracted generation into the pool. It would receive the pool price for its sales of energy and capacity. Any difference between payments for energy and capacity in the pool and payments which it must make to the contracted generators, whether positive or negative, would be recycled to Northern Ireland consumers through the PSO levy.

The model provides an implicit hedge for all Northern Ireland suppliers against pool price movements. As pool price increases the difference between it and the contract costs widens, PPB derives more pool revenues, resulting in a lower PSO. Suppliers are therefore partially cushioned against pool price increases. Conversely a falling pool price will lead to an increased PSO levy.

There are several variants as to how such a model could work. These variants relate to the time-period over which payments are recycled and/or forecasts of costs are made. At one extreme it could be envisaged that the difference between the pool price and the contract cost, is calculated in every half hour and cleared within a certain period of time with suppliers. Alternatively longer periods for clearing could be made, over a week, month or even a yearly basis. It would also be possible for contract costs to be forecast annually (and differences between forecast and actual costs passed through in subsequent years) so that the PSO provides a pool price hedge against a pre-determined contract price.

The principal benefits of this approach are that:

- This option is simple; it does not require PPB to develop the capability required to manage CfDs and it minimizes the amount of regulation of the PPB's operation required

- This option ensures that all of the hedges available from PPB generators find their way to Northern Ireland suppliers.
- Finally the principal benefit of these options is that it substantially eliminates concerns that PPB could act to favour its affiliates through the way in which it enters into CfDs – principally because it would not enter into any.

The principal disadvantages that can be identified are that

- Under this option, all PPB-related hedges would sit with NI suppliers. This might reduce the likely NI take-up of directed contracts (insofar as NI suppliers felt the implicit hedging sufficiently reduced their exposure to movements in the pool price). In extremis, this might undermine the Market Power Mitigation strategy developed for the SEM.

Option 2: Ofreg establishes ‘regulated’ contracts between PPB and NIE PES and other suppliers

Option 2 involves allowing PPB to participate fully in the CfD market. PPB would be obliged to revenue maximise (and appropriate incentive mechanisms would have to be designed to achieve this), and not discriminate between suppliers on the island of Ireland, that is it would be placed in a position analogous to ESB PG.

Because there is a danger that PPB could discriminate in favour of Viridian Group companies, since the benefits to the Group would most likely outweigh any revenue maximisation incentive that could be earned by PPB, this approach would involve detailed regulation of PPB. Currently Northern Ireland Independent suppliers have many complaints concerning PPB’s non-BST sales, and one of the aims of the SEM is to overcome these. Regulating PPB in the CfD market would necessitate a degree of market supervision over and above that envisaged for the market monitoring unit, which will only look at the pool and not the market for financial instruments based on the pool price.

It has been suggested that the needs of NIE PES to hedge its position should be given particular attention, and NIE PES should thus be given first refusal on PPB CfDs. The argument is that this is necessary because NIE PES does not have a generation arm. However this would equally apply to ESB PES in the Republic of Ireland as ESB PG will

have a non discrimination licence condition. Therefore the Regulatory Authorities can not see any rationale to giving NIE PES preferential access to PPB contracts.

In principle CfDs could be auctioned, rather than allowing PPB to develop a role in the trading of CfDs. While this would both allow access by independent suppliers to PPB capacity, and could be constructed to minimise the risk of PPB favouring its affiliates, it is difficult to see how any auction could be combined with a situation where both PESs used an auction process to contract for their requirements (see section 7).

If PPB did not sell sufficient CfDs to cover all PPAs, a mechanism would have to be established where such an under-match was recovered through the PSO. Under this model, while much of the PSO volatility identified under option 1 could be removed there would still be an element of uncertainty.

The principal benefit identified for this approach is that there would be

- There may be merit in allowing PPB to operate as a normal market participant as this reduces the proportion of CfDs whose price has been administratively set.

Its principal disadvantages, depending upon the variant of the model chosen, are that it would be:

- open to potential suggestions of discriminatory behaviour by PPB
- More complex regulatory provisions and oversight required to govern contractual arrangements
- more complex PSO
- If PPB offers hedges through an auction process, this will conflict with any requirement that both PES contract for their requirements through an auction process.

Subject to a satisfactory solution to the regulatory provisions and oversight of PPBs operations in the Contracts market being available, the Regulatory Authorities are minded to proceed with option 2. Generally the Regulatory Authorities will need to establish rules to ensure that any trades between incumbent generators (PPB and ESBPG) to the PESs comply with EPO. This is discussed later in this paper.

The Regulatory Authorities are inviting the views of interested parties as to the more appropriate option setting out the manner by which the PBB should participate in the new market.

6.1.2 *ESB PSO contracts under the SEM*

In the Republic of Ireland the PSO requires ESB to purchase electricity under power purchase agreements (PPA) from three groups of power station, viz. the peat burning stations, the “Capacity 05” CCGT stations of Aughinish and Tynagh, and other AER sources which comprise predominantly wind-farms. The PSO levy mechanism compensates ESB for the out of market costs it incurs in meeting its obligations under the contracts.

