

# **Single Electricity Market**

**Disclosure of Information to Final Customers by Suppliers  
Proposed Decision Paper**

**22 February 2008**

**SEM-08-006**

## **Executive Summary**

Under Article 3(6) of Directive 2003/54/EC Member States are required to ensure that electricity suppliers specify in or with bills and in promotional materials made available to final customers the contribution of each energy source to the overall fuel mix of the supplier over the previous year. In addition, suppliers are required to provide at least a reference to existing sources of information regarding the environmental impact resulting from the electricity produced by the fuel mix of the supplier in question over the same period.

The Single Electricity Market Committee (the SEM Committee) has determined that disclosure of information to customers by suppliers in the All-Island Market is a SEM Committee matter within the meaning of the legislation<sup>1</sup>. The SEM Committee must determine how the above requirement can be met in the SEM.

In March 2007 the Regulatory Authorities published a consultation paper which set out available options for the calculation of the fuel mix of suppliers for disclosure purposes (AIP/SEM/07/46). Following review of comments received, and further consideration of the options by the SEM Committee, this paper sets out the proposed decision in relation to how the fuel mix disclosure and environmental impact information requirements will be implemented in the SEM.

### Proposed High Level Methodology for Calculation of Supplier Fuel Mix

The SEM Committee propose that calculation of fuel mix disclosure in the SEM will be broadly based on 'Option 3' as set out in AIP/SEM/07/46. Under this option certificates are issued for output generated from specified fuel types. Calculation of fuel mix will be based on evidence of the source of energy as follows:

- A.** Renewable Energy Guarantees of Origin (REGOs) for renewable energy sourced electricity generated on the island and traded in the SEM pool.
- B.** Generator Declarations for non renewable energy sourced electricity generated on the island and traded in the SEM pool (see Appendix B for an example).
- C.** REGOs plus bilateral contracts for renewable energy generated on the island and traded outside of the SEM pool.

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<sup>1</sup> The SEM Committee is established in Ireland and Northern Ireland by virtue of section 8A of the Electricity Regulation Act 1999 as inserted by section 4 of the Electricity Regulation (Amendment) Act 2007, and Article 6(1) of the Electricity (Single Wholesale Market) (Northern Ireland) Order 2007 respectively. The SEM Committee is a Committee of both CER and NIAUR (together the Regulatory Authorities) that, on behalf of the Regulatory Authorities, takes any decision as to the exercise of a relevant function of CER or NIAUR in relation to an SEM matter.

- D.** Generator Declarations plus bilateral contracts for non renewable energy generated on the island and traded outside of the SEM pool.
- E.** REGOs plus Relevant Arrangements, where in place, for renewable energy that is generated in Northern Ireland.
- F.** REGOs/Generator Declarations for renewable/non renewable energy imported to the island of Ireland, accompanied by assurances that the REGO/generator declaration has not and will not be used as evidence of fuel mix for disclosure purposes outside of the island of Ireland.
- G.** A residual fuel mix will be applied to energy imported to the island of Ireland that is not covered by any of the above evidence (A-F). This residual fuel mix for imports will be calculated on the basis of the residual fuel mix of Great Britain.
- H.** A residual fuel mix for the island of Ireland will be applied to any remaining energy that is not covered by the above evidence (A-G).

#### Proposal for Environmental Impact Information

The proposals regarding presentation of disclosure information, provision of environmental impact information and the approach in relation to promotional materials are consistent with those currently used in Ireland and in Great Britain, examples of which can be viewed in Appendix A.

Comments are requested from interested parties on the matters raised in this paper, specifically the SEM Committee's proposed decisions. Comments on this paper should be submitted, preferably by email, by 5.00pm on the 24<sup>th</sup> of March 2008. Comments should be submitted to both:

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## 1. Background

Article 3(6) of EU Directive 2003/54/EC requires Member States to “ensure that electricity suppliers specify in or with bills and in promotional materials made available to final customers:

- (a) the contribution of each energy source to the overall fuel mix of the supplier over the preceding year;
- (b) at least the reference to existing reference sources, such as web-pages, where information on the environmental impact, in terms of at least emissions of CO<sub>2</sub> and the radioactive waste resulting from the electricity produced by the overall fuel mix of the supplier over the preceding year is publicly available.

*With respect to electricity obtained via an electricity exchange or imported from an undertaking situated outside the Community, aggregate figures provided by the exchange or the undertaking in question over the preceding year may be used.*

*Member States shall take the necessary steps to ensure that the information provided by suppliers to their customers pursuant to this Article is reliable.”*

On 13<sup>th</sup> March 2007 the CER and NIAUR, the Regulatory Authorities, issued a consultation paper (AIP/SEM/07/46) setting out three high level options for the implementation of the fuel mix disclosure requirement in accordance with Article 3(6) of Directive 2003/54/EC which the Regulatory Authorities had considered.

In summary, the three options examined were as follows:

### Option 1 – Average Pool Fuel Mix

Under this option, the fuel mix for the pool is calculated based on generator output for generation that is seen in the trading systems. If required, suppliers could request that energy traded outside of the pool as provided for in the SEM Trading and Settlement Code be added to their fuel mix.

### Option 2 – Financial Contracts

Under this option, financial contracts (known as Contracts for Difference or CFDs) are accepted as a proxy for proof of purchase of energy produced from defined fuel sources. Here, evidence that a supplier has entered into a financial contract(s) is produced and the supplier’s fuel mix calculated on that basis. The average pool fuel mix would still be calculated and would be attributed to unhedged purchases from the pool by suppliers. Under this option suppliers would be required to submit evidence regarding financial contracts that supports the use of certain fuel mixes for energy purchases associated with those contracts, to the satisfaction of the Regulatory Authorities. In this regard, suppliers must provide satisfactory evidence that the generator that is counterparty to the contract has generated at least the relevant volumes.

