

# **Fuel Mix Disclosure by Suppliers in Great Britain**

## **Draft Guidelines**

June 2005      146/05

## Summary

On 18 March 2005 a new standard licence condition was inserted into electricity supply licences by The Electricity (Fuel Mix Disclosure) Regulations 2005 (SI No. 391). The Regulations implement Article 3(6) of Directive 2003/54/EC concerning common rules for the internal market in electricity (“the Directive”) and requires details of the mix of fuels used to produce the electricity supplied to be provided to customers by suppliers, along with certain environmental information.

In November 2004 Ofgem published a revised draft licence condition and summary of responses<sup>1</sup> to the consultation on the draft licence condition. In that document Ofgem undertook to produce non-binding guidance to encourage good practice by suppliers when complying with the licence condition. These guidelines are published here in draft form for comment.

The purpose of the guidelines is to help suppliers with the presentation of the fuel mix information in order to maximise consumers’ understanding of that information. They therefore propose some limited standardisation of certain aspects of fuel mix labelling to aid consumers when comparing the content of the fuel supplied by different suppliers. These guidelines are not intended to prevent suppliers from branding their bills or material or undertaking special initiatives to raise brand awareness.

These draft guidelines include information on requirements with respect to the calculation and presentation of the fuel mix and environmental information and sample labels and calculations.

**Ofgem invites views from interested parties on all aspects of the draft guidelines.** Final guidelines will be issued later in 2005.

It should be noted that the neither the draft guidelines nor the finalised guidelines impose any requirements on licensees. It is the relevant licence condition which places obligations on suppliers. The guidelines should be read in conjunction with, and should not be seen as a definitive interpretation of, that licence condition. Anyone in doubt about how they may be affected by the licence condition should seek independent legal advice.

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<sup>1</sup> *Fuel mix disclosure – summary of responses and revised draft licence condition* November 2004 256/04

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# 1. Introduction

- 1.1 On 18 March 2005 a new standard licence condition (30A) was inserted into electricity supply licences by The Electricity (Fuel Mix Disclosure) Regulations 2005 (SI No. 391). These Regulations implement the requirements of Article 3(6) of Directive 2003/54/EC of the European Parliament and of the Council concerning common rules for the internal market in electricity (“the Directive”). This obliges Member States to require each supplier to provide details to its customers of the mix of fuels used to produce the electricity it supplies and certain environmental information.
- 1.2 In November 2004 Ofgem published a revised draft licence condition and summary of responses<sup>2</sup> to the consultation on the draft licence condition in which Ofgem undertook to produce non-binding guidance to encourage good practice by suppliers when complying with the licence condition. These draft guidelines are published for comment.

## ***Purpose of this document***

- 1.3 This document sets out draft guidelines. The purpose of the guidelines is to help suppliers with the presentation of the fuel mix information in order to maximise consumers’ understanding of that information. They therefore propose limited standardisation of certain aspects of fuel mix labels to aid consumers when comparing the content of the electricity supplied by different suppliers. These guidelines are not intended to prevent suppliers from branding their bills or material or undertaking special initiatives to raise brand awareness.

## ***Main features***

- 1.4 These guidelines include information on:
- ◆ calculation;
  - ◆ presentation;
  - ◆ evidence, and

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<sup>2</sup> *Fuel mix disclosure – summary of responses and revised draft licence condition* November 2004 256/04  
Fuel mix disclosure by suppliers in Great Britain – draft guidelines  
Office of Gas and Electricity Markets

- ◆ auditing.

1.5 In this document the information required to be disclosed by suppliers is referred to as a 'label', whether it is on a bill or elsewhere.

### ***Impact Assessment***

1.6 This document does not include an impact assessment because it is purely advisory and does not impose any new regulatory obligations on suppliers.

### ***Next Steps***

1.7 Ofgem invites views from interested parties on all aspects of the draft guidelines. Final guidelines will be issued later in 2005.

### ***Handling of responses***

1.8 In accordance with its usual practice, Ofgem intends to make responses to this consultation available through the Ofgem library and website. Respondents may request that their response is kept confidential. Ofgem shall respect this subject to any obligations to disclose information e.g. under the Freedom of Information Act 2000<sup>3</sup> or the Environmental Information Regulations 2004. Respondents wishing their responses to remain confidential should clearly mark the documents to that effect and include the reasons for confidentiality.