It is proposed that ESB PES will act as an intermediary for the AER contracts that are less than 10 MW. However, for the Capacity 2005 contracts the Regulatory Authorities’ are proposing that ESB offer hedges against these contracts to all market participants by way of some allocation mechanism which could be similar to NIE PPB allocation proposals.

The Regulatory Authorities are proposing the ESB put in place a separate ring-fenced contracts management function to manage these arrangements on behalf of ESB. This would be analogous to the role of PPB within NIE. The details of this allocation mechanism will be developed by the Regulatory Authorities.

6.1.3 *Treatment of PSO contracts*

The Regulatory Authorities are proposing that these contracts will be offered to all suppliers, including PES, on an equal basis. The Regulatory Authorities understand that this proposal may impact on the calculation of the PSO and the treatment of the EPO and will take this into account when addressing these issues.

The Regulatory Authorities seek the views of respondents on the:

- Treatment of NIE PPB contracts in SEM
- Treatment of ESB PES contracts in SEM including the creation of a separate ring-fenced entity within ESB to manage this arrangement
- Allocation options for these contracts
- Any other issues raised in this section of the consultation paper

6.2 Public Service Obligation

6.2.1 Background

The Public Service Obligation in Northern Ireland is a charge levied on all units of electricity sold. It is intended to cover many of the legacy costs and other costs which for social reasons are spread over the whole customer base. Without a PSO levy, the costs they reflect would be borne solely by customers who cannot change supplier or who have yet to exercise their choice.

The PSO tariff was designed to recover the cost of those projects in the market which were deemed to be of benefit to the market as a whole, and which should therefore be paid for by the market as a whole. In addition the PSO tariff includes the recovery of costs for projects such as retail market opening and the costs of the energy efficiency schemes.

The Public Service Obligation (PSO) levy in the Republic of Ireland is an additional charge relating to the additional costs to ESB of procuring output from renewable, sustainable or alternative forms of energy purchased under various Government schemes. ESB is obliged by government to make these purchases in the interests of security of supply and environmental protection. The costs recovered through the levy equate to the additional costs of these purchases over and above the cost of electricity purchased at a market price. The levy is applied in accordance with a PSO order made

by the Minister for Communications, Marine and Natural Resources and the level of cost applied each year is approved in advance by the Commission.

The Regulatory Authorities are proposing that the principles underlying the PSO cost base and the calculation of the PSO be aligned in both jurisdictions prior to SEM.

A further consultation paper will be developed shortly that will set out the various options under consideration for the development of a common PSO methodology.

6.2.2 PSO benchmark price

The statutory basis for the levy in the Republic restricts its use to recovering only costs incurred by ESB in meeting the PSO obligation whereas in Northern Ireland the levy can be used to recover the shortfall between the PSO generation costs and the BST and for other purposes such as returning to customers any benefits that arise from the allocation of carbon credits. If PSO generation is used to back CfDs in both jurisdictions then a new combined benchmark price will be required.

For clarity the Regulatory Authorities are minded that the principles used to determine the PSO benchmark are the same in both jurisdictions. The details of the exact methodology used to determine the PSO benchmark will be the subject of a separate consultation in each jurisdiction.

6.3 Contracting Platform

Possible transparent methods for trading contracts were discussed in an earlier Consultation Paper published in September 2006 (Risk management in the SEM - AIP/SEM/122/06). These included:

- trading through an organised exchange, though it seemed unlikely that there would be sufficient liquidity contract market for the foreseeable future to support such an institution;

- through an over-the counter (OTC) market administered by a broker, or brokers, though again the evidence suggested it was unlikely that a broker would find the volume of contracting sufficiently large to warrant the necessary investment; or
- By way of a web based bulletin board established and maintained by ESBPG and if option 2 in section 6.1.1 is accepted NIE PPB, and operated either by them or by a third party under contract.

The Regulatory Authorities are keen to encourage the emergence of a market for trading contracts that facilitate contract market liquidity and thus promote competition in supply. The Regulatory Authorities therefore intend to explore with the industry the option of directing ESBPG and if appropriate NIE PPB jointly to set up a web-based platform on which offers of and bids for CfDs might be made and through which ESBPG's and NIE PPB's non PES auction contracting could be transacted.

The Regulatory Authorities seek views of interested parties on the proposal to directing ESBPG and NIE PPB jointly to set up a web-based platform on which offers of and bids for CfDs might be made.

7 PES Regulatory Framework

7.1 Regulation of PES Tariffs - Background

7.1.1 Republic of Ireland

The functions of the Commission in relation to electricity are set down in Section 9 of the Electricity Regulation Act 1999 as amended by subsequent Statutory Instruments. SI 60 2005 ²provides for the amendment of Section 9 of the 1999 Act for the purposes of assigning the Commission with the power to issue directions to ESB as PES in relation to its costs including tariffs.