Evidence regarding purchases outside of the pool as permitted under the SEM Trading and Settlement Code can be submitted by suppliers to the Regulatory Authorities for approval for addition to their fuel mixes.

### Option 3 – Certification of Fuel Types

Under this option certificates are issued for output generated from specified fuel types. This would extend to all relevant fuel types including non renewable sources such as gas and coal. Such certificates would have to be generated for all power traded in the pool. Purchases outside the pool as permitted under the SEM Trading and Settlement Code could be submitted by suppliers to the RAs for approval for addition to their fuel mix.

At the time of the March consultation the Regulatory Authorities did not favour the adoption of option one on the basis that it may be regarded as inconsistent with the spirit of the Directive given that it does not facilitate suppliers who wish to differentiate their offerings to customers on the basis of fuel type. Option 3 was deemed to potentially impose a relatively larger administrative burden than the other options and would require legislative change to implement. The Regulatory Authorities, having considered these issues, identified option two above as the recommended approach to support implementation of disclosure in the SEM and requested comments from interested parties on these issues.

Having considered the responses, investigated the options further, and taken account of experience in other countries (such as Great Britain) the SEM Committee consider an amended version of option three to be appropriate. In view of this respondents and all interested parties are now given a second opportunity to comment.

The Regulatory Authorities received responses to the consultation (AIP/SEM/07/46) from six interested parties, as follows:

- Airtricity
- Bord Gáis Energy Supply
- ESB Customer Supply
- ESB International
- Northern Ireland Electricity
- Viridian Power and Energy

These responses are available alongside this paper on the All Island Project website.<sup>2</sup>

Section 2 of this paper summarises comments received and the Regulatory Authorities responses to these comments. Section 3 sets out the SEM Committee's proposed decision.

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<sup>2</sup> <http://www.allislandproject.org>

## **2. Respondents' Comments**

The Regulatory Authorities received six comments on the options outlined in the consultation paper on implementation of disclosure in the SEM (AIP/SEM/07/46). This section summarises the comments received from interested parties and the Regulatory Authorities responses to those comments.

### **2.1 Option 1 Average Pool Fuel Mix**

Under this option, as set out in Section 4.1.1 of AIP/SEM/07/46, the fuel mix for the pool is calculated based on generator output for generation that is seen in the trading systems. If required, suppliers could request that energy traded outside of the pool as provided for in the SEM Trading and Settlement Code be added to their fuel mix.

#### **2.1.1 Respondents' Comments**

Two respondents favoured option 1 as their preferred option for the implementation of disclosure of fuel mix associated with energy supplied to final customers. Both respondents favoured option 1 on the basis that it allows for straightforward implementation, minimal implementation costs and a short time line for its introduction. Both respondents dispute the Regulatory Authorities contention in AIP/SEM/07/46 that as option 1 does not facilitate suppliers in differentiating their offerings on the basis of fuel type of energy supplied it may not be consistent with the spirit of the Directive<sup>3</sup>. On the contrary, said respondents argued that option 1 is the option which is most consistent with the wording contained in Article 3(6) of EU Directive 2003/54/EC, given the references therein to the use of aggregate figures in relation to electricity obtained via an electricity exchange for disclosure purposes<sup>4</sup>. One respondent further disputed the Regulatory Authorities reasoning in relation to option 1 on the grounds that the pool market conflicts with the operation of a Renewable Obligation Certificate (ROC) scheme insofar as all suppliers will be deemed to have purchased the pool percentage of renewable energy. The respondent in question outlined that the ROC scheme operates in Northern Ireland only.

Three respondents argued against the introduction of option 1 on the basis that it does not facilitate suppliers who wish to market themselves as 'green' or 'low carbon' as all suppliers would have a similar fuel mix. These respondents believe that option 1 would not deliver the obligations of the Directive. The view was expressed by a respondent that option 1 does not allow consumers to make a non-price comparison of suppliers. The respondent further outlined that option 1 goes against the spirit of the Directive which was established to

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<sup>3</sup> EU Directive 2003/54/EC

<sup>4</sup> Article 3(6) of EU Directive 2003/54/EC states: 'With respect to electricity obtained via an electricity exchange or imported from an undertaking situated outside the Community, aggregate figures provided by the exchange or the undertaking in question over the preceding year may be used'

encourage suppliers to make best efforts to disclose the source of their energy to customers.

### **2.1.2 Regulatory Authority's Position**

The Regulatory Authorities agree with the respondent's contention that option 1 offers a favourable approach from an ease of implementation viewpoint. However, the Regulatory Authorities agree that option 1 fails to facilitate suppliers who wish to market themselves as 'green' or 'low carbon' as all suppliers would have a similar fuel mix under this approach. The Regulatory Authorities further agree with the respondent's argument that option 1 goes against the spirit of the Directive. The Regulatory Authorities note here the objectives of the disclosure requirement as set out by the Commission of the European Commission (the "EU Commission") which include enabling consumers to make informed choices regarding suppliers based on the generation characteristics of the electricity they supply.<sup>5</sup>

On the above basis, option 1 is rejected as the method of measuring disclosure in the SEM. However, the Regulatory Authorities consider that it will be necessary, under any implementation option chosen, to calculate a residual pool mix for energy not supported by the required evidence to distinguish it as originating from a particular fuel source.

## **2.2 Option 2 Financial Contracts**

Under option 2 financial contracts (CFDs) would be accepted as a proxy for proof of purchase of energy produced from defined fuel sources. Here, evidence that a supplier has entered into a financial contract or contracts is produced and the supplier's fuel mix calculated on that basis. The residual, average pool fuel mix would still be calculated and would be attributed to unhedged purchases from the pool by suppliers.

