

Labelling of electricity (Disclosure)

"The customer has a right to an informed choice. Those who claim today that labelling of electricity is technically not feasible take up the arguments of those politicians and companies who told us that labelling of GMO food was not feasible" Claude Turmes, rapporteur of electricity market directive in the European Parliament.

In its Communication to the Council and Parliament on completing the internal energy Market, COM(2001)125 final, it is noted that to complete the internal market and to reap its full benefits a number of measures are necessary, including those relating to consumer protection. A vital part of this lies in providing adequate, appropriate and standardised information on the sources used in the production of electricity.

As experience shows, disclosure of electricity is technically feasible and economically viable. Those companies and governments that oppose the disclosure do it clearly for political reasons. Not disclosing the electricity mix would not only harm the small consumers in their informed choice but would also limit environmental auditing schemes of the business community and public authorities because of lack of information on the electricity mix. Therefore without disclosure Greening the power sector will get much more difficult.

The proposed directive from Commission includes in annexe 3 a requirement on disclosure. However this text is too vague to ensure relevant information to the EU citizens. Therefore the rapporteur of Parliament proposes a more precise wording in its report.

The proposed Directive from the Commission includes a requirement for utilities to disclose the sources of electricity supplied to the final consumer. Such a move is welcomed as it falls in line with current and proposed legislation of some Member States and a more global intention of providing more information to customers. The Commission's proposal is included in the Annex to article 3 states:

Member States shall ensure that electricity suppliers specify in the bills sent to each final consumer, the composition of the fuel mix used to generate the electricity that is consumed by the final consumers they supply. The relative costs of the different fuels used to generate a unit of electricity supplied to the final consumers shall be specified and the relative importance of each energy source with respect to the production of greenhouse gases.

Unfortunately, these are very minimal standards, insufficient to enforce full disclosure of information. The information requirements would enable electricity companies to state for example that "your electricity last year came from fossil and nuclear sources." On the other side, it leaves open the possibility of making additional, perhaps misleading, claims. For maximum transparency of the internal market it is important that all labels in the European Union provide the same objective information.

The amendments proposed by the Parliamentary rapporteur include more specific disclosure requirements, parity of requirements for electricity produced in the Union and that imported into it, and specific

disclosure requirements for transmission and distribution system operators. The rapporteur is proposing that the following information is included on all bills and advertising.

- The contribution of each energy source, e.g. gas, coal, nuclear, oil and renewables, for both the portfolio of the electricity being provided and the company as a whole over the preceding three months must be provided to each final consumer.
- Additional information must be given on the use of combined heat and power plants.
- Information must be given on the relative importance of each source for the production of greenhouse gases, particulates – SO₂ and NO_X – and nuclear fuel.

Penalties should be placed on companies that fail to fully comply with this requirement of the Directive.

Many within the electricity industry are reluctant to introduce labelling. Eurelectric who co-ordinate the European electricity industry's position in Brussels state: -

Consumer protection rules mentioned in Annex are occasionally unrealistic, especially the call to label all electricity according to the fuel bases, which is largely unfeasible.

However, in the late 1990s many in the food industry claimed that the separation and labelling for the food industry for GM crops would not be possible. One of the first supermarkets Iceland in the UK, to switch states in the box below how they were told that what they were proposing was impossible.

ICELAND Statement:

As pioneers in the food retail industry Iceland were the world's first to ban GM ingredients in our own label range in May 1998.

We started out with a relatively simple aim - to give customers a choice. In fact, when we set out to achieve this we were often told that this was impossible and we'd have to change the world.

Back in 1998, we removed GM ingredients from our Own Label Food, which was not an easy task as at the time we were the only retailer to take this stance. When we first contacted our suppliers we came up against many hostile comments for example "you're asking the impossible!" and "how much is that going to cost!". However, once we clearly communicated our policy and reasoning for why we wanted to remove GM, things became a little easier.

Source: Iceland web site.

Now nearly all-major supermarkets in the EU have now clearly label GMOs within their own brand goods, furthermore the EU has recently passed legislation to ask for GMO labelling on all consumer products.

