



## **Single Electricity Market**

## **SMO Revenue and Tariffs**

## **Decision Paper**

**31<sup>st</sup> August 2007**

**AIP/SEM/07/455**

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## EXECUTIVE SUMMARY

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### Background

The All-Island Single Electricity Market (SEM), due to commence operation on 1<sup>st</sup> November 2007, will be administered by a Single Market Operator (SMO), formed through a contractual joint venture between EirGrid and SONI.

The SMO will need to recover from market participants its operational costs, capital costs associated with the establishment of the SEM, constraint costs associated with the balancing of the transmission systems, and constraints costs associated with generator units which are being tested.

With this in mind, on 11<sup>th</sup> June 2007 the Regulatory Authorities published a consultation paper on the form of SMO regulation, the allowed revenue for the SMO, the cost of constraints, and all associated tariffs<sup>1</sup>.

The six sets of comments that were received have been published, in conjunction with a separate paper by the Regulatory Authorities which summarises the comments and provides regulatory responses<sup>2</sup>. In general, comments were received in relation to the length of the initial tariff period, the form of regulation and performance indicators, the SMO allowed revenue, the Imperfections Charge, generator-under-test tariffs, and SMO charges and fees.

Comments which warrant a specific mention include those in relation to Accession and Participation Fees as those comments resulted in a reduction in these fees. In addition, the Regulatory Authorities have provided further information in relation to SMO reporting requirements under the TSC, as this is relevant to a number of comments that were received.

The comments have also fed into this document, the SMO Revenue and Tariffs Decision paper, which details the Regulatory Authorities' final decisions in relation to SMO revenue and tariffs for the initial tariff period. An overview of the decisions is provided below.

### Form of Regulation

For an initial tariff period from 1<sup>st</sup> November 2007 to 30<sup>th</sup> September 2008, the Regulatory Authorities have decided that the SMO will be subject to rate-of-return regulation for its costs, with the energy and capacity cash-flows being regarded as a cost pass-through<sup>3</sup>.

In view of the start-up nature of the SMO and the associated uncertainty involved in estimating its costs, all costs allowed for the initial tariff period will be subject to an *ex-post* review and determination by the Regulatory Authorities. This determination may result in an over or under-recovery of revenue being fed through to the subsequent tariff period(s).

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<sup>1</sup> SMO Revenue and Tariffs Consultation paper, AIP/SEM/246/07, [www.allislandproject.org](http://www.allislandproject.org)

<sup>2</sup> SMO Revenue and Tariffs: A summary of comments and Regulatory Authorities' responses, AIP/SEM/07/456, [www.allislandproject.org](http://www.allislandproject.org)

<sup>3</sup> For clarity, the SMO are not principals in relation to these cash flows; they are simply being administered by the SMO.

This form of SMO regulation applies to the initial tariff period only and other forms of regulation for the subsequent tariff period(s) will be considered separately.

### **SMO Allowed Revenue**

Applying the Regulatory Authorities' inflation assumptions, the total revenue sought by the SMO to cover its costs for the tariff period is €27.0m, in mid-tariff period prices. The Regulatory Authorities have carried out an analysis of the various costs categories (as detailed in Section 6) and have allowed total SMO revenue of €23.1m for this period. A comparison between the costs sought by the SMO and those allowed by the Regulatory Authorities is shown below, in mid-tariff period prices. All SMO costs for subsequent tariff periods will be subject to a separate review by the Regulatory Authorities.

<b>Mid-Tariff Period Prices</b>	<b>Sought by SMO €m</b>	<b>Allowed by RAs €m</b>
Operating costs (excl. depreciation)	13.2	10.9
Depreciation	10.9	9.6
WACC	2.9	2.6
<b>Total:</b>	27.0	23.1

### **SMO Charges**

The Regulatory Authorities have decided that the following tariffs will recover the allowed SMO revenue:

- a variable SMO charge to suppliers of €0.628 / MWh;
- a fixed SMO charge to generator units of €116 / MW installed capacity; and,
- a fixed SMO charge to supplier units of €543 / supplier unit.

In addition, there will be an accession fee of €1,500 and a participation fee of €3,500 for both supplier and generator units. It should be noted that these fees are one-off (per party for accession and per unit for participation) and, as noted by the SMO, the Regulatory Authorities have recently decided that there will be no charge to parties or Units that participate in market trials<sup>4</sup>.

### **Imperfections Charge**

The cost of constraints is €112.6m in mid-tariff period prices, resulting in an Imperfections Charge to suppliers of €3.208 / MWh.

### **Generator-Under-Test Tariffs**

A tariff (in €/MWh) that varies according to a generator unit's capacity will be used to recover the constraints costs associated with the testing of a generator unit. These tariffs are detailed in Section 8.3.

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<sup>4</sup> Decision on the Treatment of Accession & Participation Fees during the pre Go-Live period (AIP/SEM/312/07)

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## 1. INTRODUCTION

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### 1.1 THE SINGLE ELECTRICITY MARKET

The Northern Ireland and Republic of Ireland governments, the Northern Ireland Authority for Utility Regulation and the Commission for Energy Regulation (together “the Regulatory Authorities”), and industry are currently working together to create an All-Island Energy Market, as outlined in the All-Island energy market development framework paper<sup>5</sup>.

The first step in this process, the implementation of an All-Island wholesale electricity market, the Single Electricity Market (SEM), is currently underway and the market will Go-Live on 1<sup>st</sup> November 2007.

The design of the SEM was set out by the Regulatory Authorities in June 2005<sup>7</sup>. It will be a centralised or gross mandatory pool market, with electricity being bought and sold through the pool under a market clearing mechanism. Generators will receive the System Marginal Price (SMP) for their scheduled dispatch quantities, capacity payments for their actual availability, and constraint payments for changes in the market schedule due to system constraints. Suppliers purchasing energy from the pool will pay the SMP for each trading period, capacity costs, and system charges. The SEM market rules are set out in the Trading and Settlement Code (the TSC<sup>6</sup>).

### 1.2 THE SINGLE MARKET OPERATOR

The development of the SEM led to a design which required that a Single Market Operator (SMO) be in place to administer the market<sup>7</sup>. With this in mind the Regulatory Authorities approved the plans of EirGrid and SONI, the transmission system operators for the Republic of Ireland and Northern Ireland respectively, to establish a SMO on a contractual Joint Venture basis<sup>8</sup>.

The SMO's position in the market is explicitly defined in the TSC, which sets out the rules, procedures, terms and conditions which all parties including the SMO must adhere to in order to participate in the SEM. The SMO will, among other things, administer daily generator bid/offer capture, schedule the market and determine the marginal price. It will produce daily, weekly and monthly settlement and invoicing statements for market participants in relation to electricity, constraints, capacity payments and SMO charges, and execute weekly and monthly clearing services for these charges. The SMO will manage currency risk and market participants' credit requirements. Furthermore, it will be involved in the resolution of queries and disputes, market change, and the provision of market information.

### 1.3 SINGLE MARKET OPERATOR REVENUE AND CHARGES

The SMO will incur operational costs while carrying out the above functions, and will recover these costs, as well as the costs of establishing the SEM, through SMO tariffs, which will be levied on market participants.

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<sup>5</sup> All-Island Energy Market: A Development Framework, Nov 2004, [www.allislandproject.org](http://www.allislandproject.org)

<sup>6</sup> [www.allislandproject.org](http://www.allislandproject.org)

<sup>7</sup> SEM: High level decision paper, [www.allislandproject.org](http://www.allislandproject.org)

<sup>8</sup> Single Market Operator Decision, [www.allislandproject.org](http://www.allislandproject.org)

To facilitate this recovery of costs the TSC requires the SMO to submit proposals on its allowed revenue, and the charges required to recover this revenue, to the Regulatory Authorities. While developing its submission, the SMO carried out a public consultation process during the second half of 2006 to ensure that there would be some consensus on the methodology used to create the submission<sup>9</sup>. The SMO's consultation and response papers, as well as comments received from the public, are available on the SMO website, and were also reviewed by the Regulatory Authorities.

Subsequently, on 27<sup>th</sup> February 2007 the SMO submitted a paper to the Regulatory Authorities detailing its revenue requirements and the associated tariffs (this paper was published by the Regulatory Authorities in conjunction with the SMO revenue and tariffs consultation paper (AIP/SEM/246/07)<sup>1</sup> for information purposes<sup>10</sup>). It should be noted that the SMO's submission also covered costs and charges associated with constraints, makewhole payments and uninstructed imbalances<sup>11</sup>.

#### **1.4 REGULATORY APPROVAL PROCESS**

The Regulatory Authorities subsequently carried out a review/analysis of the SMO's submission and of associated support information. On the basis of that review, on 11<sup>th</sup> June 2007 the Regulatory Authorities published a consultation paper on SMO revenue and tariffs<sup>1</sup>, the objective of which was to solicit comments from members of the public on a range of proposals associated with SMO allowed revenue. These proposals covered:

- The appropriate length of the initial tariff period,
- The form of regulation,
- The allowable revenue for the SMO,
- The recovery of constraints costs, and,
- The form and magnitude of each charge through which the revenue will be recovered.

Six sets of comments were received and these have been published in full by the Regulatory Authorities. In addition, the Regulatory Authorities have also published a separate paper which summarises those comments and provides regulatory responses<sup>2</sup>.

#### **1.5 DECISION PAPER**

The Regulatory Authorities are now publishing this decision paper in relation to SMO revenue and tariffs. This is based on the associated SMO revenue and tariffs consultation paper (AIP/SEM/246/07) and takes comments received during the consultation process into account. These comments and regulatory responses are summarised in a separate paper that was published by the Regulatory Authorities<sup>2</sup>.

This SMO revenue and tariffs decision paper outlines the Regulatory Authorities decisions related to the proposals set out in the consultation paper.

These decisions are detailed in the following sections, and as documented within the paper, these decisions apply to the initial tariff period only and arrangements for subsequent tariff period(s) will be considered separately.

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<sup>9</sup> SEM Tariff Charges Methodology, Aug 2006, [www.allislandmarket.com](http://www.allislandmarket.com)

<sup>10</sup> SMO revenue submission, [www.allislandproject.org](http://www.allislandproject.org)

<sup>11</sup> These are defined in the TSC.