### **2.2.1 Respondents' Comments**

Three respondents favoured option 2 as their preferred option for the implementation of disclosure of fuel mix associated with energy supplied to final customers. All three respondents supported option 2 on the premise that it facilitates suppliers in differentiating their offerings to customers on the basis of fuel type of energy supplied. One respondent also favoured option 2 due to the fact that it would render certification requirements unnecessary and thus administration costs would be minimised. That respondent argued that under option 2, a supplier should be allowed to include affiliated generation interests (where applicable) in their final fuel mix calculation even if these interests are not represented by a specific financial contract. Another respondent broadly agreed that option 2 represents the most appropriate option for disclosure in the SEM. However, that respondent highlighted a number of detailed points

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<sup>5</sup> Note of the EU Commission on Directives 2003/54 and 2003/55 on the Internal Market in Electricity and Natural Gas (*Non Binding*) entitled 'Labelling provision in Directive 2003/54/EC'



that would need to be considered by the Regulatory Authorities before option 2 could be implemented. Among the main points raised by the respondent was that a satisfactory and practical method of deriving fuel mix from financial contracts would be required and that all those involved (financial contract providers, system operator, generators etc) should be required to provide timely and accurate information to enable suppliers to fulfil the disclosure requirement.

Two respondents rejected option 2 as an option for the implementation of disclosure of fuel mix associated with energy supplied to final customers. One respondent highlighted a key failure of the approach proposed in option 2 is that generation is needed to back up a financial contract. Said respondent argues that such contracts will be untrackable as they can be traded, split and amalgamated with other contracts numerous times before final settlement. The respondent argued further that multiple trading will therefore obscure any proof of the physical origin of the power. Another respondent rejected option 2 on broadly the same basis. The respondent highlighted the significant difficulties involved for suppliers in providing evidence that the generator who is the counterparty to the contract has generated the relevant volumes.

### **2.2.2 Regulatory Authority's Position**

The Regulatory Authorities agree that option 2 could facilitate suppliers in differentiating their offerings to customers on the basis of fuel type of energy supplied. However, post receipt of responses to the consultation paper the Regulatory Authorities have further investigated the detailed operation of option 2 and consider that it may be extremely difficult to implement in practice due to the complex and varying nature of the contracts that may be put in place by participants in the SEM. Under such a system, each contract must be assigned a specific fuel mix, or individual fuel type and contractual complexity is not diminished by the existence of little standardisation in the 'shape' and time period of most financial contracts. In addition, the above may result in higher administrative costs than originally perceived in relation to this option. Therefore, the RA's have decided against using option 2 as a method of measuring disclosure in the SEM.

### **2.3 Option 3 Certification of Fuel Types**

Under option 3 certificates would be issued for output generated from specified fuel types. In the consultation paper it was stated that this would extend to all relevant fuel types including non renewable sources such as gas, oil and coal for all power traded in the pool. Purchases outside the pool as permitted under the SEM Trading and Settlement Code could be submitted by suppliers to the Regulatory Authorities for approval for addition to their fuel mix. The main challenges identified in the consultation paper regarding this option were that the administrative process required by this option may be both burdensome and costly.

### **2.3.1 Respondents' Comments**

One respondent favoured option 3 as their preferred option for the implementation of disclosure of fuel mix associated with energy supplied to final customers. The respondent argued that the certificate of fuel type should take the form of a guarantee of origin (GoO) and that a GoO provides the most appropriate way of tracking energy. The respondent outlined that GoOs are simply proof of where the energy has originated and are the ideal mechanism to prove the source of energy supplied to customers. The respondent also clarified that they were not asking that GoOs be used as a basis for calculation of renewable targets, but only to recognise them for fuel disclosure purposes. The respondent considered that the use of GoOs is consistent with the standards of the E-track project<sup>6</sup> which aims to create robust standards for energy tracking across Europe. The respondent considers this method to be superior to the more complex task of tracking of energy by underlying financial contract. The respondent disputes whether legislation would need to be passed to support the implementation of a GoO system on the basis that such a system is an EU obligation. The respondent further disputes that legislation is necessary as GoO certificates would have no monetary value and would merely act as a fuel tracking mechanism.

Respondents rejecting option 3 argued that its introduction would require the establishment of a significant administrative process to issue, track, and redeem certificates. Furthermore, option 3 would require legislation to be enacted to support its introduction.

### **2.3.2 Regulatory Authority's Position**

The Regulatory Authorities agree with the respondent's assertion that an approach similar to option 3 offers an appropriate form of tracking energy and offers a feasible method of tracking energy in the SEM for disclosure purposes.

The Regulatory Authorities also note that in Great Britain Renewable Energy Guarantee of Origin (REGOs) are accepted as proof of fuel source for the purpose of calculating fuel mix for disclosure to final customers. Generator Declarations are used as evidence of fuel source for non renewable generation.<sup>7</sup> The Regulatory Authorities consider that this approach represents a more pragmatic and less burdensome approach to the disclosure issue than option 3 as described in the March consultation paper where certification of all fuel types was suggested. In addition, this approach would utilise REGOs which are in any event provided for under Article 5 of Directive 2001/77/EC<sup>8</sup>.

