

From Green Energy to Waste Subsidy

A Greenpeace position paper on green electricity

BACKGROUND

Following the EU directive organizing the opening of the electricity market and the ensuing Belgian federal law of April 1999, regional governments are finalising their own decree which, among other things, establish a new renewable energy scheme¹.

Flanders has proposed a green certificates system which forces the power suppliers to supply their final customers with an annual fixed percentage of renewable electricity. The regulation authority will distribute green certificates to renewable electricity producers and authorised suppliers will have to prove that they have bought a sufficient quota of green certificates from producers each year. Furthermore, a special obligation would allow green electricity producers to sell green electricity to customers without distribution costs. Such a system is about to be agreed by the Flemish government and would create a market for green certificates in Flanders as soon as January 2001. The green quota would increase from 1% in 2001 to 3% in 2004 and the EU directive indicates that 6% of the electricity consumption of Belgium should come from RES in 2010. Greenpeace is considering this last objective as a strict minimum and urges the Belgian authorities to speak for its quick legally binding enforcement at EU level.

GREEN CERTIFICATES AS A THREAT TO RENEWABLE ENERGY SOURCES

Without a clear and restrictive definition of Renewable Energy Sources (RES) and Green Electricity, the green certificates obligation would jeopardize the development of RES.

The EU directive is considering that RES shall mean *renewable non-fossil fuels (wind, solar, geothermal, wave, tidal, hydroelectric installations with a capacity below 10 MW and biomass, which means products from agriculture, forestry and from the food production industry, untreated wood waste and cork waste*.

At the opposite, the Flemish authorities are considering that all non fossil & non nuclear energy is renewable : « hernieuwbaar energiebronnen : alle andere energiebronnen dan fossiele brandstoffen of kernsplijting ».

This assumption is essentially wrong, it further opens the door to a corruption of funds, from green electricity to waste subsidy.

Greenpeace is therefore urging the Flemish authorities to fall into line with the European directive on the promotion of electricity from renewable energy sources in the internal electricity market. To conform the definition of RES to the European one would at least prevent some basic problems from happening.

¹ Up to now, the Belgian power distribution sector has to pay a premium for renewable electricity production (1 BEF/kWh for forestry or agricultural biomass, 2 BEF/kWh for hydro & wind energy) Small producers of solar PV-power are paid up to 5 BEF/kWh for the electricity they put on the grid.

What are the main problems :

1. **The most fundamental environmental impact of the green certificates system as it now stands in the Flemish law project is a distortion of the polluter-pays principle that would force the consumer to pay for depollution of waste coming from other activities ;**
2. **By allowing green certificates to waste incineration or landfill gases, a huge amount of money would be wasted to support yet or nearly profitable energy sources rather than less developed ones ;**
3. **By considering any other sources than fossil/nukes as renewable, the risk is real to increase CO₂ emissions because of industrial process detrimental for the climate ;**
4. **Last but not least, a green certificate scheme might present an increasing risk for investors because of the renewable electricity price volatility.**

§1. A Distortion of the polluter pays principle

The polluter-pays principle has been endorsed by OECD countries in 1972 and its application in the EU is confirmed by many international agreements, including the Maastricht Treaty². The polluter pays principle says that the polluter must pay all the costs to prevent and to fight against the pollution he is responsible for³.

The very example of Flanders giving green certificates to whatever form of waste treatment would be a clear distortion of one of the main important principle regulating waste treatment in OECD countries.

Depollution of all polluted waste should not be supported by the energy sector because in that case, polluters do not pay all the costs of their pollution. Therefore, the polluter should not receive any subsidy or support (even from another country) to fight against the pollution carried by his activity. If the polluter does not pay the entire cost of depollution, he is indirectly encouraged to increase his polluting activity.

→ By including polluted biomass (as municipal waste, chicken poultry or sewage sludge,...) in the green certificates obligation, electricity consumers are forced to pay for the treatment of waste they never produced.

² including the Single European Act, J.O.C.E., L.169/1-29 (26/6/87) (Article 130 R.) and the European Union Treaty, Maastricht, 7 February 1992, articles 130R2 et 130S5 as well as the Directive of the Council in relation to waste (75/442/CEE), 15 July 1975

³ « the Polluter-Pays Principle means that the polluter should bear the "costs of pollution prevention and control measures", the latter being "measures decided by public authorities to ensure that the environment is in an acceptable state". In other words the polluter has to bear the cost of steps that he is legally bound to take to protect the environment, such as measures to reduce the pollutant emissions at source and measures to avoid pollution by collective treatment of effluent from a polluting installation and other sources of pollution. Generally speaking, a polluter has to bear all the costs of preventing and controlling any pollution that he originates. Aside from exceptions listed by OECD(1)(2), a polluter should not receive assistance of any kind to control pollution (grants, subsidies or tax allowances for pollution control equipment, below-cost charges for public services, etc.). », in « The Polluter-Pays Principle, OECD analyses et recommendations », Paris, OCDE, 1992, p. 5.