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## 2. STRUCTURE OF THE PAPER

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This paper outlines the Regulatory Authorities' decisions on issues related to SMO allowed revenue. It is structured as follows:

- Section 1 (the introduction) outlines the background to the SEM, the role of the SMO within the market, and the process behind the approval of the SMO allowed revenue. The objectives of this paper are also detailed.
- Section 3 outlines the regulatory principles that were adhered to during the decision making process.
- Section 4 covers the length of the initial tariff period.
- Section 5 outlines the form of regulation for the SMO.
- Section 6 covers SMO allowed revenue, including operating costs, depreciation, and the Weighted Average Cost of Capital (WACC).
- Section 7 outlines decisions made in relation to the Imperfections Charge, which covers the net cost of constraints, makewhole payments, and uninstructed imbalances.
- Section 8 covers generator-under-test tariffs.
- Section 9 covers the form and magnitude of SMO and market related charges.



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### 3. REGULATORY PRINCIPLES

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This section outlines the principles that were adhered to while evaluating the regulatory decisions contained in this paper.

As a starting point it can be stated that best practice regulation of the so-called natural monopolies, can be characterised as seeking to ensure that the relevant monopoly activity is; sustainable, stable, transparent, predictable and cost-effective. The Regulators' task essentially consists of creating a framework within which, in return for providing monopoly services to an acceptable quality, the regulated business receives a reasonable assurance of a revenue stream in future years that will cover its costs, including an appropriate rate-of-return on investments made and the recovery of capital invested.

The regulatory framework therefore needs to be **sustainable**. The regulated business must be able to finance its operations, and any necessary capital expenditure, so that it can continue to operate in the future to the ultimate benefit of customers. Sustainability also entails avoiding any barriers to market entry or market exit, and avoiding any inconsistency in the treatment of any participant, or class of participant.

To be **stable**, the framework must also satisfy all the parties affected by it - customers, the Governments and Regulatory Authorities (acting on behalf of customers), the SMO itself, and independent generators and suppliers. Frequent complaints and disputes will lead to the regime being continually adjusted by the Regulators. This creates uncertainty in the industry and discourages investment and long-term planning. The stability of the regime is particularly important to privately owned businesses, if investors are to be encouraged to make long-term investments in the sector.

The rules that govern the regulatory regime should also be **unambiguous** in their interpretation and **predictable** in the way they are applied. In particular, it should be clear how tariffs relate to costs. Regulations which are unclear will cause disputes, which create instability in the regulatory regime, add to the costs of regulation and are likely to raise the cost of capital, ultimately to the detriment of customers in the form of higher prices. An important corollary is that there should be "no surprises" for participants. This does not imply that the Regulators cannot change their view on issues, or revise the regulatory framework as necessary and in response to unforeseen developments, but it does mean that the Regulators will endeavour to:

- avoid changes which apply retroactively, with adverse consequences for the regulated businesses,
- take decisions following a due process of consultation and consideration of the relevant issues, and,
- publish a full account of the reasoning behind those decisions.

The **costs of monitoring and enforcing compliance** need to be low relative to the benefits of regulation. Ideally, the regulatory framework will involve minimum costs for data collection and analysis. The procedure for processing disputes should also be simple, although the more transparent and stable the regulatory system, the less often disputes should arise.

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## **4. LENGTH OF THE INITIAL CONTROL**

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This section outlines the Regulatory Authorities' decision on the appropriate length of the initial SMO tariff period.

### **4.1 GENERAL**

For the initial period of SEM operation the estimation of the SMO's operating costs and market related costs is particularly difficult. Costs are being estimated on an All-Island basis for the first time, with very little comparative information available.

Therefore, in order to reduce the risk of a large over or under-recovery of revenue during the tariff period, leading to the need for a mid-tariff period change<sup>12</sup>, or the requirement for a large allowance to be made in the subsequent tariff period, it is preferable to set the initial tariff period over a short (for example, one year) rather than long (for example, five year) timeframe. The implications of another consultation process, on PES tariff alignment, were also considered as part of this decision making process.

### **4.2 IMPLICATIONS OF PES ALIGNMENT DECISION**

A consultation process has already been carried out in relation to the alignment of PES tariff periods in Northern Ireland and the Republic of Ireland<sup>13</sup>. As a result it was decided that the PES tariffs would be aligned, such that there would be a 12 month tariff starting on 1<sup>st</sup> October in both jurisdictions. This means that there will be an initial 11 month PES tariff period from 1<sup>st</sup> November 2007 (the go-live date for the SEM) to 30<sup>th</sup> September 2008, with a 12 month PES tariff period starting on 1<sup>st</sup> October thereafter.

The PES alignment consultation process also highlighted the advantages associated with aligning the PES tariff periods and their underlying cost components. Specifically, not aligning the tariff periods would increase the risk of PES tariff revenue not recovering costs. This in turn would lead to the application of k-factors (that is, an allowance in the following tariff period) and cause significant distortions in retail prices from period to period. This would negatively impact the market by causing frequent switching of customers between PES and independent suppliers.

That consultation process recommended that the tariff periods for underlying cost components, including the SMO tariff period, also be aligned with the PES tariff period.

### **4.3 DECISION**

The Regulatory Authorities have decided that the initial SMO tariff period will cover:

1<sup>st</sup> November 2007 to 30<sup>th</sup> September 2008.

This is in agreement with the recommendations of the PES tariff alignment consultation process, the regulatory principles outlined in Section 3, and the benefits of a relatively short initial tariff period as outlined in Section 4.1. This decision has

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<sup>12</sup> Respondents to the consultation paper highlighted participants' aversion to a mid-tariff-period change

<sup>13</sup> PES retail tariff alignment in the SEM Decision paper, [www.allislandproject.org](http://www.allislandproject.org)

not deviated from the proposal outlined in the consultation paper and all related comments were in favour of this option.

One respondent requested that the Regulatory Authorities specifically refer to the regulatory position regarding a within-tariff-period tariff adjustment. The Regulatory Authorities are aware of the instability that such an adjustment would cause in the market and to suppliers in particular, and this is not considered desirable in the normal course of events. While the Regulatory Authorities cannot provide a cast-iron guarantee on this matter given the new nature of this market, the Regulatory Authorities have no reason to anticipate that a within-tariff-period adjustment will be required and will work to ensure that this is the case. One of the reasons for applying a relatively short timeframe for the initial SMO tariff period is to reduce any risk in this regard.

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## **5. FORM OF REGULATION**

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This section outlines the Regulatory Authorities' decisions on the appropriate form of regulation for the SMO. Section 5.1 outlines various regulatory approaches that could have been used, either as standalone methods or in conjunction with one another; Section 5.2 details cost of capital considerations that were taken into account; Section 5.3 evaluates the different forms of regulation; and Section 5.4 outlines the regulatory decisions.

### **5.1 REGULATORY OPTIONS**

Rate-of-return and permanent price caps lie at the two extremes of regulatory approaches. However, between these there are a range of regulatory approaches that combine incentives for efficiency with some form of profit control. A number of these approaches, including rate-of-return and price caps, are explained in Sections 5.1.1 to 5.1.5.

#### **5.1.1 Rate-of-return regulation**

Under rate-of-return regulation, the regulated business is allowed to charge tariffs that will cover its operating costs and give it a reasonable rate-of-return on the value of the capital employed in the business. When tariffs move out of line with costs, the business makes an application for a new set of tariffs. Rate-of-return regulation thus eliminates all prospects of excess profit and has the advantage of keeping the cost of capital low. However, it does not give the regulated business a strong incentive to reduce costs, and under certain conditions it can encourage unnecessary and inefficient investment, since the business is generally assured of being able to recover the costs of that investment and earn a given rate-of-return on the increased asset base. This risk can be mitigated, to some extent, by extensive regulatory scrutiny of the regulated business.

Rate-of-return regulation is a viable option for the regulation of some aspects of the SMO function. It is discussed further in Section 5.3, where the different options are evaluated.

#### **5.1.2 Price caps**

This was the starting point of incentive based regulation. Price caps involve the setting of tariffs for a defined period, within which all efficiency gains are retained by the business. They mimic the desirable incentives for cost minimisation found in competitive markets, where prices are not generally set in relation to the costs of individual producers, but by reference to conditions in the market as a whole. The regulated business has a strong incentive to reduce costs, but the regulator must define comprehensive output standards (to remove incentives to reduce quality), and may have to tolerate higher-than-expected profits for a time.

The benefits of price cap regulation arise only over a reasonable investment timescale, over which efficiencies can be achieved. Initially rate-of-return and price cap regulation are effectively the same, in that a tariff must be set based on required cost recovery and reasonable profit.

### **5.1.3 Yardstick regulation**

Yardstick regulation, or competition by comparison, is suitable for the regulation of utilities with regional monopolies. It seeks to provide an incentive for utilities to strive for lower costs by inducing them to compete with one another for cost reductions.

However, the relatively unique nature of the SMO's business combined with its start-up nature means that precise benchmarked cost comparisons would not be suitable as a standalone option at this stage. The use of benchmarked cost comparisons will be separately considered for the subsequent tariff period(s) as knowledge of the resources required to operate an efficient SMO develops.

### **5.1.4 Key performance indicators**

The SMO could be incentivised by assessing its performance against key performance indicators and providing financial rewards accordingly. Such performance indicators have been proposed by the SMO and are published for information purposes<sup>14</sup>.

Numerous comments were received in relation to the performance metrics and these are responded to in detail in the accompanying paper. One respondent felt that the metrics should be developed for this initial tariff period in order to provide a base-line for future periods; the SMO was in favour of considering the use of these metrics to provide financial incentives in future tariff periods.

Given the fact that the SMO is a new business, it will not be incentivised at this time through the use of key performance indicators though, as above, this issue will be re-considered for the subsequent tariff period(s). It should also be noted that the SMO will be subject to reporting requirements under the TSC and these reports should provide historical information against which the performance of the SMO can be assessed in subsequent tariff periods.

### **5.1.5 Cost-pass-through**

A cost-pass-through approach involves estimating the costs of providing the regulated function and establishing tariffs that recover those costs. This approach is suitable where the service being regulated is provided on a not-for-profit basis, and it is often used with an end of year reconciliation mechanism to allow for differences between forecast and actual costs.