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<sup>6</sup> "A European Tracking System for Electricity (E-TRACK)", [http://www.e-track-project.org/E-TRACK\\_Standard\\_v2.pdf](http://www.e-track-project.org/E-TRACK_Standard_v2.pdf)

<sup>7</sup> Fuel Mix Disclosure by Electricity Suppliers in Great Britain: Guidelines, December 2005

<sup>8</sup> Note on 23<sup>rd</sup> January 2008 the EU unveiled a package of proposals designed to tackle climate change and promote the use of renewable sourced energy. Article 6 of the draft directive further provides for guarantees of origin. [http://ec.europa.eu/energy/climate\\_actions/doc/2008\\_res\\_directive\\_en.pdf](http://ec.europa.eu/energy/climate_actions/doc/2008_res_directive_en.pdf)

In Northern Ireland “Relevant Arrangements” as defined in The Renewables Obligation (Amendment) Order (Northern Ireland) 2007 are accepted as proof that certain fuel types have been consumed in Northern Ireland. In order to maintain the integrity of this proof, NIAUR consider that any system put in place in relation to fuel mix disclosure should be consistent with these Relevant Arrangements. That is to say it would be inconsistent for a generator to declare (for the purposes of the Renewables Obligation) that the electricity was consumed by party A, but not reflect this in party A’s fuel mix disclosure statement. Therefore in Northern Ireland, for generators trading through the pool, the “Relevant Arrangement” will be the means by which REGOs are passed from accredited generators to suppliers. Where generators are not trading through the pool REGOs should be passed via the normal bilateral arrangements.

In Ireland no legislation has been enacted to date to establish guarantees of origin. The CER has had discussions with the DCENR in relation to the necessity for legislation in the context of a pool market. The requirements of Directive 2001/77/EC have been met to date within the context of a bilateral market, supply licences and the associated balancing regime that had been in place pre-SEM. It is considered that the move to a pool market and the implementation of guarantees of origin necessitate legislation in this regard.

## **2.4 Disclosure of Environmental Impact Information**

Article 3(6) of EU Directive 2003/54/EC requires Member States to ensure that electricity suppliers specify in or on bills and in promotional materials made available to final customers certain information regarding the environmental impact resulting from the overall fuel mix of the supplier in the preceding year or reference to existing sources where that information is available.

### **2.4.1 Respondents' Comments**

There was general agreement amongst all respondents to the Regulatory Authorities proposal to adopt a similar approach to the disclosure of environmental impact information as that used in Ireland and Great Britain. One respondent believed that the environmental impact approach should mirror the approach currently adopted in Ireland as this works well and in a simple fashion. This approach is outlined in Appendix C.

Another respondent requested that the information labelling approach for suppliers be standardised for comparative purposes. The respondent further suggested that consumer and environmental groups should be consulted to ensure that the information provided helps to meet its overall objective of raising awareness of the environmental impact of energy use.

### **2.4.2 Regulatory Authority's Position**

The Regulatory Authorities welcome the fact that there was general agreement with the recommended approach for the disclosure of environmental impact information set out in AIP/SEM/07/46. The Regulatory Authorities agree with the respondent's assertion that the process currently in place in Ireland works well and is easily understood.

The Regulatory Authorities consider that a standardised approach to the provision of information to final customers regarding both fuel type and environmental impacts is desirable. This allows for ease of comparison by customers of supplier offerings and is consistent with current practice in Ireland in relation to this matter.

The Regulatory Authorities note that the approach to arrive at a defined methodology for the calculation and provision of information to customers regarding fuel mix and associated environmental impacts is a consultative one which allows for the views of consumer and environmental groups to be taken on board in advance of reaching a final decision.

### **3. SEM Committee's Proposed Decision**

#### **3.1 Background**

Having reviewed the comments received to the consultation paper (AIP/SEM/07/46) and considered the issues further, both internally and with the relevant government Departments, the SEM Committee propose that calculation of fuel mix disclosure in the SEM will be broadly based on 'Option 3' as set out in AIP/SEM/07/46. In reaching this position the SEM Committee have taken account of their objectives as stated in the consultation paper. Section 4.1 of AIP/SEM/07/46 stated that the methodology put in place should:

- Take account of the differing definitions of renewables that are in place in legislation north and south should this difference be maintained;
- Ensure compliance with governing legislation;
- Facilitate ease of comparison by customers on the island of information provided by suppliers in accordance with the disclosure requirement;
- Be implemented in a manner that minimises costs to market participants and final customers;
- Be compatible with existing renewable support mechanisms in Ireland and Northern Ireland; and
- Be compatible with the other functions and duties of the Regulatory Authorities.

In arriving at this proposed decision the SEM Committee have been mindful of legislative requirements in relation to disclosure and other matters such as those pertaining to guarantees of origin for electricity generated from renewable energy sources and legal requirements relating to existing support mechanism for renewables in Ireland and Northern Ireland. Taking all of the above and the guidelines regarding implementation of Article 3(6) of Directive 2003/54/EC as issued by the EU Commission<sup>9</sup> into account, the SEM Committee is of the view that the proposed decision as set out below will facilitate the meeting of all stated requirements whilst operating within the intentions of the above Directive and Directive 2001/77/EC.

In this regard, the SEM Committee re-iterates the distinction between GoOs and exchangeable green certificates as expressed in Directive 2001/77/EC, the fact that GoOs do not of themselves imply a right to benefit from national support mechanisms and the absence of a requirement on Member States to recognize the purchase of a GoO from other Member states or the corresponding purchase of electricity as a contribution to the fulfillment of a national quota obligation.<sup>10</sup>

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<sup>9</sup> Note of EU Commission on Directives 2003/54 and 2003/55 on the Internal Market in Electricity and Natural Gas (Non Binding) entitled 'Labelling provision in Directive 2003/54/EC'

<sup>10</sup> Recitals (10) and (11), Directive 2001/77/EC

The SEM Committee is mindful of the requirement under Article 3(6) of Directive 2003/54/EC that all the necessary steps are taken to ensure that the information provided by suppliers to their customers pursuant to the fuel mix disclosure requirement is *reliable*. The EU Commission has stated that the objectives of Article 3(6) are to increase market transparency through the provision of easy access to relevant information, to provide customers with the relevant information regarding products purchased, to enable customers to make informed choices based on the generation characteristics of the electricity that they supply and to educate consumers and stimulate electricity generation that contributes to a secure and sustainable electricity system.<sup>11</sup> Given the above, the SEM Committee considers that the methodology for the calculation of the fuel mix and associated environmental impacts disclosed to customers should ensure that no double counting of generation attributes occurs and should incorporate a verification and audit where appropriate. In addition, the SEM Committee considers that in order to further protect consumers and ensure customer confidence in the fuel mix information disclosed to them, where a support accrues in relation to renewable and other generation, the fuel mix information provided to customers should be consistent with the terms and reporting requirements in relation to such support. Therefore, the SEM Committee deems it appropriate to incorporate the above principles and a verification process into the methodology for the calculation of the fuel mix and associated environmental impacts.

