

**A REPORT TO THE COMMISSION FOR ENERGY REGULATION
AND THE UTILITY REGULATOR ON
A REVIEW OF K-FACTORS AND SUPPLY MARGINS IN THE SINGLE
ELECTRICITY MARKET**

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Summary

ESB Customer Supply (ESBCS) and NIE Energy (NIEE), respectively the Public Electricity Supplier (PES) in Ireland and the former PES in Northern Ireland, are subject to price or revenue restrictions.

In any given year, the revenues that the licensees earn from tariffs that they have to set in advance may differ from the allowable revenues. The k factor is a term in the price control formula that allows compensation for any under-recovery or over-recovery in any given year to be applied in the following year.

A number of concerns have increasingly been raised, both by NIAUR and CER (collectively the “Regulatory Authorities” or “RAs”) and by industry, over the continued use of k-factors in the price/revenue restrictions for ESBCS and NIEE, suggesting that k-factors serve to undermine competition in supply.

In November 2008, Skyplex Consulting Limited was asked by the RAs to undertake a review of k-factors and supply margins. This report sets out the results of that review and includes three proposals for changes to k-factors with a view to promoting the development of supply competition in Ireland and Northern Ireland. The proposals include:

- Proposal 1: Minimal change; in which k-factors are retained, in the hope that hitherto developments in retail competition will continue to progress, but a number of changes to the existing arrangements are made in order to address the detrimental effect that k-factors have on competitor suppliers;
- Proposal 2: Asymmetric k-factors; whereby any over-recovery must be repaid with a premium or any under-recovery may not be subsequently fully recovered; and
- Proposal 3: No k-factor with maximum allowable revenue determined by ex-post pool prices and customer demand; whereby use of k-factors is discontinued completely and allowable revenues for NIE Energy (NIEE) and ESB Customer Supply (ESBCS) (together the “regulated suppliers”) are set ex-post based on the pool purchase costs of the electricity actually used by their customers, not including hedging costs.

In the case of Proposal 1, the principal changes proposed relate to making available additional information as to the hedging position of the regulated suppliers within year and providing greater regulatory certainty over the subsequent application of k-factors. These changes would be recommended as part of Proposal 2 also.

In the case of Proposals 2 and 3, additional freedom to change tariffs would be afforded the regulated suppliers. These proposals are intended thus to result in tariffs which more closely reflect costs and hence it is likely that tariffs would change more promptly to reflect changes - both increases and decreases - in underlying costs. In each of these two proposals the need for a small additional margin for the regulated suppliers is considered such that they are not expected to operate at a loss in order to meet their revenue restriction conditions.

Whilst taking steps to abolish or reduce the effects of k-factors is likely to assist in the development of retail competition, there may be other factors which serve to limit the rate of development of such competition in the two jurisdictions. Consequently, changing the k-factor regime may not in itself be sufficient to foster more competitive arrangements. Nevertheless, subject to reviewing responses to a consultation on the proposals, there do not appear to be any material disadvantages to introducing one of the reforms proposed in this document.

It is recommended that the RAs should invite views, together with justification of those views, on these proposals and, in particular:

- (A) Do customers prefer a single tariff change per year, and are any other matters that should be taken into account in considering the issues associated with reducing the effects of, or abolishing k-factors?

In respect of Proposal 1:

- (B1) What additional information should the regulated suppliers be required to make available in relation to their contract cover and forecasts of over/under recovery, and in what timescales?
- (B2) Are there any reasons why it would not be appropriate for additional information on such issues to be made available?
- (B3) What proportion of any over recovery should be returned in the following year to customers in general rather than only to customers of the regulated supplier?

In respect of Proposal 2:

- (C1) What level of asymmetry should be introduced into the k-factors and how should this vary over time?
- (C2) What level of additional margin should be afforded the regulated suppliers to give them a reasonable expectation of recovering their costs? Quantitatively, how should

this vary with the level of asymmetry and the expected frequency with which tariffs can be changed?

In respect of Proposal 3:

- (D1) Is it feasible for regulated suppliers to apply ex-post tariff corrections in order to avoid an over recovery of revenues?
- (D2) What level of additional margin should be afforded the regulated suppliers to give them a reasonable expectation of recovering their costs? How should this vary with the frequency with which tariffs can be changed?

Finally,

- (E) Which, if any, of the proposals put forward in this document should be adopted and why? What alternative proposals should also be considered?

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1. Introduction

Currently ESB Customer Supply (ESBCS) and NIE Energy (NIEE), respectively the Public Electricity Supplier (PES) in Ireland and the former PES in Northern Ireland, are subject to price or revenue restrictions. In Northern Ireland, NIEE's revenue restriction is enshrined in its supply licence, which can be modified by proposals made by the Northern Ireland Authority for Utility Regulation (NIAUR) and accepted by the licensee. In Ireland, the revenue restriction is enshrined in price controls that the Commission for Energy Regulation (CER) makes under powers granted by the Electricity Regulations Act 1999, as amended by SI60 of 2005 and is augmented by the approval generally annually by the CER of customer tariffs. The current revenue restriction for NIEE is due to apply until 31st March 2010¹, whilst ESBCS's current restriction is due to apply until 31st December 2010².

In both jurisdictions, the revenue restriction takes the form of a complex formula which allows the licensee to recover certain costs, principally: the costs of purchasing energy in the wholesale market (including contracts as well as purchases from the pool, which itself covers charges for both wholesale energy and capacity); transmission and distribution charges levied by network operators; costs of metering; and the licensee's own costs of operating its business. Under the current formulae, in any given year, the licensee is entitled to recover a number of the actual costs in full, whereas other costs, such as internal business costs, are covered by a fixed allowance. In a few cases, other terms in the price controls vary the allowable revenue in order to provide various incentives or to allow pass of costs of certain measures. In the case of ESBCS, for example the price control formula includes a variable element which is dependent upon customer satisfaction ratings from call centre services, whilst also allowing for SEM implementation costs. In the case of NIEE, the price control formula includes variable allowances for the costs of SEM and IME Directive implementation, and costs associated with Renewables Obligation buy-out.

However, in any given year, the revenues that the licensees earn from tariffs that they have to set in advance may differ from the allowable revenues. Discrepancies arise as a result of assumptions that they (and, in the case of ESBCS, the CER also) must make in calculating their tariffs. For example, generation costs may differ from estimates and the volume of units supplied and customer numbers may deviate from forecasts. The k factor is a term in the price control formula that allows compensation for any under-recovery or over-recovery in any given tariff year to be applied in the following year.

1 "Electricity Supply Licence. NIE Energy Limited", NIAUR.

2 "Direction to ESB PES (Public Electricity Supplier) on Allowable Costs 2006 – 2010 by the Commission for Energy Regulation", CER/05/164, 9 September 2005.

A number of concerns have increasingly been raised, both by NIAUR and CER (collectively the “Regulatory Authorities” or “RAs”) and by industry, over the continued use of k-factors in the price/revenue restrictions for ESBCS and NIEE, suggesting that k-factors serve to undermine competition in supply. In February 2007, the RAs consulted upon a strategy for regulation of ESBCS and NIEE under the Single Electricity Market (SEM)³, suggesting that the use of k-factors:

- may diminish the incentive (on ESBCS and NIEE) to behave economically; and
- distort competition by causing PES tariffs to be out of line with costs experienced by rival suppliers.

Then in April 2008, NIAUR issued a consultation paper looking at retail market competition in Northern Ireland⁴ which suggested that, as a consequence of the use of k-factors:

- NIEE tariffs do not necessarily reflect costs seen by rival suppliers;
- wholesale purchasing risk for NIEE is reduced; and
- profits for rival suppliers pricing at discount to NIEE will be more volatile, increasing risk for rival suppliers.

Respondents to these consultations overwhelmingly supported the abolition of k-factors, although it was also argued that the abolition of k-factors cannot be considered in isolation and would have to be accompanied by other associated changes.

In November 2008, Skyplex Consulting Limited (“Skyplex”) was asked by the RAs to undertake a review of k-factors and supply margins⁵. This report sets out the results of this review and includes proposals for changes to k-factors with a view to promoting the development of supply competition in Ireland and Northern Ireland. The proposals include a description of how k-factors and supply margins could be changed and also highlight the impact that the proposals would have, or may have, on the form of regulation of ESBCS and NIEE, the tariff setting arrangements and the wholesale contracts for difference market. Skyplex understands that it will be used by the RAs as the basis of a formal consultation. Skyplex met with a number of organisations involved in, or with an interest in, the current arrangements, and wishes to thank them for sharing their views and opinions, which were extremely helpful in the preparation of this document.

3 “The Strategy for Regulation of ESB PES and NIE in the Single Electricity Market”, AIP/SEM/07/16, April 2008.

4 “Consultation on Electricity and Gas Retail Market Competition in Northern Ireland”, NIAUR, April 2008.

5 Skyplex understands that a parallel review has been undertaken into tariff structures.

The structure of the document is as follows: Section 2 discusses the existing arrangements in Ireland and Northern Ireland; Section 3 discusses the abolition of k-factors in other jurisdictions; Section 4 includes an analysis of the issues; Section 5 puts forward proposals for the future treatment of k-factors; and Section sets out conclusions and recommendations.

2. Background

2.1. Existing Price/Revenue Restrictions

ESBCS

The functions of the CER in relation to the regulation of ESBCS are set out in Section 9 of the Electricity Regulation Act 1999, as amended by subsequent Statutory Instruments. In particular, Regulation 3 of S.I.60 of 2005 requires the CER to consider proposals from ESBCS in relation to tariffs and their underlying costs and, following an examination of proposals from PES in relation to underlying tariff costs, to issue directions to the PES in relation to such costs underlying any charges to final customers.

In September 2005, the CER issued a direction to ESBCS on allowable costs for 2006 – 2010⁶. The direction provides pass-through of ESBCS's "upstream" costs, which include energy purchase costs and network charges. The internal costs of supply business are covered by a fixed allowance, indexed by CPI-X. A modifier to the fixed allowance provides specific incentives relating to the performance of ESBCS's customer contact centre, and a margin of 1.3% is included on the upstream costs. The direction also specifies that the price control includes the use of two k-factors which, for any year t, make corrections, as agreed between ESBCS and the CER, for under or over recovery in relation to years t-1 and t-2. The correction applied in year t-1 is based on estimates of outturn revenues and costs for year t, whilst the correction in year t-2 is based on actuals (less the correction applied in year t-1). Interest applicable on any over or under recovery passed through by use of the k-factors is calculated in accordance with the prevailing three-month Euribor rate.

At least once a year, ESBCS submits to CER proposals for new tariffs. "Tariff years" are envisaged to run from 1 October to 30 September, which is in-line with the periods for which a variety of charges, such as network and market operator charges, are set. These proposals are considered by the CER, which consults upon and, as appropriate, directs ESBCS as to the tariffs it is to apply. Given the recent volatility in electricity purchase costs, ESBCS tariffs have been revised more frequently. In October 2008, the CER published proposals for ESBCS tariffs to apply from 1 January 2009 to 30 September 2009⁷, with a direction being issued to ESBCS in December⁸. However, a further revision was made for

6 "Direction to ESB PES (Public Electricity Supplier) on Allowable Costs 2006 – 2010 by the Commission for Energy Regulation", CER/05/164, 9 September 2005.