The legal basis for retail tariff regulation is also subject to EC Directive 2003/54/EC (26th June 2003) concerning the liberalisation of European energy markets. The Commission has discussed with the EU Commission the process currently employed for setting PES tariffs. In the future it may be the case that the Commission is unable to set or approve final retail tariffs for customers that are neither part of a franchise nor served by a monopoly supplier.

ESB PES' own costs are subject to a 5 year price control that runs from 2006 to 2010 and permits the PES to recover costs of just under €600 million over the 5 years at 2004 price levels. This revenue is designed to cover its operating expenditure, depreciation charges derived from its allowed capex, and an allowable margin which is currently 1.3% of PES turnover. Operating costs include payroll, bad debt provisions, the costs of the ESB call centre, third party receipting and debt collection.

7.1.2 Northern Ireland

NIE PES was established as part of the privatisation of the UK electricity industry in 1992 to act as a supplier to all customers in Northern Ireland. Initially NIE PES had the franchise for the entire market but over the years various segments of the market have been opened to retail competition, and independent suppliers have entered the market.

² European Communities (Internal Market in Electricity) Regulations 2005)

Since 1998 the market in “green” electricity has also been fully opened. All customers can buy green electricity from any supplier who in turn may source it from any renewable generator.

At present NIE PES meets the demands of its customers through an all requirements contract between NIE PPB and NIE PES that allows PES to manage the supplies for its portfolio of customers. The price at which energy is transferred between PPB and PES is known as the Bulk Supply Tariff (BST). The BST is set by the PPB but must be approved annually by NIAER. It is set at such a level that it recovers sufficient revenue to meet the costs of the Power Purchase Agreements that PPB has with its two contracted power stations to the extent that they are calculated to be ‘in market’. PPA costs which are calculated ‘out of market’ are recovered through the PSO levy.

NIE (both PPB and PES) provides NIAER with an analysis of the costs it anticipates in the next financial year together with its proposals for their recovery through the various annual tariffs. The structure and level of these tariffs is considered by NIAER and then approved for the forthcoming year. The tariffs include the Bulk Supply Tariff (BST), the System Support Services charge (SSS), the Use of System Tariffs (UoS) and the Public Electricity Supplier (PES) retail tariffs. NIAER also approves the Public Service Obligation (PSO),

In November 2006 NIAER began a programme that will consider the options for improving the transparency of tariff formulation. The outcome of this programme will help inform the derivation of an appropriate regulatory framework post the implementation of the SEM.

7.2 Considerations following introduction of SEM

Although the introduction of the SEM should not result in any significant shift in the costs seen by the PES in either jurisdiction it will significantly alter the trading arrangements that each PES must engage in. This will create a significant shift in each PES’s risk profile. The risk management tools will become very different to those currently in use.

In the Republic of Ireland it is important to note that the Commission would have reviewed the regulatory framework for ESB PES regardless of the introduction of the SEM. The Commission has been concerned that the current regulatory structure requires it to make a large number of decisions that directly affect both the ESB PES and the retail market as a whole. In particular the Commission believes that the current arrangement whereby the Commission undertakes a leading role in the tariff setting process for ESB PES is inappropriate in a market in which competition is developing.

In Northern Ireland NIAER is reviewing the role of NIE PES in light of both the introduction of SEM and the introduction of full market opening in 2007. In considering the new price control for NIE PES, the authority considers that some of the functions currently undertaken by NIE PES such as meter reading will need to transfer to the common service provider (T&D) in order to facilitate full retail market opening. On the other hand the establishment of the SEM will entail additional functions and costs associated for example with a risk management role that is not currently undertaken by the NIE PES. NIAER will set a new price control for NIE PES starting in 2007 which will allow the company adequate revenues to finance its newly defined activities.

7.3 Proposed PES Regulatory Framework

A number of objectives have been identified for the regulation of both PESs in the SEM. The aims and objectives of the regulatory strategy are to create a framework that:

- Firstly protects the interests of final consumers with promotion of competition seen as the favoured means of doing so (where appropriate and efficient to do so);
- tackles dominance in the supply market, encouraging efficiency and avoiding undue discrimination as a means of achieving this goal;
- provides a clear transparent and non-discriminatory mechanism for the determination of PES tariffs; and,
- Facilitates competition in the generation of electricity.

Over the longer term the Regulatory Authorities see the development of a competitive retail market with several independent suppliers competing in the market and the demise

of the existing PESs in their current state. In the meantime the Regulatory Authorities envisage robust regulation of the PESs with the aim of promoting competition as a priority. The Regulatory Authorities will also wish to consider what measures are needed to ensure that the two incumbents (both PESs and their affiliates) do not exercise market power.

The framework proposed for regulating PES tariffs under consideration by the Regulatory Authorities comprises two parts. The first is the derivation of an Economic Purchase Obligation (EPO) that each PES must comply with when procuring wholesale supplies of electricity. The second part is to regulate costs that each PES incurs. PES' own costs for sectors of the market where it remains the *de facto* franchise supplier would also be separately approved, as at present. However, the nature of the regulatory price controls means that each PES's own costs and any cost efficiently incurred in meeting its EPO are treated under the same PES price control, whereas T&D costs would be controlled separately.