### ***Timetable for consultation***

1.9 Views are requested by **21 July 2005** and should be sent, preferably by email, to:

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Ofgem  
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London  
SW1P 3GE

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<sup>3</sup> For more information go to [www.foi.gov.uk/understand.htm](http://www.foi.gov.uk/understand.htm)  
Fuel mix disclosure by suppliers in Great Britain – draft guidelines  
Office of Gas and Electricity Markets

- 1.10 If you have any queries on this document, please contact John Costyn on 020 7901 7166 or Alex Thorne (alex.thorne@ofgem.gov.uk) on 020 7901 7194 who will be pleased to help.

### ***Legal status***

- 1.11 The guidelines do not impose any requirements on licensees. They are intended to assist suppliers when compiling data and publishing fuel mix information and environmental information. They should be read in conjunction with, and should not be seen as a definitive interpretation of, the relevant licence condition. Anyone in doubt about how they may be affected by the licence condition should seek independent legal advice.

## 2. Information requirements

2.1 This chapter covers the compliance cycle for fuel mix disclosure as well as guidance on content and presentation of the relevant information. The draft guidelines are designed to help achieve the objective of transparency for consumers and to make comparisons between the electricity supplied by suppliers more effective. Paragraph numbers in brackets refer to the relevant paragraph in the licence condition.

### *Compliance cycle*

2.2 In summary the key dates in the compliance cycle are:

- ◆ Compliance year: **1 April-31 March**
- ◆ Date at which evidence (REGO/generator declaration) must be held: **1 July** following end of compliance year.
- ◆ Publication by DTI of Fuel Mix Disclosure Table to be used for calculation: **1 August** following end of compliance year.
- ◆ Date by which data must be updated: **1 October** following end of compliance year.

2.3 The first year in which information must be supplied to customers is from 1 October 2005 to 30 September 2006, referring to electricity supplied from 1 April 2004 to 31 March 2005.

2.4 Suppliers are required to publish fuel mix information at least annually to each customer that receives a bill or a statement, provided that the licensee has supplied electricity for a full disclosure period (paragraph 2).

2.5 The period to which this information relates is known as the disclosure period. This runs from 1 April to 31 March each year and the first period began on 1 April 2004 (paragraph 1).

2.6 The requirement to provide the information for the disclosure period takes effect from 1 October immediately following the end of the disclosure period and lasts for 12 months, unless paragraph 3 of the licence condition is relied on with

respect to promotional materials (see paragraph 2.7 below) (“the publication period”). This is to ensure that suppliers have time to calculate the necessary data (paragraph 2). On every subsequent 1 October information must be updated to reflect the fuel mix of electricity supplied in the immediately preceding disclosure period.

- 2.7 To allow for suppliers to plan stock levels of promotional material and to allow for some flexibility in the scheme, in the last two months of each publication period (i.e. August and September) suppliers are permitted to use information for the next disclosure period in any item of promotional material (paragraph 3).
- 2.8 The licence condition does not require that customers are provided with the fuel mix information more often than annually. This is consistent with the Directive and also aims to minimise costs to suppliers. Suppliers may provide information on a more regular basis if they wish (paragraph 2 (a)).

## ***Content***

### **Fuel Mix**

- 2.9 Fuel mix information must be provided to customers. The following categories of energy sources are to be used for the purposes of fuel mix disclosure (paragraph 1):
- ◆ coal;
  - ◆ natural gas;
  - ◆ nuclear;
  - ◆ renewable, and
  - ◆ other.
- 2.10 The definition of ‘renewable’ follows the definition in the European Renewables Directive<sup>4</sup> and includes all renewables, not just those subject to support, for example, through the Renewables Obligation (paragraph 1).

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<sup>4</sup> Directive 2001/77/EC of the European Parliament and of the Council

- 2.11 Suppliers are free to further sub-divide each category, for example to identify a particular technology or renewable source. This is discussed further in paragraph 2.24 below.
- 2.12 Fuel mix information should be presented in percentage terms to the nearest whole percentage point, even if it is zero. Contributions less than one percent, are to be shown to one decimal point (paragraph 5).