§2. Waste of money for renewable energy development

Another problem of green certificates obligation is that green quota will create an identical support for all renewable electricity types even though production costs are not the same for each renewable technology. Everyone knows that PV systems and landfill gas, for example, have not the same production cost because of their different availability, technology development and market penetration. Nevertheless, they would receive the same support equal to the market price of green certificates. It is so that the Flemish current green certificate scheme would only support RES, which are the most cost-efficient. This may be the worst impact of green quotas : a waste of money because the financial support is not used to develop new and clean RES but distributed to polluting technologies that are already cost effective.

§3. Increase in CO2 emissions

By supporting renewable technologies without strict monitoring of the whole lifecycle, CO2 emissions might increase. There is a substantial risk for some biomass energy technologies.

We know that burning biomass emits the CO2 fixed by the plant during its whole life, so that the global carbon cycle is neutral. But the CO2 emitted upstream has to be taken into account.

Looking at the sewage sludge treatment for example we see that, although co-firing of dried sludge emits about 500g CO2/kWh while biomethanisation emits almost no CO2, co-firing produces more "green" electricity than biomethanisation. But the natural gas wasted to dry the sludge could have produced more electricity in a gas combined cycles plant.

A utility would then be more interested by burning sludge in an existing coal power plants rather than invest in a new biomethanisation plant, especially as the coal plant gets more green certificates.

GREEN CERTIFICATES AS A WAY TO DEVELOP RENEWABLE ENERGY SOURCES

Actually, the Flemish decree regarding the organization of the electricity market draws a fuzzy line between renewable energy support and waste treatment subsidy.

To change this situation, Greenpeace is advocating to clearly separate Renewable Energy Sources from Non Renewable Energy sources and to mark polluted biomass. It is further necessary to separate sustainable technology channels from unsustainable ones.

Three different categories are considered :

1. Renewable energy sources used by sustainable technology channels (ex : wind energy, solar thermal & PV energy, some clean form of biomass,...)
2. Renewable energy sources used by unsustainable technology (ex : gasification of chicken poultry, ...),
3. Non renewable energy sources used by unsustainable technology (ex : waste incineration, landfill gas,...)

Category 1 should benefit from green certificates and other support mechanism for RES.

Category 2 should not benefit from green certificates since it goes over polluting, unsustainable technologies whose financial support opposed the polluter-pays principle and / or the waste hierarchy : Prevention - Re-use - Material recycling - Elimination

Category 3 must be excluded from the definition of RES and hence of green certificates or whatever support to renewable energy sources.

CONCLUSION

To avoid the main threats of a green electricity market, four very easy mechanisms have to be enforced :

1. Exclude polluted biomass

It is crystal clear that supporting waste treatment or development of any polluted biomass is opposed to the polluter pays principle. This is why Greenpeace strongly opposes green certificates for waste incineration.

2. Balance economic competition by environmental competition

With the green certificates, governments introduce economic competition between different renewable energy resources & technologies. But economic competition has to be balanced by environmental competition. Therefore, a whole life cycle analysis of CO₂ emission of each renewable electricity technology has to be made.

A green certificate corresponding to a renewable technology that emits more than the best available fossil fuel technology must receive a certificate value equal to zero. A green certificate corresponding to a technology that emits 0 g CO₂/kWh must receive a value equal to 1.

3. Differentiate each RES on the green certificate

The green certificate has to mention the type of resource and technology used to produce the electricity and the power suppliers must fulfil their obligations with green certificates coming from different RES.

4. Introduce a minimum and a maximum price for green certificates

In order to limit the price volatility, it is necessary to put a maximum and a minimum price for green certificates. The maximum price is generally defined as the penalty for suppliers who do not fulfil their green obligation. The minimum price could be paid to producers who did not sell their green certificates. Different minimum prices could be proposed for each type of renewable resource and technology.

Source : How to succeed in the change of renewable electricity support in Belgium : from fixed premiums to green quotas (I. Sintzoff. Groupe Energie Biomasse. NGO workshop on Green Energy, march 2000).