The electricity grid is huge and extremely complicated. Currently the electricity that you use when you turn on a light cannot be traced back to the company to whom you pay your electricity bill. Furthermore, there is no difference to the final consumer in electricity that is produced in a coal or a gas fired power stations. **However, what is important is who gets paid for the electricity the consumer uses and what**

sources they use to produce electricity and what is their environmental impact. Thus which power are being encouraged and supported by a consumer. This is important, as disclosure of electricity sources does not require the tracking of electrons as they flow from the power station to the light bulb.

This makes disclosure relatively simple as companies already keep careful track of who pays for what electricity. When disclosure was first introduced in New York it only required a handful of staff to set up the labelling system.

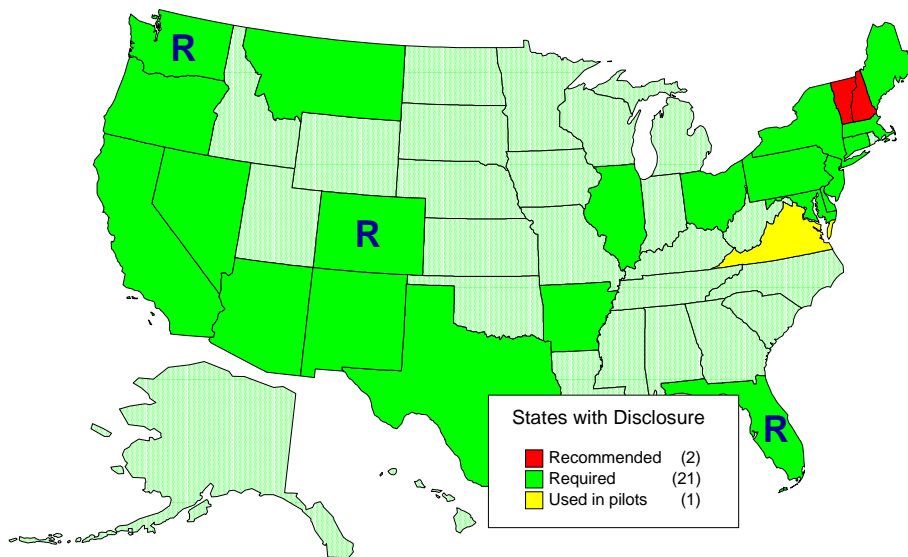
What is needed is that the relevant market operators - system operators of transmission and distribution, market place operators and traders have to be obliged to relate their information to the body in charge with the disclosure. The rapporteur has tabled the respective amendments to make sure that this information is available.

Actual Experience

Within the EU Austria requires full disclosure of the energy sources used to produce the electricity, while Netherlands is likely to follow suit. In other parts of the world, Switzerland, parts of Australia and significant parts of the US are all preparing or have in place legislation for disclosure.

In the US, 19 States have full legislation in place which requires the full disclosure of the electricity sources. Nearly 50% of US States have or are in the process of implementing full or partial disclosure. The map below outlines this.

Status of Disclosure



Ed Holt & Associates, Inc.

Electricity Labels in the U.S. and Australia

Estimated Source of Power Supply

PGE

Regional Average

POWER CONTENT LABEL

ENERGY RESOURCES	PRODUCT NAME* (projected)	2000 CA POWER MIX** (for comparison)
Eligible Renewable	56%	12%
- Biomass & waste	-	2%
- Geothermal	-	5%
- Small hydroelectric	-	3%
- Solar	-	<1%
- Wind	-	2%
Coal	8%	16%
Large Hydroelectric	9%	19%
Natural Gas	18%	35%
Nuclear	9%	17%
Other	<1%	1%
TOTAL	100%	100%

* 50% of (Product Name) is specifically purchased from individual suppliers.
 ** Percentages are estimated annually by the California Energy Commission based on the electricity sold to California consumers during the previous year.

For specific information about this electricity product, contact (Company Name). For general information about the Power Content Label, contact the California Energy Commission at 1-800-555-7734 or www.energy.ca.gov/cons/umer

Estimated Air Emissions and Spent Nuclear Fuel with information on Environmental Impacts

REGIONAL AVG. PGE

Carbon Dioxide (CO₂) – Carbon dioxide is a major contributor to global climate change, which may cause droughts and floods, raise sea level, and threaten forests, crops, and fish and wildlife habitat. Coal and oil, and to a lesser extent natural gas, are the principal sources of CO₂ from power generation.