Some elements of the SMO revenue will be managed on a not-for-profit basis, that is, providing a service where the cost is being passed through from one service provider to the end customer, and these elements are suited to cost-pass-through regulation.

One respondent commented that the description of energy and capacity payments as cost-pass-through is incorrect and inconsistent with the TSC. It is acknowledged that all cash-flows, aside from SMO costs, are market-related and that the SMO administers these without being a principal, that is, a party to the transaction. Describing energy and capacity payments as 'cost-pass-through' is not meant to imply that the SMO is a principal, although such a description has no direct material impact. Rather it is meant to imply that the SMO is simply the administrative agent for these market-related costs over which it has no control. For clarity, and in order

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<sup>14</sup> SMO performance metrics, [www.allislandproject.org](http://www.allislandproject.org)

to ensure that the legal status of the SMO is clear, these references to ‘cost-pass-through’ refer to charges that are handled, or administered, by the SMO.

## **5.2 COST OF CAPITAL CONSIDERATIONS**

Section 3 states that Regulatory Authority decisions must be sustainable and stable. To ensure the sustainability and stability of the SMO, it must be allowed an appropriate cost of capital. However, it has been shown that the appropriate cost of capital for a given function may vary according to the chosen form of regulation.

Section 5.2.1 outlines the costs of capital considerations associated with choosing between price cap and rate-of-return regulation.

### **5.2.1 Rate-of-return versus price cap**

One of the main considerations when choosing between rate-of-return and price cap regulation is the cost of capital associated with each. Analysis confirms that the risks associated with price cap regulation are perceived to be higher than those for a rate-of-return regulated body, leading to a higher cost of capital for a price cap regulated body relative to one with a rate-of-return approach. Given that both approaches are effectively similar over the tariff period of 11 months, and given that the benefit of the price cap approach in relation to avoiding the need for extensive transparency is not relevant for the SMO function, a rate-of-return approach would be more beneficial in this case.

## **5.3 EVALUATION OF THE APPROPRIATE FORMS OF REGULATION**

In this section the SMO’s functions are separated into a number of distinct areas, and the Regulatory Authorities decision on the appropriate form of regulation is detailed for each.

### **5.3.1 Energy and Capacity payments**

As detailed in the TSC, the SMO is responsible for charging suppliers for electricity purchased from the gross mandatory pool, and paying generators for electricity sold into the pool. The charge for this electricity is set by market clearing mechanism and so is not specified *ex-ante*. This is effectively a non-profit cash-stream, and therefore there is no need for any form of either price cap or rate-of-return regulation.

Therefore, as per the consultation paper, this cash-flow will therefore be subject to cost-pass-through<sup>15</sup> regulation.

The capacity payments revenue flow will also be subject to cost-pass-through regulation, as per the consultation paper.

### **5.3.2 Imperfections charge**

The TSC requires that the SMO establishes a charge (the Imperfections Charge), to be levied on suppliers on a per MWh basis, to allow the recovery of the cost of constraints, net of uninstructed imbalance and make-whole payments<sup>16</sup>. The SMO

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<sup>15</sup> As per Section 5.1.5, the SMO is not a party to these transactions; it simply performs an administrative role

<sup>16</sup> These terms are defined in the TSC, [www.allislandproject.org](http://www.allislandproject.org)

will be responsible for the recovery of the Imperfections Charge from suppliers and the payment of the associated costs. This is effectively a non-profit cash-stream, in which case there is no concept of price cap or rate-of-return regulation. Cost-pass-through<sup>15</sup> is therefore the appropriate form of regulation for this function.

It is also recognised that there may be an under or over-recovery associated with these costs within the tariff period. Any such mis-match will be covered by the SMO working capital provisions and reconciled in a future tariff period. This is discussed further below.

### **5.3.3 SMO operation**

As per the TSC, SMO Charges, accession and participation fees will be recovered by the SMO and will cover the costs of establishing the SEM and the SMO's allowed operating costs. Details on each charge/fee is given in Section 9.

The nature of this SMO function means that a regulatory mechanism that includes some incentive to control costs, such as rate-of-return or price cap, is more appropriate than cost-pass-through.

As described in Section 5.1.1, rate-of-return regulation meets the basic objectives of controlling costs, while ensuring that all costs are recovered. On the other hand, price cap regulation, as described in Section 5.1.2, involves a less intrusive regulatory assessment, and establishes stronger incentives over a regulatory review period.

However, price cap regulation may also increase the cost of capital for the regulated function, as shown in Section 5.2.1. Therefore, a price cap approach is typically used where the function is complex and not conducive to comprehensive cost analysis by a regulator. This is not true in this case, as the SMO obligations are set out in the TSC and it has a reporting requirement that is set out in its licence and the TSC. Furthermore, many of the cost drivers are external to the SMO and may not be amenable to incentives being placed on the SMO.

For these reasons, and the fact that the initial tariff period will span a period of only 11 months, the advantages usually provided by price cap regulation would not be evident. In essence, it would have the same result as a rate-of-return approach, but with a potentially higher cost of capital.

Therefore, as per the proposal in the consultation paper, the Regulatory Authorities' have decided that a rate-of-return approach will be used for this element of the SMO's role. Two respondents commented that they were in favour of this approach.

The SMO had provided a set of performance criteria to the Regulatory Authorities against which its performance could be incentivised. However, given that this will be the first year of operation for the organisation, the Regulatory Authorities will not incentivise the SMO using performance criteria during the initial tariff period. The use of performance incentives will be separately considered for the subsequent tariff period(s) as experience and knowledge of the day-to-day operation of the SMO grows.

One respondent commented that putting performance metrics in place for the initial tariff period would allow a base-line to be formed for future tariff periods. While the Regulatory Authorities will not be implementing financial incentives related to performance metrics for the initial tariff period, it is agreed that a base-line would be

desirable when considering their use for future tariff periods. It is the Regulatory Authorities' view that the information provided by the SMO as part of its reporting requirements under the TSC should allow the production of such a base-line for use as part of possible future incentive schemes. The details of the TSC related reporting requirements will be consulted upon by the Regulatory Authorities.

Other comments are detailed in the regulatory response paper.

#### **5.4 DECISION ON FORM OF REGULATION**

The Regulatory Authorities' decision is that the SMO will be subject to rate-of-return regulation (that is, it will receive a rate-of-return on its asset base), with the energy and capacity cash-flows being regarded as a cost-pass-through<sup>15</sup>.

In view of the start-up nature of the SMO and associated uncertainty involved in estimating its costs, it should be noted that all SMO costs which are allowed for the initial tariff period, including capital-related costs, will be subject to an *ex-post* review and determination by the Regulatory Authorities. This determination of efficiently incurred costs may result in an over or under-recovery of revenue being fed through to the subsequent tariff period(s). This also applies to revenue covered under the Imperfections Charge.

Furthermore, this decision on the form of regulation applies for the initial tariff period only (that is, from 1<sup>st</sup> November 2007 to 30<sup>th</sup> September 2008). Other forms of SMO regulation, including the use of a price cap, performance incentives and cost benchmarking, will be considered separately for the subsequent tariff period(s) when there is more certainty on SMO operation and costs.



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## 6. DETERMINATION OF ALLOWABLE REVENUE

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This section outlines the Regulatory Authorities' decisions in relation to SMO allowed revenue, and covers the operating costs of the SMO during the initial 11 month tariff period, the capital costs involved with the establishment of the market, and the Weighted Average Cost of Capital (WACC) to be provided as remuneration for the parent companies. The costs/revenues are shown in detail from Section 6.1 below and are summarised in Section 6.6.

As referred to in Section 5, in view of the start-up nature of the SMO and the associated uncertainty involved in estimating its costs, all SMO costs allowed for the initial tariff period will be subject to an *ex-post* review and determination by the Regulatory Authorities. This determination of efficiently incurred costs may result in an over or under-recovery of revenue being fed through to the subsequent tariff period(s).

In addition, all allowed costs/revenues apply to the initial tariff period only and will be separately reviewed for the subsequent tariff period(s) as the SMO function beds down and its costs become more certain.

### 6.1 OPERATING COSTS

Operating expenditure covers all costs incurred by the SMO from 1<sup>st</sup> November 2007, or 'Go-Live', to 30<sup>th</sup> September 2007. The figures allowed by the Regulatory Authorities are outlined in the below table and detailed in the following sections:

	Sought by SMO €m	Allowed by RAs €m
Payroll	5.4	4.0
Professional fees	1.2	0.9
Facilities	1.2	1.1
IT & communications	2.4	2.4
Research & development	0.3	0.0
General & administrative	0.5	0.4
Depreciation	10.5 <sup>17</sup>	9.3
Energy imbalances	1.8	1.8
<b>Total:</b>	<b>23.3<sup>17</sup></b>	<b>19.9</b>

**Table 1:** Operational costs sought by the SMO and allowed by the RAs (mid-2007 terms)

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<sup>17</sup> This figure has increased relative to the value included in the consultation paper. This is related to a submission by the SMO seeking the approval for Interest-During-Construction (IDC). An amount of €1.3m had originally been sought by the SMO for IDC; this fed into the asset base, depreciation, WACC, *et cetera* and was included within the consultation paper. However, an updated submission seeking €4.2m was made by the SMO and this did not feed into the consultation paper as there was insufficient time for an analysis to be carried out. However, the Regulatory Authorities have made an allowance for this submission within this decision paper. The actual allowance approved by the Regulatory Authorities (€2.7m in mid-2007 terms) is detailed in Section 6.2.2.

### 6.1.1 Payroll

This covers all management, specialist and support staff within the SMO function including:

- Market Operations,
- Development,
- IT,
- Corporate support functions, and,
- Communications.

The above breakdown is detailed further in the SMO revenue submission, where a total figure of €5.4m, covering the cost of 57 staff at an average yearly staff cost of €0.103m, was included for the first 11 month tariff period.

After an analysis of the information provided by the SMO, the Regulatory Authorities arrived at a figure of €3.5m for payroll for the initial tariff period, based on 48 staff with an average yearly staff cost of €0.080m per staff member. The average yearly staff cost of €0.080m per staff member includes allowances for PRSI contributions in the Republic of Ireland, National Insurance contributions in Northern Ireland and pension contributions in addition to salaries and bonuses. This figure also includes an allowance made for the managerial structure of the SMO, and the seven-day-a-week and on-call nature of some positions.