In this new regulatory compact the Regulatory Authorities will rely on:

- An approved Economic Purchase Obligation (EPO), which would embody a hedging policy statement, a procurement principles statement for the purchase of CfD contract cover, and routine reporting of compliance with these statements;
- A statement of the tariff policies that each PES intends to adopt, including the approval of the form (or structure) adopted for each tariff, or group of tariffs and appropriate licence conditions; and,
- Approval through separate regulatory processes of tariff cost elements covering monopoly services and each PES' own costs.

7.4 Economic Purchase Obligation

7.4.1 Current Economic Purchasing Obligations

In the Republic of Ireland regulation 17 (f) of S.I. No. 60 of 2005 and the corresponding obligations in the PES Licence requires ESB PES *“to engage, after 19 February 2005, in economic purchase of electricity on terms approved by the Commission”*. At present the

Commission has determined that the EPO is met through a combination of PSO contracts and the regulated vesting agreement between ESB PES and ESBPG.

In Northern Ireland NIE PPB is the entity required to purchase under the terms of an EPO. NIE PES is required to buy all of its electricity requirements from PPB under the BST and thus by default NIE PES is effectively already bound by an EPO. Under the SEM PPB will be required to sell its energy into the Pool. NIE PES will therefore no longer source its power directly from PPB and thus the constraints of the existing EPO will no longer apply.

Part IV C of Condition 6 of NIE's current transmission and PES licence places an obligation for the PES to purchase economically, but this obligation only comes into force following a direction from the Authority. The Authority intends to trigger this obligation with the commencement of the SEM.

7.4.2 Economic purchase obligation under the SEM

Following the implementation of the SEM it is proposed that a new EPO would apply to the PES or its equivalent in each jurisdiction. It would be structured around:

- A collection of high level **EPO Principles** agreed between the PESs and the Regulatory Authorities;
- A hedging policy (the **Hedging Policy Statement**) describing the manner in which risks associated with the uncertainty of its demand forecast and pool prices would be hedged;
- Guidelines (the **Procurement Guidelines**) that would describe the manner in which each PES would procure the contract cover it required to comply with its hedging policy; and,
- **Periodic Reporting**, possibly quarterly, that would describe how it had met its objectives and complied with the relevant obligations. The report would include a rationale for prices paid for contract cover in the wholesale electricity market.

The ability for ESB PES to procure its wholesale supplies of electricity economically has the potential prospect of being constrained by existing PSO contracts. It is important that the manner in which these contracts are re-negotiated should not inhibit competition

in the wholesale electricity market. Directed Contracts are also administered arrangements and while each PES has discretion as to whether it adopts any allocation to which it might be entitled the Regulatory Authorities are of the view that any Directed Contracts each PES enters into shall be deemed to have satisfied the EPO.

7.4.3 High level principles of EPO

The primary principle under which each PES should procure wholesale electricity is to ensure supplies of electricity to its customers are provided in an economic manner. The concept of what constitutes economic supply will require a fuller exposition once the SEM and its associated contract market are established. It should be noted that the EPO will apply predominantly to each PES's procurement of hedge contracts to meet its financial exposure in the Pool, although the same principles should apply to any physical purchase of electricity from small embedded generating plant (i.e. less than 10 MW) whose output is not sold to the Pool.

The Regulatory Authorities are proposing the following principles for the EPO. These principles, which will be set out in the Supply Licence, are:

- Obtain the best value contracts for customers
- Provide price stability and price certainty for customers whilst reflecting underlying costs in the market
- Not discriminate between any customer or class of customer
- Be transparent in terms of their constituent components
- Accommodate underlying price and volume risks, unless the terms of any retail agreement were for the pass through of Pool prices
- Be procured in a fair, open and transparent manner.

For clarity the Regulatory Authorities require the PES Hedging Policy Statement and Procurement Guidelines required under the EPO to articulate how the principles noted above would be satisfied. Each PES will be required to submit this to their relevant Regulatory Authority for approval. The hedging policy statement and the procurement guidelines will be developed in further detail in subsequent sections of the paper.

7.5 PES Risk management under the SEM

The Regulatory Authorities have published a consultation paper³ setting out the forms of contracts that could exist under the SEM and the institutional arrangements that might be used for trading them. CfDs or their derivatives will be main instrument for hedging exposure to Pool prices. The derivation of a PES hedging policy and contract procurement process would inevitably depend upon the availability and types of hedging derivatives, and the platform on which they were traded.

The Regulatory Authorities believe that it is for the industry to decide the form of contracts that might be most appropriate. However, they recognise the role they could play in facilitating the emergence of an appropriate institutional framework for the trading of such contracts. Limiting the number of contract forms should encourage liquidity, but more sophisticated forms could provide a more efficient hedge. Contract forms will need to address both pricing and volume aspects. The market may see merit in devising a short term contractual form that would complement the annual formats proposed for the Directed Contracts, or the longer term arrangements in the PSO contracts. The action of the main providers of contract cover, such as NIE PPB could require separate regulatory oversight. This prospect has been discussed above.