7 "ESB Customer Supply Proposals for Regulated Tariffs for Tariff Period 1st January 2009 to 30th September 2009", CER/08/223, 24 October 2008.

8 "Direction to ESB Public Electricity Supplier on Electricity Tariffs to apply from 1st January 2009", CER/08/246, 1 December 2008.

the period 1 May 2009 to 30 September 2009 with a proposed decision being issued in early March⁹ with a final decision in April¹⁰.

NIEE

The functions of the Authority in regulating the allowable revenues of NIEE are set out in The Electricity (Northern Ireland) Order 1992 as amended. In particular, the Authority may make modifications to conditions of licences with the consent of the licence holder. In the absence of the agreement of the licence holder, the Authority may refer the matter to the matter to the Competition Commission.

Annex 2 of NIEE's supply licence sets out the restriction on NIEE's supply charges. NIEE is required to set its supply charges using its best endeavours to ensure that the average charge per unit supplied in any year does not exceed the "maximum average charge per unit supplied". The maximum average charge per unit supplied is determined formulaically in the licence. The formula provides for pass-through of costs incurred in the purchase of electricity and of transmission and distribution charges. Internal business costs are determined by fixed allowance indexed by inflation and with an adjuster for customer numbers, whilst an incentive is provided for the efficient management of costs of meeting NIEE's renewables obligations. The formula also includes in relation to any year t , a k -factor which adjusts the maximum allowed revenue in year t by the difference between maximum allowed revenue in year $t-1$ and the actual revenue in year $t-1$. Interest applicable on any over or under recovery passed through by use of the k -factors is calculated in accordance using the "average specified rate", which is based on the banking base rate. Margins on supply business costs are also set by NIAUR as part of the price control formula which, in the current price control, was set on the basis of 1.8% of total revenue (although it is expressed as a fixed sum of allowable revenue rather than as a percentage of total revenue in the price control formula).

NIAUR is not required to approve NIEE's tariffs although, in practice, it is understood that NIEE does not currently change tariffs without consultation with NIAUR¹¹. It is possible that NIEE's motivation for seeking such approval is to increase their regulatory certainty, for example by minimising the likelihood of the NIAUR will subsequently suggest that NIEE has breached its licence obligations in respect of a particular tariff.

9 "Proposed Decision on ESB PES Tariffs to apply from 1st May 2009 to 30th September 2009", CER/09/038, 3 March 2009.

10 "Decision on ESB PES (Public Electricity Supplier) Tariffs and Use of System Charges for the period 1st May 2009 to 30th September 2009", CER/09/053, 9 April 2009.

11 For example, "Approval by the Utility Regulator of NIE Energy's 1 October Tariff Increase - A Background Briefing", NIAUR.

2.2. February 2007 Consultation

In February 2007, the RAs consulted on a strategy for regulation of ESB and NIE in the SEM¹² which, amongst other things, set out proposals for the regulation of PES tariffs under the SEM. This stated that the aims and objectives of the regulatory strategy were to create a framework that:

- protects the interests of final customers, with the promotion of competition seen as the favoured means of doing so (where appropriate and efficient);
- 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.

The paper envisaged the development of a competitive retail market over the longer term with several competitive suppliers and “*the demise of the existing PESs in their current state*”.

The elements of the regulatory arrangements that the RAs proposed included:

- an approved Economic Purchase Obligation (EPO), which would embody a hedging policy statement, a procurement principles statement for the purchase of contract for differences (CfD) cover, and routine reporting of compliance with these statements;
- a statement of the tariff policies that each PES proposes 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 PESs’ own costs.

Insofar as the use of k-factors was concerned, this consultation suggested that the use of k-factors:

- may diminish the incentive (on ESBCS and NIEE) to behave economically; and
- distorted competition by causing PES tariffs to be out of line with costs experienced by rival suppliers.

12 See Footnote 3.

The approach contemplated in the paper was that each PES should be able to fix in advance the bulk of its costs for each tariff year. Hedging pool prices over the period for which the tariff applied would bring certainty to the wholesale element of the tariff, whilst the network charges and PES overhead costs were subject to a separate price control that would fix those costs for a year, subject to any end-of-year reconciliation.

The paper also noted however that poor liquidity in contracts market or the unavailability of fixed price annual CfD cover would be risks that could justify the continuation of a k-factor. It also suggested that a better alternative for larger low voltage (or even domestic customers) would be the inclusion of a contract price adjustment or fuel cost variation feature. These would have similar effects as a short-term k-factor but keep retail prices more closely aligned with wholesale prices.

The paper went on to propose that costs that would be excluded from the k-factor would be costs that could readily be hedged or disposed of by trading out of an underlying position. Subject to adequate liquidity in the contracts market or availability of CfD cover, these would include pool price and fuel price risks since these should be managed in accordance with the hedging policy under each PES's EPO, together with any costs that suppliers would naturally face in their participation in the market.

2.3. June 2007 Decision Paper

In June 2007, the RAs published a decision paper setting out their proposals for the regulation of ESBCS and NIEE in the SEM¹³. This paper stated that NIEE and ESBCS would be required to submit Tariff Methodology Statements to their respective RA. This document also stated that both businesses would be required to adjust their tariffs within year should unanticipated changes to the external environment indicate an unacceptably large k-factor adjustment in the subsequent year. It was also stated that the arrangements for treatment of k-factors were considered to be a transitional step and that the scope of the k-factor would be subject to a further review.

In the June 2007 paper, the RAs also decided that both ESBCS and NIEE would be required to publish a Hedging Policy Statement including procurement principles. The paper stated that by approving these statements, the RAs' aim was to ensure that ESBCS and NIEE operated to a clear set of guidelines when deciding whether or not a particular hedge is viewed as being compliant with their Economic Purchase Obligation (EPO).

13 "Regulation of ESB and NIE in the SEM. A Decision Paper". AIP/SEM/304/07, 20 June 2007.

2.4. Tariff Methodology and Hedging Policy Statements

Further to the June 2007 decision paper, requirements were placed on NIEE and ESB Customer supply to submit for approval and comply with Tariff Methodology and Hedging Policy Statements. These Statements are published on the AIP website¹⁴.

ESB Customer Supply

Condition 3 of ESB Interim Public Electricity Supply Licence¹⁵ requires the licensee to prepare and submit to the CER for approval a Tariff Methodology Statement and to comply with directions given by the CER in respect of the matters to be specified in the statement and the review and revision of the statement by the licensee. ESB PES's Tariff Methodology Statement, as currently approved, states that "... *if forecast variances between costs included in tariffs and revised forecast costs during the year exceed a threshold value the tariffs will be subject to review. Where tariff rates are to be revised, they will be revised for the remainder of the year to reduce the end-of-year variance.*".

Condition 9 of the ESB Interim Public Electricity Supply Licence requires the licensee to engage in economic purchase of electricity and the financial hedging of associated price and volume risk on terms (and/or timescales) as approved and/or directed by the CER from time to time. It requires the licensee also to prepare and submit to the CER for approval, a statement of financial hedging policy (the "Hedging Policy Statement"), which is required to describe the manner in which the licensee will hedge against price and volume risks in the wholesale electricity market associated with the PES business.

NIEE

Condition 54A of NIEE's supply licence requires NIEE to prepare and submit to the Authority for approval a Tariff Methodology Statement for each relevant year setting out the Licensee's policy for calculating and setting the prices it shall charge any Customer or class of Customer for the supply of electricity.

NIEE's Tariff Methodology Statement states that "*NIEE Supply will [therefore] monitor [the impact of errors in the forecasts of demand and the costs of serving it] over the year. If they cumulatively lead to a likelihood of an error exceeding 2.5% in any year, NIE Supply will consider the introduction of a tariff adjustment within the year*". Condition 4 of NIEE's supply licence requires the licensee to purchase electricity at the best effective price reasonably obtainable having regard, amongst other things, to the desirability to ensure the stability of

14 "ESB Customer Supply Tariff Methodology Statement for Tariff Period 1st October 2008 to 30th September 2009", 14 August 2008, CER/08/225; "ESB Customer Supply Hedging Policy Statement", 24 April 2009. CER/09/081; "NIE Energy Hedging Policy Statement Summary", NIAUR, 30 April 2009.

15 "Interim Public Electricity Supply Licence Granted to Electricity Supply Board", AIP-SEM-07-468.

and minimise the frequency of changes in, the licensee's charges for electricity supply. Condition 4 also requires NIEE to prepare and submit to the Authority for approval, a Hedging Policy Statement setting out the licensee's policy for entering into electricity purchase contracts designed to enable the licensee to hedge risks in respect of the costs of purchase of electricity by the licensee.

2.5. Other Relevant Licence Conditions

There are further conditions in the current licences of both ESBCS and NIEE which are intended to prevent, amongst other things, predatory pricing by the two dominant suppliers. In particular, Condition 14 of NIEE's supply licence states "*the Licensee shall not supply or offer to supply electricity to Customers in any market in which it is dominant on terms which are predatory*". Similarly, Condition 4 of ESBCS's Interim Public Electricity Supply licence states that, "*In carrying on the Public Electricity Supply Business, the Licensee shall not prevent, restrict or distort competition to any appreciable extent in any market relating to the generation, transmission, distribution and/or supply of electricity*", and that, "*In carrying on the Public Electricity Supply Business, the Licensee shall not abuse any dominant position it may have*".

Further licence conditions applying to both ESBCS and NIEE are intended to restrict vertical integration of their supply businesses with generation¹⁶. In the case of ESBCS, Condition 6 of its supply licence requires the licensee to, "*make arrangements in accordance with paragraph 3 to secure the complete and effective separation of the Public Electricity Supply Business, including full operational and managerial independence, from any affiliate or related undertaking of the Licensee, or any affiliate of any related undertaking of the Licensee or the Intermediary Activity, or any other Regulated Business of the Licensee*". This includes separation from ESB's Power Generation business.

Condition 5 further states that, "*the Licensee shall procure that the Public Electricity Supply Business does not give any direct or indirect cross subsidy to, nor receive any direct or indirect cross subsidy from, any affiliate or related undertaking of the Licensee*".

In NIEE's supply licence, Condition 45 states that, "*The Licensee shall not, and shall procure that any affiliate or related undertaking of the Licensee shall not, purchase or otherwise acquire for value any electricity which has been or is to be generated by any own-generation set or generation set in which the Licensee has an accountable interest*", whilst Condition 44 places strict limits on the amount of generating capacity that may be owned by NIEE.

¹⁶ Other conditions also restrict vertical integration with distribution and transmission.

Furthermore, Condition 48 states, “*the Licensee shall procure that no Separate Business gives any cross-subsidy to, or receives any cross-subsidy from, any other business of the Licensee or of an affiliate or related undertaking of the Licensee (whether or not a Separate Business)*”.