Furthermore, given the requirement to provide reliable information to customers and the clear distinction between disclosure requirements and national support mechanisms, for disclosure purposes, the SEM Committee proposes that the definition of ‘renewables’ employed is that set out in Directive 2001/77/EC as distinct from differing Member State definitions for other purposes, such as qualification for support mechanisms, be used here.

The proposals regarding presentation of disclosure information, provision of environmental impact information and the approach proposed in relation to promotional materials are consistent with those currently used in Ireland and in Great Britain. The above are considered appropriate in that they allow for ease of comparison of supplier offerings by customers on the island of Ireland, minimise cost impacts for suppliers currently providing such information in Ireland and result in an appropriate degree of regulatory supervision. The Regulatory Authorities will continue to monitor the provision of information to customers to ensure that the delivery of environmental impact information is effective.

The SEM Committee’s proposed decision regarding disclosure of fuel mix and associated environmental impacts by suppliers to final customers is set out in Section 3.2 below.

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<sup>11</sup>Note of EU Commission on Directives 2003/54 and 2003/55 on the Internal Market in Electricity and Natural Gas (Non Binding) entitled ‘Labelling provision in Directive 2003/54/EC’

## **3.2 Proposed Decision**

### **3.2.1 High Level Calculation Methodology for Fuel Mix Disclosure**

Calculation of fuel mix for disclosure to final customers for a given Disclosure Period as required under Article 3(6) of Directive 2003/54/EC will be based on evidence of the source of energy as follows:

- A.** Renewable Energy Guarantees of Origin (REGOs) for renewable energy sourced electricity generated on the island and traded in the SEM pool.
- B.** Generator Declarations for non renewable energy sourced electricity generated on the island and traded in the SEM pool (please refer to Appendix B for the proposed format of a Generator Declaration).
- C.** REGOs plus bilateral contracts for renewable energy generated on the island and traded outside of the SEM pool.
- D.** Generator Declarations plus bilateral contracts for non renewable energy generated on the island and traded outside of the SEM pool.
- E.** REGOs plus Relevant Arrangements, where in place, for renewable energy that is generated in Northern Ireland<sup>12</sup>.
- F.** REGOs/Generator Declarations for renewable/non renewable energy imported to the island of Ireland, accompanied by assurances that the REGO/generator declaration has not and will not be used as evidence of fuel mix for disclosure purposes outside of the island of Ireland.
- G.** A residual fuel mix will be applied to energy imported to the island of Ireland that is not covered by any of the above evidence (A-F). This residual fuel mix for imports will be calculated on the basis of the residual fuel mix of the deemed source of the imports, in this case, Great Britain.
- H.** A residual fuel mix for the island of Ireland will be applied to any remaining energy that is not covered by the above evidence (A-G).

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<sup>12</sup> Note where a Relevant Arrangement or similar agreement is in place for the purposes of determining consumption in Northern Ireland, and a REGO has been obtained for the same generation, in order to avoid double counting the REGOs must follow the relevant arrangement.

### **3.2.2 Compliance Cycle**

1. The Disclosure Period will run from January 1<sup>st</sup> to December 31<sup>st</sup> each year, i.e. a calendar year. The first Disclosure Period will commence on January 1<sup>st</sup> 2008. Information regarding this first Disclosure Period must be made available to customers in the subsequent year.
2. Suppliers will be required to provide customers with information on fuel sources and associated environmental impacts in or on bills within two months of the relevant information regarding a given Disclosure Period being made available to them. This will allow suppliers time to use up existing bill stocks and to revise bills to reflect revised disclosure information.
3. Suppliers that have not supplied electricity to customers for the full disclosure period (the applicable period) in question are not required to disclose a fuel mix specific to their offerings to final customers. Here, such suppliers will be obliged to put the disclosure label on all bills to final customers, in line with the requirements set out in this paper, and shall include percentages by energy source for the average fuel mix for Ireland. Zero percent shall be represented for each energy source with regard to the electricity supplied by the supplier in question.

### **3.2.3 Approval/Validation**

1. The Regulatory Authorities shall approve the inputs to the calculation of the fuel mix and associated environmental impacts of suppliers.
2. For energy that is entitled to a Renewable Obligation Certificate (ROC) in accordance with The Renewables Obligation Order (Northern Ireland) 2007, or a LEC in accordance with the Finance Act (2000) evidence presented as per Section 3.2.1 above must align with the requirement that such energy be consumed in Northern Ireland. Where evidence to the contrary is presented, entitlement to a ROC will be foregone.
3. For energy that is supported by the Public Service Obligation (PSO) in Ireland evidence presented as per Section 3.2.1 above must align with the requirement that such energy be consumed in Ireland.
4. In order to prevent double counting of generation attributes, only one of either a REGO or a generator declaration will be accepted in relation to generation output.