7.5.1 PES hedging strategy

Each PES faces a series of risks in SEM for which it will have to provide effective mitigation for. These risks include;

- Increased risk due to difficulties in matching contract profile to load profile,
- New supply requests that must be met as part of USO obligations,
- Intermittent profile due to obligations under AER contracts,
- The predominance of residential load each PES's customer base also will tend to make the PES demand particularly sensitive to weather and ambient temperature adding further to demand forecasting uncertainty.

³ AIP/SEM/122/06 – 15th September 2006

- Volume uncertainty associated with the connection of new customers and the migration of customers to other suppliers as competition becomes better established.

There are a number of options for mitigating these risks. First greater investment in more sophisticated demand forecasting tools should allow better approximation between load profile and contract profiles. Second, the proposals in section 6 of this paper should assist each PES to mitigate some of these other risks. However the primary risk mitigation measures will be hedging the wholesale energy price. As part of the normal course of their business each PES would be expected to prepare some kind of hedge strategy that outlines their various risks and mitigation options.

Firstly, the Regulatory Authorities will require the PES businesses to produce an annual Hedging Policy Statement. The Hedging Policy Statement would make explicit the volume of cover and the associated timescales it would seek for each class of customer, together with other derivative contracts that would assist the management of market risks. Hedges for fuel prices and exchange rate exposure might also be needed depending upon the specific terms of the CfD cover that is procured.

Although the bulk of cover sought is likely to be two-way CfDs each PES may see merit in other contract forms to manage the risks discussed above. These could, for example, include some, or all, of the following:

- One way CfDs that will effectively cap pool price exposure in specified trading periods. These might be applied to designated trading periods, such as times of high system demand when there is a risk of upward Pool price excursions, perhaps limited to a number of hours in any month
- Weather variable volume CfDs to deal with uncertainties that arise from the correlation of demand with ambient temperature
- Fuel price hedges to cover fuel price indexation that may be included in one-way and two-way CfDs
- Exchange rate hedges in the event that CfDs are purchased with prices denominated in the currency of the other jurisdiction

An integral part of each PES's management of its volume forecast in the medium term will be the active trading of its CfD cover in order to match movements in anticipated demand. The manner by which it intends to trade its contract cover with other suppliers, generators or brokers needs to be made explicit. It should also comply with its approved procurement process.

The Hedging Policy Statement should also describe how the volume of CfD cover required in any trading period would be risk adjusted. Each PES may wish to slightly over-contract in trading periods where there was the prospect of an upward excursion in pool price, such as at times of high system demand and under-contract when there was the prospect of pool price collapse. Judgments of this nature will require a view to be formed about the likely shape and volatility of SMP movements and the policy statement should indicate the modelling that will be undertaken for this purpose.

Each PES should also indicate how it intends to construct its hedging strategy such that cover will transcend from one period to the next. For example, rather than signing contracts that will match each PES's forecast demand on an annual basis in line with the tariff year, each PES could choose to create a contract environment that establishes a continuum of contract cover from one tariff period to another. The hedging policy should assume that the contracting activity would be a dynamic activity rather than being constrained to particular periods or events. The hedging Policy should be kept under continuous review by a risk management committee within each PES. It should be submitted to the Regulatory Authorities on a periodic basis, but at least quarterly. Speculation in the purchase and sale of wholesale contracts would not be entertained under the policy.

<p>For clarity the Regulatory Authorities are proposing to require each PES to annually provide a HMS to the Regulatory Authorities for approval that sets out their hedging strategy in SEM and how this meets the EPO principles.</p>

7.5.2 Directed contracts and the EPO

In order to ensure that the SEM is not undermined by generators that hold market power the Regulatory Authorities have devised a market power mitigation strategy⁴. A cornerstone of this strategy is the use of Directed Contracts (DC). Each PES will be entitled to elect for a limited quantity of these contracts during June and July of 2007. However, each PES has discretion in deciding the extent to which it takes up the options that are made available.

Directed Contracts are expected to be an enduring feature of the SEM until such time as it can be demonstrated that the market power of any individual generator no longer persists. Thus the Regulatory Authorities will look to establish new Directed Contracts on an annual basis. The term of the Directed Contract will align with the PES tariff year; the initial term of the PES is currently under consideration. However, the preferred tariff year for both Regulatory Authorities is from 1st October to 30th September. Therefore the current thinking is that the initial PES tariff term in SEM will commence on the 1st November 2007 and end on 30th September 2008, i.e. an eleven month term. The initial term of the Directed Contract as currently drafted aligns with this tariff year.

The Regulatory Authorities are proposing that directed contracts are EPO compliant and that any allocation they elect to take is deemed to be consistent with their EPO principles.

7.5.3 PES procurement guidelines

Separately to the Hedging Policy the EPO would require each PES to describe the approach it would take to the procurement of its contract cover. The purchase of contracts should be in a manner that is fair, transparent and provides equal access to all parties wishing to offer contracts. There are a number of approaches that might be considered.