2.6. April 2008 Letter to ESB Customer Supply

In April 2008, the CER wrote to ESBCS regarding the treatment of correction factors in retail tariffs¹⁷. In this letter the CER stated, “*While correction factors provide some certainty and price stability for customers on fixed tariffs and strengthens financial viability for the supply businesses, it conversely can undermine the development of competition in the retail market by acting as an insulator for the supply businesses against changes in market conditions. Correction factors can also diminish the incentive for ESB Customer Supply and NIEE to act as they would in a fully competitive market.*”. The letter went on to state, “*The Regulatory Authorities take the view that the elimination/reduction of correction factors is important in the development of competition in all sectors of the retail market. Accordingly, we have agreed to conduct a long term strategic review of the application of correction factors in retail tariffs in Q3/Q4 of this year.*”.

2.7. April 2008 NIAUR Consultation

In April 2008, NIAUR published a consultation on Electricity and Gas Retail Market Competition in Northern Ireland¹⁸. Amongst other things, this consultation noted that, whilst there were some encouraging signs, there are no active competitors to the incumbent gas and electricity suppliers for domestic customers. The paper examined a number of generic barriers to competition that applied to both the gas and electricity retail markets in Northern Ireland. These included, amongst others, the lack of contract market liquidity, issues over retail price controls (including allowed margins) and quality, transparency and availability of data (in particular, customer data, for example, customer demand profiles).

This document stated that the use of k-factors for NIEE can affect the market in two ways:

- it reduces the purchasing risk for NIEE relative to that of other suppliers; and
- it could potentially result in NIEE’s tariffs not being cost reflective in a given tariff period.

The paper suggested that the existence of k-factors and the associated allowed retail margins for NIEE was one of the barriers to entry to retail competition in Northern Ireland.

17 Letter to Pat Fenlon, General Manager, ESB Customer Supply from Cathy Mannion, Director of Electricity Networks and Retail, CER, dated 10 April 2008, CER/08/049.

18 “Consultation on Electricity and Gas Retail Market Competition in Northern Ireland”, NIAUR, 23 April 2008.

In November 2008, the Utility Regulator published a consultation document on its draft corporate strategy and forward work programme¹⁹. In the Annex of this document, a decision paper on “Energy Retail Competition – Consultation & Way Forward” was published. This document confirmed the Utility Regulator’s intention to review the inclusion of k-factors in NIEE’s price control.

2.8. Industry Views

A range of views on the issue of k-factors and associated supply margins have been raised by industry in response to the consultation documents issued by the RAs, and in bilateral discussions between the RAs and a number of interested parties which were conducted as part of this review process. In a number of cases, views were expressed in the context of the Irish retail market alone, rather than in that of the retail markets in both Ireland and Northern Ireland.

Whilst the majority of respondents generally support the abolition of k-factors, believing them to be a barrier to entry to competition, some respondents were of the view that any abolition of k-factors would need to be accompanied by wider changes in market structure.

The principal issues raised are summarised below.

K-factors are a barrier to competition

Several respondents raised the fact that the existence of k-factors meant that the tariffs of incumbent suppliers did not necessarily have to reflect the actual costs of electricity supply in any particular year and that this made it difficult for new entrants to compete. It was also stated that in any given tariff year, competitor suppliers did not know whether PES tariffs were under-recovering against costs (and consequently, in principle an increase in subsequent tariffs would apply in the following year) or over-recovering against costs (and consequently that a reduction in subsequent tariffs would apply). Furthermore, notwithstanding the Hedging Policy Statements, competitor suppliers had very little information as to how over or under recovery was building up in the current year and what would be the consequent impact in the following year.

Some respondents also raised concerns over the uncertainty associated with the application of k-factors, asserting that in some cases, where the PES had under-recovered, these under-recoveries were not necessarily fully applied in k-factors in the following year. They argued that this posed substantial risks for new entrants seeking to compete against PES

¹⁹ “NIAUR Draft Corporate Strategy (2009-14) and Forward Work Programme (April 2009 to March 2010). A Utility Regulator Consultation Paper”, NIAUR, 14 November 2008.

tariffs in years where there was an under-recover of charges as they had no control or information over whether the under-recovery would be included in next year's tariff.

Other respondents believed that a current barrier to entry arose from the fact that k-factors provided NIEE and ESBCS with a "free" hedge of their energy purchase costs which was not available to new entrants. Whilst in principle, a new entrant supplier could also benefit from the free hedge in subsequent years as the k-factor was applied, there was a lack of information over the quantity and price of hedging cover held by the dominant suppliers, and consequently over the level of k-factor hedge upon which they were relying. Furthermore, the lack of certainty over the extent to which any k-factor would actually be applied and consequently over the reliance that new entrants could themselves place on the k-factor hedge. The implicit hedge provided by k-factors was therefore of more value to the incumbent than to new entrants.

Removal of k-factors should be accompanied by other changes in the market structure

A number of respondents suggested that the abolition of k-factors should be accompanied by an increase in the supply margins earned by the incumbent suppliers. Whilst this would reflect the additional risks faced by the incumbents, who would be required to either hedge, or carry the risks of price changes within their businesses, this would place incumbents on an equal footing with new entrants as well as giving new entrants more of an opportunity to compete against the incumbent suppliers, as they would have a higher margin against which to compete.

The need to review the overall risks falling on the incumbent suppliers when considering any abolition of k-factors was also raised. For example, it was stated that ESBCS was required to be independent of ESB Power Generation and, because they consequently could not rely upon any associated generation business to provide a natural hedge against the risks of the market, this placed ESBCS at a competitive disadvantage relative to other suppliers. Furthermore, it was stated that there was limited liquidity in the contracts market which meant that the quantities and prices of hedges available for supply businesses were limited. It also was stated that, in Ireland, any changes in ESBCS's tariffs required regulatory approval which meant that this process was both lengthy and uncertain. Finally, it was argued that the abolition of k-factors against such a background; i.e. without other changes to the form of regulation and tariff setting for PES or their access to bilateral contracts or physical hedges through vertical integration; would mean that ESBCS would be potentially exposed to market risk of such magnitude that it could not simply be compensated for through a modest increase in supply margin.

Other matters

A number of other views were raised which included:

- customers prefer a single tariff change per year, and consequently the existing k-factor regime was in the interests of customers;
- there was a possibility that ESB PES was systematically under-recovering revenues and/or ensuring relatively large k-factors in order to maintain market share;
- the removal of k-factors and a commensurate increase in supply margin would not necessarily simply result in an increase in costs for consumers because competitive pressures would apply to prices. Furthermore, in a more competitive environment, suppliers would be able to offer more innovative higher-value products to customers – something that was not facilitated by the existing regime;
- the complexity and asymmetry of information associated with k-factors meant that even the RAs would not be able to derive sufficient information to ensure adequate transparency. It was suggested for example, that whilst relevant information is available to the RAs, the RAs may not know what information to ask for in some circumstances;
- it was possible that one or more of the regulated supply business may be deliberately under-pricing in order to protect market share and that there was a strong case for regulation to set a minimum price to be charged by the dominant suppliers as well as a maximum price;
- that ESBPG was under-hedging but that the abolition of k-factors could increase the requirement for hedges by the regulated suppliers and encourage greater supply by ESBPG; and
- the retail margin may be too low to promote effective competition in supply.

These arguments are discussed further in Section 4.

Consultation Question:

- (A) Do customers prefer a single tariff change per year, and are any other matters that should be taken into account in considering the issues associated with reducing the effects of, or abolishing k-factors?

2.9. Emergence of domestic retail competition in Ireland

On 18th February 2009, Bord Gáis Energy (BGE) announced its entry into Ireland's residential electricity market. BGE guaranteed a minimum saving of 10% off ESB rates for

all customers in the first year, with a price guarantee of lower rates against any future ESB change in prices. On Tuesday 3rd March 2009, BGE announced that in the first two weeks of its campaign, almost 50,000 customers had switched to BGE. This represents approximately 2.5% of Ireland's customer 2 million customers, or 1.8% of the 2.7 million customers in the SEM in total.

On 27th February 2009 Airtricity also announced a new tariff offering for Irish domestic customers which it stated represented a 13% saving on their home electricity charges.

Skyplex understands that as of mid-April, cumulatively the total numbers of domestic customers that have now switched is approaching 150,000, which represents approximately 7.5% of Ireland's customers.

Whilst the entry of both BGE and Airtricity into the Irish supply market has occurred with the existing k-factor arrangements, it has also taken place against a background of an anticipated significant reduction in ESBCS's tariffs. For example in the March 2009 Proposed Decision on ESB PES Tariffs to apply from 1st May 2009 to 30th September 2009²⁰, the CER concluded that ESBCS's then current tariffs remained cost-reflective for the period running from January to September 2009, but expected to see an average reduction of 14-16% in tariffs from 1st October 2009 based on forward fuel prices at that time. Following consultation, on 9th April 2009, the CER subsequently published a further decision document²¹ in which it was stated that the CER had decided to bring forward the expected price decrease expected for October 2009 through deferral of networks revenue, resulting in an expected decrease of 10.3% in the average final bill for domestic customers and small and medium sized enterprises (SMEs).

In Northern Ireland, there has not, to date, been any degree of market entry by independent suppliers in the domestic electricity market. The possible reasons for this were examined in the Utility Regulator's consultation in April 2008²². This was followed by a decision document in November 2009¹⁹ and, in April 2009, by the publication of a consultation on a Work Programme for Energy Retail Competition²³ in which it is noted that some companies have indicated a willingness to enter the domestic electricity supply sector. A package of measures intended to promote retail competition was put forward in the April 2009 consultation document, including for example: the development of a policy on data

20 "Proposed Decision on ESB PES (Public Electricity Supplier) Tariffs and Use of System Charges for the period 1st May 2009 to 30th September 2009", CER/09/038, 3 March 2009.

21 Decision on ESB PES (Public Electricity Supplier) Tariffs and Use of System Charges for the Period 1st May 2009 to 30th September 2009. CER/09/053, 9 April 2009.

22 "Consultation on Electricity and Gas Retail Competition in Northern Ireland", May 2008.

23 Energy Retail Competition Work Programme: Generation Overview and Rationale, Consultation April 2009.

transparency (in relation to delivering more effective retail competition), the promotion of a more liquid contract and secondary hedging mechanism in electricity and the delivery of an enduring solution system for energy switching.

3. Removal of k-factors in other jurisdictions

3.1. Great Britain

Retail competition was introduced in GB in 1998. Starting in September 1996, Offer²⁴ published a consultation document²⁵ setting out proposed transitional measures for consumer protection, in the form of price controls for the fourteen GB PESs, as retail competition developed in Great Britain. A series of other consultation documents followed in January, May, July and August 1997, culminating in a proposals document in October 1997²⁶.

The May 1997 consultation document highlighted several perceived difficulties with the use of k-factors in the GB price controls, these included:

- Customer that over- or under-paid in any year would not necessarily be the ones receiving or suffering the compensating adjustment;
- PESs could possibly use correction factors to competitive advantage; and
- PESs automatically able to pass through their costs would be in a different position to competing suppliers.

The document also stated, *“there may be significant practical difficulties in setting and monitoring satisfactory pass-through constraints”* and that *“[the PESs] differ in the methods of attributing these costs to different tariff and customer groups. As a consequence, a form of restraint based only on cost pass-through would be quite unpredictable in effect. Some prices might go down, others might go up, depending upon how each company sought to attribute its costs and seek its profit margins”*.