### ***Environmental information***

- 2.13 Suppliers should prepare and make available information on environmental impacts of the electricity supplied in the disclosure period. Information should include (paragraph 11):
- ◆ CO<sub>2</sub> emissions (in grams of carbon dioxide per kilowatt hour), and
  - ◆ radioactive waste generated (in grams per kilowatt hour).
- 2.14 The method for calculating the environmental impact is set out in the licence condition at paragraph 11. It includes the use of standardised emission factors provided by the DTI in the fuel mix disclosure data table. Further to consultation with stakeholders, the DTI has advised that the measure to be used for radioactive waste is to be “fuel burnt in the reactor (to be subsequently discharged as spent fuel)”. This is to be based on information provided by generators and averaged across all technologies.
- 2.15 Information on the environmental impact of electricity supplied in the disclosure period must appear on promotional materials and must be supplied to customers. While greatest transparency will be achieved where the information is provided directly on or with bills in the case of customers, the supplier can provide a reference source such as a web page on customers’ bills or accompanying materials. Equally, reference to a reference source can be made on promotional materials. If a reference source is detailed rather than the information itself, the detail of that source must be clear and it must be clear that in following up on the reference, information on the environmental impact of the electricity supplied by the particular supplier will be found (paragraph 6).

- 2.16 It is also open to suppliers to provide a wider range of environmental information (e.g. emissions of sulphur dioxide or other pollutants).

### **Presentation**

- 2.17 In order to minimise costs for suppliers, the licence condition does not specify any particular way of presenting the information. However, Ofgem suggests as a minimum requirement that suppliers provide the required information in table format. Suppliers could provide the information in other formats in addition to the table, for instance, pie charts. See Appendix 3 for sample designs of tables.
- 2.18 While Ofgem appreciates that suppliers will want to brand their designs, it encourages suppliers to make tables and charts broadly similar to the examples in Appendix 3 to ensure accuracy and enable easy comparison between suppliers. Inclusion in the table of a comparison of electricity supplied by the supplier with the content of the national average supply is strongly suggested to assist consumers.
- 2.19 Suppliers should also ensure that their designs are clear and easy to find and to read. For instance, keeping the same order of fuels as in the licence condition would ensure easy comparison between different suppliers' labels.

### **Promotional materials**

- 2.20 The licence condition further requires that fuel mix information is provided in promotional materials (paragraph 2 (b)). These are defined in paragraph 1 as documents intended to promote the sale of electricity, other than newspapers and magazines, handed out or sent direct to customers. Suppliers may also wish to include information on websites.
- 2.21 Promotional materials handed out or sent direct to customers include:
- ◆ welcome packs for new customers;
  - ◆ material provided by doorstep sellers and staff seeking to sign up new customers in public places (e.g. supermarkets);

- ◆ material sent to households encouraging people to sign up to the supplier.

(This list is not exhaustive).

2.22 The European Commission guidelines<sup>5</sup> specifically exclude billboard and television advertisements from the meaning of promotional materials.

2.23 Ofgem will take a proportionate approach to enforcement in this matter. However, suppliers should seek their own legal advice.

### **Sub-division of energy source categories**

2.24 Suppliers are free to sub-divide each of the categories of energy source that are required for fuel mix disclosure. For example, under natural gas, suppliers may wish to include a sub-category of CHP or under renewable, suppliers may wish to include sub-divisions for wind, solar, landfill gas, etc.

2.25 If suppliers use sub-divisions under the renewable category then, to aid comparison and ensure transparency, the categories provided under paragraph 1 of the licence condition should be used.

### ***Product vs. licence***

2.26 The obligation to provide fuel mix and environmental information is placed on each supply licensee. Therefore customers subscribing to a certain product must receive information on the average fuel mix of all electricity supplied by the licensee.

2.27 Suppliers may also wish to provide information on the fuel mix of a particular product. This, however, does not replace the requirement to provide information on the total supply by the licensee. If a supplier takes this option it may wish to display an additional column in its fuel mix disclosure table so that a comparison can be made between the fuel mix of the particular product and that of the licensee's total supply for the disclosure period. This should be made clear on the label (paragraph 7 (b)). An example of such a table can be seen at Appendix 3.

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<sup>5</sup> Note of DG Energy and Transport on Directives 2003/54 and 2003/55 on the internal market in electricity and natural gas.

- 2.28 If a supplier chooses to follow this route and differentiates between products on the basis of fuel mix (e.g. by a green supply offering), it would be good practice to provide fuel mix information for all products. It will then be clear to consumers that the supplier's standard or default tariff product is different in composition to the licensee's total supply.
- 2.29 If a supplier holds a number of different licences then the information on the label should relate to the particular licence that the customer is supplied under or the product is marketed under.