However, it is acknowledged that there are some quite unique features to the forthcoming and new SMO function which make it difficult at this stage to gauge authoritatively what level of payroll resources will be required by an efficient SMO on an ongoing basis. It is also important for the operation of the SEM that the SMO has sufficient payroll resources to discharge its functions effectively. Taking these considerations into account, the Regulatory Authorities have decided to allow €3.5m for payroll with an additional contingency of €0.5m.

This allowance (totaling €4.0m) is made on the assumption that the SMO will recruit staff on an efficient basis taking into account the relative cost of employment in each labour market. With this in mind, a review and determination of the allowed payroll (as with all SMO costs) will be undertaken by the Regulatory Authorities *ex-post* and any resulting under or over-recovery will be fed through to the subsequent tariff period(s).

In addition, this decision does not infer that any particular assumed staff number and associated payroll cost will necessarily be allowed on a continual basis - that is, after the eleven months tariff period - as this will be subject to a separate review by the Regulatory Authorities as the SMO function beds down.

Comments received from respondents in relation to payroll are detailed in the accompanying regulatory response paper<sup>2</sup>.

### 6.1.2 Professional fees

After an analysis of the SMO revenue submission, a figure of €0.897m (€0.3m less than the €1.2m initially sought by the SMO) has been allowed by the Regulatory Authorities for professional fees. The figures included in the SMO revenue submission and those allowed by the Regulatory Authorities are outlined in the below table, followed by a description of each cost:

	<b>Sought €m</b>	<b>Allowed €m</b>
Regulatory legal	0.250	0.250
Disputes/Modifications committees	0.335	0.060
Consultancy services/Contractors	0.225 <sup>18</sup>	0.197
Market auditor	0.260	0.260
Other professional fees	0.130	0.130
<b>Total:</b>	<b>1.200</b>	<b>0.897</b>

**Table 2:** Professional fees sought by the SMO and allowed by the RAs (mid-2007 terms)

Regulatory legal covers legal advice provided to the SMO on regulatory issues arising from SMO licences and the TSC. This varies from providing legal input regarding the implications of changes to the TSC to providing interpretation of SMO responsibilities under the TSC and licences. The Regulatory Authorities have decided that €0.250m will be allowed, as per the SMO's submission and the regulatory consultation paper.

The Regulatory Authorities have allowed a provision of €0.060m to permit the SMO to carry out its responsibilities in relation to the modification committee as detailed in the relevant Agreed Procedure<sup>19</sup>. The Regulatory Authorities do not make any allowance for the Disputes Resolution Board (€0.275m had been sought by the SMO), but an allowance may be made for these costs *ex-post*, that is, in the subsequent tariff period, subject to the usual regulatory scrutiny to ensure that they have been efficiently and reasonably incurred.

In order to ensure business continuity in the event of staff turnover, the provision of advice in relation to market reports and financial disputes, and an independent IT audit, a figure of €0.225m had been included in the SMO revenue submission for consultancy/contractor services. Following analysis by the Regulatory Authorities this figure was revised downwards by the SMO to €0.197m; the Regulatory Authorities have decided that this revised figure will be allowed.

Under the TSC, the Regulatory Authorities are expected to appoint a Market Auditor every 3 years, who will conduct an audit of the code and its operations, procedures and processes at least once every calendar year. It is expected that this will only happen once over the course of this revenue submission period. The TSC provides for the SMO to recover the costs of the Market Auditor and a provision of €0.260m is included in the revenue submission. This is consistent with previous TSO requirements, and the Regulatory Authorities have decided that the full €0.260m will be allowed.

Other professional fees cover requirements for corporate audit, recruitment and communications expenditure. As per the SMO's submission the Regulatory Authorities have decided that a figure of €0.130m will be allowed.

### **6.1.3 Facilities**

The SMO will be co-located on property provided by both parents for the period covered by this revenue submission. Facilities costs cover all shared space and

<sup>18</sup> The SMO initially proposed €0.225m; this was later revised by the SMO to €0.197m.

<sup>19</sup> [www.allislandmarket.com](http://www.allislandmarket.com)

include cleaning services, maintenance, car parking, security, mail service, copy bureau, switch board and catering and canteen services as well as the more obvious rent, insurance and utilities. The SMO included a figure of €1.247m in the revenue submission to cover this cost. The Regulatory Authorities have scaled the figure of €1.247m to allow for the reduction in payroll, that is, the reduction from 57 to 48 staff as detailed in Section 6.1.1, resulting in the Regulatory Authorities deciding that a figure of €1.050m will be allowed to cover this cost.

#### **6.1.4 IT & telecommunications**

The SMO have included a figure of €2.377m in its submission for the support and maintenance of the SMO's IT and telecommunications infrastructure, covering extended support agreements and operational support and maintenance agreements for the market software. This will ensure the SMO can build internal expertise on the software without the market or participant's service being affected. This figure also covers the cost of links between the two SMO facilities and the market software providers.

The Regulatory Authorities have decided that the full €2.377m will be allowed.

#### **6.1.5 Research and development**

The SMO included a figure of €0.250m in its revenue submission to cover research and development. However, as this role is not required under the TSC, and given that this tariff covers the first 11 months of the SMO operation, the Regulatory Authorities did not propose to allow any revenue for this area.

Within its response to the SMO revenue and tariffs consultation paper, the SMO stated that it found the Regulatory Authorities' proposal in relation to R&D disappointing, and highlighted that this activity is not explicitly ruled out under any of the legislation, licences or the TSC. A related comment, which is covered in Section 2.3.2 of the regulatory response paper, states that the SMO should not act outside of its role as defined within the TSC, and states that if the SMO feel that additional activities are required then it should bring forward the relevant TSC modification proposals.

The Regulatory Authorities accept the SMO's assertion that a R&D activity is not explicitly ruled out by the relevant documentation. However, if it is not specifically required under the TSC, or is not required in order to allow the SMO to fulfil its obligations more efficiently, then market participants should not be required to fund the activity through the SMO tariffs. Hence the Regulatory Authorities have not allowed any revenue for this area during the initial tariff period.

#### **6.1.6 General and administrative**

The SMO included a figure of €0.497m in its submission to cover general and administrative costs, as per the below table. Some aspects of this cost have been scaled by the Regulatory Authorities to allow for the payroll decisions as detailed in Section 6.1.1, that is, the reduction from 57 to 48 staff, and a reduced provision of €0.443m has been allowed.

	<b>Sought €m</b>	<b>Proposed €m</b>
Travel and subsistence	0.247	0.208
Staff training	0.095	0.080
Bank charges	0.115	0.115
Office supplies	0.040	0.040
<b>Total:</b>	<b>0.497</b>	<b>0.443</b>

**Table 3:** General & administrative figures sought by SMO and allowed by the RAs (mid-2007 terms)

### 6.1.7 Depreciation

A figure of €10.0m had been included in the SMO revenue submission for depreciation during the initial 11 month tariff period. This was later revised by the SMO to €10.5m as detailed in Section 6.2.2

The Regulatory Authorities have decided to allow a provision of €9.3m. The difference between this allowed amount and the revised figure of €10.5m which was sought by the SMO was due to revisions to the total allowed capital expenditure as outlined in Section 6.2.

### 6.1.8 Energy imbalances

It had been assumed that the SMO would simply administer payments to generators and receipts from suppliers for energy, and that these monies would always equal. However, it is now recognised that this is not the case as there will be an energy imbalance in the SEM. This energy imbalance means that money received from suppliers will not equal the money paid out to generators and the SMO is now required to finance any differences, ensuring that generators are paid for their loss adjusted market schedule quantities.

The imbalance arises from the implementation of loss factors in SEM, which it is expected will lead to differences between losses arising from meter quantities and actual market schedule quantities. Generators will be paid SMP times the loss adjusted market schedule quantities. However, payments from suppliers will be based on loss adjusted meter quantities. Losses will be locational in SEM and therefore these payments will not always be equal<sup>20</sup>.

The SMO have provided an estimate of €1.75m for the cost associated with this imbalance. This estimate was based on an analysis of 2005 Republic of Ireland figures using the Transitional Electricity Settlement System. This was determined assuming an average SMP of €80 per MWh and while no comparable data is available for Northern Ireland, an allowance has been made to reflect losses on the

<sup>20</sup> Losses are incurred on the transmission system as electricity is transported from generators to the bulk supply points. In settlement, the transmission losses are allocated to generators (including distribution connected generators) using Transmission Loss Adjustment Factors. Some generators are responsible for proportionally more losses than others depending on their point of connection to the grid. Therefore transmission loss factors are locational. The Transmission Loss Adjustment Factors are derived by the system operators using marginal loss factors derived for each affected generator based on forecast assumptions of average system demand and average generation dispatch for the designated seasons.

All-Island system. The analysis did not consider the impact of distribution connected generation.

On the basis of this analysis the SMO requested that €1.75m be provided in its operating costs to allow for this energy imbalance. The Regulatory Authorities have decided that the full €1.75m will be allowed for the initial tariff period, subject to a full *ex-post* review.

#### **6.1.9 Other costs**

The SMO requested that the Regulatory Authorities allow full *ex-post* pass through on any costs incurred by the SMO when financing interest payments to generators for underpayments related to the settlement reallocation process.

The SMO stated that they are not in a position to carry out a credible analysis of this cost at this time, and therefore the Regulatory Authorities have decided that the cost associated with this process will be reviewed *ex-post* with allowed costs feeding into the subsequent tariff period(s).

One respondent commented that if these interest payments arise due to inefficiencies related to the SMO, then this cost should not automatically be passed on to participants. The Regulatory Authorities acknowledge this comment and as stated above will be carrying out an *ex-post* assessment of costs prior to approving their recovery.

The SMO have also stated that they may incur costs due to the VAT arrangements that will be in place, and requested that the associated costs be dealt with *ex-post* as they cannot be estimated accurately at this time. The Regulatory Authorities have decided that the costs associated with the VAT arrangements will be reviewed *ex-post*, as requested by the SMO, with allowed costs feeding into the subsequent tariff period(s).

#### **6.1.10 Interest provisions**

The SMO's revenue submission proposes that the working capital requirements of the SMO, including any currency related imbalances not covered by the TSC currency charges, be provided by EirGrid and SONI on a 3:1 basis and that financing be repaid with the WACC of each parent applied to their respective portions.