### **3.2.4 Enforcement**

1. Suppliers, under the terms of their Supply Licence, will be required to provide fuel mix information to final customers in accordance with the SEM Committee's decision(s) on this matter.
2. Suppliers that have not supplied electricity to customers for a full Disclosure Period are not required to disclose a fuel mix for the energy supplied by them to final customers. In such circumstances, suppliers will be obliged to put the disclosure label on all bills to final customers, in line with the requirements set out in this paper, and shall include percentages by energy source for the average fuel mix for Ireland. Zero percent shall be represented for each energy source with regard to the electricity supplied by the supplier in question.
3. The methodology for the calculation of the fuel mix and associated procedures and processes regarding provision and approval of required inputs and evidence will be included in formal guidelines by the Regulatory Authorities.
4. Prior to the completion of the modifications to the Supply Licence and the publication of formal guidelines by the Regulatory Authorities, suppliers in Ireland must provide accurate information (and in the required format) in accordance with any directions issued by the Commission under Regulation 25 of S.I. No. 60 of 2005.
5. The aggregate amount of power disclosed to customers in any category in any period cannot exceed the amount of power generated<sup>13</sup> by that technology in that period. In the event of any disparity arising between aggregate production by technology and aggregate sales by technology emphasis will be placed on the evidence of each generator<sup>14</sup> on the distribution of its power to one or more suppliers. It is a matter for suppliers therefore in the case of any agreements with generators to ensure the agreement is satisfactory on the sale of the power and all associated attributes.

### **3.2.5 Environmental Impact Information**

1. In order to determine the applicable environmental impact data, CO<sub>2</sub> emission factors will be provided to suppliers based on data obtained from the Environmental Protection Agency (the EPA) in Ireland and from DEFRA in Northern Ireland<sup>15</sup> and from generators.

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<sup>13</sup> Adjusted for imports and exports.

<sup>14</sup> Including where appropriate importers and exporters.

<sup>15</sup> <http://www.defra.gov.uk/environment/business/envrp/pdf/conversion-factors.pdf>

2. Suppliers will multiply their fuel disclosure percentage per energy source by the associated CO<sub>2</sub> emission factor, as provided to them, to give the required information, i.e. CO<sub>2</sub> emissions in g/kWh, by energy source.
3. This information will be updated, with respect to the relevant periods, by suppliers in each subsequent year on the 'Disclosure Date'.
4. The publication of fuel mix and environmental impact information on either the front or back of bills must be concluded within two months from the date on which the required information is made available to suppliers.

### **3.2.6 Promotional Materials**

1. Promotional material is material handed out or sent directly to customers, excluding newspaper, magazine, bill-board and television advertisements. It includes welcome packs for new customers, materials provided by doorstep sellers seeking to attract new customers and material sent to households encouraging them to sign up to a supplier.
2. Information provided by suppliers on promotional materials regarding fuel mix and associated environmental impacts should use the same basic format as that required to be made available in or with bills to final customers. References to such information provided on promotional material should reference information provided in this format also.
3. This requirement will be enforced under licence condition and will be included in the forthcoming review of Supply Licence conditions.
4. The Regulatory Authorities will adopt a proportionate approach to enforcement of this matter.

### **3.2.7 Presentation**

1. The form and detail of communications to customers regarding fuel sources and environmental impacts will be subject to the prior approval by the Regulatory Authorities. The above information must be provided by all suppliers in the format set out in this paper and must be supplied on either the front or back of *all* bills to customers. Where this information is provided on the back of bills to customers, clear reference must be made to this on the front of all such bills. The form and detail of such will be subject to approval by the Regulatory Authorities, prior to its issue to final customers given the timelines specified in this document.
2. The default label format for presentation of fuel mix and associated environmental information to final customers is set out in Figure 1, Appendix A. This includes the average fuel mix for the All Island Market

and that of the supplier for comparative purposes, and information regarding CO<sub>2</sub> emissions and radioactive waste associated with each of the above.

3. Where a supplier wishes to further sub-divide a fuel category, this may be done provided that a total percentage is included for each fuel category that the Regulatory Authorities require to be included in or on bills sent to final customers. The appropriate label format is set out in Figure 3, Appendix A.
4. Where a supplier wishes to differentiate the fuel mix of energy supplied to a specific customer (e.g. customer A may require 100% renewable sourced electricity while customer B may wish to be supplied by the average fuel mix), this may be included in a separate column in the fuel mix disclosure table in addition to the overall fuel mix of that supplier provided that the total amount of power supplied for each fuel category over all customers balances for the supplier overall. To prevent double counting of fuel categories the figures will be audited. The appropriate label format is set out in Figure 2, Appendix A.
5. Examples of categories of energy sources that may be used for the purpose of fuel mix disclosure are coal, gas, peat, renewables, CHP, heavy fuel oil, distillate oil and other. Following the calculation of the fuel mix disclosure information and provision of this to the Regulatory Authorities, the Regulatory Authorities will determine what energy sources should be specified and what sources may be listed as 'Other' due to the insignificant nature of the percentage contribution to the fuel mix for the calendar year in question.
6. For consistency purposes, and in line with the EU Commission guidelines on this matter, the definition of 'renewable energy sources' set out in Directive 2001/77/EC shall apply for disclosure purposes.
7. The Regulatory Authorities will keep the provision of effective information to customers under review.

### **3.3 Associated Issues**

The SEM Committee notes that the necessary legal framework to support the implementation of the disclosure requirement under the SEM must be put in place. This will include the modification of supply licences in both jurisdictions. It may also include a statutory basis for Guarantee of Origin in Irish law.

The CER notes the associated issue of the necessity to continue to provide for the separate licensing of green and CHP suppliers under the Electricity Regulation Act 1999. Heretofore "green suppliers" were permitted to balance green sales and procurement over a reasonable time. A question arises whether the full implementation of the fuel disclosure requirement will eliminate this

regime. This matter was consulted upon previously<sup>16</sup> and has been discussed with the DCENR.