The first option under consideration is that each PES should procure a substantial proportion of its hedging contracts by way of auctions. In support of this approach each PES would set out for approval by the Regulatory Authorities the various types and quantity of contracts it required. The merit of this approach is that the auction format

⁴ Market Power Mitigation in the SEM Directed Contracts: Price, Form And Allocation: Supplemental Decision Paper (AIP/SEM/165/06 November 3 2006)

would be open and transparent, and allow all parties equal access. A possible disadvantage might be that it would limit the ability of each PES to fine tune its contract cover to meet a changing demand forecast or conclude more sophisticated contract derivatives.

An adjunct to an auction process would be for each PES to fulfil its hedging requirements through bilateral negotiation. This approach would involve each PES negotiating with a range of contract providers to cover its forecast customer demand, and then devising derivative contracts that would deal with specific risks such as weather and fuel price movements. The approach would give each PES greater precision in covering its exposure to pool prices but would be less transparent. Given the present structure of the industry this approach might require more intrusive regulatory oversight to ensure that each PES was procuring an appropriate portfolio. If this approach were adopted then each PES would need to develop a procurement evaluation process that was overtly objective and transparent.

The importance placed by the Regulatory Authorities on the creation of a transparent and open contract market has led them to the view that the basis of PES procurement should be an auction process. There are many different forms of auction that could be employed.

Reliance on the auctioning of contract cover raises a number of detailed policy issues that will need to be addressed; in particular the interaction of auctions with any form of contract trading platform that may be developed by the industry and facilitated by the Regulatory Authorities. (Some form of trading platform is likely to be in place for the commencement of the SEM.) It is anticipated that each PES will make a submission to the appropriate Regulatory Authority in April detailing how an auction process could operate in 2007 and how it might then evolve to incorporate an enduring trading platform. The Regulatory Authorities will approve the form of the auction but not be involved directly in its conduct. Instead they would expect each PES to manage the process, which would then be subjected to audit by an independent third party appointed by the Regulatory Authorities. Notwithstanding this the Regulatory Authorities believe that some intervention may be necessary, in particular in the setting of reserve prices.

Prior to the start-up of the SEM the auction will run parallel with the window under which each PES can elect for its Directed Contract allocation.

The Regulatory Authorities believe that the most pragmatic way forward would be to institute a two stage approach to contract procurement. The first stage would be for each PES to auction a significant proportion of its requirements. As already noted initial auction will coincide with the allocation of the Directed Contracts with each PES placing notices of their requirements in relevant media by early May. Subsequent auctions could then occur at periodic intervals. The second stage would be to rely on whatever form of trading platform emerges to fine tune the auction outcomes and provide whatever risk management tools were judged to be efficacious.

In summary the Regulatory Authorities are proposing that PESs procure contracts through a multi round auction process, the details of which will be developed by each PES but approved by the appropriate Regulatory Authority. Subsequent trading will use either the contract trading platform or a negotiated process.

7.6 Reporting

The final strand in the Economic Purchase Obligation would be a system of ongoing reporting through which each PES would demonstrate compliance with the hedging policy and procurement guidelines to the Regulatory Authorities. These reports would be made by each PES to its relevant Regulatory Authority. The reports should indicate the rationale for any particular price paid for a CfD and indicate why the purchase could be judged as economic. The valuation to the business of other contract forms used to manage the demand forecasting risks and uncertainty of pool prices should also be described fully. These reports might be produced on a monthly basis for the first year until confidence was established that the market processes were functioning properly. Once the arrangements were established less frequent submission of reports might be appropriate.

8 Setting PES tariffs

8.1 Role of the Regulatory Authorities

8.1.1 Tariff year alignment

The Regulatory Authorities have considered changing the tariff years for each jurisdiction to align with a single tariff year across both jurisdictions. At present the PES tariff year in the Republic of Ireland is from January to December, whereas in Northern Ireland it is from April to March. The Regulatory Authorities recently published a consultation paper⁵ setting out proposals to realign the PES tariff year in both jurisdictions and a decision on this matter is expected shortly.

8.1.2 Regulatory framework

The EPO and the associated statements regarding PES Hedging Policy and the Procurement Guidelines will address the manner in which the Regulatory Authorities will influence the PES business in their purchase of wholesale electricity supplies. In other contexts the Regulatory Authorities will continue to regulate the monopoly activities of transmission and distribution under their individual price controls. Charges for use of the networks can be incorporated directly into PES supply tariffs.

In addition to these explicit controls each PES would further be required to obtain approval for its underlying tariff policies via new conditions in the Supply Licence. A Tariff Policy Statement formally approved by the appropriate Regulatory Authority would enable each PES to justify its choice of tariff categories on the basis of the similarity of the costs of supply, and describe the various aspects of tariff derivation including the rationale for cost attribution and structure. It would also deal with other social policies such as the arrangements for the fuel poor, bad debt and disconnection provisions, and the differential treatment between urban and rural customers. This will be decided on a jurisdictional basis

In seeking approval for the form of tariff, each PES would be required to make explicit the category of costs that each element of the tariff was designed to recover. There

⁵ PES Retail Tariff Period Alignment in Both Regulatory Jurisdictions – AIPSEM0704 January 23 2007 (<http://www.allislandproject.org/2007/AIP-SEM-07-04.pdf>)

should be transparency in the manner by which wholesale electricity costs and other costs were reflected in the retail price. This should include a description of the times of day over which different tariff rates would apply, and whether the level of the tariff would vary with any fuel or other cost element.