In light of these issues, Offer was of the view that maximum price limits seemed to be better capable of meeting their aims than cost pass through restraints²⁷. However, it also considered that it may be appropriate to retain some form of pass through in the event that:

- there had been a significant and unexpected movement in costs outside the PESs control which, in all the circumstances, made it unreasonable for the PES to be held to the constraints; or

²⁴ Now Ofgem.

²⁵ “The Competitive Electricity Market from 1999: Price Restraints”, Ofgem, September 1996.

²⁶ “The Competitive Electricity Market from 2008: Price Restraints Proposals”, Ofgem, October 2007.

²⁷ With cost pass-through the difference between price and revenue controls does not arise because, by definition, the costs are being passed through. Where there is a restraint, a price control, as opposed to a revenue control, protects both the customer and the licensee from the volume risk.

- the costs of serving different types of customers were such that in all the circumstances a relaxation or rebalancing of the restraints would be appropriate.

In its fourth consultation in July 1997, Offer examined the detail of the expected electricity purchase costs for suppliers. In particular, it was noted that most electricity sold was covered by contracts for differences. At the time, three broad categories of CfD applied: the medium-term coal-backed contracts and certain nuclear-backed contracts; the RECs 15 year contracts with IPPs; and one year (or shorter) contracts to make up the required cover.

At the time, the medium-term coal and nuclear contracts, which covered approximately 60% of the franchise market, and which were priced considerably above pool price, were coming to an end. The IPP contracts, covering approximately 20% of franchise sales, were also considered to be relatively highly priced compared to pool price.

It was also noted that CfDs were, at the time, trading at approximately 6% premium²⁸ above pool price and implied that this should be taken into account if k-factors were to be discontinued.

In the final proposals for the PESs in October 1997, the savings arising from the discontinuation of the medium term coal and nuclear contracts combined with those from the spreading of the IPP contracts over the non-franchise and franchise markets led to relatively substantial reductions in revenues being set for the PESs even though maximum price limits were applied without k-factors.

The benefits of maximum price limits were summarised in the October 1997 paper as:

- providing clear reassurance to customers that they will be protected and will benefit from the competitive market;
- increasing the incentives on the PESs to purchase efficiently;
- providing clear targets for competitors to aim at; and
- avoiding the difficulties and potential distortions of cost pass-through controls and associated correction factors.

3.2. Other European Issues

In December 2008 the European Regulators' Group for Electricity and Gas (ERGEG) published its 2008 Status Review of the Liberalisation and Implementation of the Energy

²⁸ Para. 4.59 of the July 1997 consultation refers.

Regulation Framework²⁹. This document states, “... *in many Member States, competitive (or market based) prices still co-exist with regulated end-user prices, which remain a major concern. In such dual markets suppliers without low-cost generation capacity or equivalent long-term contracts will not be able to make competitive offers which cover supply costs if the regulated end-user prices are not in line with wholesale market conditions. Furthermore, there will be no incentive [for customers] to switch supplier if customers benefit from artificially low regulated prices*”, and, “*These findings show that artificially low regulated end-user prices which are not market based are an obstacle to supplier switching. Therefore, as far as non market-based regulated end-user prices are distorting competition, they should be abolished, or where appropriate, brought into line with market conditions*”.

These conclusions support a number of the concerns raised in relation to the use of k-factors in the SEM, in particular where there has been an over-recovery of revenues in one year, the repayment of such over recoveries through use of k-factors in subsequent years’ results in customer tariffs that are below market price. In accordance with the ERGEG conclusions, it may be assumed that in such circumstances, new entrant suppliers will not be able to make competitive offers and that there will be no incentive for customers to switch suppliers if they benefit from these artificially low regulated prices³⁰.

29 “ERGEG 2008 Status Review of the Liberalisation and Implementation of the Energy Regulatory Framework C08-URB-15-04 10 December 2008”, <http://www.energy-regulators.eu>. Section 1.3 refers.

30 It is noted that there is also an argument that regulation can be used to ensure that prices remain sufficiently high, i.e. to prevent predatory pricing by dominant incumbents.

4. Analysis

As discussed in Section 2, the majority of industry participants support the abolition of k-factors as being necessary to promote retail competition in both Ireland and Northern Ireland. Most were also of the view that it would be necessary also to allow the regulated suppliers an increased margin to compensate for the additional risks that they were likely to face as a removal of k-factors, although others believed that a more extensive review of how the risks falling on the regulated suppliers could be managed was necessary.

Whilst many consultations involve issues for which there are winners and losers within the industry and which elicit opposing views in some cases the interests of industry participants, who are ostensibly competitors (e.g. incumbent and new entrant suppliers), actually are well-aligned. Clearly, higher margins for suppliers, whether or not as a quid pro quo for the removal of k-factors, is an example of this. In such cases, any opposing view may be held only by customers, who typically are under-represented in such consultation exercises. Given the responsibilities of the RAs to safeguard the interests of customers, it is necessary thus to evaluate industry views critically in light of the fact that they cannot be relied upon necessarily to provide a comprehensive spectrum of views.

4.1. Risks

In a perfectly competitive market, if k-factors allowed NIEE and/or ESBCS to supply for periods at below cost then rival suppliers would have to choose between losing customers and supplying them at a loss. Conversely when k-factors allowed NIEE/ESBCS to recover previous losses and charge above costs, customers would switch to rival suppliers. Whilst this distortion of competition is cited as a major shortcoming of k-factors for rival suppliers, in such a market, k-factors would not provide NIEE or ESBCS with an effective hedge. Under perfect competition, even when k-factors permitted NIEE and ESBCS to recover previous losses, they would still be compelled to set prices at cost to prevent losing their customers to the other suppliers. Thus ESBCS/NIEE could not benefit from the over-recovery as intended.

However, for the immediate future the market is unlikely to conform to the perfect competition ideal and, as acknowledged in the NIAUR 2008 consultation, it is more likely that rival suppliers will merely price at a discount to ESBCS or NIEE. It is argued that k-factors will then increase the volatility of revenues of rival suppliers, increasing the return required by investors. Whilst the variability in revenues could increase as a result of an over-recovery being followed by an under-recovery (and vice versa), the under-recovery that follows an over-recovery (or vice versa) would be entirely predictable and hence uncertainty in

revenues would not be increased. Variability that is predictable does not constitute risk. In fact, k-factors here would *reduce* the uncertainty in the net present value of all future cash flows; without k-factors, rival suppliers would be exposed to the uncertainty of losing profits were the regulated supplier to under-price with no prospect of correspondingly enhanced profits in the subsequent period. On this basis, a rational investor would be satisfied with a *lower* rate of return with the regulated supplier having k-factors than without.

However, a number of problems complicate this analysis:

- (i) a problem reported by rival suppliers is that they cannot be certain of the extent to which variations in costs will be reflected in subsequent periods through the application of k-factors because they do not know the extent to which the variations in costs have instead been hedged by the regulated suppliers. It is argued thus that the k factor arrangements need to be accompanied by much greater transparency of the contract cover held by the regulated suppliers;
- (ii) even with greater transparency over the level of contract cover held by the regulated suppliers, there are issues with when rival suppliers receive information about such contract cover and the likely impact on subsequent k-factors. For example the regulated supplier would be placed at an advantage if it knew first whether the following year's tariffs would include an adjustment for an over or under recovery;
- (iii) it has been suggested that there is a degree of regulatory uncertainty over whether an over or under adjustment will in fact be passed through in a subsequent period; and
- (iv) if rival suppliers do price at a discount to ESBCS/NIEE then rival suppliers will also benefit from the hedge provided by k-factors to the extent that the risks against which k-factors protect ESBCS/NIEE are industry-wide, i.e. affect all suppliers equally. To a first order, the risk of efficient energy purchase costs falls into this category, with all suppliers purchasing from the same pool and purchasing from the same contracts market. However, it is also the case that if different suppliers supply different customer bases then different suppliers are likely to be exposed to different combinations of base-load, mid-merit and peaking prices. To the extent that base-load, mid-merit and peaking prices are not well correlated, different suppliers may thus be exposed to different variations in cost bases. ESBCS/NIEE's customer demand is understood to have a greater proportion of peaking demand than most other suppliers; other suppliers may thus be exposed to variations in baseload costs. Then again, where rival suppliers are vertically integrated, generation will tend to provide a hedge primarily against baseload rather than mid-merit and peaking costs.

Nevertheless, to the extent that they are retained, k-factors should:

- (a) apply to risks that are industry-wide; but
- (b) not apply to risks that are company-specific or which can be effectively managed by individual suppliers.

Note that the alternative to hedging purchase costs is that of making tariffs more closely mirror costs through indexing to fuel costs or contract prices, as was suggested in the June 2007 Consultation, or through pool price pass-through or more frequent within-year tariff changes. The effect of these mechanisms is to reduce risk on suppliers by transferring it to customers. Whilst it is possible that many customers accept that bills vary and are content to pay against a prevailing tariff, that in some markets there are suppliers offering, and customers accepting, supply contracts that fix energy prices for an extended periods of time implies that there is a cost, at least to some consumers, of bearing these risks.

The argument that abolishing the k-factors would increase the requirement for hedges by the regulated suppliers and hence encourage ESBPG to provide more hedges, thereby improving liquidity in the contracts market is unconvincing. If the contracts market is currently undersupplied (by generators) then it would seem likely that increasing supplier demand would make contracts more, not less, difficult to obtain. However, measures that make tariffs more reflective of the underlying costs of the regulated suppliers to customers should *reduce* the need of regulated suppliers to hedge and hence reduce the demand and hence the under-supply in the contracts market.

4.2. Incentives

In the existing price controls, both NIEE and ESBCS are allowed pass-through of their upstream costs but given allowances for their internal business costs. In effect the internal business costs are subject to a maximum revenue restriction. As is widely acknowledged, the effect of this form of a maximum revenue restraint is to give a strong incentive to manage down costs. In the absence of a specific financial incentive to manage upstream costs, an economic purchase obligation provides instead a mandatory requirement to manage these costs effectively.

Without k-factors, the concept of pass-through becomes less clear. If over or under recoveries were not refunded or recovered in subsequent periods then reductions in costs would be retained by the licensee. Whilst the resulting incentive to reduce upstream costs may be regarded as beneficial, against this, the incentive for ESBCS/NIEE to truthfully report forecasts of costs on average over time is also lost. Without k-factors, the incentive to reduce costs will also be an incentive to inflate forecasts. Consequently, without k-factors, there may be an increased burden on the RAs to scrutinise and refute cost information

provided by the companies. Whilst such an exercise is undertaken by the RAs in respect of the various transmission and distribution businesses, arguably these costs are more predictable than the volatile energy purchase costs of the supply businesses.

Whilst pass-through and k-factors may provide an incentive to truthfully reveal costs, this only applies over the long-term. Within any cash flow and working capital constraints, and in the absence of effective competition, the existing k factor mechanisms would make regulated suppliers indifferent as to whether revenues are recovered in one period or another. As is the basis of rival suppliers' concerns, the regulated suppliers may thus be relatively unconcerned whether tariffs reflect costs in a specific period as k-factors can ensure that revenues will match costs over the long-run. Furthermore, to the extent that mismatches between tariffs and costs at any given time create risk for competitor suppliers, there would be an incentive for the regulated supplier to seek to engineer such a situation.