##### **6.1.10.1 Decision**

The Regulatory Authorities' have decided that working capital provided by the parent companies should be subject to the methodology outlined below, which is consistent with that currently in place for working capital provided by the parent companies while carrying out their transmission system operator functions.

The SMO's response to the regulatory consultation paper, stated that interest payments to the SMO for under-recovery of revenue should be determined using the Regulatory Authorities' assumed real cost of debt for the utility<sup>21</sup>, as determined under the WACC, and that EirGrid's share of the interest provision related to the

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<sup>21</sup> This is lower than the methodology proposed by the SMO in their original revenue submission where it was proposed by the SMO that interest payments to the SMO related to the under-recovery of revenue would be a calculated using the total WACC value of 5.63% (not just the cost of debt component of 3.73%).

repayment of over-recoveries, should be calculated using an average 3 month Euribor rate adjusted for any differential between European HICP inflation and Irish HICP inflation, is also noted. The Regulatory Authorities' decision in relation the over-recovery methodology is in agreement with the SMO's view. For under-recovery, the Regulatory Authorities' are still of the opinion that the approach used for the TSO function is appropriate, and the decision detailed below reflects this view.

For EirGrid, the following methodology has been used for determining the interest rate ( $I$ ) that is applied to allowed under and over-recoveries of transmission revenue for the previous year ( $t-1$ ), and has been in use by the Commission since 2002<sup>22</sup>:

$I_{t-1}$  is the mean of the twelve monthly average three month Euribor rate between April and March of the year  $t-1$  (that is, April of year  $t-2$  to March year  $t-1$ ) and adjusted for the difference in the mean of the twelve point to point Euro zone harmonised index of consumer prices and the Irish harmonised index of consumer prices between April and March of the year  $t-1$ .

For SONI the following interest rate is used:

the arithmetic mean of the daily base rates of Northern Bank Limited (or such other bank as the Authority shall specify from time to time) current from time to time during the period in respect of which the calculation falls to be made.

The Regulatory Authorities have decided that working capital provided by the parent companies to cover fluctuations during the tariff period, and allowed under-recovery of revenue during the tariff period, will be paid back in the subsequent tariff period(s) with the appropriate amount of interest as determined using the above methodology. As the SMO proposes that working capital will be provided by the parent companies on a 3:1 basis, this means that the "Euribor rate" will be applied to three quarters, and the "Northern Bank Limited" rate will applied to one quarter, of the working capital provided. This reflects the cost of short-term financing required to provide the SMO's working capital needs.

In addition, it has been decided that any allowed over-recovery of revenue will be recovered from the SMO in the subsequent tariff period(s) with the appropriate amount of interest determined using the above methodology.

It should be noted that while it has been decided that the total amount of interest will be based on the ratio proposed by the SMO for the provision of working capital by the parents, the ratio by which funding is provided is not specifically approved here.

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<sup>22</sup> In addition, EirGrid is also allowed working capital which includes 20% of EirGrid's external costs to which WACC is applied.

## **6.2 ASSET BASE AND DEPRECIATION**

### **6.2.1 Options for assessment of asset base**

There are four recognised methods for the determination of initial rate bases:

- **Book value:** the value of the original investment, that is, the sum paid for assets, less cumulative depreciation, is used. This method is usually reliable, once there are auditing procedures in place, and stable values are usually attained.
- **Reproduction cost:** the cost of reproducing the asset in question is used.
- **Replacement cost:** the replacement cost or the new replacement value, that is, the cost of replacing the assets using the technology available at the time. This is the most economically efficient method for valuation, but the influence of technological innovations (related to reproducing the asset) may lead to sharp variations in the value.
- **Market value:** the price the assets would command if sold on the market is used. This may lead to a figure that is substantially different from the book value, giving rise to stranded assets.

#### **6.2.1.1 Decision**

The Regulatory Authorities have decided that the book value method will be used for the evaluation of the SMO asset base. This method will allow the SMO to recover the costs incurred while establishing the market in a stable, sustainable and predictable manner, as per the regulatory principles outlined in Section 3.

#### **6.2.2 Asset base**

This section covers the actual and budgeted capital costs related to EirGrid and SONI's involvement in the establishment of the SEM. These include project implementation costs related to the SEM programme and SMO establishment project, and costs associated with market trial. It should be noted that these costs are only those which have been, or will be, incurred prior to Go-Live. In addition, costs incurred by EirGrid and SONI in relation to system operator readiness for the SEM will be recovered through mechanisms other than the SMO tariffs and so are not detailed here.

These costs will be recovered through the SMO tariffs, as per Section 9 and subject to the method and length of depreciation as outlined in Section 6.2.3.

The capital costs to be recovered are detailed in the below table. These have been updated to reflect the most recent approved costs and, in the case of the market trial, decisions included in this paper.



<b>SEM capital expenditure</b>	<b>Sought by SMO €m</b>	<b>Allowed by RAs €m</b>
SEM programme	42.6	37.9
SMO establishment	8.1	6.6
Market trial	3.8	3.3
Additional IDC submission	2.9 <sup>17</sup>	2.7
<b>Total:</b>	<b>57.4<sup>17</sup></b>	<b>50.5</b>

**Table 4:** Capital costs sought by the SMO and allowed by the RAs (in mid-2007 terms)

### **SEM Programme Expenditure**

The objective of the SEM programme is to ensure the smooth implementation of the market systems and processes required for operation of the SEM. The SEM programme expenditure relates to the costs involved in the analysis, design, specification, procurement and implementation of market systems. This expenditure is being incurred on a phased basis with oversight and approval of all costs conducted by the Regulatory Authorities.

The above figures are based on those included in the SMO revenue submission, but have been updated to include the most recently approved figures.

### **SMO Establishment Expenditure**

The objective of the SMO establishment project is to ensure that a SMO organisation is established, and operationally ready, in time for commencement of the market trial. Establishing the SMO has significant legal, contractual, system and process impacts for SONI and EirGrid. Implementing this change requires a large number of activities to be undertaken, with contributions from a wide range of personnel. The establishment of the SMO involves the procurement of numerous corporate IT systems to enable its operation, the requirements for which have been identified as part of the SEM establishment programme.

This expenditure is being incurred on a phased basis with oversight and approval of all costs conducted by the Regulatory Authorities.

The above figures are based on those included in the SMO revenue submission, but have been updated to include the most recent approved figures.

### **Market Trial**

A number of SMO costs will be incurred before the “Go-Live” date of November 1st 2007. These are required to ensure the SMO organisation is operational during Market Trial. Market Trial is the penultimate project step ensuring that the people, processes and systems are operationally ready for market opening. Market Trial spending includes payroll, IT, facilities, professional fees and general & administrative.

The figures for market trial are scaled to allow for the reduction in allowed SMO staff numbers as detailed in Section 6.1.1. Specifically figures related to payroll and IT have been reduced. This allows for the fact that if staff are not required after “Go-Live” as per Section 6.1.1, then they will not be employed during the market trial period, and less personal IT equipment will be needed.

## **Interest During Construction**

The SMO's original revenue submission included a figure of €1.3m for Interest-During-Construction (IDC) and this value fed into the depreciation and WACC figures for which an allowance was sought. These depreciation and WACC figures were then referred to by the Regulatory Authorities in the consultation paper

However, subsequent to the original submission, the SMO submitted a revised request seeking an allowance of €4.2m (in mid-2007 terms<sup>23</sup>) for IDC. However, this revised request was not assessed prior to the publication of the consultation paper as there was insufficient time for an analysis to be carried out.

In this revised submission, the SMO stated that in the normal course of events EirGrid and SONI would be allowed to recover their capital expenditure in the year in which it is incurred and as a result the issue of IDC does not arise. However, this is not the case with the SEM Programme, the cost of which has been borne by EirGrid and SONI since 2005, even though recovery of the allowed costs will not commence until SEM Go-Live. This has resulted in EirGrid and SONI adopting the principle that applying IDC to actual spend prior to SEM Go-Live is both appropriate and reasonable. EirGrid and SONI further believe that IDC has two components, the opportunity cost of the finance used but not recovered, and its time value. Therefore in the SMO's revised submission an IDC value of €4.2m was calculated and this included allowance for EirGrid and SONI's respective WACCs (the opportunity cost) and inflation (the time value).

However, while the Regulatory Authorities have decided that while an IDC allowance up to SEM Go-Live is appropriate and will be allowed, this allowance should instead reflect the financing costs associated with the SEM Programme.

Therefore the Regulatory Authorities have decided to allow an IDC value of €2.7m (in mid-2007 terms). This includes an allowance for the financing costs, based on the assumed cost-of-debt for each SO, and an inflation allowance. All other figures (depreciation, WACC, *et cetera*) have been adjusted appropriately to allow for this IDC figure.

### **6.2.2.1 Decision**

The Regulatory Authorities have decided that the above costs totalling €50.5m will be capitalised and the depreciation will be recovered through the SMO tariffs.

As not all of these costs have been incurred to date (some are budgeted provisions) the actual outturns will be allowed for in subsequent tariff periods, subject to the usual regulatory scrutiny.

### **6.2.3 Depreciation**

This section gives a brief description of different types of depreciation, and evaluates the most appropriate option for the regulation of the SMO. The appropriate length of the depreciation period is also covered.

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<sup>23</sup> IDC figures have been converted to mid-2007 (and elsewhere to mid-tariff-period) terms to facilitate consistency with other figures for SMO revenue.

### **6.2.3.1 Method of depreciation**

There are a number of possible methods through which asset bases may be depreciated, such as sinking fund, declining balance, activity based, sum-of-years-digits, units-of-production, and units-of-time depreciation.

However, the most common form of depreciation is the straight-line method, where it is assumed that the value of the asset drops in equal, constant yearly increments over a given amount of time. That is, the asset is depreciated by the same amount each year over a given time period. This method is very common.

### **6.2.3.2 Timeframe for recovery**

Typically where IT systems are implemented these costs are recovered over a five year period. This is consistent with current depreciation rules applied by the parent companies and international practice. Both BETTA and NEMMCO market implementation costs were depreciated and recovered over a five year time frame. In the US, ISO NE and CAISO depreciation is conducted using straight-line methods over an estimated useful asset life ranging from three years to five years for IT systems.

