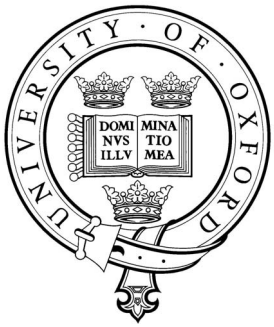

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Consumer Information on Electricity
Final Report

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The Consumer Information on Electricity Project

The project 'Consumer Information on Electricity' (CIE) was carried out on behalf of the European Commission. The objective of this study was to assess the options for European guidelines for consumer information on electricity, in order to facilitate the Member States to fulfil the requirements of consumer information laid down in Directive 2003/54/EC.

Directive 2003/54/EC, repealing Directive 96/92/EC, concerning common rules for the internal market in electricity, asks Member States to ensure that consumers are informed about the fuel mix of the electricity supply. In a liberalised electricity, market environmental arguments are increasingly used in marketing. Therefore, agreeing common principles on how to give the consumer information about the fuel mix and the environmental consequences of the electricity produced is becoming vital.

The CIE project is very closely linked to the Altener funded 4CE (Consumer Choice and Carbon Consciousness for Electricity) project, which both the ECI (4CE and CIE project leader) and Oeko Institut are involved with. The 4CE project is investigating the potential and options for a European wide disclosure scheme and building the basis for an electricity label for Europe. The CIE project builds heavily upon the work done in the 4CE project, which has provided an essential springboard of knowledge and information for CIE.[1] The contribution of the four other 4CE project partners, the Central European University (Hungary), EVA (Austria), IT Power (UK) and SEI (Sweden), should be acknowledged in providing a sound basis for the CIE project.

This document is the final report of the CIE project, based on extensive research since the project started in February 2003, including a stakeholder consultation, undertaken in June 2003, involving suppliers, consumer associations and environmental organisations throughout Europe (details provided in Appendix D).

[1] For further details and project reports, please see the 4CE project website: www.electricitylabels.com

Executive Summary

The revised European Directive 2003/54/EC concerning common rules for the internal market in electricity was adopted in June 2003 and is due to be implemented in summer 2004. This Directive introduces the concept of electricity disclosure where consumers are provided with information about the attributes of the electricity they are buying.

At a minimum, the Directive requires that the disclosure information relates to the suppliers portfolio for the preceding year, with fuel mix information provided in or with the bill and promotional materials. Environmental information, in terms of at least CO_2 emissions and radioactive waste, must be provided at least on an existing reference source which must be referred to in or with the bill and promotional materials. Member States are required to ensure that the information provided to final consumers is reliable.

In interpreting of the text of the Directive, the following details have been defined as a basis for the discussion in this report:

- The disclosure information (fuel mix and environmental impact) should relate to the last calendar year.
- The portfolio refers to all the electricity sold to final consumers, both domestic and non-domestic, by the company that is named on the bill (i.e. not necessarily the parent company).
- 'Promotional materials' refer to material that is sent out directly to customers, rather than newspaper and magazine advertisements, and includes printed brochures, tender documents and price quotations.
- The requirement for reliability in the Directive implies that some form of tracking mechanism is required in the electricity market, rather than relying on statistical averages, to avoid double-counting of electricity attributes and large shares of electricity with unspecified attributes.

Four key criteria have been identified as the crucial factors against which any disclosure scheme should be assessed: consumer information, reliability, cost, speed.

An approach which represents minimal compliance with the Directive is likely to take around 3 years to implement and so would not be a particularly high speed option. Such an approach is unlikely to provide a sufficient level of consumer information, reliability or cost-effectiveness and is therefore not recommended.

The recommended approach, which goes beyond the minimum specified in the Directive is likely to take around 4 years to implement and would ensure a significantly higher level of consumer information, reliability and cost-effectiveness. The following recommendations relate to this approach, dealing first with the information provided to consumers and how this is displayed, followed by recommendations on how this information should be gathered through the tracking mechanism.