4.3. Competition

In the response to the NIAUR April consultation, suppliers argued that the margins are too low, and that ESBCS and NIEE should be exposed to more risk and given higher margins if competition is to develop. Suppliers further argued that higher margins would be more than offset by the effect of greater supply competition in providing downwards pressure on pool prices³¹. Certainly, in other markets where supply competition has been introduced such as GB, one justification for greater retail competition was the anticipated effect in providing downwards pressure on wholesale prices. In the SEM, however, pool prices are formed from the bids of generators, which are required by a bidding code of practice to correspond with the short-run marginal costs of production, and thus the scope for competitive downwards pressure on pool prices would seem limited³². However, it has been suggested that supply competition could have an effect on wholesale prices by facilitating generation new entry. The argument is that, in the absence of a liquid contracts market, the advantages of vertical integration will imply that generation new entry – which can have an effect on wholesale prices – will be aided by the generator also having a retail position. The

31 For instance, NIEE stated, “The removal of price control and the associated “k” correction from this sector of the market would require higher supplier margins, however, this added risk premium should be more than off-set by increased competition in the wholesale market (delivering lower wholesale prices)”, and, “... this issue [removing k-factors] can only be addressed by raising the retail margin and so, in the short term at least, potentially increasing final prices. However, it is reasonable to conclude that this would only be a short term impact, as any additional risk premium is likely to be more than off-set by a more liquid and competitive wholesale market.”

32 It is possible that there could be negative contract premia. Nevertheless, contract prices should not deviate too far from expectations of pool prices and so the scope for reductions in premia should be limited whilst the current bidding principles apply. It is also recognised that there is an alternate view that retail competition could serve to drive down wholesale contract prices.

counter-arguments are that the SEM is seeing new entry from generators that do not have a retail position and also that the benefits of vertical integration will place generators at a competitive advantage to the regulated suppliers, notwithstanding low margins or the benefits to the regulated suppliers of k-factors.

In most markets, rival suppliers enter the market because they are more efficient and hence can realise the necessary margins through lower costs rather than requiring higher prices. Potential rival suppliers in the SEM argue that their costs are higher than those of the incumbent, and clearly it would be appropriate to identify and eliminate any undue subsidies to the incumbent suppliers. In the April consultation, NIAUR proposed a “shallow supply model”, whereby many functions ancillary to supply, e.g. billing, are undertaken centrally, with the intention that new entrants are not struggling to compete against economies of scale of the incumbents. However, it is also notable that many respondents argued against this model, suggesting that there is scope for achieving higher margins through higher efficiency in these areas rather than through higher prices.

Nevertheless, it is true that margins for ESBCS and NIEE are prima facie low compared with suppliers in other markets³³. However, supply businesses typically employ relatively small amounts of capital. Furthermore, according to capital asset pricing theory, investors will only demand higher rates of return for risks which are undiversifiable, i.e. risks which are correlated with the stock market as a whole; uncorrelated risks can be borne at little or no cost by holding a diverse portfolio of investments, such as holding shares in both supply and generation. Hence, to the extent that the returns to supply businesses are diversifiable, small average margins should provide an adequate return on capital. It is not necessarily appropriate to set margins merely so that, say, the probability of a loss in any one given year will be low.

Innovation

It has been suggested that higher margins could still act to the benefit of customers by promoting innovation in supply products that deliver higher value to customers. Certainly, different supply products, in the form of different forms of tariffs etc., may deliver higher value to customers. To the extent that this is true, suppliers offering such products should thus be able to command a premium for them, which may partially reflect a higher cost of providing these products but will also reflect the higher margin that a unique product may command from customers that have a demand for it. As long as 'standard' tariffs of the regulated suppliers against which innovative products are competing are provided at an

³³ In addition to the general opinion expressed by suppliers that the margins are low, the allowed margins are, for example, below the 6% identified by Offer as applying in the GB market in 1997.

economic price then it will be economic to provide such innovative products. If the standard tariffs are provided below cost then the premium that the market will bear for innovative products may be insufficient to cover the costs of such innovation. Whilst potentially the regulated suppliers could also provide innovative products, in the absence of competition there is no incentive for them to do so. Hence, higher margins for the regulated suppliers could deliver benefits to customers to the extent that the availability of more innovative products is being suppressed as a consequence of customers being supplied by the regulated supplier at below cost.

Parallels with Anti-dumping Clauses

It is true that k-factors could result in regulated tariffs being above cost in one year and below cost in the following year, and that, in principle, this would result in rival suppliers accruing customers in one year and then seeking to lose them in the following year. However, this is a similar effect to that which motivated discussions about the so-called “anti-dumping clause” in supply licences in the run up to the implementation of the SEM. Specifically, the concern was that whilst NIEE and ESBCS would be obliged to supply customers against a tariff that was constant across the year, pool prices and hence the costs of serving customers would vary. Consequently, rival suppliers would have the incentive to supply customers during the summer, when the cost of serving customers is low, whilst contractually requiring the customer to find another supplier, i.e. NIEE or ESBCS, just for the winter when pool prices were high. As a result of the non-seasonal regulated tariff, NIEE or ESBCS would be obliged to supply the customer at a loss. Although it has been included, suppliers argued in consultation responses that the clause was unnecessary, and that experience in GB had not supported the concern that suppliers would engage in such behaviour. The view seemed to be that, given the cost of acquiring a customer, suppliers were unlikely to require their customers to seek supply elsewhere, and would prefer to “ride out” periods when customers are being supplied below cost. Arguably such views are inconsistent with the view that k-factors will cause suppliers to seek to materially increase or decrease their market share in response to whether the prevailing k-factor means that regulated tariffs are respectively set above or below underlying market costs.

Recent Supply New Entry

It has been suggested that the recent new entry into the supply market in Ireland may have been prompted by the rapid fall in wholesale prices combined with a delay in the downwards revision of ESBCS tariffs. This resulted in high supply margins, creating an opportunity for new entrants. However, these high margins would only ever apply until ESBCS tariffs were revised down, whereas new entry suppliers have made promises to undercut ESBCS tariffs

over the long-term. Furthermore, if this situation were responsible for creating the opportunity for new entry, then rival suppliers should be in favour of mechanisms that resulted in mispricing of regulated suppliers' tariffs, as is the case with k-factors.

5. Proposals

5.1. Proposal 1: Minimal change

Recent developments in competition for domestic customers in Ireland suggest that it may be possible for a competitive electricity supply market to evolve even with the existing k-factor and associated arrangements in place. Other factors, such as the introduction of the SEM, divestment of generation from ESB, the prospective development of additional East-West interconnection capacity and further investments in new generation, including by independents suggest that competition in supply may continue to develop further into the future.

In Northern Ireland, as has already been noted in Section 2.8, some companies have expressed an interest in entering the domestic retail supply market and furthermore, the Utility Regulator is consulting upon a work programme which includes a number of measures other than k-factors and margins, which are intended to promote competition in this sector. These measures include, for example: a review of supply price controls to promote transparency and facilitate competition; development of a policy/strategy on data transparency intended to promote competition; and the promotion of a more liquid contract and secondary hedging market.

In the light of these, the RAs could make minimal changes whereby the existing k-factor, margin, tariff and regulatory arrangements remain substantially in place.

Even under a minimal change option, a number of limited steps should be considered in order to improve on the existing arrangements. These would include:

- ensuring that there is greater transparency and certainty associated with the application of k-factors, such as requiring ESBCS and NIEE to publish additional detail of their contract cover levels at various stages over the year; and requiring them to publish a regular update on the cumulative levels of over/under recovery of their supply businesses together with associated background information³⁴;
- to address the further uncertainty for rival suppliers as to whether k-factors are fully recovered in future periods, providing additional certainty to the processes followed by the RAs in approving any k-factor;
- it may be appropriate to undertake a legal review of the existing licence conditions intended to ensure that regulated suppliers cannot engage, or threaten to engage, in

³⁴ "Retail Tariff 2009 Information Note", CER and NIAUR, 29 May 2009. This states the RAs' intention to publish additional information on contracting levels and k-factors.

predatory pricing, in order to confirm consistency between jurisdictions and that they continue to be robust against any under-pricing and any cross-subsidisation between tariffs; and

- as described in Proposal 2, linking any over or under-recovery to customers rather than to suppliers or, alternatively, refunding a proportion of over-recoveries to all customers, e.g. through the PSO Levy.

Consultation Questions:

- (B1) What additional information should the regulated suppliers be required to make available in relation to their contract cover and forecasts of over/under recovery, and in what timescales?
- (B2) Are there any reasons why it would not be appropriate for additional information on such issues to be made available?
- (B3) What proportion of any over recovery should be returned in the following year to customers in general rather than only to customers of the regulated supplier?

5.2. Proposal 2: Asymmetric K-factors

Key criticisms of k-factors are that the regulated suppliers are made indifferent to whether tariffs charged to customers reflect the costs of serving those customers, as the out-turn discrepancies between revenues and costs can always be adjusted for in subsequent periods, and that rival suppliers do not know the extent to which the regulated suppliers are relying on k-factors to manage risk as opposed to either hedging or remaining exposed.

Currently the reliance on k-factors is costless for the regulated supplier. Any under-recovery in one year can be recouped in the subsequent period or periods together with interest charged at market rates whilst, similarly, any over-recovery is refunded with interest at the same market rates. It is true that there may be some limit on the ability to sustain k-factors in that the recovery of excessive shortfalls could increase tariffs in subsequent periods to such levels that the loss of customers would be too great. Nevertheless, within this constraint the regulated suppliers can rely on the k-factors mechanism at no cost.

The objective in Proposal 2 is thus to ensure that the k-factor mechanism is not costless. This is achieved through introducing asymmetry in the k factor mechanism so that:

- (a) any shortfall in revenues cannot be fully recovered in subsequent periods, i.e. the recovery is equal to the shortfall less a specified amount; and

- (b) any over-recovery must be more than refunded in subsequent periods, i.e. that the refund is equal to the over-recovery *plus* a specified amount.

As has been used in a number of revenue restrictions including, in Northern Ireland, the latest Phoenix supply price control, the penalty takes the form of a percentage of the amount under or over recovered, and is implemented as an adjustment to the interest rate applied to previous under or over recoveries. A tolerance may also be applied such that no penalty, or a reduced penalty, applies to under or over recoveries within a specified tolerance.

Freedom in tariff setting

Currently, in Ireland, the process for delivering tariff changes, which includes preparation and submission of the proposed changes by ESBCS to CER, consultation by the CER, and subsequent approval (or otherwise) is considered lengthy and can result in significant over or under-recoveries accumulating before tariff changes can be made. Furthermore, given that the tariff that is approved may be different from tariff that will minimise out-turn over or under recovery, the regulated supplier is exposed to a risk that is imposed by the tariff approval process. Thus, given that under or over recoveries under asymmetric k-factors would be costly, a *quid quo pro* under this approach would be that the regulated suppliers are given greater freedom in tariff setting in order that they can best manage this risk. Instead of approving specific tariffs for ESBCS, CER would set the price control formula (including asymmetric k factor terms) only. In principle, in Northern Ireland, NIEES already has this freedom in tariff setting, although Skyplex understands that NIEE has always sought NIAUR's approval of proposed tariff changes.

