ENERGY TAXATION AND ITS PROBLEMS OF REGULATION

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ABSTRACT: The study analyses the questions of the energy taxation within the environmental tax regulation, as a special area of the environmental politics regulation. The author demonstrates the development and the role of the energy tax in the environmental policy. The energy tax is one of the most harmonized spheres of the European taxation rules. The harmonization with the single directive of the European Union come true not a long time ago, that is why the analysis of the experiences is important before the introduction of the regulation. Certain countries have applied the energy tax before the introduction of the directive. The study pans out about the experiences of regulation up to the present and the prospective changes of the regulation in the future.

KEYWORDS: energy tax, taxes, environmental, European taxes, environmental taxes

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1. THE FORMATION OF ENERGY TAXATION AND ITS HISTORY OF DEVELOPMENT

Energy taxes play a significant role in economy, they make up more than 70% of all environmental taxes in the Member States of the European Union and also more than 50% in most of other countries. (Georgescu-Pendolovska-Cabeca, 2007, Kiss, 2002) These types of taxes serve a unique purpose within the environmental tax system as pointed out in the specialized literature. (Kiss, 2005)

The function of energy taxes is similar to those of the general environmental taxes:
- enforcing of the polluter pays principle;
- inciting the use of environmentally sound technologies;
- raising funds for the purposes of the protection of the environment;
- integration of environmental goals into environmental politics;
- highlighting of areas with high environmental importance;
- moderating the distorting effects of traditional tax systems.

The most controversial part is the incentive nature of energy taxes. Literature points out that the low short term price elasticity of the demand for energy products makes it a stable source of income therefore the use of higher tax levels does not endanger the actual

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tax incomes. In general raising taxes lowers the direct demand but in time it returns to its previous rate. However, the application of energy taxes does affect the decision-making of taxpayers in the long term while it affects the choice of the used energy source in the short term. The expenditure of household reacts uniquely to the energy taxes since energy consumption belongs into the circle of the basic needs and the costs of shifting to another energy source is high and only financially beneficial in the long term. On the contrary, enterprises react quicker as energy taxes can affect the programs for energy-rationalization and raise their energy efficiency.

The price of energy is ever changing, the changes are high therefore energy taxes with low rates aren’t efficient enough. Consumer habits are more subject to the global market than the energy taxes in the short term. Another problem is the external price equalizing effect of the energy taxes. Economic literature points out the fact that producing energy from oil or gas pollutes the environment to such an extent that the external costs exceed not only the amount of energy taxes but also the overall price of the product. Efficiency is further impaired by different types of subsidies that directly or indirectly promote fossil resources over the development of renewable resources.1

The taxation of energy looks peculiar in the EU and other OECD countries. Its current form is the result of long economic and historical development in which international conferences for climate protection played a huge role. These determined that the energy sector has the most significant effect on climate change, bringing it to the center of attention. The USA has the highest pollution rate all over the world, making its energy taxation policies worth looking at. (Lazarri, 2008)2

The American energetics taxation policy focused on gas and oil resources and their extraction due to growing demand toward them. In 1916 and later in 1926 an Act on gas and oil taxes was passed. Its primary goal wasn’t the protection of the environment but the increase of inland revenue. The tax decreased the profit of oil and gas companies significantly which hindered the development of oil industry therefore taxpayers were allowed to use reduced tax rates and delayed payment. These events incited the research and development of oil and natural gas. More profitable trade sped up the extraction process leading to the exhaustion of resources. Low prices also encourage oil consumption over the use of renewable energy. The ’70s brought changes to the energy taxation policy. Pollution became an important issue as an energy crisis took shape and inland revenue was further reduced by reduced tax rates for oil and gas. All these events prompted the government to prefer energy economy and alternate resources over conventional energy resources. New environmental taxes like an excise duty on fossil fuel and a federal tax on sales of cars were also introduced in the 1970’s. Reduced tax rates were meant to help the spread and introduction of alternate resources, energy efficient technologies and renewable resources. The Act of 1978 on energy taxes contains the bigger amount of tax benefits like the ones for residential and business energy use and also the ones for conventional and nonconventional fuel. Energy policy changed direction in the 1980s. In 1980 excise duty for oil was enacted. The new policies became neutral,

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1 Kis (2005.): i.m. 133. p. Az European Environmental Agency differentiates between multiple types of state aids: direct financial aid for the energy production sectors; acquisitional quotes; favorable loans; the relief of the energy producers’ responsibility; reduced prices; reduced tax rates; unsecured external costs; research and development aid.