Disclosure information display

This refers to the type of information that should be included as part of disclosure and how this information is presented to the final customer:

- There should be harmonisation of the disclosure information content and the layout in which it is presented to consumers at the Member State level, with some common criteria specified at a European level.
- Any supplier selling electricity outside of its own country must display the disclosure information in the style and language of the country that it is selling in.
- The disclosure information display should be the same for both domestic and non-domestic consumers as a minimum.
- Environmental information should be displayed in or with the bill and promotional material along with the fuel mix information.
- It is recommended that the disclosure information (both fuel mix and environmental impact) is displayed on a separate leaflet or insert which is sent out with the bill (examples given in Appendices A, B and C).
- It is recommended that there is a prominent link to the leaflet or insert displayed on the bill.
- Disclosure information displayed on promotional materials should use the same graphics as the information displayed in the separate leaflet.
- Comparative reference figures for both the fuel source and environmental impact information should be provided as part of the disclosure information. It is suggested that country averages are used initially but that European averages may become more appropriate over time with a liberalised European market.
- Reference figures should refer to average consumption in the relevant country or region rather than average generation.
- It is optional for Member States to decide whether to show the total proportion and country(s) of origin of imported electricity.
- Provision of personalised information (e.g. 'your electricity usage resulted in x kg of CO_2 emissions') on or with the bill should be optional at a supplier level.
- Member States should ensure that appropriate auditing and verification processes are put in place to ensure reliability of information displayed on bills, promotional materials or given over the telephone.
- Suppliers should be free to provide product information in addition to their portfolio disclosure but it is recommended that Member States should require that if a supplier chooses to differentiate one or more products, they must then provide product and portfolio information to all customers.

Frequency of distribution

- It is implicit in the Directive that the disclosure information is made available to consumers in or with the bills at least once a year. It is suggested that the decision as to whether this information should be sent out more frequently is decided at the Member State level. However, it is recommended that, in the early stages of the disclosure system, the information is sent out at least twice a year, if the billing processes allow, in order to raise awareness of the issues amongst consumers.

Fuel source information display

The following recommendations relate to the type of information on fuel sources that should be covered and the way in which this detail should be displayed:

- Fuel sources should be listed individually rather than in generic groups.
- Member States should agree a fixed list of fuels to be used by all suppliers, including a detailed breakdown of renewables and a category for 'other'.
- Member States should consider limiting the list of fuel source categories to around 10-12 (including any detailed listing of renewable sources) to limit complexity.
- Common definitions and terms for the various fuel sources should be agreed between the Member States. Definitions of renewables should be based on those given in the Renewables Directive 2001/77/EC.
- Suppliers display their fuel mix portfolio in line with the standard list, even if they have to show some sources at 0% (this is to ensure a uniform display within a country and comparability between suppliers).
- Any imported electricity is assigned to the relative fuel source category within the supplier's overall fuel mix.
- A combination of a pie chart and table should be used to display the fuel source information.
- It is recommended that the pie chart is only ever used to illustrate the supplier's portfolio while the table provides a more detailed breakdown of renewables and national averages for the total fuel mix (including details on renewables).
- If the supplier has chosen to display both product and portfolio information, the pie chart should be used to illustrate the portfolio (to ensure comparability with labels from other suppliers), whilst details on the product and national averages can be displayed in a table.

Environmental information display

These recommendations relate to the type of environmental information that should be included and how this should be displayed.

- Given the complexity of environmental impact information, it is suggested that the minimum list of indicators specified in the Directive (CO_2 emissions and radioactive waste) is sufficient as a European standard for the time being. This could be revised at later date if a consensus amongst Member States on other significant environmental impacts emerges.
- However, Member States could still be given the option to include additional environmental indicators of particular relevance to their country (although it should be noted that this has implications for the tracking mechanism which may then have to be designed to satisfy the maximum data requirements of all Member States).
- CO_2 figures should be given as kilograms/kWh and radioactive waste should be expressed as micrograms/kWh.
- Absolute figures (expressed per kWh) should not be the only information provided. These figures should be displayed in combination with some form of ranking or indexing for ease of comparison between suppliers and to allow consumers to calculate their own personal emissions.
- Format for display of the environmental information is decided at the Member State level, but with some guidance on possible options from the EU. It is recommended that the environmental information is presented in a ranked or indexed display. Further consumer research is required in order to identify the most effective display format from a consumer perspective.
- Information on CO_2 emissions and radioactive waste should always be displayed together and not in separate locations.

Comparative information

- There should be an independent catalogue, provided by a body such as the industry regulator or national consumers association, comparing what is offered by all suppliers (based on the disclosure information on a portfolio basis at a minimum and on products, if applicable) within a certain region which is made available to all consumers (on the internet and in hard copy).