### ***Audit***

- 2.30 The accuracy and reliability of the information provided is the responsibility of suppliers. Suppliers are required to provide Ofgem, on demand, with any information Ofgem reasonably requires to establish whether the licensee is complying or has complied with the requirements of the licence condition (paragraph 12).
- 2.31 There is no requirement for the information to be independently audited, though suppliers are free to use auditors if they wish.

## 3. Evidence requirements

### First two disclosure periods

- 3.1 The DTI's June decision document<sup>6</sup> announced that Renewable Energy Guarantees of Origin (REGOs) would be the primary evidence for identification of supply as renewable source and that generator declarations would be the evidence for identification of supply as being from other sources.
- 3.2 As the REGOs scheme was still being implemented at the time of the decision document, it was decided that the licence condition would allow for generator declarations to be the evidence for identification of renewable source supply for the first two periods<sup>7</sup> (paragraph 8 (a)).
- 3.3 REGOs will be available in respect of the first disclosure period and suppliers may choose to use them or generator declarations.
- 3.4 If suppliers are not in possession of a REGO or a generator declaration the residual fuel mix figures must be used.

### Subsequent disclosure periods

- 3.5 REGOs should be used as evidence for identification of supply as renewable but if they are not available the residual fuel mix table must be used to make the necessary calculation (paragraph 10).
- 3.6 For other sources (i.e. coal, oil, natural gas, nuclear and other) generator declarations must be used unless they are not available. In that case, the residual fuel mix table must be used to make the necessary calculation (paragraph 8 (b)).

### ***Evidence of energy source***

- 3.7 It should be noted that evidence of supply from specific generation sources (whether REGOs or generator declarations) should be held by the supplier at midday on 1 July immediately following the end of the disclosure period.

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<sup>6</sup> DTI June 2004 *Conclusions Document Regarding the Department's Consultation on the Directive Concerning Common Rules for the Internal Market in Gas EC/2003/55*

<sup>7</sup> 1/4/04 – 31/3/05 & 1/4/05 – 31/3/06

3.8 The licence condition sets out specific information that is to be included in a generator declaration (paragraph 1), being:

- ◆ the name and location of the generating station;
- ◆ the name of the supply licensee to which the information in the generator declaration relates;
- ◆ the disclosure period to which the generator declaration relates;
- ◆ the fuel used in the generating station, and where the generating station uses more than one fuel the proportion of each fuel used according to the calorific value of the fuel used;
- ◆ the amount of electricity subject to the declaration, expressed in MWh;
- ◆ a statement that the generator has not issued generator declarations or transferred guarantees of origin in relation to an amount of electricity that exceeds the total output of the generating station in the disclosure period<sup>8</sup>; and
- ◆ the signature of a director of the generation company or person of similar standing where the generation licensee is not a company to verify the above facts.

3.9 Suppliers must hold a declaration containing all of the above details as evidence of electricity produced from coal, natural gas, nuclear and other and supplied in each disclosure period (Paragraph 8(b)). See Appendix 4 for a *pro forma* generator declaration.

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<sup>8</sup> As a protection against double counting, the total electricity covered by all REGOs and/or generator declarations from a particular generator used for fuel mix disclosure must not be greater than the total output of the station.

## ***Evidence of energy source when generation is outside Great Britain***

### **Outside Great Britain**

- 3.10 Suppliers may use generator declarations from a generator outside Great Britain. As with REGOs, evidence must be held showing that the electricity referred to in the generator declaration was supplied in Great Britain (paragraph 9 (a)).
- 3.11 The generator declaration used in this case must not have been used as evidence of fuel mix in a country outside Great Britain (Paragraph 9 (b)).
- 3.12 Suppliers may use REGOs from other Member States. However, in addition to a REGO, suppliers must hold evidence that the electricity referred to in the REGO was supplied in Great Britain. Evidence should be similar to that used to support Levy Exemption Certificates (LECs) sourced from outside Great Britain.
- 3.13 The REGO used in this case must not have been used as evidence of fuel mix by a supplier in another Member State (paragraph 9 (b)).
- 3.14 Supply from generators outside Great Britain and outside the EU (e.g. Switzerland) may be evidenced by a generator declaration. Again, this must be accompanied with evidence of supply in Great Britain.