Margin

It is unlikely that the revenues actually recovered in any given tariff period will ever exactly equal the allowable revenues in tariff period. The penalty imposed by asymmetric k-factors on either under or over-recoveries will thus represent a new cost on the regulated suppliers. The freedom to set tariffs more freely would give the supplier the ability to adjust revenues more accurately than may currently be the case.

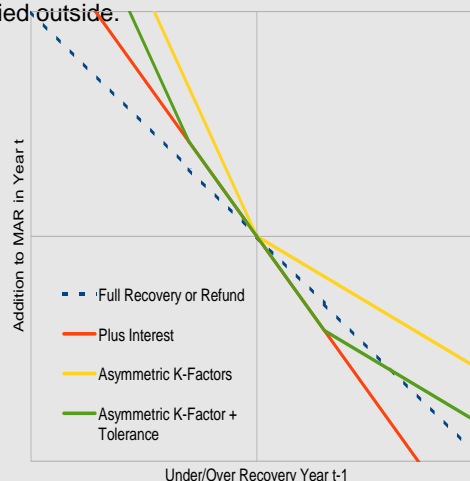
Proposal 2 – Asymmetric K Factors

Under the current supply business revenue restrictions for both ESBCS and NIEES, the supplier is permitted a Maximum Allowable Revenue (MAR), as defined in the supply licence (in the case of NIEES) or in a direction from the CER (in the case of ESBCS). The licence condition or direction applies for a number of years, typically five, and defines the MAR in each year for which the licence condition or direction applies. The MAR is typically made up of an allowance for internal supply business costs which is a fixed number indexed by RPI or CPI and other factors, plus pass-through of a number of costs. The most significant pass through cost is the “upstream” energy purchase costs and includes pool costs and bilateral contract costs.

It is likely that the pass-through costs will not be known in advance (otherwise it would be possible to make a more specific allowance for them in the MAR), neither will the quantity of electricity supplied on which charges, set ex-ante, are made. Consequently it is unlikely that supplier charges will recover exactly the MAR. K-factors allow any under (or over) recovery to be added (deducted) from the following year's MAR. Note that if there is a delay in knowing the amount of any under or over recovery, this merely adds an additional degree of uncertainty to the MAR in the following year, although the formula for ESBCS's MAR has explicit terms for estimated over or under recovery in the previous year and the discrepancy between actual and estimated under or over recoveries for the year before that.

A fair rate of interest is added to the previous under or over recoveries. Currently the same rate of interest is applied to under and over recoveries, making the supplier indifferent – cash-flow considerations aside - to revenues received in one year or another. Under Proposal 2, asymmetric k-factors can simply be that the rates of interest applied to under- and over-recoveries are different, such that an amount less than any under-recovery may be recovered in the following year, whilst an amount more than any over-recovery must be refunded in the following year. Thus, either under or over recovery is costly for the supplier, and it is no longer indifferent as to whether it recovers the correct in any given tariff year. It is possible also that a tolerance is allowed around the MAR such that a single rate of interest is applied to under or over recoveries within the tolerance and different rates applied outside.

The supplier could legitimately argue that the length of time the regulator took to approve a tariff change, or the failure of the regulator to approve a tariff at all, could impose a cost due to costly under or over recoveries. In order to be able to manage this cost, the supplier should be given freedom to set its tariffs without recourse to regulatory approval. Instead, the requirement on the supplier is that it complies with its revenue restriction, which determines its MAR.



An adjustment would be made to the allowed margin so such that the supplier would continue to be expected to recover its allowable revenues over the long term notwithstanding the existence of the asymmetric k-factors.

However, it is recognised that there is a practical limit to the frequency with which tariffs can be revised and hence a certain level of penalty is likely. The magnitude of this cost would be

a function of:

- (i) the frequency with which tariffs could be adjusted, particularly towards the end of the tariff year, and hence the accuracy with which revenues could be matched to the allowable revenues;
- (ii) the volatility of energy purchase costs, which itself be dependent on both the volatility of pool purchase costs and the degree to which pool purchase costs are unhedged; and
- (iii) the (percentage) penalty applying to discrepancies between actual and allowable revenues.

It may, thus, be necessary to permit the regulated suppliers an additional revenue allowance, expressed either as an expected business cost or as an increased margin.

Transparency of costs and tariff setting

Asymmetry in k-factors would discourage regulated suppliers from relying systematically on k-factors and hence help to reduce the discrepancies between revenues and costs in any given period. Hence rival suppliers would have greater assurance that prices were reflective of costs as between different period. However, these asymmetric k-factors *per se* would not provide any additional assurance that prices were reflective of costs as between different tariffs. In the same way that symmetric k-factors allow regulated suppliers to shift revenues between periods, under asymmetric k-factors there would, in principle, remain the ability to shift revenues between tariffs³⁵. In principle, a regulated supplier could still set individual tariffs that were priced sometimes high relative to costs and sometimes low. Hence, for any individual tariff, discrepancies between costs and prices could remain.

It would be appropriate thus that asymmetry of k-factors were accompanied by greater transparency in the tariff setting methodology. Greater detail would be needed than is currently provided in the Tariff Setting Methodology Statement as to how the regulated supplier apportions costs (both internal business costs and wholesale purchase costs) as between tariffs. The measures for transparency under Proposal 1 would also be appropriate under Proposal 2, particularly with low levels of asymmetry.

The asymmetry of k-factors could be increased over time. By reducing the degree to which under-recovery in one period could be recovered in a subsequent period, the regulatory price control mechanism would tend to a maximum revenue restraint. Similarly, increasing the penalty to the supplier of over-recovery would again make the characteristics of the price control mechanism tend towards a maximum revenue restraint, except that the remedy of

³⁵ Although this is prohibited by licence condition.

requiring charges in a subsequent period to be reduced to uneconomically low levels would be detrimental also to competitors. In order to address this, penalties for over-recovery should be refunded to customers, not suppliers, such that repayments would be made to the then current supplier of the customers on whom the past over-recovery had been charged. Given that this is likely to be difficult to implement, an alternative would be for penalties for over-recoveries to be refunded to *all* customers, i.e. the customers of *all* suppliers, say through network charges.

Consultation Questions:

- (C1) What level of asymmetry should be introduced into the k-factors and how should this vary over time?
- (C2) What level of additional margin should be afforded the regulated suppliers to give them a reasonable expectation of recovering their costs? Quantitatively, how should this vary with the level of asymmetry and the expected frequency with which tariffs can be changed?

5.3. Proposal 3: No K-Factor with Maximum Revenue Restraint determined Ex-Post

The necessity for k-factors derives from the placing of restrictions on the regulated suppliers as to the level of charges and the frequency with which they can change that level, together with the inability to predict with reasonable certainty the costs that the supplier might incur. Thus Proposal 3 abolishes k-factors but seeks to remove the uncertainty of assessing reasonable costs by making the assessment of reasonable costs ex-post.

Each regulated supplier would be subject to a maximum revenue restriction³⁶ determined ex-post from pool prices and the aggregate demand profile of the customers to which regulated tariffs applied, plus an allowance for reasonable supply costs. Whilst the regulated suppliers would be free to enter into hedging contracts, any profits or losses arising as a consequence of hedges would not be counted as part of the allowable revenues and consequently any such profits or losses would accrue directly to the relevant regulated supply business.

There would be no recovery of shortfalls in subsequent periods. As in Proposal 2, if the regulated supplier is to carry the risk of over or under recovery, it follows that it would not be reasonable also to impose on the supplier the tariffs it is required to charge.

³⁶ Breach of the maximum revenue restraint would, in the case of NIEE, be a breach of licence, and in the case of ESBCS, a breach of the direction from the CER. Whilst the consequences vary as between the two jurisdictions, it is assumed regulated suppliers will endeavour not breach the terms of their licence or a direction, as the case may be.

Hence, again, the regulated suppliers would need to be given freedom to set tariff prices as

Proposal 3 – No K Factors with Maximum Revenue Restraint

Under Proposal 3, there is no compensation in year t for under or over recovery in year t-1 (or t-2). MAR is determined after the end of the tariff year in accordance with the revenue restriction formula in the licence or direction, as the case may be. MAR is determined to be the cost of energy purchases, priced at actual pool prices and known demands, plus a margin and an allowance (as now) for internal supply business costs. No allowance is made for contracts for differences, although the supplier is free to enter into CfDs if it believes these are favourably priced or should it consider that it is worth sacrificing margin for some reason. The time at which MAR must be determined is not critical. It should be late enough such that the required information is known to acceptable accuracy but not so late that there remains uncertainty for the supplier as to whether it is deemed to have complied with its obligations.

Any under-recovery against MAR through pricing to low is lost to the supplier. Over-recovery is breach of the MAR, and hence breach of licence or the direction. However this may be avoided by an ex-post discount to the supplier's customers in their final bills for the relevant year.

As under Proposal 2, the regulated suppliers would be given freedom to set its tariffs without recourse to regulatory approval.

An adjustment would be made to the allowed margin so such that the supplier would continue to be expected to recover its allowable revenues over the long term notwithstanding the fact that it is not permitted to collect under-recoveries through k-factor adjustments.

and when they deem appropriate.

With volatile costs - note that, unlike Proposal 2, the allowable revenue would be based on purely unhedged pool purchase costs - regulated suppliers would wish to revise tariffs more frequently in order to avoid, on the one hand, foregoing profit by pricing too low and, on the other, pricing too high and breaching the maximum revenue restriction. This would mimic the problem faced by rival suppliers, who also wish to avoid, on the one hand, pricing too low and foregoing profit and, on the other, pricing too high and losing customers. However, there is a cost to revising tariffs. This goes beyond the administrative costs of informing customers and changing systems. Whilst such costs are significant, more important would likely to be the loss of goodwill of customers if tariff changes were too frequent. Hence suppliers would have to balance the desire to price accurately with the danger that suppliers that change tariff prices too frequently may lose customers to suppliers that change tariff prices less often. Under this Proposal, this equation would be faced by regulated and rival suppliers alike.

The ability to set tariffs as and when the supplier sees fit does not eliminate risk for the supplier entirely. In addition to the limit to the frequency with tariffs can reasonably be changed, for the regulated suppliers, there is the possibility that costs could change at the

end of a price control period such that there is simply no time to make a tariff adjustment. Furthermore, the risk of licence breach means that over-pricing is arguably more serious for the regulated suppliers than for rivals. Accordingly, a margin would be appropriate to both compensate for the residual risk of late cost changes and for the fact that the regulated supplier will bias its prices low in order to avoid exceeding the ex-post maximum revenue restriction. Of course, it is still possible that exceptional changes in wholesale costs at the end of a price control period would cause a regulated supplier to breach the revenue restriction. However, the RAs are required to be reasonable in their enforcement of licences and hence the exceptional nature of circumstances would be taken into account.

