Discrimination of electricity in the EU's energy and climate legislation

Discrimination of electricity in the EU's energy and climate legislation prevents the realisation of a low-carbon society

The EU has established targets for the climate and energy policy. The targets have been followed up by a comprehensive regulatory framework. However the harmonised EU regulation discriminates the use of electricity in the end-user market. In this brochure, we examine how the EU's use of conversion factors for electricity has in fact worked against its intended purpose.

The problem is the use of conversion factors for electricity in several EU directives and regulations. The EU requires that, when calculating total energy use at end-user level, the electricity consumption is multiplied by a conversion factor. Why? Because the purpose is to calculate the amount of primary energy used in power plants. In a number of directives, the factor for electricity is set to 2.5 and provokes unintended consequences when using such conversion factors.

Consumers are indeed misled when they choose products based on current energy labelling, CO_2-emissions increase and security of supply is threatened. This is problematic because it prevents the realisation of long-term emissions targets, increases the EU's dependence on energy imports, and disregards consumer interests.

Increased greenhouse gas emissions

When developing Ecodesign requirements for products, much stricter efficiency requirements are set for products that are powered by electricity than for products for the same purpose powered by direct use of fossil energy. A conversion factor of 2.5 for electricity thus means that electrical products have to use 60% less energy than alternative products. In some cases, this has resulted in electrical products being prohibited. We therefore run the risk that both short-term and long-term greenhouse gas emissions will increase.

Still, if consumers choose to purchase and use electrical products, this will not result in increased greenhouse gas emissions in Europe because the production of electricity is capped by the EU Emissions Trading Scheme (EU ETS)! The electricity sector is included in the EU ETS where they must compensate for their own emissions by acquiring European emission allowances (EUAs). Since the number of emission permits is limited and the member states (that are part of the ETS) issue fewer and fewer allowances for each passing year, we can be sure that the emissions in the sectors covered by ETS will be reduced in line with the long-term emissions targets.

> Ecodesign requirements stimulate end-users to select products powered by fossil energy, the consequence will be an increase in greenhouse gas emissions.

However, emissions from combustion of fossil energy in households and service sectors are not covered by the EU ETS. As Ecodesign requirements are meant for consumers to be informed and choose accordingly, they actually stimulate end-users to select products powered by fossil energy.The consequencewill thus be an increase in greenhouse gas emissions.

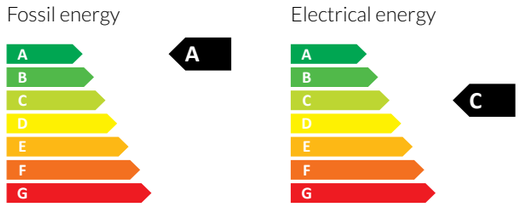
We risk locking in future dependence on fossil energy, making it more difficult and more expensive to realise the long-term climate objectives.

In conflict with consumer interests

The purpose of energy labelling is to make it easier for consumers to make informed decisions. In Energy labelling regulations, electrical products are "punished" as the consumption of electricity is multiplied by a factor of 2.5. As a consequence, some electrical products will never be able to surpass an energy rating of "C". Meanwhile products with the same final energy consumption in the form of fossil energy can obtain an "A" rating. Today's Energy labelling scheme has an perverse effect and motivates consumers to purchase products that run on fossil energy instead of electricity, regardless of whether this can increase both the energy bill for consumers and greenhouse gas emissions.

> Today's Energy labelling scheme motivates consumers to purchase products that run on fossil energy instead of electricity.

The member states are obliged to reduce domestic emissions in households and service sectors (non-ETS). In these sectors, direct fossil energy consumption must be limited, either by taxes or other regulatory measures. Thus – conversion factors, that motivate end-users to choose fossil fuelled products instead of electric products, also represent a financial risk for households as it increases their energy bill.



On the path to a low-carbon economy 2050 we cannot discriminate electricity

The EU objective is to reduce greenhouse gas emissions by 80–95% in the period from 1990 to 2050. According to the Commission's Energy Roadmap, this means drastic cuts in emissions from energy production, industry and transport as well as in households and the service sectors. This requires phasing out fossil fuel combustion at the end user level in favour of clean sources of energy such as electricity, heat and hydrogen. An important conclusion in the Energy Roadmap is that electricity is not a cause of the climate challenges but is an important part of the solution.

By applying primary conversion factors for electricity based on historic ways of producing electricity, the EU is not consistent with its energy policy and strategy. It distorts the energy market and creates competition between different energy solutions resulting in increased greenhouse gas emissions whilst misleading consumers and reducing security of supply.

When formulating the EU energy and climate policy framework for 2020–2030, counteractive measures such as conversion factors prevent the realisation of long-term goals. The framework for 2030 has to function as a bridge to a more sustainable, secure and productive low-carbon society in 2050.

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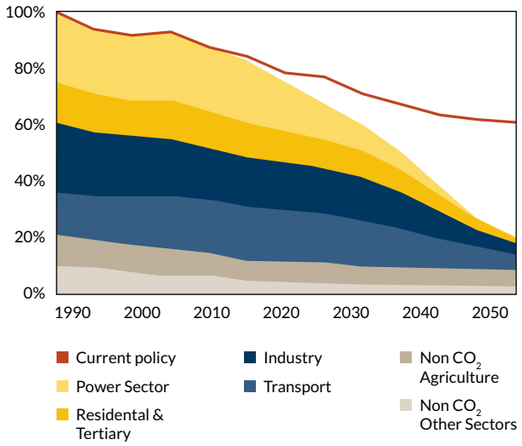
EU low carbon road map 2050 – The power sector will be decarbonised – and electricity will be the main energy carrier – why then discriminate electricity?



We therefore have the following recommendation:

The EU must avoid the discrimination of electricity and cautiously reconsider the use of conversion factors in all regulatory legislation addressing the end-user markets. This includes the Energy Efficiency Directive, Energy Performance of Buildings Directive and Regulations to the Ecodesign Directive and Energy Labelling Directive.

"Security of supply will top the agenda"

EU Commission at European Summit
June 25 – 2014

Challenges security of supply

On average, EU imports half of its annual energy consumption. The high dependence on imports creates concerns related to security of supply.

Hence, in the Energy Efficiency Directive, the EU sets requirements for both national targets and action plans for increased energy efficiency. Unfortunately, the primary conversion factor for electricity is applied in these requirements too. As a result, the member states can only meet the energy efficiency targets by encouraging end-users to choose products powered by fossil fuels instead of electrical products (see supra).

This increases the dependence on imported fossil energy and distorts the energy market compared to alternative energy sources.

If consumers instead choose electrical products, the electricity consumed may be produced from many different energy sources such as renewables (sun, wind and hydro), or nuclear power, coal, oil and gas with CO_2 capture. This will strengthen and diversify domestic energy supply and improve energy security.

Electricity is not a cause of the climate challenges but is an important part of the solution.

The European Association of Electrical Contractors
www.aie.eu

The European Union of Electrical Wholesalers
www.euew.org

www.euha-alliance.eu

www.nho.no/en

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