### **6.2.3.3 Decision**

The Regulatory Authorities have decided that in common with other MO functions and for IT functions more generally, straight-line depreciation over a five-year period will be adopted.

When assessed against the principles outlined in Section 3, this decision is seen to be sustainable, stable, unambiguous and predictable. The capital costs will be recovered by the SMO in a manner that is consistent with current international best practice and the method currently employed by the parent companies.

The treatment of the asset base may be reassessed in subsequent tariff periods.

## **6.3 Treatment of new investment**

The SMO revenue submission does not propose that any new investment incurred during the initial tariff period would be recovered during that tariff period. The treatment of new investment costs will therefore be considered at a later date, once any future investment costs have been assessed.

One respondent queried how new investment will be considered within the tariff/price control and whether the SMO will provide a rate-case *ex-ante* for proposed major spends.

In response to this query, once any future SEM related expenditure can be properly scoped, the SMO will then make a separate submission to the Regulatory Authorities in relation to that proposed expenditure. This submission will be assessed by the Regulatory Authorities.

In addition, under the terms of the SMO licence, the licensees must prepare and maintain a market system development plan for the development of the Single Electricity Market Trading and Settlement System over the following two years. The specific contents of this plan are currently being finalised. The year-one development plan is expected by 1<sup>st</sup> November 2007.

However, any new investment will not affect this initial tariff period, but will instead feed into subsequent tariff periods.

## **6.4 WEIGHTED AVERAGE COST OF CAPITAL**

The Regulatory Authorities agree that the SMO should be allowed to recover its reasonably incurred capital costs, and that the recovery of these costs should include fair remuneration for the parent companies, that is, a fair WACC.

### **6.4.1 Options**

A number of sources can be assessed while determining an appropriate WACC for the SMO activity:

- The cost of capital of the two SO organisations. This provides guidance on what returns the stakeholders require, but does not take into account differences in risk between an SMO operation and an SO activity.
- The cost of capital allowed for infrastructure projects throughout Northern Ireland and Ireland. The obvious difference in risk between these types of projects and a SMO means that this may not be a particularly useful comparison.
- The cost of capital allowed for SMOs elsewhere. This is not straightforward as many SMOs are not-for-profit organisations. In addition, many SMOs are also SOs which have different levels of risk.
- The cost of borrowing for SMOs. The level at which a SMO could borrow funds on the open market might provide a good guide as to the risk associated with the activity and the appropriate cost levels. This would be an upper end indication as in practice one would expect some degree of equity financing which has inherently lower risk, within the overall cost of capital for the SMO.

### **6.4.2 Decision**

While none of the above comparisons give a direct result for the appropriate cost of capital for the SMO, the Regulatory Authorities have decided that the cost of capital for the parent companies will be used for the SMO activity for the initial 11 month period.

This does not take the different risk levels between an SMO operation and an SO activity into account, but provides guidance on the returns which stakeholders require, and is the most appropriate option for the first tariff period.

This decision leads to a WACC for EirGrid of 5.63%, and while the WACC for SONI's portion of these costs has not been finalised, a value which reflects the WACC that is to be included in a separate consultation paper by NIAUR (on SONI's allowed revenue for its SO function) has been used for the purposes of this SMO revenue and tariffs decision paper. Any updates to this value will be accommodated in the subsequent tariff period(s).

Using the updated capital and market trial costs as outlined in Section 6.1, and based on the 3:1 ratio by which EirGrid and SONI fund these costs, these WACC's result in a total figure of €2.5m.

However, it should be noted that, while it has been decided that the total WACC provided to the parent companies during the initial 11 month tariff period will be calculated on the basis of a 3:1 split of funding between EirGrid and SONI, this decision will not affect the calculation of the WACC in subsequent tariff periods.

It should also be noted that differences between the figure included by the SMO in its revenue submission and that allowed by the Regulatory Authorities, that is, €2.8m<sup>17</sup> versus €2.5m, are due to the Regulatory figure being based on the most recent approved capital costs (and revised market trial figures), and the use of a different SONI WACC (as referred to above) instead of the 6.9% value used by the SMO.

## 6.5 INFLATION RATE

In the consultation paper the Regulatory Authorities had used an inflation rate that was based on the average increase in the Consumer Price Index (CPI) for the past 12 months (May 2006 to April 2007 inclusive) as per the Irish Central Statistics Office website, and the average increase in the Retail Price Index (RPI) for the past 12 months (May 2006 to April 2007 inclusive) as per the UK National Statistics Office website, to inflate the figures provided by the SMO from mid-2007 to mid-tariff period prices.

A combined 12 month value of 4.34% was used. This was obtained by weighting the values from each jurisdiction (that is, the CPI value for Ireland and the RPI value for Northern Ireland) according to the 3:1 financing split used by the SMO.

However, it was stated that this methodology could be updated prior to the publication of the decision paper once the Regulatory Authorities' assumptions in relation to inflation in 2007 and 2008 had been finalised.

The below table reflects the most recent regulatory assumptions in relation to inflation, and had led to the use of a blended inflation rate of 4.07% for 2007 and 2.57% for 2008 for the purposes of this decision paper. These rates have been used to inflate the SMO costs from mid-2007 to mid-tariff-period, that is, mid-April-2008, prices:

	<b>2007</b>	<b>2008</b>
Ireland	4.6%	2.6%
Northern Ireland	2.495%	2.483%
Blended on 3:1 basis	4.07%	2.57%

**Table 5:** Revised inflation rates

As with all costs the inflation rate will also be reviewed *ex-post*.

## 6.6 SUMMARY

The total revenue proposed by the SMO in its submission is €26.1m for the initial tariff period in mid-2007 terms, covering its proposed operational costs, capital costs, depreciation and WACC. The Regulatory Authorities have carried out an analysis of these categories and have decided that a total SMO revenue of €22.4m will be allowed for this period. The differences are summarised in the table below (detail is provided in the preceding sections).

	<b>Sought by SMO</b> €m	<b>Allowed by RAs</b> €m
Operating costs (excl. depreciation)	12.8	10.6
Depreciation	10.5	9.3
WACC	2.8	2.5
<b>Total:</b>	<b>26.1</b>	<b>22.4</b>

**Table 6:** Total allowed revenue sought by SMO and allowed by RAs in mid-2007 terms

Applying the inflation rate used by the Regulatory Authorities to bring the these figures to mid-tariff period prices (mid April 2008 - see Section 6.5) the total revenue sought by the SMO is €27.0m and the total revenue allowed by the Regulatory Authorities is €23.1m.

	<b>Sought by SMO</b> €m	<b>Allowed by RAs</b> €m
Operating costs (excl. depreciation)	13.2	10.9
Depreciation	10.9	9.6
WACC	2.9	2.6
<b>Total:</b>	<b>27.0</b>	<b>23.1</b>

**Table 7:** Total allowed revenue sought by SMO and allowed by RAs in mid-tariff year terms

All SMO costs allowed for the initial tariff period will be subject to an *ex-post* review and determination by the Regulatory Authorities. This determination of efficiently incurred costs may result in an over or under-recovery of revenue being fed through to the subsequent tariff period(s). Furthermore, all costs/revenues apply to the initial tariff period only and will be separately reviewed for the subsequent tariff period(s) as the SMO function develops and its costs become more certain.

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## 7. IMPERFECTIONS CHARGE

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### 7.1 BACKGROUND

The Imperfections Charge covers the net cost of constraints payments, makewhole payments, and uninstructed imbalances. This cost is estimated *ex-ante* and recovered from suppliers on a MWh basis through the Imperfections Charge. In the SMO revenue submission the cost of makewhole payments and uninstructed imbalances are estimated to be zero, with most attention being paid to the cost of constraints.

### 7.2 ESTIMATION OF CONSTRAINTS COSTS

An estimate of €109m is included in the SMO revenue submission for the cost of constraints during the 11 month period from 1<sup>st</sup> November 1<sup>st</sup> 2007 to 30<sup>th</sup> September 2008. The detail behind the calculation of that figure is also included in the SMO's submission.

Essentially, by performing multiple runs of the PLEXOS model, adding in key reserve requirements and specific transmission constraints, the effect in terms of increases in total production cost was analysed. This difference in production cost between these simulations represented the constraint costs associated with the modelled transmission and reserve constraints. Since it was not possible to model all constraint cost drivers in PLEXOS, further analysis of specific constraint effects was performed. This built on the PLEXOS modelling described above and also looked at the effect and impact of:

- perfect foresight,
- market modelling assumptions,
- specific transmission system constraints,
- specific reserve constraints, and,
- other factors.

The figures attributable to each are detailed in the SMO revenue submission. In addition to the information provided in the revenue submission, the System Operators have also facilitated workshops with the Regulatory Authorities, which allowed further discussions regarding their modelling work. This examination led to the regulatory decisions outlined in the following sections.

### 7.3 RECOVERY OF CONSTRAINTS COSTS

As stated previously, the cost of constraints is estimated *ex-ante* and this estimate is recovered during the relevant tariff period through the Imperfections Charge. However, it is almost certain that differences between the costs being recovered and paid out will lead to instances where the SMO will:

- require working capital to fund constraints payments that exceed revenue collected through the Imperfections Charge, or,
- have collected revenue through the Imperfections Charge that exceeds the amount being paid out on constraints.



To allow for the first scenario, the SMO proposed that the parent companies would provide this funding on a 3:1 basis, with EirGrid providing 75% and SONI providing 25% of the funding.

The SMO proposed that in the SEM both EirGrid and SONI will have standby facilities in place to cover their share of the costs. This is consistent with the situation in the current Irish market, where EirGrid have entered into an agreement with a number of banks to provide a standby facility for the provision of funding. To the extent that funds are actually drawn under the standby facilities provided by EirGrid and SONI, the SMO propose that the actual interest costs incurred be allowed on a pass through basis. This cost will be based on a rate as charged to EirGrid by its banks for its share of the funding, and a rate as charged to SONI by its banks for its share of the funding.

The SMO also proposed that differences between constraint outturns and forecasted amounts, and the associated cost of funding be dealt with in the following tariff period.