2 The study is used to illustrate the development of US tax policy.
less distorting than the previous regulation making energy taxes more efficient. The previously granted benefits for residential and business energy taxes expired in 1985 and only the use of solar, geothermal and ocean thermic energy provided discounts. The efficiency of the system was distorted by the still effective discounts on oil and gas. Since 1998 several significant acts and amendments affecting energy taxation were passed. The relatively low price of oil affected manufacturers negatively and encouraged consumption. By 2000 the prices of oil and gas rose significantly helping the reevaluation of energy tax regulation. A wider range of energy tax discounts and subsidies were introduced as part of the measures of energy policy. In 2005 the Act on energy policies containing an extensive regulation on energy tax discounts was passed.

Two types of energy taxes can be distinguished in the Member States of the European Union: the tax on conventional energy products (coal, oil, natural gas, electricity) and the tax on fuels. Carbon dioxide taxes are the less prevalent of the two since energy taxes in the traditional sense are already among the harmonized fields of taxes in the EU. (The introduction of carbon dioxide taxes started in the early 1990s and was sped up by the Rio conference. The tax base of carbon dioxide tax is the amount of carbon dioxide emitted, thus making it one of the primary environmental taxes. The Scandinavian countries and the Netherlands were the first states to introduce these taxes.)

The uniform taxation of energy products and a uniform harmonized energy tax were both heavily debated before their introduction, the current EC regulation is the result of a long process detailed by the specialized literature. (Hasselknippe – Christiansen, 2003; Szabó, 2007) Before the unified directive the regulations of the Member Stated differed significantly. Due to the lack of harmonization a wide variety of tax rates, exemptions and exceptions were in effect. The Committee unsuccessfully attempted to enact several collective carbon dioxide and coal taxes. They were mostly opposed due to their negative effect on the market. (Hasselknippe – Christiansen, 2003) Constant debates lead to the creation of a framework of the taxation of energy products in the European Community in the form of a directive proposal. The Monti-Directive of 1997 was named after Mario Monti, the contemporary commissioner of taxes. It had multiple goals: (Szabó, 2007)

- protection of the environment (reducing the rate of the emission of carbon dioxide);
- encouraging the use of different means of transportation;
- employment creation (excess income from energy taxes is meant to be invested into the reduction of the labour burden);
- fiscal harmonization.

The Monti-proposal’s characteristic is to set minimal rates for all of the energy taxes. (Member states can still set a different rate as long as it exceeds the minimum). The proposal also contained tax exemptions and returns. (Kiss, 2005) Among the exemptions are:

- utilization for other purposes than as propellant and fuel;
- utilization for the purpose of producing electric and co-generated energy;

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3 Kiss (2005.): i.m. 119. p. The council of finance ministers of the member states planned to introduce the tax on Union level but to failed to do so. It was introduced in Finland (1990), Sweden and Norway (1991), Denmark and the Netherlands (1992).
- fuel for not privately used planes;
- shipping.

The proposal also grants the possibility of tax returns:
- up to half of investments aiming to increase energy efficiency;
- if the tax exceeds 10% of nontraffic-type costs of an enterprise, up to the amount exceeding the 10% rate.

The proposal planned to enact the unified energy tax in three steps. As the first one, 8 primary energy products would have been taxed based on their energy capacity. The initially low rate would have been increased every two years reaching the proposed rate in 2002 by the time the Directive would become effective. (Szabó, 2007)

In 1998 the European Parliament proposed the standardization of energy taxes in the so called Olsson-report: (Kiss, 2005)
- every Member State must enact a standardized energy tax;
- energy has to be subject to the highest value added tax rate;
- instead of the principle of unanimity the principle of qualified majority should prevail in energy tax matters in EC decisions.

Although the Monti-proposal was less ambitious than the proposal for the carbon dioxide tax in 1992 but it was still heavily opposed by such Member States, like Spain or the UK, since as these state claimed the energy market should have been liberalized before the introduction of a unified energy tax in the EU. (Szabó, 2007) Decisions regarding taxes and finances require unanimity in the EU making even a single Member States able to prevent the introduction of a tax.