### ***Fuel mix disclosure data table***

- 3.15 If a supplier does not hold a generator declaration, a REGO (or figures provided by an electricity exchange if available) for use as evidence of energy source for the purpose of fuel mix disclosure, it must apportion the amount of electricity for which evidence is not held in accordance with the percentages detailed in the fuel mix disclosure data table (paragraph 10).
- 3.16 The fuel mix disclosure data table will be compiled and updated annually by the DTI and will be published on its website by 1 August each year (paragraph 1). A sample table can be found at Appendix 2.

## **Environmental information**

- 3.17 In addition to providing residual fuel mix information the table also provides the emission rates for use in calculating the environmental impact of total electricity supplied. This includes:
- ◆ the CO<sub>2</sub> emission rate for each energy source, and
  - ◆ the amount of radioactive waste for nuclear generation.
- 3.18 Suppliers should follow the methodology found in paragraph 11 of the licence condition when calculating environmental impact for the purpose of paragraph 4(b).

## **Losses**

- 3.19 The fuel mix disclosure data table includes a factor to be used to adjust the total amount of electricity supplied to calculate the “amount of electricity purchased for supply” to be used in calculations by the licensee to account for losses on the transmission and distribution systems (paragraph 1). The application of this factor will be explained in the fuel mix disclosure data table, and will not be applied to embedded generation.

## 4. Enforcement

- 4.1 The Electricity Act 1989 gives power to the Authority to enforce licence conditions. The guidelines are not part of the licence condition and, as stated in Chapter 1, do not in themselves impose enforceable obligations on licensees. Rather, the purpose of the guidelines is to provide for a set of minimum standards for the presentation of information that must be disclosed by suppliers.

# Appendix 1 New Standard Supply Licence

## Condition 30A

A1.1 This is the text of the new licence condition (30A) inserted in all supply licences by The Electricity (Fuel Mix Disclosure) Regulations 2005 (SI No. 391).

### Condition 30A

#### 1. In this condition:

"disclosure period" means each period of 1 April to 31 March after 31 March 2004.

"energy source" means the fuel used for the generation of the electricity supplied by the licensee being coal, natural gas, nuclear, renewable or other.

"fuel mix disclosure data table" means a table published by the Department of Trade and Industry on its website which will be available by 1 August each year after 31 July 2005 and identified as being for use by suppliers for the provision of: the factor referred to in the definition of the total amount of electricity purchased for supply by the licensee in this paragraph, the percentages for the calculation of the amount of each energy source in the residual fuel mix for the purposes of paragraph 10, and the information about environmental impact for the purposes of paragraph 11.

"generator declaration" means a declaration including details of:

- (a) the name and location of the generating station;
- (b) the name of the licensee to which the information in the generator declaration relates;
- (c) the disclosure period to which the generator declaration relates;
- (d) the fuel used in the generating station, and when the generating station uses more than one fuel the proportion of each fuel used according to the calorific value of the fuel used;
- (e) the amount of electricity subject to the declaration, expressed in MWh;
- (f) a statement that the generator has not issued generator declarations or transferred guarantees of origin in relation to an amount of electricity that exceeds the total output of the generating station in the disclosure period; and
- (g) the signature of a director of the generation company or person of similar standing where the generation licensee is not a company to verify the facts referred to in sub-paragraphs (a) to (f).

"guarantee of origin" means a certificate issued by the Authority or issued by another competent body and recognised by the Authority under The Electricity (Guarantees of Origin of Electricity Produced from Renewable Energy Sources) Regulations 2003.

"other" means an energy source other than coal, natural gas, nuclear or renewable.

"promotional materials" means documents intended to promote the sale of electricity, other than newspapers and magazines, handed out or sent directly to consumers.

"renewable" means wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.

"total amount of electricity purchased for supply by the licensee" means the sum of the figures determined by the licensee under article 6(3) of the Renewables Obligation Order 2002 and article 6(3) of the Renewables Obligation (Scotland) Order 2004 (or equivalent determinations under any amendments to those Orders or re-enactments of the renewables obligation on revocation of those Orders) multiplied by a factor provided in the fuel mix disclosure data table to allow for transmission and distribution losses.

**2.** Provided that the licensee has supplied electricity for a full disclosure period, and subject to paragraph 3, it shall during the 12 month period commencing on 1 October immediately following the end of the disclosure period, provide the information referred to in paragraph 4:

(a) at least once in the period, to each customer that receives a bill or a statement in that period, either with or on the bill or the statement; and

(b) in promotional materials.

**3.** The licensee may, during the final two months of each period commencing on 1 October mentioned in paragraph 2, use in any item of promotional material the information required for the next following such period, instead of the information required by paragraph 2.