Tracking system

The tracking system creates unambiguous links between power plants and electricity sold to final consumers and uses them to allocate power generation attributes. The following points relate to the recommended approach for tracking:

- The disclosure scheme should not be heavily based on statistical averages. Such a system cannot convert consumer preferences into price signals for generators and therefore does not allow consumer choice to have an impact.
- It is recommended to introduce comprehensive tracking systems following the flexible approach to tracking, based on central registries in each Member State. Such a registry can hold both tags (which are transferred together with electricity contracts) and certificates (which are traded independently from these contracts). Market participants can choose whether to use a tag or certificate or convert one to the other. The registry can provide suppliers with all information which they have to disclose to their consumers. The operation of this system should be monitored very closely in order to allow for corrective action if required.
- The registries can be operated by regulators, Independent System Operators or any other independent body nominated by Member State governments. Member State should explore whether synergies can emerge from combining the operation of the registries and the carbon registries required under the Emissions Trading regime.
- Member States should develop their tracking systems with as much harmonisation as possible in order to support the internal market for electricity. This is one of the most critical points in setting up electricity disclosure schemes in Europe.
- The use of the tracking mechanism should be made voluntary and a residual mix should be introduced at least for an introductory phase. However, since the use of a residual mix reduces the accuracy of disclosure information, Member States should not allow extensive use of this option.
- The use of the residual mix and its impact on the accuracy and reliability of the disclosure information should be monitored closely by Member State governments and the Commission and regulatory action taken if necessary.
- The residual mix should not be split up by suppliers to create separate products.
- The registries should support disclosure of product information if this option is allowed by a Member State. In this case, suppliers should be required to maintain separate accounts at the registry for the attributes of their products in order to ensure transparency.
- The central registry provides an appropriate means of verifying the tracking mechanism and the data disclosed to consumers.
- Additional verification should be carried out on the input data to the registry by independent accredited auditors, based on existing verification mechanisms or those under development (e.g. the EU Emissions Trading Scheme) where possible.

- The overall level of accuracy and reliability of the tracking mechanism should be comparable in all Member States.
- The tracking mechanism should be merged with the system for Guarantees of Origin for electricity from renewables and cogeneration in the Member States.

Tracking system information coverage

The following recommendations relate to which data are included in the tracking system:

- Member States should agree on a common basis for how power plants are included in the tracking system. This can be done using e.g. either plant-specific or generic emission factors.
- The rules for selecting which fossil fuel plants are covered by plant-specific emissions factors should be based on rules for coverage under the monitoring procedures of the intended EU Emissions Trading Scheme.
- A minimum generation capacity should be established for the inclusion of individual plant data from nuclear and renewable power plants in the disclosure scheme. Low capacity plants should be integrated into virtual units of higher capacity in order to be included in the tracking scheme.
- Specific regulations should be considered by Member States for power plants using multiple fuels.
- As far as possible, the disclosure scheme should use data that are already available e.g. plant generation data from the settlement procedures in the electricity market.

Tracking of fuel source information

- Member States should agree on which fuels are covered by the tracking mechanism. For example, hard coal and lignite could either be tracked separately or could be integrated into one fuel category ‘coal’.
- A European tracking mechanism must be designed to handle the full list of fuels which have been selected for disclosure by the Member States

Tracking of environmental indicators

- Member States should agree on which environmental indicators are included in the disclosure scheme (CO_2 emissions and radioactive waste at a minimum) and develop common standards on how they are defined and determined.
- CO_2 emissions should be used rather than greenhouse gas equivalents in order to reduce the complexity of the system and to adapt it to the reporting requirements for the Emissions Trading Scheme.
- The disclosed CO_2 emissions should be based on direct emissions factors initially, moving to life-cycle emissions of the power plant and fuel if the basis on which life-cycle emissions are calculated can be agreed amongst the Member States
- The disclosed radioactive waste should be based on the volume of spent nuclear fuel which is produced by the reactors.
- Environmental indicators should be tracked on a plant-specific basis using tags or certificates with two classes of generic emissions factors for each fuel type (e.g. in gCO_2/kWh) corresponding to the highest and lowest emissions factors from European power plants. The CO_2 emissions from each plant are then described reflected through an individual mix of tags or certificates with these two generic factors (e.g. 40% of the highest emissions factor and 60% of the lowest emissions factor). The same method can be used for radioactive waste.
- Tracking of the environmental indicators should reflect the impact of cogeneration by incorporating zero emissions tags or certificates.

Imported electricity

- Unit contracts or data provided by the exporting undertaking should only be used if the exporting country has implemented a Guarantee of Origin for the respective type of attributes. This will avoid double-counting of these attributes and limit the incentive for cherry-picking.
- In all other cases, the average generation mix of the exporting country can be used as a first step. The effects of this should be monitored closely by the Member States and the Commission.
- Further research is required on how other undisclosed imports can be handled and how effects such as ‘green-washing’ of electricity can be prevented.