Member states reacted to the introduction of the energy tax in two ways. The first group contains those Member States where energy taxes aren’t widely used (Belgium, Ireland, Luxemburg, Spain, Germany, France) while the other one where the usage of these kind of taxes is widespread (Italy, Finland, Sweden, Austria, Denmark, The Netherlands). (Szabó, 2007) Therefore it is obvious that Member States have different interests regarding the enactment of energy taxes. The proposal was first amended under the German presidency in 1999, implementing longer interval and granting wider flexibility to the Member States. Despite the proposal no progress was reached. The Swedish presidency returned to the subject in 2001. The negotiations were back on the table thanks to the fact that the Swedes put great emphasis on the environmental issues. The distortion of competition was attributed to the rate of the tax since Sweden used a higher rate than other countries. The proposal was vetoed by the Spanish despite the fact that the Swedish initiative also covered the market liberalization. The work of the Swedish was continued by the Belgians in the second half of 2001. Despite the remaining differences in view an agreement was reached to implement a tax on both the input and output of electric energy. In 2002, when Spain gained presidency their opposition faded away leading to great progress and a new proposal. Their change of approach had multiple reasons. Financial reasons were the most prominent due to the constantly growing energy tax rates the proposed rates of the Community have become too low. Moreover, Spain hoped that the liberalization of the energy market would lead to the opening of the market

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4 The eight primary energy products: municipal heating oil, heavy heating fuel, other heating fuels, petroleum, PB gas, natural gas, solid heating fuels and electricity.
of France. (Hasselknippe – Christiansen, 2003) In the second half of 2002 the Danish presidency managed to achieve several results: (Kiss, 2005)

- determination of the energy intensive sectors;
- several Member States were allowed the use the minimal EU tax rate;
- a transitional period, delayed implementation was also allowed to particular Member States.

The agreement was strengthened by the fact that the newly joining countries would make the decision-making process even more difficult. Even so, the proposal reached its final form in 2003 and passed on the 27th of October under the Greek presidency.5

The characteristics of the Directive effective since 1st of January 2004 are the following: (Hasselknippe – Christiansen, 2003)

- minimum tax rates were determined in advance until 2013;
- minimum rates remained low,
- state specific rules of implementation;
- long transitional periods;
- enterprises making energy efficiency agreements are entitled to tax refund.

The factors affecting the formation and development of the energy taxes will have an effect on its future regulation as well. These key factors are: (Hasselknippe – Christiansen, 2003)

- the regulation of the internal market of the EU;
- energy liberalization and deregulation;
- energy safety;
- environmental policy;
- other political processes.

Internal market played a determining role in the formation of energy tax as its main goal is to prevent the distortion of competition through regulation. The internal market of the EU determines the regulation of national energy taxes, minimum tax rates and the further development of the Energy Tax Directive. The Directive hasn’t affected the operation of the internal market significantly but rather fixed the status quo by incorporating the minimum tax rates into a legal document. After the Directive was passed few changes occurred in the national energy tax rates. As long as they remain above the minimum rate it helps the full harmonization of the energy tax.

The issue of energy safety was and is of key importance for the EU which was made obvious by the reoccurring Russian-Ukrainian gas debates causing disruptions in the gas supply of several Middle-European countries. More than 70% of consumed oil and more than 40% of gas was imported by the EU in the 2000s but due to the growing demand and internal resources running low these rates are expected to rise significantly (90% of oil and 70% of gas) as pointed out by the Green Paper of the European Committee. The EU is becoming more and more exposed to disruptions in supply and price changes since the supply is originated from outside the EU. To answer this issue, the EU is attempting to make its energy supply system more diverse and thorough and decrease the dependence on foreign oil and gas. Energy tax plays a significant role in achieving these goals since it

redirects consumption toward environmentally sound sources protecting the environment and making the energy supply safer.

The energy policy of the EU follows a dual strategy. First, the EU attempts to fulfill its international undertakings regarding the decrease of emission and on the other hand to provide an affordable and ample supply of energy. Taking all these into account, a dual-level negotiation logic get into the focus of the formation of the Directive aiming to use a lower tax rate for internal resources than for the imported ones. The first common step on the road to achieving energy safety is the Green Paper submitted in 2000. It pointed out the failure of the harmonization of the energy tax, and highlighted the importance of the tax in the reduction of environmental damages. Whether the energy tax will be able to change consumer habits remains to be seen. In many cases literature doubts it since energy taxes only affect consumer habits in the long term but barely on the short term.