It is noted that Ofgem suggested initially a 6% premium for hedging energy purchase costs. This, however, was in the context of an *ex-ante* maximum revenue restriction, which promotes fixed tariffs and the hedging of purchase costs would be a sensible strategy. With the ex-post maximum revenue restriction and flexibility in tariff setting suggested here, the level of hedging would be much lower, and it is debatable as to whether a margin significantly higher than the current 1.3% would be warranted.

Many reports seem to state that the current market is under-supplied (by generators) with hedging contracts. The regulated suppliers also argue that they are required to operate their supply businesses independently from their affiliated generation businesses and hence are unable to benefit from any natural hedge in the manner that rival suppliers can. If the effect of this Proposal is that the requirement for the regulated suppliers to hedge is reduced then the imbalance between supply of and demand for hedging contracts should be improved. Likewise the exposure of the regulated suppliers due to the lack of a natural hedge and under-supply of hedging contracts is reduced.

Innovation in Supply Products

Some customers may want price certainty that cannot be provided by suppliers whose tariffs must keep in line with underlying costs. One obvious form of innovation in supply products is the fixing or capping of prices for extended guarantee periods. However, in providing such products, the supplier and customer are accepting that there is the possibility that the customer will be paying less than would have been the case under a standard variable tariff will be balanced by possibility that the customer will be paying more. Indeed, it is likely that the supplier would hedge this risk using a contract for differences which would compensate the supplier should pool prices turn out to be high but cost it extra should pool prices turn out low.

However, with a maximum revenue restriction determined ex-post from pool prices and the aggregate demand profile of the customers to which regulated tariffs applied, offering

guaranteed fixed price tariffs would be more problematic. If out-turn pool prices were lower than expected, an ex-post maximum revenue restriction based on pool prices would not permit the charging of prices higher than a standard variable tariff, notwithstanding the fact that these higher prices would be offset by losses on any hedging contracts.

A possible remedy might be to permit the regulated supplier to offer such guaranteed tariffs outside the scope of the maximum revenue restraint, providing the supplier offered also a standard variable tariff, subject to the ex-post maximum revenue restriction. Customers would then be able to choose between the standard variable tariff and the unregulated guaranteed tariff. However, given that the purpose of price controlling the dominant suppliers is to prevent the possible exploitation of customers, concerns would remain that customers, most of whom are poorly-informed relative to suppliers, could be persuaded into signing over-priced fixed term contracts by exaggerated reports of possible future price rises. A second possible remedy might be base the maximum revenue restriction on out-turn pool purchase costs plus hedging contract gains/losses. Thus, where pool prices collapsed, the maximum allowable revenue for a fixed price contract backed by a hedging contract would be based on the (low) pool purchase price plus the losses on the hedging contract, thereby allowing the corresponding above market revenues. This approach, however, would distort the incentives to contract efficiently. Given the incumbent suppliers do not, as far as Skyplex is aware, currently offer fixed term contracts to domestic customers, and commercial customers to whom such contracts may be offered are largely deregulated, such a restriction need not affect existing business. Whilst it could restrict the freedom of regulated suppliers, as compared to rival suppliers, to offer new fixed term contracts, this is perhaps no more onerous than the restriction at the introduction of the SEM, requiring ESBCS and NIEES to offer only pool price-related contracts to Medium Voltage customers.

Margin

With allowable revenues being determined with reference to totally unhedged electricity purchase costs, the regulated suppliers would be particularly exposed to unexpected changes in pool prices towards the end of the tariff year. Unexpected increases in pool purchase costs would increase the maximum allowable revenue (and possibly actual purchase costs also) which might be impossible to recover through changed tariffs in the time remaining before the end of the tariff year. More onerous would be an unexpected fall in pool prices as this could lead to a breach of the maximum revenue restraint. Whilst it should be expected that the Regulatory Authorities would be reasonable in assessing any breach of licence or direction, a regulated supplier, behaving rationally, would shade its tariffs in order to avoid a breach. Unless an allowance is made for this in setting the maximum allowable revenue, the regulated supplier would thus fail to cover its costs.

In Proposal 2, it was suggested that the refund of any over-recovery in one period in a subsequent period to customers who may have moved to a different supplier would be impractical. However, it should be possible to apply a tariff reduction ex-post³⁷ for existing customers so as to prevent or reduce an over-recovery, even if timescales prevent the tariff reduction being determined and published ex-ante.

In principle, in order to maximise actual revenues within an ex-post maximum allowable revenue, the regulated suppliers could ex-ante publish tariffs higher than would otherwise be the case, to leave scope for a reduction ex-post so as to recover the target revenue.

However, publishing higher ex-ante tariffs would risk losing customers, whilst excessive reliance on ex-post corrections would risk causing confusion amongst customers and losing goodwill. Nevertheless, the option of this mechanism would minimise the need for the regulated suppliers to shade their tariffs and hence for an allowance or additional margin.

Consultation Questions:

- (D1) Is it feasible for regulated suppliers to apply ex-post tariff corrections in order to avoid an over recovery of revenues?
- (D2) What level of additional margin should be afforded the regulated suppliers to give them a reasonable expectation of recovering their costs? How should this vary with the frequency with which tariffs can be changed?

³⁷ Clearly it would be unreasonable to apply tariff *increases* ex-post, as customers may have made consumption decisions on the basis of the published lower price.

Table - Summary of Proposals			
	Proposal 1 Minimum Change	Proposal 2 Asymmetric K-Factors	Proposal 3 Ex-Post Max Allowable Revenue (MAR)
Revenue Restriction	No change	No change other than asymmetric k-factor and additional margin.	MAR on upstream costs determined ex-post from outturn customer demand and outturn pool prices (plus T and D costs). No adjustment for contract costs.
Information provided to rival suppliers	More information to allow rival suppliers to make estimates of under/over recovery	More information to allow rival suppliers to make estimates of under/over recovery.	No information necessary
Certainty of application of k-factors	RAs provide certainty that under/over recoveries will be passed into following tariff year.	RAs provide certainty that under/over recoveries will be passed into following tariff year.	Not applicable
K-factors	No change	Cost pass-through with asymmetric k-factors. Asymmetry can be increased in successive years.	K-factors abolished.
Over-recoveries	No change	Over-recoveries refunded to all customers, not just those of NIEES/ESBCS (as per e.g. Public Service Obligations).	Any over-recovery is breach of licence (albeit breach can be avoided by customer rebate (see below). Under-recovery borne by supplier.
Tariff Setting	No change	ESBCS/NIEES subject only to revenue restriction formula in direction / licence, defining MAR in each tariff year. Freedom to revise tariffs without recourse to regulatory approval.	ESBCS/NIEES subject only to revenue restriction formula in direction / licence, defining MAR in each tariff year. Freedom to revise tariffs without recourse to regulatory approval.
Contract costs	No change	As now, economically purchased contract costs allowed in costs.	MAR set purely on basis of pool prices. Supplier can enter into contracts for differences but MAR not changed by contract losses or gains.
Margin	No change	Increased margin to provide for expected cost of k-factor penalty.	Small margin increase such that Supplier can err on under-recovery to avoid breaching MAR.
Ex-post refunds / discounts	No change	Suppliers can include ex-post discounts/refunds to prevent exceeding MAR.	Suppliers can include ex-post discounts/refunds to prevent exceeding MAR.
Other licence conditions	Review of provisions to give assurance of no predatory pricing.	Review of provisions to give assurance of no predatory pricing.	Review of provisions to give assurance of no predatory pricing.

5.4. Other Issues

Error Supplier Units

Common to both proposals are that certain risks to incumbent suppliers are reduced. In particular, the Error Supplier Units, whereby the demands of ESBCS and NIEES are determined by differencing total generation and the loss-adjusted demands of other suppliers, exposes ESBCS and NIEES to risks other than the pure price and volume risks of their customer demand. Other risks comprise:

- (i) profiling errors resulting in the mis-allocation of demand as between ESBCS and NIEES and other suppliers;
- (ii) differences between the allocation of and the proportionate share of actual transmission losses to rival suppliers;
- (iii) differences between the allocation of and the proportionate share of actual distribution losses to rival suppliers;
- (iv) errors in the allocation of unmetered supplies or other unaccounted for supplies (e.g. theft).

Global aggregation, which will enable the demands of ESBCS and NIEES to be determined on the same basis as all other suppliers will certainly improve matters. However, even in the absence of global aggregation, improvements could be considered in the allocation of errors, including:

- (a) allocation of profiling errors that does not simply assume that all differences fall on the Error Supplier Units;
- (b) using Bulk Supply Point metering to better allocate transmission losses across all suppliers;
- (c) better estimation of distribution losses and unmetered supplies; and
- (d) better allocation of errors as between ESBCS and NIEES.

If such improvements are not made in the short-term, it may be necessary instead to adjust the maximum revenue restriction of each of the regulated suppliers in order to compensate for these effects. Of course, under Proposal 2, such adjustment can be made ex-post, with better information of the adjustments necessary.

Minimum Prices

Some suppliers are concerned that the dominant suppliers are able to under-price in order to exclude rivals and maintain market share. For this strategy to work, it is only necessary that the dominant suppliers have the possibility of under-pricing – it is not necessary for them actually to do so. Accordingly, it may be appropriate that the maximum revenue restriction is also a minimum revenue restriction, i.e. a revenue requirement. Clearly a tolerance would be required in order to avoid excessively frequent tariff revisions at year end, although this does raise a concern that the dominant suppliers may be able to under-price to a degree within the tolerance band.

It is noted that Condition 14(2) of NIEE's supply licence states, "... the Licensee shall not supply or offer to supply electricity to Customers in any market in which it is dominant on

terms which are predatory”, and that, Condition 4(1) of ESBCS’s interim supply licence states, “ ..the Licensee shall not prevent, restrict or distort competition to any appreciable extent in any market relating to the generation, distribution and/or supply of electricity.”. Condition 4(2) further states, “In carrying out its Public Electricity Supply Business, the Licensee shall not abuse any dominant position it may have”.

Against the background of these licence conditions it may be appropriate to introduce additional monitoring and investigation into any under-recovery of costs by the regulated supply businesses even within the tolerance band.

Consultation Question:

- (E) Which, if any, of the proposals put forward in this document should be adopted and why? What alternative proposals should also be considered?

6. Conclusions and Recommendation

There are a number of features of the existing regulatory arrangements relating to the treatment of k-factors and associated supply margins that may operate so as to stifle the development of retail competition in Ireland and Northern Ireland.

Three proposals for reform put are forward.

Under Proposal 1 (Minimal Change), the form of regulation and tariff setting processes would remain broadly unchanged, although a number of changes would be introduced with the intention of addressing some of the issues associated with the existing k-factor regime.

These would include:

- ensuring that there is greater transparency and certainty associated with the application of k-factors, such as requiring ESBCS and NIEE to publish additional detail of their contract cover levels at various stages over the year; and requiring them to publish a regular update on the cumulative levels of over/under recovery of their supply businesses together with associated background information;
- providing additional certainty to the processes followed by the RAs in approving any k-factor;
- undertaking a legal review of the relevant existing licence conditions so as to ensure that they are robust against any under-pricing and any cross-subsidisation between tariffs; and
- linking any over or under-recovery to customers rather than to suppliers or, alternatively, refunding a proportion of over-recoveries to all customers, e.g. through the PSO Levy.