Finally, it is necessary to consider the most appropriate body to calculate the disclosure figures annually. This will be influenced by where the legal responsibility lies in relation to both disclosure and GoOs and the need to minimise administration costs.

### **3.4 Next Steps**

Following receipt of comments by the 24<sup>th</sup> of March 2008, the SEM Committee will issue a final decision on this matter in April 2008. It will then be necessary to progress the implementation of the decision. This will include drafting and publication of formal guidelines for suppliers on this matter. A timetable for the implementation of the final decision will be published with that decision.

The Regulatory Authorities will continue to progress the legislative and licence amendments as referred to above. Licence amendments will be made following the relevant process as set out in extant legislation in Ireland and Northern Ireland. Legislative changes are a matter for government and the Regulatory Authorities will continue to progress this matter.

Finally, following discussions with the relevant bodies a decision will be made as to which organization is best placed to carry out the administration of the process.

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<sup>16</sup> CER/06/188 Consultation Paper: 'Removal of separate green and CHP supply licence requirement'

## Appendix A

**Figure 1: Default Presentation of Information**

<b>Supplier Z Disclosure Label</b>		
<b>Applicable Period: January 2008 to December 2008</b>		
<b>Electricity supplied has been sourced from the following fuels:</b>	<b>% of total</b>	
	<b>Electricity Supplied by Supplier Z</b>	<b>Average for All Island Market (for comparison)</b>
Coal	X %	X %
Natural Gas	X %	X %
Nuclear	X %	X %
Renewable	X %	X %
CHP	X%	X%
Pumped Storage	X %	X %
Peat	X %	X %
Distillate Oil	X %	X %
Heavy Fuel Oil	X %	X %
<b>Total</b>	100 %	100 %
<b>Environmental Impact</b>		
CO <sub>2</sub> Emissions	X g per kWh	X g per kWh
Radioactive Waste	X g per kWh	X g per kWh
For more information on the environmental impact of your electricity supply visit <a href="http://www.SupplierZ.ie">www.SupplierZ.ie</a> or call 00XXX X XXX XXXX		

**Figure 2: Presentation of Information with Individual Product Information**

<b>Supplier Z Disclosure Label</b>			
<b>Applicable Period: January 2008 to December 2008</b>			
<b>Electricity supplied has been sourced from the following fuels:</b>	<b>% of total</b>		
	<b>Your Electricity</b>	<b>Electricity Supplied by Supplier Z</b>	<b>Average for All Island Market (for comparison)</b>
Coal	X%	X%	X %
Natural Gas	X%	X%	X %
Nuclear	X%	X%	X %
Renewable	X%	X%	X %
CHP	X%	X%	X %
Pumped Storage	X%	X%	X%
Peat	X%	X%	X%
Distillate Oil	X%	X%	X%
Heavy Fuel Oil	X%	X%	X%
<b>Total</b>	100%	100%	100 %
<b>Environmental Impact</b>			
CO <sub>2</sub> Emissions	X g per kWh	X g per kWh	X g per kWh
Radioactive Waste	X g per kWh	X g per kWh	X g per kWh
For more information on the environmental impact of your electricity supply visit <a href="http://www.SupplierZ.ie">www.SupplierZ.ie</a> or call 00XXX X XXX XXXX			

**Figure 3: Presentation of Information with Additional Fuel Sub Categories**

<b>Supplier Z Disclosure Label</b>		
<b>Applicable Period: January 2008 to December 2008</b>		
<b>Electricity supplied has been sourced from the following fuels:</b>	<b>% of total</b>	
	<b>Electricity Supplied by Supplier Z</b>	<b>Average for All Island (for comparison)</b>
Coal	X %	X %
Natural Gas	X %	X %
Nuclear	X %	X %
Renewable	X %	X %
Including:		
Wind	X%	
Hydro	X%	
Other	X%	
CHP	X %	X %
Pumped Storage	X %	f
Peat	X %	X %
Distillate Oil	X %	X %
Heavy Fuel Oil	X %	X %
<b>Total</b>	100 %	100 %
<b>Environmental Impact</b>		
CO <sub>2</sub> Emissions	X g per kWh	X g per kWh
Radioactive Waste	X g per kWh	X g per kWh
For more information on the environmental impact of your electricity supply visit <a href="http://www.SupplierZ.ie">www.SupplierZ.ie</a> or call 00XXX X XXX XXXX		

## Appendix B

**Figure 4: Example of Generator Declaration**

<b>Generator Declaration</b>														
<b>Fuel Mix Disclosure</b>														
(A) Name of generating station:														
(B) Location of generating station:														
(C) Supply licensee to which this declaration relates:														
(D) This generator declaration relates to the disclosure period:														
(E) Amount of electricity covered by this declaration:		MWh												
(F) Fuel or fuels used to generate electricity:														
(G) For multi-fuel stations: The proportion of each fuel used according to the calorific value of the fuel used.														
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%; padding: 5px;">Fuel</th> <th style="width: 33%; padding: 5px;">Proportion (%)</th> <th style="width: 33%; padding: 5px;">MWh</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">(i)</td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">(ii)</td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">(iii)</td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> </tr> </tbody> </table>	Fuel	Proportion (%)	MWh	(i)			(ii)			(iii)			
Fuel	Proportion (%)	MWh												
(i)														
(ii)														
(iii)														
<p>I declare on behalf of (<i>the generating station operator</i>) that (<i>the generating station operator</i>) has not issued generator declarations or transferred guarantees of origin in relation to an amount of electricity produced by (<i>name of generating station</i>) for the disclosure period referred to above which in total exceeds the total output of (<i>name of generating station</i>) in that disclosure period.</p> <p>I declare that I am duly authorised to sign this form for and on behalf of (<i>the generating station operator</i>) and I confirm that the information provided is complete, true and accurate to the best of my knowledge and belief.</p>														
Signature:														
Block capitals:														
Position:														
Date:														



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## **Appendix C**

Extract from Disclosure of Information to Final Customers by Suppliers:  
Direction and Responses to Comments Received.