Environmental policies of the EU also affected the energy system of the Member States, the formation and development of the Energy Tax Directive. Literature highlights the three most important fields of the policies regarding energy taxes are the policy of the EU on climate change, the strategy of renewable energy and the measures used in the field of energy policies. The European Union became the front runner of the struggle against climate change. However, the instruments of this struggle changed due to sustainable development. The draft of the energy tax proposed in the early 1990s was considered a significant step of the policy on climate change. The tax pointed out problems both on the scale of the member states, as well as on the scale of the Union. It’s an important step despite the fact that the European Environmental Agency (EEA) claims that the tax hardly affects environmental sustainability, the Kyoto undertakings and the Emission System of the EU. Still, Member States made steps to transform their energy taxation in light of the protection of the environment. The goal of the strategy of renewable energy is the constant increase of renewable energy production also targeted by the White Paper on renewable energy sources (like biomass, wind, solar, geothermic energy and heat pumps).

In order to spread the use of renewable energy Member States are entitled to apply favourable tax rates, price reducing regulations and subsidies. Renewable energy sources were removed from the scope of the Energy Tax Directive but because of the low energy tax rates and expansive exemptions the spread of renewable energy isn’t efficient enough. It’s obvious that the different sectors of environmental politics require different measures according to their efficiency (trade of emission, renewable sources, energy taxes).

Enacting energy tax is important for the new member states of the Community, too. The ten newly joining countries were obligated to implement the tax as part of the Directive. Since these countries either didn’t have an energy tax or it was in a different form, this new type of tax made the most significant changes in their legal and financial system.

2. ENERGY TAXATION IN DIFFERENT COUNTRIES OF THE EUROPEAN UNION

Energy taxation went through a specific development process until the implementation of the Directive and this became the focus of literature analysis. (Steinbach, 2007)⁶ The

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⁶ Environmental taxation is presented based primarily on the work of the author.
analyses determined the high importance of the energy tax in every country making the energy taxation systems of all 15 Member States prior to the implementation of the Directive worth looking at. (Hasselknippe—Christiansen 2003)

In 1999 Austrian environmental tax revenues reached 4.9 billion euros, traffic and energy taxes making up 90% of this amount. Since their 1996 implementation tax rates on natural gas and electric energy were constantly growing. Electric energy was not only subject to energy taxes but also to VAT. Revenues from these taxes were spent on the protection of the environment. The industry sector belonged under the scope of the Energy Tax Refund Act which grants tax refund for electricity and gas users if the value added exceeds 0.35%. This means tax refund for consumers with high energy consumption rates. The EC ruled out the new Austrian environmental tax proposal in November 2001 due to its benefits for the industrial sector which were considered State aid by the EU. According to the Commission the modification of this proposal should be done by the end of 2002 which as a matter of fact overlapped the tax reform of the Union planned in the beginning of 2003.

In 1997 the country with the lowest environmental tax revenue was Belgium in the EU. Revenues were uneven in the country due to the different tax systems of the different regions; water, waste and pollution were all subject to regionally different charges. Financial politics including energy taxation belong to the federal jurisdiction. The Federal Project for Sustainable Development (2000-2003) along its chapter on sustainable development examines the effects of the introduction of carbon dioxide and energy taxes and distinguishing between VAT subject based on their products and their effect on the environment. These plans were implemented in the National Climate Change Plan where the tax was no longer considered as just a draft. In this examination phase the national energy taxation was evaluated through different scripts. The plan was to raise the tax rates to those of the neighboring countries and the most important trade partners (Germany, Netherlands, France), to triple the rate of excise duty on energy products and to implement Community proposals were among the plans. The raised tax rates aimed to increase inland revenues by 1.4 billion euros and to decrease CO₂ emission by 3.5% instead of the original 3%.