8.1.3 PES tariff regulation

Where the PES continues to have a *de facto* franchise it will be appropriate for the Regulatory Authority to continue to regulate the level of the PES tariff.

At present the Regulatory Authorities are minded to adopt the following approach in relation to PES tariffs:

- For the largest customers (medium voltage or greater) the PES businesses would be expected to offer a pool price pass-through based tariff thus eliminating the need for the approval of tariffs in this sector of the market, and encouraging competition (and eliminating the need for a k-factor) in the supply of these customers.
- Tariffs for domestic and other low voltage sectors of the market would be derived using an approved methodology that combined the costs borne by each PES business that had been determined in other price controls with the expected outcome of its EPO that related to wholesale supplies. Network charges, market operation costs and the PES overhead costs would have been subject to a revenue cap in the relevant price control and their incorporation in the tariffs for each customer class demonstrated through the Tariff Methodology. The expected costs of hedging wholesale electricity costs would be largely determined prior to the start of a tariff year and thus the level approved in the tariff would effectively become a cap on subsequent risk management activity in the contract market. This should provide an appropriate incentive for any within year trading of contract cover to be undertaken in an economic manner.
- Tariffs for application when acting as supplier of last resort or when discharging its universal supply obligation would be derived in a similar manner.

Network charges, market operation costs and the PES overhead costs would have been subject the subject of other price controls and their incorporation in the tariffs for each customer class would be demonstrated through the Tariff Policy methodology. The expected costs of hedging wholesale electricity costs would be largely determined prior to the start of a tariff year and thus the level approved in the tariff would effectively become a cap on subsequent risk management activity in the contract market. This should provide an appropriate incentive for any within year trading of contract cover to be undertaken in an economic manner.

For clarity it is important to emphasise that tariffs in each jurisdiction would be set by the relevant Regulatory authority.

In summary the Regulatory Authorities are proposing two part tariffs, the first part (for larger customers) is a pool price pass-through tariff, the second part are tariffs based on an agreed methodology which is approved by the Regulatory Authorities
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8.1.4 SOLR and USO tariffs

In relation to tariffs relating to each PES acting as supplier of last resort (SOLR) or under its universal supply obligation (USO) the prices offered by each PES under these circumstances could be structured in the same manner as set out above in the previous section.

8.2 *Tariff formulation*

8.2.1 Tariff Policy Statement

The Tariff Policy Statement envisaged as part of the overall regulatory framework would set out the principles and methods by which wholesale costs would be allocated to individual groups of customers, and be in accordance with the Hedging Policy. The allocation might also be a function of the Directed Contracts if appropriate, and the costs of the uncertainty associated with each customer class. The treatment of losses should be described together with the attribution of network charges.

The rationale for structural aspects of the tariff such as the choice of the number of kWh rates, the use of fixed charges and the maximum demand or peak usage charges would also be covered. In this there will be a trade off between the simplicity of the tariff, which will reduce billing costs, and the degree of cost reflection that can be achieved. The resolution of this trade-off should also be explained, together with the source of load research used in any analysis.

Since it would be possible for each PES to cover its wholesale procurement risks through the inclusion of a price adjustment clause in its retail tariffs, which could either complement or obviate the need for part of its hedging policy, each PES should also be required to gain formal approval from its respective Regulatory Authority for the form of tariff it proposed for each customer class through its Tariff Policy Statement. This approval would not extend to the level of the tariffs, which would be derived in accordance with whichever of the approaches described above were adopted.

8.2.2 The “k factor”

At present a PES can adjust the tariff level in each year for an under or over recovery of cost in the previous year through the “k factor” in its supply cost price control. Retaining the k factor for all PES costs has the disadvantage that it may diminish the incentive for the PES to act economically. It also distorts competition in that the PES tariff would reflect a combination of historic and forecast cost movements and thus be out of line with the costs other suppliers reflected in their charges.

Under the approach contemplated in this paper each PES should be able to fix in advance the bulk of its costs in each tariff year. Hedging pool prices over the period for which the tariff applies will bring certainty to the wholesale element of the tariff, whilst network charges and the PES' own overheads will be subject to separate price controls that will fix these for the year subject to any end of year reconciliation. Historically, the k factor acts as an income guarantee for the PES supplier but is not available for other suppliers

Poor liquidity in the contracts market or the unavailability of fixed price annual CfD cover would be risks that could justify a continuation of a “k factor”. However, a better alternative in these circumstances for larger low voltage (or even domestic customers)

on tariffs that were not formulated on the basis of passing through pool prices would be the inclusion of contract price adjustment (CPA) or fuel cost variation (FCV) features in the tariff. Such mechanisms would have a similar effect as a short term k factor, but keep retail prices more closely aligned with movements in the wholesale market thus mitigating the prospect of a step changes in prices at the start of a tariff year.