**4.** In respect of each disclosure period the information referred to in paragraph 2 is:

(a) the contribution of each energy source, even where the contribution is necessarily expressed as zero, to the total amount of electricity purchased for supply by the licensee; and

(b) the environmental impact per kWh of electricity supplied resulting from the total amount of electricity purchased for supply by the licensee in terms of emissions of carbon dioxide and the production of radioactive waste.

**5.** The contribution referred to in sub-paragraph 4(a) must be expressed as a percentage of the total amount of electricity purchased for supply by the licensee, rounded to the nearest whole percentage point or, where the contribution is less than one percent, to one decimal place.

**6.** The information referred to in sub-paragraph 4(b) may be provided by means of a reference to an existing reference source such as a web page, provided that such reference is sufficiently clear to enable the source to be readily accessible and that the purpose for which the reference is provided is stated on or with the bill or statement and on promotional materials.

**7.** The licensee shall indicate clearly with the information referred to in paragraph 4:

(a) the disclosure period to which the information relates; and

(b) that the information relates to the total amount of electricity purchased for supply by the licensee.

**8.** Subject to paragraphs 9 and 10, the licensee shall claim a contribution referred to in sub-paragraph 4(a) where the following evidence is held at midday on 1 July immediately following the end of the disclosure period:

(a) in the case of renewable, a guarantee of origin relating to generation in the disclosure period or, until 1 July 2006 only, a generator declaration relating to that period indicating a renewable energy source; or,

(b) in the case of coal, natural gas, nuclear or other, a generator declaration relating to that period indicating the particular energy source; or

(c) in the case of electricity obtained via an electricity exchange or imported from an undertaking outside the Community, where aggregate figures are provided by the electricity exchange or undertaking, such of those figures as identify the amount of electricity produced from a particular energy source.

**9.** The licensee shall only rely on a guarantee of origin issued outside Great Britain or a generator declaration from a generator outside Great Britain where:

(a) it holds evidence of supply in Great Britain of the electricity referred to in the guarantee of origin or generator declaration, and

(b) the guarantee of origin or generator declaration has not been used as evidence of fuel mix outside Great Britain.

**10.** Where the licensee does not hold the evidence required under paragraph 8 in respect of an amount of electricity purchased for supply by the licensee, the licensee shall apportion the amount of electricity in respect of which evidence is not held to each energy source according to the percentages detailed in the fuel mix disclosure data table.

**11.** For the purpose of sub-paragraph 4(b), the licensee shall refer to information expressed in terms of grams per kWh in the case of carbon dioxide and grams per kWh in the case of radioactive waste, where the figures are calculated:

(a) for carbon dioxide emissions, by multiplying the percentage of each energy source as calculated according to sub-paragraph 4(a) by the CO<sub>2</sub> emission rate for each energy source as appears in the fuel mix disclosure data table and totalling the result obtained for each energy source; or

(b) for radioactive waste, by multiplying the percentage of nuclear as calculated according to sub-paragraph 4(a) by the rate of radioactive waste as appears in the fuel mix disclosure data table.

**12.** The licensee shall upon request by the Authority provide to the Authority such information in such form and within such time as the Authority may reasonably require for the purpose of establishing whether, in the Authority's opinion, the licensee is complying or has complied with the requirements of this licence condition."

## Appendix 2 Sample fuel mix disclosure data table

A2.1 This set of data tables is to be provided on an annual basis by the DTI for use in the calculation of fuel mix and environmental information. The actual figures will be calculated each year from official sources. The numbers shown in this table are for illustrative purposes only and are not based on official figures. They are, however, used in the calculation of the worked example in Appendix 5.

### Sample Fuel Mix Disclosure Data Table

1. Residual fuel mix for apportioning electricity for which the licensee does not hold evidence as set out in paragraph 9.

Fuel	Percentage
Coal	33
Natural gas	37
Nuclear	25
Renewable	2
Other	3

2. Grams per kWh of carbon dioxide emitted in the production of electricity of each fuel to be used in the calculation of average carbon dioxide emissions as set out in paragraph 10 (a).

Fuel	g/kWh
Coal	1,000
Natural gas	380
Nuclear	0
Renewable	0
Other	750

3. Grams per kWh of radioactive waste, being fuel burnt in the reactor to be subsequently discharged as spent fuel, to be used in the calculation of average generation of radioactive waste as set out in paragraph 10 (a).