Under Proposal 2 (Asymmetric k-factors), the basic form of regulation for the regulated suppliers would remain as now, but they would be afforded additional flexibility to change tariffs within year. An asymmetry would be introduced in the k-factors such that if there were an over-recovery in one year, the regulated suppliers would be required to refund the over-recovery, plus an additional amount, in the following year(s). The changes proposed in Proposal 1 would also form part of Proposal 2.

Under Proposal 3 (No k-factor with maximum revenue restraint determined ex-post), the same additional freedom to revise tariffs would be afforded the regulated suppliers. Under this approach however, k-factors would be discontinued, and the maximum allowable revenue for the regulated suppliers set equal to their customers' demand priced at pool price. The costs of any contracts for differences would not be included in the allowable revenues, although regulated suppliers would be permitted to contract as they saw fit.

Under both Proposals 2 and 3, because additional risks would be passed on to customers through potentially more frequent within-year tariff changes, the demand for contracts for differences from the regulated suppliers would be expected to reduce. The contracts for differences market is generally reported to be undersupplied and this change could be beneficial in lessening the supply/demand imbalance.

Another feature common to Proposals 2 and 3 would be an increased supply margin set so as to ensure that maximum allowable revenues for the regulated suppliers allow them to have a reasonable expectation of covering costs. Under both Proposals 2 and 3, even with additional flexibility in tariff setting, there would still be some expectation that the regulated suppliers would not be able to set tariffs so as to exactly recover allowable revenues and consequently, under Proposal 2, there would be some expectation that the regulated supplier would have a degree of exposure to the under/over recovery charge; whereas under Proposal 3, the regulated suppliers would have to set tariffs so as to recover an expected amount below their maximum allowable revenues in order to avoid breaching their maximum allowable revenue licence condition. Hence, the purpose of the additional allowance or margin would, in each case, be to allow tariffs to be set so that there was a reasonable expectation that costs would be covered by revenues.

Whilst taking steps to abolish or reduce the effects of k-factors is likely to assist in the development of retail competition, there may be other factors which serve to limit the rate of development of such competition in the two jurisdictions. Consequently, changing the k-factor regime may not in itself be sufficient to foster more competitive arrangements. Nevertheless, subject to reviewing responses to a consultation on the proposals, there do not appear to be any material disadvantages to introducing one of the reforms proposed. The increased margins proposed under Proposals 2 and 3 are intended only to ensure that the regulated suppliers maintain an expectation that on average their revenues meet upstream costs given the change in k-factor regime and are not intended to confer an expectation of additional revenue. Hence, the overall costs to consumers should be no more than at present even if additional competition does not develop.

It is recommended that the RAs invite views upon the arguments and proposals put forward in this document, in particular upon the proposed form of regulation, tariff setting arrangements and levels of additional margin required in Proposals 2 and 3. The changes in Proposal 1 are more limited in scope but, given the relatively high levels of new entry already seen in Ireland under the existing arrangements, these may be considered sufficient at this point in time.

Appendix 1: Assessment of Proposals

Assessment factor	Proposal 1: Minimal change	Proposal 2: Asymmetric k-factors	Proposal 3: No K-Factor with Maximum Revenue Restraint determined Ex-Post
Effectiveness in promoting competition	<p>Score = Low to Medium</p> <p>The proposed changes are aimed at addressing the principal concerns raised in relation to k-factors. However this proposal relies further facilitating the current and prospective market entry seen under the existing arrangements.</p>	<p>Score = Low to Medium</p> <p>This proposal would incorporate the changes set out under proposal 3 as well as asymmetric k-factors. The degree to which some level of k-factors remained would depend on the levels of asymmetry adopted. The degree to which existing issues remained would depend on the levels of asymmetry adopted.</p>	<p>Score = Medium</p> <p>This proposal represents a more radical change to the regulatory arrangements applying to the regulated suppliers and tariff setting process and would result in the cessation of the use of k-factors which, it is hoped would help to stimulate additional market entry.</p>
Ease and cost of implementation	<p>Score = High</p> <p>There would be a need for licence changes in both jurisdictions, the need to finalise the detail of additional reporting and arrangements for redistribution of over-recoveries. The regulatory processes associated with setting k-factors would also need to be communicated to provide the additional certainty and transparency to market participants.</p>	<p>Score = Medium</p> <p>In addition to the changes in Proposal 3, there would be a need to finalise the detailed proposals on levels of asymmetry and revised margins and to make changes to implement this through a change to the licence of NIEE and through a revised Direction to ESBCS. Furthermore, it would be necessary to finalise the detail of, and to communicate, the processes for more flexible tariff setting.</p>	<p>Score = Medium</p> <p>This would require changes to the revenue restriction condition for NIEE and a revised Direction on Allowable Costs for ESBCS. It would be necessary to finalise the detail of, and to communicate, the processes for more flexible tariff setting.</p>

Assessment factor	Proposal 1: Minimal change	Proposal 2: Asymmetric k-factors	Proposal 3: No K-Factor with Maximum Revenue Restraint determined Ex-Post
Timescale required for their implementation	Score = Low to Medium These changes could be incorporated relatively easily subject to industry acceptance and agreement on licence changes.	Score = Low to Medium These changes could be incorporated relatively easily subject to industry acceptance and agreement on licence changes.	Score = Low to High These changes could be incorporated relatively easily subject to industry acceptance and agreement on licence changes. In this case however, because of the more radical nature of the changes, it is possible that there may be some opposition to the changes.
Improvements in transparency	Score = Low to Medium It is hoped that the additional reporting and certainty over application of k-factors would bring additional transparency to new entrant suppliers.	Score = Medium In addition to the enhanced reporting, the asymmetry in k-factors and additional flexibility in tariff setting would bring additional certainty that costs of supply were being recovered within the relevant year.	Score = Medium to High Under this approach, it would be clear that the costs of supplying customers in any one year would be recovered in that year.
Support for sustainability and energy efficiency policies	Score = N/A Other than enhanced supply competition assisting in the delivery of these policies, it is not considered that there would be a material impact in this area.	Score = N/A Other than enhanced supply competition assisting in the delivery of these policies, it is not considered that there would be a material impact in this area.	Score = N/A Other than enhanced supply competition assisting in the delivery of these policies, it is not considered that there would be a material impact in this area.

Assessment factor	Proposal 1: Minimal change	Proposal 2: Asymmetric k-factors	Proposal 3: No K-Factor with Maximum Revenue Restraint determined Ex-Post
Support for customer protection policies	Score = Low to Medium Again, the benefits in this area are linked to the additional retail competition that it would foster.	Score =Low to Medium The additional customer protection delivered under this proposal is linked directly to the additional competition that it may bring to the retail supply market.	Score = Medium Again, the benefits in this area are linked to the additional retail competition that it would foster.
Future Proofing	Score =Low to Medium Again, further changes would be needed under this model, depending upon how and whether retail competition develops over time. If it does not, then the changes in Proposals 1 or 2 could be considered. If it does, then it may simply be necessary to relax existing regulatory restrictions on ESBCS and NIEE once an adequately competitive situation exists.	Score = Medium It is anticipated that additional changes would be required under this model depending upon whether and how competition develops over time. The principal changes would be to discontinue the regulatory constraints on ESBCS and NIEE when an adequately competitive retail market is considered to exist.	Score = Medium It is anticipated that additional changes would be required under this model depending upon whether and how competition develops over time. The principal changes would be to discontinue the regulatory constraints on ESBCS and NIEE when an adequately competitive retail market is considered to exist.

Assessment factor	Proposal 1: Minimal change	Proposal 2: Asymmetric k-factors	Proposal 3: No K-Factor with Maximum Revenue Restraint determined Ex-Post
Unintended consequences	Score = Medium to High The changes associated with this proposal appear straightforward. Again however, it is recommended that wider views are sought on the proposals.	Score = Medium The changes associated with this proposal appear relatively straightforward and consequently, it is considered that it is unlikely that unintended consequences will arise. Wider views on the proposal should, however, be invited in order to confirm this.	Score = Low to Medium The changes under this proposal are more radical, and it is possible that unintended consequences might arise. Again wider consultation on the proposal would help to identify the full scope of the impact that it may have.

Appendix 2: URL for Footnote References

1	http://www.niaur.gov.uk/electricity
2	http://www.cer.ie/en/electricity-retail-market-decision-documents.aspx?page=2&article=962ddd4d-6602-4717-9983-cf58fdeb14be
3	http://www.allislandproject.org/en/generation.aspx?page=2&article=4ad994c7-e273-485d-a30f-c658a34e90f7
4	http://www.niaur.gov.uk/uploads/publications/23Apr08Retail_comp.pdf
5	N/A
6	http://www.cer.ie/en/electricity-retail-market-decision-documents.aspx?page=2&article=962ddd4d-6602-4717-9983-cf58fdeb14be
7	http://www.cer.ie/en/documents-by-year.aspx?year=2008
8	http://www.cer.ie/en/documents-by-year.aspx?year=2008
9	http://www.cer.ie/en/documents-by-year.aspx?year=2009
10	http://www.cer.ie/en/documents-by-year.aspx?year=2009
11	http://www.niaur.gov.uk/uploads/publications/UR_View_on_NIE_Price_Rise.pdf
12	http://www.allislandproject.org/en/generation.aspx?page=2&article=4ad994c7-e273-485d-a30f-c658a34e90f7
13	http://www.allislandproject.org/en/generation.aspx?page=2&article=4ad994c7-e273-485d-a30f-c658a34e90f7
14	http://www.allislandproject.org/en/generation.aspx?article=4ad994c7-e273-485d-a30f-c658a34e90f7
15	http://www.allislandproject.org/en/generation.aspx?article=5080277e-98cc-4aec-902a-dbc04b7d508
16	N/A
17	http://www.cer.ie/en/electricity-retail-market-current-consultations.aspx?article=17ab4428-c3b4-4d2b-86c9-bd27e655dbd6
18	http://www.niaur.gov.uk/uploads/publications/23Apr08Retail_comp.pdf
19	http://www.niaur.gov.uk/uploads/publications/20081114_-_Corporate_-_Corporate_Strategy_and_FWP_decision_paper.pdf
20	http://www.cer.ie/en/electricity-retail-market-decision-documents.aspx?article=bc42f318-37bd-4db9-892a-87e43c489c53
21	http://www.cer.ie/en/electricity-retail-market-decision-documents.aspx?article=bc42f318-37bd-4db9-892a-87e43c489c53
22	http://www.niaur.gov.uk/uploads/publications/23Apr08Retail_comp.pdf
23	http://www.niaur.gov.uk/uploads/publications/Retail_Competition_080409.pdf
24-28	N/A
29	http://www.ceer-eu.org/portal/page/portal/EER_HOME/EER_PUBLICATIONS/NATIONAL_REPORTS/National%20reporting%202008/ERGEG%E2%80%99s%202008%20Status%20Review%20of%20the%20Liberalisation%20and%20Imple
30-33	N/A
34	http://www.cer.ie/en/electricity-retail-market-decision-documents.aspx?article=ebb3f946-f8f6-4aec-ab28-f717f4905e52
35-37	N/A