REGIONAL AVG.	416
PGE	392

Carbon Dioxide (g/kWh)

Spent Nuclear Fuel – Spent nuclear fuel contains the most radioactive and long-lived waste formed during operation of nuclear power plants. Spent fuel is currently stored at nuclear power reactor sites. The U.S. has no permanent disposal site for radioactive waste.

REGIONAL AVG.	129
PGE	78

Spent Nuclear Fuel (g/kWh)

Sulfur Dioxide (SO₂) – Major health effects associated with SO₂ include asthma, respiratory illness and aggravation of cardiovascular disease. SO₂ leads to the formation of acid rain, which increases acidity of lakes and streams, damage to plants and accelerated decay of buildings and other structures. Coal is the principal source of SO₂ from power generation.

REGIONAL AVG.	886
PGE	710

Sulfur Dioxide (mg/kWh)

Nitrogen Oxides (NO_x) – Nitrogen oxides contribute to acid rain and ground-level ozone (smog), and may cause respiratory illness in children. NO_x also adds excess nutrients to lakes and coastal waters which are destructive to fish and other animal life. Coal, and to a lesser extent natural gas and biomass, is the principal source of NO_x from power generation.

REGIONAL AVG.	862
PGE	754

Nitrogen Oxides (mg/kWh)

Hydropower Project Impacts – Some hydropower dams contribute to the decline of salmon and other fish and wildlife populations.

Information obtained from the Oregon Office of Energy

Fuel and Air Emissions to Generate Your Electricity (Period shown: 1/1/98 through 12/31/98)

FUEL SOURCES

- Biomass Less than 1%
- Coal 35%
- Gas 33%
- Hydro 11%
- Nuclear 16%
- Oil 4%
- Solar 0%
- Solid Waste 1%
- Wind Less than 1%

Total 100%

Actual total may vary slightly from 100% due to rounding.

AIR EMISSIONS RELATIVE TO THE NEW YORK STATE AVERAGE

Source	Percentage	Relative to Average
Sulfur Dioxide (SO ₂)	142%	(142% of average)
Nitrogen Oxides (NO _x)	133%	(133% of average)
Carbon Dioxide (CO ₂)	129%	(129% of average)

Note: Sulfur dioxide and nitrogen oxides are key pollutants that contribute to acid rain and smog, and carbon dioxide contributes to global climate change. Depending on fuel sources, air, and location, the generation of electricity may also result in other public health, environmental and socio-economic impacts not disclosed here.

Electricity Facts

Generation Price	Monthly Use	250 kWh	500 kWh	1000 kWh	2000 kWh
Average price (cents per kWh) for varying levels of use. Prices do not include regulated charges for delivery service.	Average Generation Price	5 cents	4.5 cents	4 cents	3.5 cents

Your average generation price will vary according to when and how much electricity you use. See your most recent bill for your monthly use and Terms of Service or your bill for actual prices.

Contract
 See your contract or Terms of Service for more information.
 ■ Minimum Length: 2 Years ■ Price Variability: Fixed over contract period

Supply Mix
 We used these sources of electricity to supply this product from 250 to 2000 kWh:

Air Emissions
 Nitrogen oxides (NO_x), sulfur dioxide (SO₂), and carbon dioxide (CO₂) emissions from this generation relative to regional average.

See your Disclosure Statement for further information regarding this label and your electricity service. You may also call XYZ Energy Supply for additional information or a copy of the Disclosure Statement at (800)555-1234.

GREENHOUSE GAS POLLUTION

Over the last 90 days your electricity supply emitted 2000 kg of carbon dioxide.

Where YOUR Electricity Comes From:

Source	Your emissions	State avg.
Coal-fired power	78%	(33%)
Gas-fired power	4.8%	(2.8%)
Hydroelectricity	7%	(4.8%)
Biomass power	6.8%	(10.7%)
Wind power	3.4%	(10.7%)
Solar power	<0.1%	(10.7%)
Fossil	100.0%	(100.0%)

By using 25% Eco Plan, you have reduced your emissions by 694 kg.

This Briefing sheet has been prepared by the office of Claude Turmes, MEP, who is the Rapporteur for the European Parliament of the Directive on the Liberalisation of the Electricity Market. For more information contact: Tel.00 32 2 2847246 or fax. 00 32 2 2849246 or visit <http://www.eu-energy.com/electricity>