## **7.4 DECISION**

### **7.4.1 Imperfections charge**

The Regulatory Authorities have decided that the full estimate provided for the net cost of constraints, makewhole payments and uninstructed imbalances, that is €109m, will be recovered through the Imperfections Charge during the first 11 month tariff period. The cost allowed for the initial tariff period will be subject to review and determination ex-post, with allowed under or over-recoveries feeding into the subsequent tariff period(s).

Given that this figure is in mid-2007 terms, the Regulatory Authorities have inflated the figure to mid-April 2008 prices, that is, the mid-point of the tariff period, using the methodology outlined in Section 6.5, leading to a total figure in mid-April 2008 prices of €112.6m.

Using the assumptions provided in the SMO revenue submission, this leads to an Imperfections Charge of €3.208 / MWh.

### **7.4.2 Provision of working capital**

The Regulatory Authorities have decided that, as per the SMO revenue submission, the funding of working capital requirements will be provided by EirGrid and SONI.

However, the Regulatory Authorities have decided that funding required to cover fluctuations during the tariff period, and any allowed under-recovery of revenue during the tariff period will be paid back, in the subsequent tariff period(s), with the appropriate amount of interest as determined using the methodology outlined in Section 6.1.10. This reflects the cost of short-term financing required to provide the SMO's working capital needs.

Similarly, for situations where the revenue recovered by the SMO through the Imperfections Charge is greater than that paid out in constraints, the Imperfections Charge in the following tariff period(s) will be reduced by an appropriate amount to reflect the allowed over-recovery and the associated interest as determined using the methodology outlined in Section 6.1.10.

The SMO's revenue submission proposes that in some cases, when constraint costs reach a certain level, the money would not be paid out right away. Instead the validity of the level of constraints would be investigated prior to payment. However, the non-payment of constraints to generators is not allowed by the TSC and hence this proposal cannot be allowed. Nevertheless it is agreed that the SMO should highlight exceptional levels of constraints to the Regulatory Authorities, as per the revenue submission, if such scenarios arise. It is likely that the SMO will also be required to include information on constraints payments within a monthly report that it will publish on its website, although the contents of this report have yet to be finalised.

At this stage the SMO will not be incentivised to reduce the cost of constraints in the SEM. As per the SMO's submission the SMO itself does not balance the system and has no influence over the level of constraints. Hence any incentives would have to be placed on the SOs and such schemes are outside the scope of this paper.

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## 8. GENERATOR-UNDER-TEST TARIFFS

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This section outlines the Regulatory Authorities' decisions in relation to generator-under-test tariffs. These are approved for the period from 1<sup>st</sup> November 2007 to 31<sup>st</sup> December 2008, although they may be revised during that period. The SOs do not anticipate that any revenue will be received through these tariffs during that initial 11 month tariff period. However, any revenue that is received will be used, in addition to the €112.6m recovered through the imperfections charge, to fund constraint payments. The reasons for this are detailed below.

### 8.1 BACKGROUND

Testing of a new generating unit, or an existing generating unit returning from major overhaul, is generally required in advance of the plant becoming fully operational. During a test the generator commonly requires that it be run at certain levels of output or a certain profiled output. It may not be possible to accurately predict the actual level of output of the unit at any specific time and there may be a significantly higher risk of a fault than for a fully commissioned generator.

These factors lead to increased system operating costs for the Transmission System Operator (TSO) for several reasons.

The TSO will not be able to predict the output of the unit under test in advance with any degree of confidence, as it is common for tests to be cancelled at short notice or to vary significantly from their nominated level of output. To match supply and demand, the TSO will generally have to commit extra units to ensure a rapid response to changes from the unit under test's scheduled output and to ensure that the system would remain within normal security standards following the loss of the unit.

As the unit under test is at a significantly higher risk of tripping, the TSO will carry additional operating reserve to ensure that security of supply is not compromised. This leads to additional costs associated with constraints, increased reserve premium, additional run hours, and trips and fast wind downs<sup>24</sup>.

Under the TSC, a testing generator must pay a generator-under-test tariff which reflects the increased constraint cost (these cover the constraint costs associated with additional reserve requirements, additional run hours and trips & fast wind-downs, but not other costs such as increased reserve premiums which are dealt with under other arrangements) that they are causing to the system.

Section 8.2 outlines the proposals that were contained in the consultation paper in relation to the charging methodology for generator-under-test tariffs.

The Regulatory Authorities' decision is outlined in Section 8.3.

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<sup>24</sup> Further detail is provided on these charges in '2005 Generator testing tariffs, background and calculations', [www.eirgrid.com](http://www.eirgrid.com)

## **8.2 OPTIONS**

### **8.2.1 Option A: A single tariff**

A single tariff (€/MWh to be determined), independent of unit size, MWh output or reliability (test phase), could be multiplied by the unit's metered output to derive the test charge.

Given that this proposal is for a single rate applied to all units under test, it would not be as cost reflective as a rate that varied with unit output or test phase. As the rate is likely to be based on some average constraint cost, it is likely that large units would be charged proportionally less than small units (of course the rate is multiplied by the unit output so large units will ultimately pay a larger charge than small units).

This option would only cover the constraint element of generator testing. In order to avoid the overhead and complexity associated with a second charge to recover a relatively small amount of money, EirGrid would recover any increase in Ancillary Services costs from demand customers through the TUoS mechanism rather than directly from the unit under test.

### **8.2.2 Option B: Single tariff per test phase**

This option is similar to Option A except that there would be a single tariff for each test phase. However, the tariffs would continue to be independent of unit size or output. This option would require the relevant TSO to notify the SMO of the relevant test phase of the unit. The SMO would then apply the test tariff applicable to that test phase.

This option has the advantage over option A of allowing different tariffs to be applied depending on the reliability of the unit under test. So the unit under test would be incentivised to progress through their testing to improve reliability and reduce the testing tariff.

However, there are implementation issues associated with this option:

- a business process/system would need to be put in place to facilitate the TSO informing the SMO of the test phase,
- the market systems will require some form of a look-up table to convert the test phase to the appropriate tariff.

This option would only cover the constraint element of generator testing. In order to avoid the overhead and complexity associated with a second charge to recover a relatively small amount of money, EirGrid would recover any increase in Ancillary Services costs from demand customers through the TUoS mechanism rather than directly from the unit under test.

### **8.2.3 Option C: Unit size specific tariffs**

This option is for a tariff that varies according to defined generator capacity bands. This proposal is similar to the structure of EirGrid's existing schedule of tariffs however it would relate to a unit's size (or capacity) rather than output and would not vary according to test phase. So, a single tariff would apply to the unit throughout its testing period.

A tariff that is unit size specific will allow more cost reflective charging than a single tariff applied to all units, as proposed in options A and B, as the tariff applied to larger units would be greater than that applied to smaller units.

This option would use a fixed schedule of tariffs (which would be determined in advance and fixed for the year) with no testing tariff related TSO-SMO information exchanges required in settlement timescales. It would not require any system changes and could be implemented through simple TSO-SMO business processes.

This option would only cover the constraint element of generator testing. In order to avoid the overhead and complexity associated with a second charge to recover a relatively small amount of money, EirGrid would recover any increase in Ancillary Services costs from demand customers through the TUoS mechanism rather than directly from the unit under test.

### **8.3 DECISION**

As per the consultation paper, the Regulatory Authorities have decided that Option C, unit size specific tariffs will be implemented for the following reasons:

- The application of this simple charging structure reflects the relatively low frequency of occurrence and relatively small transmission system costs incurred;
- A tariff that varies according to unit size allows the recovery of more cost reflective charges for the unit under test. The risk posed by a large generator testing on the system and failing would be greater than that posed by the testing and possible failure of a smaller generator;
- Units under test will be required to contribute towards the costs of testing and will be incentivised to progress through testing in a timely manner;
- This option avoids differing charges being levied by EirGrid and SONI;
- This option can be accommodated within market systems – this is critical if the proposal is to be implemented before SEM Go-Live.

Airtricity agreed with the Regulatory Authorities' proposal while Synergen instead proposed Option A: a single €/MWh charge that would not be banded by capacity. Synergen felt that this would be more simplistic, and stated that it has not been proven that having €/MWh charges that are banded by capacity is more cost reflective than a simple €/MWh charge.

However, the System Operators have stated that a banded tariff is more cost reflective. Generator-under-test tariffs reflect the increased costs incurred as a result of altering the TSOs' operating policy to manage a unit under test, and while small/medium sized units under test might not alter the normal reserve requirement larger units would.

In line with the Regulatory Authorities' decision to implement €/MWh tariffs that are banded by capacity the TSOs have submitted a set of generator-under-test tariffs to the Regulatory Authorities. These tariffs are shown in the below table and will be implemented in the period from 1<sup>st</sup> November 2007 to 31<sup>st</sup> December 2008, although they may be updated during that period.

These tariffs have been derived from those currently used by EirGrid. Specifically the elements of the current generator-under-test tariffs related to constraint costs associated with:

- additional reserve requirement,
- additional run hours, and,
- trips and fast wind-downs

have been converted into 2008 terms using inflation rates that are consistent with Regulatory Authority policy. The tariffs have also been converted into a 'single-phase' charge by weighting the current charges for Phase 1 and Phase 2<sup>25</sup> on a 40:60 basis, which is consistent with previous experience.

<b>Unit capacity, MW</b>	<b>€/MWh</b>
GEN ≤ 50	3.58
50 < GEN ≤ 100	3.33
100 < GEN ≤ 150	3.53
150 < GEN ≤ 200	4.12
200 < GEN ≤ 250	4.89
250 < GEN ≤ 300	6.09
300 < GEN ≤ 350	8.43
350 < GEN	11.27

**Table 8:** Generator-under-test tariffs for the initial tariff period (in mid-2008 terms)

For subsequent schedules of generator-under-test tariffs it is the Regulatory Authorities and the System Operators' intention that a full all island study will be complete and that this will then be used to calculate the charges going forward.

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<sup>25</sup> These Phases relate to the stage of testing which the generator is in. The generator that is under test progresses from one phase to another as it is deemed to be more reliable. Further detail is provided in: "2005 Generator testing tariffs, background and calculations", [www.eirgrid.com](http://www.eirgrid.com)

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## 9. FORM AND MAGNITUDE OF CHARGES

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As part of its role in the administration of the market there are charges which the SMO must levy in order to recover its own allowed costs and allowed market related costs (see Sections 6 and 7). These charges consist of:

- energy and capacity charges,
- the accession fee,
- the participation fee,
- the Imperfections Charge,
- the MO charge, and,
- the generator-under-test tariff.