The Regulatory Authorities have contemplated a range of approaches for a k-factor under the SEM. At one end of the spectrum is its abandonment; which would provide each PES with the strongest incentive to hedge fully its costs. At the other end of the spectrum is a continuation of the present arrangements where the k-factors would enable each PES to recover (or return to the customer) any difference between forecast costs and those that outturn. However, the latter approach would provide no incentive for each PES to control its costs in a market context, and thus undermine competition.

In support of the framework for regulating PES tariffs the Regulatory Authorities are of the view that the most appropriate framework is for the K-factor to encompass only those specific PES costs that are judged outside its control. Examples of such costs would be those associated with:

- its obligations of being the supplier of last resort, and retaining a universal supply obligation,
- reconciliation costs that flow from the control of network and market operation charges,
- Volume risks in the domestic and SME sectors of the market that were shown to be uncontrollable, for example, where another supplier chooses to leave a sector of the market and a large number of customers migrate back to the PES.

Costs that would be excluded from the k-factor would be costs that could readily be hedged or disposed of by trading out an underlying position. These would include Pool and fuel price risks since these should be managed in accordance with the hedging policy under its EPO, together with any costs that other suppliers would naturally face in their participation in the market. In this approach the involvement of the Regulatory Authorities in setting the level of the tariff at the start of the year would be to approve the methodology and possibly key assumptions, but not the forecast of costs.

Each PES would be required to provide a rationale for any claim for the application of the k-factor in a separate submission to the relevant Regulatory Authority. The application would require each PES to demonstrate that all reasonable steps had been taken to minimise the uncertainty of its exposure to the costs that it claimed.

In summary the Regulatory Authorities are proposing that each PES will have a K-factor, however this K-factor will be limited to certain uncontrollable risks that each PES faces due to the nature of the business. The scope of these risks must be agreed before the tariff year.

8.2.3 PES Margin

The principal determinant in deciding the appropriate level for the PES t margin should be the level of commercial risk that each PES faces in the market. Currently the PES businesses see only very modest levels of risk. In the Republic of Ireland power is procured from just two sources; the PSO contracts and any residual requirements from the vesting arrangement with ESBPG. In Northern Ireland the PES acquires its supplies under an all requirements arrangement with the PPB. Thus at present, unlike other suppliers, the PESs face no need for balancing energy. Furthermore prices are fixed on an annual basis with any variation in PES costs reimbursed through the k-factor adjustment.

Furthermore, although the retail market in the Republic is open fully to competition, and that in Northern Ireland will be from the start of the SEM, the reality is that ESB and NIE PES constitute the largest supply businesses in terms of market share, and furnish electricity supplies to almost all domestic and SME load. This customer base gives the PESs a de-facto monopoly over large sections of the market.

This situation appears unlikely to change immediately following the implementation of the SEM. However, under the SEM a number of aspects of the market and regulatory frameworks will alter the PES risk profile. Like other supply businesses the PES will need to procure its contract cover through whatever mechanisms are available and balance its contract portfolio with its customer's consumption through pool purchases.

This is likely to leave each PES with a degree of pool price exposure that cannot be hedged.

The price control for PES own costs in the Republic of Ireland covers the period from January 2005 to December 2009. This control includes a specific provision for PES to earn a margin of 1.3% on its overall forecast revenue. In Northern Ireland NIE PES is currently earns a margin of 1.6%. A new PES price control is under negotiation.

Changes to the PES' risk profile as a consequence of the new market structure and the accompanying regulatory framework indicate that it may now be necessary to re-evaluate the margin that the PES is permitted to earn. Evidence from other electricity markets implies that somewhat higher levels of profitability may be appropriate for a supply business although clearly the level would depend upon the nature of the market arrangements. Examples that have been found elsewhere indicate margins that range from 1.5% to 4.0%. However, since the PESs will continue to enjoy the use of a limited k-factor to recover certain costs incurred under their license obligations, an allowed margin of 2.0% is currently contemplated as being appropriate to accommodate the risks that will emerge following the SEM implementation.

The Regulatory Authorities are proposing that the PES businesses margin be increased to take account of the increased risk profile for each PES in the SEM. Although still under review a net margin of 2.0% is being contemplated as appropriate.

9 Next Steps

It is intended that the consultation process concerning the framework for the regulating the wholesale market and PES tariffs will commence in February 2007. Once the consultation is concluded the Regulatory Authorities will set out their final decision on the topics covered in early April.

The Regulatory Authorities would then expect PES to publish its Hedging Policy Statement in early April, followed by the development of its Procurement Guidelines. It is anticipated that Directed Contracts will be allocated in June 2007, and that an initial auction of PES hedging requirements will be conducted at the same time. The Regulatory Authorities will then approve the PES EPO and other aspects of the generation and PES regulatory frameworks in early August 2007.