CER/06/117, 30th June 2006, Appendix 2

### ***Determination of Environmental Impact Data for Disclosure Purposes***

*In order to determine the environmental impact data associated with each energy source the following data with respect to the 2005 and 2006 calendar year for Ireland will be used:*

- A.** *The total mass of each fuel combusted in the production of electricity;*
- B.** *The total energy (in volume terms) produced from each energy source in question.*

*The total mass as above is then multiplied by the appropriate net calorific value (TJ/kt) as provided by the EPA. With regard to the net calorific value of Natural Gas, this is based on information obtained from Bord Gáis Éireann acting as the Network Operator, as approved by the Commission (please refer to the subsequent paragraph). The resulting figure is multiplied by the appropriate fuel factor (tCO<sub>2</sub>/TJ) as modified by the associated oxidation factor. The net calorific values, fuel factors and oxidation factors are those provided by the EPA (refer to Table 1).*

*Please note that Table 1 states that the net calorific value for Natural Gas is “Not required” and stipulates to use those values stated on “BGE Bills”. In this regard the Commission has decided, for the purpose of determining the required environmental impact information, that an average net calorific value for Natural Gas based on the combined mean daily average net calorific value associated with the entry points onto the Irish Transmission System, i.e. the Moffat and Inch Entry Points, weighted with respect to the volumetric flow of Natural Gas through these entry points will be used (refer to Table 2).*

*For coal, site specific values will be used for the net calorific value and the fuel factor as provided by the EPA, refer to Table 2. With regard to said energy production data such data will be with respect to the interface with the transmission system. All energy production data will be adjusted by an average weighted transmission loss factor (subject to the approval of the Commission). The resultant CO<sub>2</sub> emission factors (g/kWh) are to be determined by dividing the CO<sub>2</sub> emissions (in mass terms) associated with the production of electricity from each aforementioned energy sources by the respective loss factor adjusted energy data. These resultant CO<sub>2</sub> emission factors will be provided to suppliers by the SSA. Suppliers will multiply these CO<sub>2</sub> emission factors by their associated fuel mix disclosure percentages per fuel type as provided by the SSA. Suppliers shall summate the above values and include this value in the row entitled CO<sub>2</sub> emissions under the Environmental Impact section of the Disclosure Label to be placed on bills as well as any such information placed on promotional materials inline with the requirements as outlined in this Direction.*

**Table 1:**

Source:

<http://www.epa.ie/downloads/pubs/air/airemissions/name,12097,en.html>

Version 3- 26 October 2007

**Country Specific Net Calorific Values and CO<sub>2</sub> Emission Factors for use in the Annual Installation Emissions Report- 2007**

Subject to revision, the following factors may be used for calculating CO<sub>2</sub> emissions for **2007 only**. They are based on Ireland's Specific Emission Factors used in the 2005 National Inventory reported to UNFCCC, unless otherwise stated. Please note that this table may be updated at anytime as new information becomes available. The fuel factor does not include an oxidation factor; this must be applied separately (except for cement kilns where combustion is assumed to be practically 100%). The operator must ensure that the most recent version of this table is used when calculating CO<sub>2</sub> emissions for submission in the verified Annual Installation Emissions Report.

**Fuel Factors**

Fuel	t CO <sub>2</sub> /TJ
Coal	Site specific
Kerosene	71.76
HFO/RFO/MFO/LFO	76.38*
LPG	64.13**
Diesel / Gas Oil	73.67
Natural Gas	57.089
Pet Coke	100.8****
Crude Oil	Site specific
Peat	Site Specific

\*This factor also applies for MFO and LFO. Please note that GO and LFO are different fuels with different calorific values. Gas oil (BS 2869 Class D), LFO (BS 2869 Class E).

\*\*Source: Flogas Ireland Ltd. analysis data for commercial propane (LPG).

\*\*\* IPCC 1996.

**Net Calorific Values**

Fuel	NCV (TJ/kt)
Coal	Site specific
Kerosene	44.20
HFO/RFO/MFO/LFO	41.24*
LPG	46.68**
Diesel / Gas Oil	43.31
Natural Gas	Not required, use bills***
Pet Coke	31.00****
Crude Oil	Site specific
Peat	Site Specific

\*This factor also applies for MFO and LFO. Please note that GO and LFO are different fuels with different emission factors.

\*\*Source: Flogas Ireland Ltd. analysis data for commercial propane (LPG), 2004. Average density 507.05 kg/m<sup>3</sup> (g/l).

\*\*\*Note BGE Gas bills show kWh based on Gross Calorific Value - convert to Net Calorific Value by multiplying by 0.903 and then convert to TJ by multiplying by 3.6 x 10<sup>-6</sup>

\*\*\*\* Source IPCC 1996.

**Tier 1 Oxidation Factors to be applied for all combustion (except cement kilns)**

Fuel	Oxidation factor
Coal, Pet Coke, Peat	0.99
Kerosene, HFO/RFO, Diesel / Gas Oil, Crude Oil	0.995
LPG, Natural Gas	0.995

(From Annex II of the Monitoring and Reporting Guidelines, Commission Decision 2004/156/EC)

**Table 2:**

**Example of Net Calorific Values (NCV) for Natural Gas and Coal.**

<b>Fuel</b>	<b>NCV</b>
Natural Gas	0.000039 TJ/m <sup>3</sup>
Coal	25.5 TJ/ktonne