In Denmark energy is subject to taxes since 1977 (taxes on fuels were implanted in 1917 but without an environmental program.) The carbon dioxide energy tax on households was implemented in 1992 with the intention of increasing its rate annually. According to the reform of the protection of the environment in 1996 the emphasis among tax revenues shifted from taxes on work and income to those on pollution and natural resources. The carbon dioxide tax benefitted the industrial sector based on energy intensity. The reform introduced the system of voluntary agreements and granted benefits for energy saving projects. Traditionally, reforms of environmental protection taxes enjoy significant political support in Denmark while the industrial sector harshly opposes them due to the negative effect of the tax on their competitiveness. Several tax reductions had been applied to make an agreement possible with each diminishing the effectiveness of the tax. (Still, in 1997 the energy consumption of the industrial sector would have been 10% higher without the tax.) After the 2001 elections the new government made promises about a full freezing of taxes preventing the implementation of new taxes and decreased energy and green taxes in the real term. The government favored making a decision
regarding the tax harmonization debates but unfortunately the Danish presidency was unable to enact the collective energy tax.

In 2001 an Act on Carbon Dioxide Quote was passed which implemented a national maximum of emission and a system of trade of greenhouse gas emission. It is based solely on carbon dioxide and it covers the whole electric energy sector but the system excludes power stations with an emission and output rate of less than 100,000 tons of gas. Almost 90% of total electric energy output falls under its scope which makes up 30% of all Danish greenhouse gas emission.

In 2000 Finland environmental tax revenues totaled at 4.1 billion euros making up 7% of total tax revenues; 82% of this amount came from taxes on fuel and 16% from energy taxes. A general energy tax on fossil fuels was implemented in the early 1990s which was later reformed in 1994 extending its range on all primary energy sources (excl. biomass, wind, exhausted heating elements) with a fixed ratio (60% for carbon dioxide, 40% for energy.)

The current system was easier to implement thanks to Finland joining the EU and opening its energy market. Instead of taxing the primary energy sources electric energy consumption was subject to taxes. Taxes were reduced for companies with smaller electric energy production. The base of energy production shifted to renewable energy. Energy intense companies were entitled to tax refunds.

In France energy taxation was first introduced in 1997 with the introduction of General Tax on Polluting Activities (Taxe Générale sur les Activités Polluantes -TGAP), which combined and simplified the five previously existing tax types (air pollution, treatment and storage of mineral oils and special industrial wastes, municipal waste and noise pollution.) In 2000 a new general energy tax was implemented (TGAP-2). The revenues of TGAP were used to lessen the burdens of employers. TGAP2 was highly debated especially for its provisions on industrial consumption. The main problem was that due to the different types of exemptions costs for smaller companies were higher than for the bigger energy intense ones. The revenues from TGAP2 was used to finance social programs but since it was deemed unconstitutional, the French Constitutional Court deleted these provisions. After TGAP2 energy taxation received less attention the regulation of the corporate sector focused on voluntary agreements aiming to reduce greenhouse gas emission of enterprises instead. The tax on household electric energy consumption was the only energy tax implemented in 2003. In order to reduce greenhouse gas emission, AERES, an organization of companies with this same goal was formed.

The German energy tax system was created during the ecological tax reform because of an obvious change of mindset on taxation – between 1999 and 2003 the emphasis was successfully transferred from the taxes on labor onto the taxes on pollution. The electric energy tax was implemented in 1999 as part of the reform. It grants the possibility of reduced tax rates for energy intense companies and programs for the protection of the environment. These programs aim to increase energy efficiency energy-saving. (Klok, 2002) Despite its successes the reform had its own share of shortcomings, the most prominent was the reduced tax rates for the industrial sector which the Committee criticized for its conflict with European competition rules. The government guaranteed the 80% tax reductions until 2012 but the reductions with rates of 90% had to be removed from the system. This was the first time for a 10 year long relief period to be permitted since the implementation of the new system in January of 2001. Other problems included
energy produced from mineral oils and natural gas being subject to double-taxation while coal being exempt. The winning party of the 2002 elections promised to focus on EU scale tax-harmonization and to avoid energy tax raises. The coalition formed after the elections continued the ETR reform.

Greek energy taxation focuses mainly on oil products which makes up 6.7% of total tax revenues. Compared to these, other taxes are negligible. There is no environmental tax reform (ETR) in sight.