While the detail of some charges is strictly defined in the TSC, for others only an outline has been given. This section clarifies the Regulatory Authorities' decisions on any remaining issues related to each charge.

### 9.1 ENERGY & CAPACITY CHARGES

The structure and detail of charges for energy purchased from the “pool” is defined in the TSC. It will be a per MWh charge, the amount of which will be set for each half hour by the engine responsible for settling the market. This paper does not make any new decisions in relation to the form and magnitude of energy charges.

The detail for capacity charges is being dealt with as part of another consultation process and so no decisions are made here in relation to capacity charges.

### 9.2 ACCESSION FEE

The TSC states that the accession fee will be a fee paid to the SMO by each applicant for accession to the TSC, to cover the SMO's costs incurred in assessing the application.

In the SMO revenue submission a fee of €6,000 per party was proposed, based on 10 staff man-days and 0.5 days legal advice required to process an accession application. Following analysis by the Regulatory Authorities, this figure was revised downwards by the SMO to a fee of €4,500 per party, based on the seven staff man-days work and 0.5 days legal advice required to process an accession application.

In the consultation paper, the Regulatory Authorities had proposed an accession fee of €4,500 per party. This was based on the SMO's revised submission as referred to above. In response to the consultation paper Airtricity's commented on the time required to carry out the accession process. Allowing for Airtricity's comment, which highlighted uncertainty regarding the full time equivalents required to carry out the accession process, the Regulatory Authorities have decided that an accession fee of €1,500 will be implemented during the initial tariff period. This fee will be published by the SMO in both Euro and Sterling.

It should also be noted that as stated in the consultation paper, information on the treatment of accession fees during the pre Go-Live period has been published separately by the Regulatory Authorities<sup>26</sup>. That publication relates to exemptions

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<sup>26</sup>Decision on the treatment of accession and participation fees during the pre Go-Live period, [www.allislandproject.org](http://www.allislandproject.org)

from the payment of accession and participation fees for partys/Units that are registered for market trial, and leads to a reduction in the amount of parties that will be paying the accession fees. Additionally, it should be highlighted that other charges will be responsible for recovering the SMO's allowed revenue for the initial tariff period as detailed in Section 6 and any additional revenue recovered through the accession fees will be netted off the next tariff period.

### **9.3 PARTICIPATION FEES**

In the TSC the participation fee is defined as “the fee payable with an application to register and become a Participant in respect of any Unit”. The proposals that were included in the consultation paper and the Regulatory Authorities' decision are now provided. The Regulatory Authorities also provide a response to some comments that were received in relation to this topic.

In the SMO revenue submission participation fees of €12,250 per Supplier Unit and €13,750 per generator unit were proposed, based on the 24.5 and 27.5 staff man-days work respectively to process a participation application. Following analysis by the Regulatory Authorities, the SMO reduced its figures to €11,000 (22 man-days work) and €12,500 (25 man-days work) for supplier units and generator units respectively.

Based on the SMO's revised assessment of the work involved in processing an application, the Regulatory Authorities proposed that a participation fee of €11,000 and €12,500 be charged to supplier and generator Units respectively, and this proposal was included in the consultation paper.

As part of its response to the regulatory consultation paper the SMO provided a revised figure of €7,000 for the participation fee or both Supplier and Generator Units. The calculation behind this figure is outlined fully in the SMO's response, which is published in conjunction with this paper. In summary, the €7,000 is for 14 person days at a FTE of €500 per day. This revision has been facilitated by the development of Agreed Procedure 1 which has led to streamlining or removal of a number of steps related to the registration process.

The Regulatory Authorities welcome the SMO's proposed reduction in the participation fee. However, in order to allow for Airtricity's comments, which highlights uncertainty regarding the FTEs required to carry out the registration process, the Regulatory Authorities have decided a participation fee of €3,500, for both Supplier and Generator Units will be implemented for the initial tariff period. This fee will be published by the SMO in both Euro and Sterling.

It should also be noted that information in relation to the treatment of accession and participation fees during the pre Go-Live period has been published separately by the Regulatory Authorities<sup>26</sup>. That publication relates to exemptions from the payment of accession and participation fees for partys/Units that are registered for market trial, and leads to a reduction in the amount of parties that will be paying the participation fees. Additionally, it should be highlighted that other charges will be responsible for recovering the SMO's allowed revenue for the initial tariff period as detailed in Section 6 and any additional revenue recovered through the participation fees will be netted off the next tariff period.



## **9.4 IMPERFECTIONS CHARGE**

This charge has been outlined in Section 7. The charge for the initial tariff period will be €3.208 / MWh.

## **9.5 MARKET OPERATOR CHARGE**

The TSC states that the Market Operator Charge shall comprise of:

- a Fixed Market Operator Generator Charge, which may be different for each Generator Unit,
- a Fixed Market Operator Supplier Charge, which may be different for each Supplier Unit , and,
- a Variable Market Operator Charge applicable to all Participants in respect of their Supplier Units, expressed in €/MWh.

During the first 11 month tariff period, these charges will recover SMO operational costs, the appropriate amount of depreciation associated with the SEM related capital costs incurred by EirGrid and SONI, and the appropriate WACC. These costs are detailed in Section 6.

However, the TSC does not specifically state what proportion (or type) of costs should be allocated to either the fixed or the variable element of the charge for recovery. The options are outlined below.

### **9.5.1 Options**

A number of options were considered in relation to the recovery of the costs outlined above through either the fixed or variable element of the market operator charge:

- All costs considered to be driven by number of Units participating in the market could be recovered through the fixed charge. However, this could lead to barriers to entry, and since the initial capital costs benefit the whole market on a per MWh basis by creating a better commercial environment for the purchase and sale of electricity, it is difficult to define the costs that are driven by the number of Units participating in the market;
- Capital costs could be recovered via the fixed charge on the basis that all other costs are MWh driven, while capital costs could be argued to be a function of the size of the settlement system, itself driven by the number of participant units that the market must cater for. This argument presumes that capital items include only settlement system development costs and that the system costs are driven by the number of participant units. However, system costs may also be affected by other requirements and not simply the number of participating units. If this solution were applied to initial capital costs only, then it would lead to a gradual shift of capital cost recovery from the fixed charge to the variable charge, leading to unpredictability and instability in the tariff;
- The fixed charge could be set to zero on the grounds that none of the costs are driven by the number of Units participating in the market (at least to a sufficient extent to justify a charge per Unit, other than the Participation Fee).

Combinations of the above options were also evaluated against regulatory principles, leading to the below decisions.

## 9.5.2 Decision

The Regulatory Authorities' decisions in relation to the SMO charges have not changed from the proposals that were made in the consultation paper, although some updates have been made<sup>27</sup>. A number of comments were received in relation to these charges and the Regulatory Authorities have provided a response to these comments in the regulatory response paper which has been published in conjunction with this decision paper.

An evaluation of the above options and combinations of the above options against the regulatory principles outlined in Section 3, led to the Regulatory Authorities deciding that the majority of costs, 95%, will be recovered through the variable charge.

In relation to the €1.75m caused by energy imbalances, as outlined in Section 6.1.8, it has been decided that all of this cost be recovered through the variable charge. This will essentially ensure that suppliers cover any difference between their energy payments to the SMO and the SMO's energy payments to generators.

Applying this methodology to the costs allowed by the Regulatory Authorities for the initial tariff period results in a variable charge of €0.628 / MWh to suppliers, bringing in total revenue of €22.0m through the variable charge.

It has been decided that the fixed charges to generators and suppliers will recover the remaining 5% of all costs between them in a 95:5 ratio. That is, the revenue recovered through the fixed charges will be weighted to ensure that for each generator Unit registered the revenue recovered through the fixed MO charge to generators will be 19 times the revenue recovered through the fixed MO charge to suppliers for each supplier Unit registered.

Furthermore the fixed market operator charge to generator Units will vary by MW of installed capacity. This is accommodated by the TSC which states that the fixed market operator charge to generator Units may be different for each generator Unit.

In summary, the Regulatory Authorities' decisions lead to:

- A variable MO charge of €0.628 / MWh for the initial tariff period;
- A total fixed MO charge to generator Units of €116 / MW installed capacity<sup>27</sup> for the initial tariff period; and,
- A total fixed MO charge to supplier Units of €543 / supplier Unit for the initial tariff period.

This allows the total revenue approved by the Regulatory Authorities for the SMO, €23.1m in mid-tariff period prices, to be recovered: €22.0m through the variable charge, €1.1m through the fixed charge to generators, and €0.012m through the fixed charge to suppliers.

As per the SMO revenue submission the fixed market operator charge will be billed on a monthly basis.

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<sup>27</sup> Changes relative to the consultation paper are due to updates provided by the SMO in relation to their forecast of all-island generation capacity and the number of generator and supplier Units in the market, and finalisation of the allowed revenue.

As detailed in the paper that summarises the Regulatory Authorities response to comments receive on the consultation paper, demand side Units will be exempt from the fixed market operator charge to generator Units.

These decisions are sustainable, stable, unambiguous and predictable, and are in agreement with the regulatory principles outlined in Section 3.

The avoidance of barriers to entry, which could be caused by high fixed charges to generator and supplier units, is essential in maintaining a sustainable regulatory environment. In addition, the above decisions will allow the regulated business to finance its allowed operational costs, and any necessary capital expenditure, so that it can continue to operate in the future to the ultimate benefit of customers. A number of comments were received by the Regulatory Authorities in relation to the market operator charges and these are referred to in the regulatory response paper that is published in conjunction with this decision paper.

The above decisions also rule out the movement of cost recovery from fixed to variable charges (or vice versa), which is caused by some other options. This movement would cause unpredictability and instability in the tariffs, and conflicts with the principles outlined in Section 3.

This assumes that as per the SMO revenue submission, any income receive through accession or participation fees during the initial tariff period will be netted of the required allowed revenue for subsequent tariff periods.

Information on the treatment of accession fees during the pre Go-Live period has been published separately by the Regulatory Authorities<sup>26</sup>. That publication relates to exemptions from the payment of accession and participation fees for party/Units that are registered for market trial.