Fuel	g/kWh
Nuclear	0.012

4. GB average fuel mix (for comparison)

Fuel	Percentage
Coal	33
Natural gas	37
Nuclear	25
Renewable	2
Other	3

5. Losses factor: 1.09  
(not to be applied to all supply from embedded generation)

## Appendix 3 Examples of label design

A3.1 The following examples illustrate the various label options that suppliers might want to use. These are not intended to constrain suppliers from branding their labels appropriately or supplementing with graphical information.

Option 1 – Label with contact details for environmental information

<b>SupplierEnergy disclosure label</b> (relates to electricity supplied in the period April 2004 to March 2005)		
<b>Electricity supplied has been sourced from the following fuels:</b>	% of total	
	<b>Electricity supplied by SupplierEnergy</b>	<b>Average for GB (for comparison)</b>
Coal	x%	33%
Natural gas	x%	37%
Nuclear	x%	25%
Renewable	x%	2%
Other	x%	3%
<b>Total</b>	<b>100%</b>	<b>100%</b>
<b>Environmental Impact</b>		
For information on the environmental impact of your electricity supply visit <a href="http://www.SupplierEnergy.co.uk">www.SupplierEnergy.co.uk</a> or call 0845 XXX XXX		

Option 2 – Label with environmental information included

<b>SupplierEnergy disclosure label</b> (relates to electricity supplied in the period April 2004 to March 2005)		
<b>Electricity supplied has been sourced from the following fuels:</b>	% of total	
	<b>Electricity supplied by SupplierEnergy</b>	<b>Average for GB (for comparison)</b>
Coal	x%	33%
Gas	x%	37%
Nuclear	x%	25%
Renewable	x%	2%
Other	x%	3%
<b>Total</b>	<b>100%</b>	<b>100%</b>
<b>Environmental Impact</b>		
CO <sub>2</sub> emissions	X g per kWh	430 g per kWh
Radioactive waste	X g per kWh	0.0030 g per kWh
For more information on the environmental impact of your electricity supply visit <a href="http://www.supplierenergy.co.uk">www.supplierenergy.co.uk</a> or call 0845 XXX XXX		

Option 3 – Label with individual product information and environmental information

<b>SupplierEnergy disclosure label for April 2004 to March 2005 – Greenproduct (relates to electricity supplied in the period April 2004 to March 2005)</b>			
<b>Fuel Mix</b>	<b>% of total</b>		
	<b>Your electricity (Greenproduct)</b>	<b>Electricity supplied by SupplierEnergy</b>	<b>Average for GB (for comparison)</b>
Coal	X%	x%	33%
Natural gas Including CHP: x%	X%	x%	37%
Nuclear	X%	x%	25%
Renewable Including: Hydro x% Wind x% Landfill gas x% Other x%	X%	x%	2%
Other	X%	x%	3%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Environmental Impact</b>			
CO <sub>2</sub> emissions	x g per kWh	x g per kWh	430 g per kWh
Radioactive waste	x g per kWh	X g per kWh	0.0030 g per kWh
for more information on the environmental impact of your electricity supply visit <a href="http://www.supplierenergy.co.uk">www.supplierenergy.co.uk</a> or call 0845 123 456			

Option 4 – Label with product information and contact details for environmental information

<b>SupplierEnergy disclosure label for April 2004 to March 2005 – Greenproduct (relates to electricity supplied in the period April 2004 to March 2005)</b>			
<b>Fuel Mix</b>	<b>% of total</b>		
	<b>Your electricity (Greenproduct)</b>	<b>Average for SupplierEnergy</b>	<b>Average for GB (for comparison)</b>
Coal	X%	x%	33%
Natural gas Including CHP: x%	X%	x%	37%
Nuclear	X%	x%	25%
Renewable Including: Hydro x% Wind x% Landfill gas x% Other x%	X%	x%	2%
Other	X%	x%	3%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Environmental Impact</b>			
For information on the environmental impact of your electricity supply visit <a href="http://www.SupplierEnergy.co.uk">www.SupplierEnergy.co.uk</a> or call 0845 123 456			

## Appendix 4 Sample generator declaration

A4.1 The text below shows a sample generator declaration.

<b>Generator declaration for the purposes of Electricity Supply Licence Condition 30A</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: 1 April 200X to 31 March 200X.			
(e) Amount of electricity subject to this declaration		.....MWh	
(g) Fuel(s) used to generate electricity:			
(h) (For multifuel stations) The proportion of each fuel used according to the calorific value of the fuel used:			
	<b><u>Fuel</u></b>	<b><u>Proportion (%)</u></b>	<b><u>MWh</u></b>
1)	.....	.....	.....
2)	.....	.....	.....
3)	.....	.....	.....
<p>I declare on behalf of [the generating station operator] that [the generating station operator] has not issued generator declarations or transferred guarantees of origin in relation to an amount of electricity produced by [name of generating station] for the disclosure period referred to above which in total exceeds the total output of [insert generating station] in that disclosure period.</p> <p>I declare that I am duly authorised to sign this form for and on behalf of [generating station operator] and I confirm that the information provided is complete, true and accurate to the best of my knowledge and belief.</p>			
Signature _____		Printed name _____	
Position in company:			
Date:			

## Appendix 5 Worked example

A5.1 To illustrate how the figures in a supplier's fuel mix table are derived a worked example is provided in this appendix. Step 1 shows a fictional supplier's data for a disclosure period. Step 2 shows how the residual fuel source data is combined with the evidenced fuel source data to reach the percentage of each energy source in the total supplied by the licensee in the disclosure period. Step 3 shows how the carbon dioxide emissions are calculated and step 4 shows a completed fuel mix disclosure table.

### Step 1

#### *Amount supplied*

Total supplied as determined under renewables obligation orders: = 1000 MWh  
of which embedded generation: = 100 MWh  
Losses factor: = 1.09  
Total purchased for supply =  $(900 \times 1.09) + 100$  = 1081 MWh

#### *Evidence held on 1 July*

REGOs:		50	MWh
Generator declarations	Coal:	300	MWh
	Gas:	350	MWh
	Nuclear:	160	MWh
	Renewable:	10	MWh
	Other:	40	MWh

#### *Residual*

Residual  $[1081 - (50 + 300 + 350 + 160 + 10 + 40)] = 171$  MWh

### Step 2

In the table below the first column shows the fuel, the second column shows the amount of electricity supplied that has been evidenced through REGOs and generator declarations. The third column shows the residual amount of electricity (171 MWh) which is apportioned according to the percentages in the fuel mix disclosure data table published by DTI. For example, to calculate the residual amount for coal multiply 0.33 by 171 which equals 56.4. This is repeated for each fuel type. Column 4 is the sum of columns 2 and 3. Column 5 gives the percentages for column 4.

Fuel	MWh with evidence	Residual	Total	Percentage
Coal	300	56.4	356.4	33
Gas	350	63.3	413.3	38
Nuclear	160	42.8	202.8	19
Renewables	60	3.4	63.4	6
Other	40	5.1	45.1	4
<b>Total</b>	<b>910</b>	<b>171</b>	<b>1081</b>	<b>100</b>

### Step 3

Step 3 uses the percentage figures from column 5 above to calculate carbon dioxide emissions for each fuel type and radioactive waste for nuclear power. The multiplication factor is taken from table 2 in the fuel mix disclosure data table.

#### **Carbon dioxide calculations**

Coal	0.33 x 1000	=	330	g/kWh
Natural Gas	0.38 x 380	=	144.4	g/kWh
Nuclear	0.19 x 0	=	0	g/kWh
Renewables	0.06 x 0	=	0	g/kWh
Other	0.04 x 750	=	30	g/kWh
Total		=	504.4	g/kWh

#### **Radioactive waste calculations**

$$0.19 \times 0.012 = 0.00228 \text{ g/kWh}$$

### Step 4

Step 4 shows a complete fuel mix disclosure table using the figures calculated above.

<b>SupplierEnergy disclosure label</b> (relates to electricity supplied in the period April 2004 to March 2005)		
<b>Electricity supplied has been sourced from the following fuels:</b>	<b>% of total</b>	
	<b>Electricity supplied by SupplierEnergy</b>	<b>Average for GB (for comparison)</b>
Coal	33%	33%
Gas	38%	37%
Nuclear	19%	25%
Renewable	6%	2%
Other	4%	3%
<b>Total</b>	100%	100%
<b>Environmental Impact</b>		
CO <sub>2</sub> emissions	504.4 g per kWh	430 g per kWh
Radioactive waste	0.00228 g per kWh	0.0030 g per kWh
For more information on the environmental impact of your electricity supply visit <a href="http://www.supplierenergy.co.uk">www.supplierenergy.co.uk</a> or call 0845 XXX XXX		