Ireland didn’t subject electric energy to taxation and the overall amount of attention environmental taxation received (apart from taxation of fuels and traffic, of course) is also low. The National Climate Change Strategy in 2000 proposed the implementation of the carbon dioxide tax in 2002. The proposal was disapproved by finance minister Charlie McCreevy in 2002 but in December of the same year, after the renegotiation of the issue the implementation was delayed until 2004.

Energy tax rates for households and enterprises have always been high in Italy for historical reasons. During the implementation of a general financial reform between 1998 and 2003 Italy planned to introduce the energy tax gradually aiming to use its revenues to decrease the rate of taxes on labor. Tax benefits were issued and environmental protection programs were initiated as part of the reform. The annual tax raise on fuels was based on the coal content in regard for all subjects of the tax. The tax raises of the industrial sector depended on the tax-harmonization issues of the EU. Tax rates were frozen on the basis of the 2000 fuel prices and a promise were made to avoid tax raise but to widen the basis of assessment. In 2002, legislation proposed a new energy tax act aiming to modernize the taxation system.

In Luxemburg the energy tax system existed before 2003, albeit with low tax rates.

Netherlands has one of the most advanced energy taxation systems in the EU, covering taxes of energy, groundwater, waste disposal facilities, air traffic noise, fertilizer and incentives to make the country more ‘green’ by increasing energy-saving and energy efficiency. 1996-2003 the subjects of the taxes included households, traffic, small and medium enterprises. 60% of the revenues came from households while the remainder originated from the industrial sector. Energy intense companies were almost fully exempt similar to natural gas. The rate of the taxes was doubled in three steps over 4 years compensated by the reduction of income tax rates and social contributions burdening the employers. Electric energy consumption decreased by 15% due to the high prices. (Energy tax revenues make up 1.5% of total tax revenue.)

The National Climate Change Plan was implemented in Portugal in December of 2001 by attempting to reform the taxation system in the traffic sector. Electric energy received very little attention, the only tool for the protection of the environment was the feed-in bonus granted for renewable energy sources.

Energy consumption is subject to lower tax rates for the industrial sector than for households in Spain but there are no other laws regarding environmental taxation. Before the Spanish Presidency-in-office in 2002, Spain vetoed the agreement on the collective energy taxation system of the EU.

The energy tax was implemented by the 1991 tax reform in Sweden with stern fiscal neutrality. Only the industrial sector was granted benefits and refunds. After a series of failed attempts on harmonization tax rates for the industrial sector were reduced to 25%
but raised by 50% in 1997. Other environmental tax rates were also increased, including the taxes on sulfur dioxide and nitrogen dioxide. The change of approach with the shift from taxes on labor to taxes on energy was accepted as part of the budget of 2002.

The Climate Change Levy (CCL) determined the English energy taxation system which covered gas, coal and electric energy (oil products fall under the scope of the tax on mineral oil) consumed by the corporate sector (households are not subject to the tax.) It’s important to note that taxes on non-mineral oil belong here, too.

Energy intense companies are granted tax reductions up to 80% for Climate Change Agreements in which they undertake the fulfillment of energy-saving requirements, decreasing their emission and the initiation of energy efficiency programs. Moreover, companies are able to participate in the English system of trade of emission. (Every sector has signed these voluntary agreements already.) CCL is neutral to income, its revenue of 1 billion pounds made up 0.5% of total inland revenue. This money is used to decrease the social contributions paid by employees and to fund environmental protection programs. The government attempts to compensate companies for the high tax rates through increased investment benefits: if the company invests in environmental protection, energy efficiency and emission reducing measures it is granted annual tax allowance.

The CCL system was criticized by environmental protection organizations for using energy as a basis instead of coal and by companies for ruining British competitiveness. Another problem was the uncertainty about the effect of the system on the English and EU system of trade of emission. The conflict of these two systems stems from the decision of the British government to exclude households from the scope of the CCL. To ensure the successful shift to the EU-ETS system the dual regulation of the industrial sector has to be reworked since companies have to both pay the taxes and use limits on emission.

In 2003, energy taxes made up 76% of all environmental taxes which at the time meant 194 billion euros for the 15 member states and 202 billion for all 25 member states of the present day. Energy taxes concern two sectors in regard to taxation: households and enterprises. Despite making up only 26% of total energy consumption, households paid 50% of overall tax revenue (In some countries, like Belgium, Spain, Great-Britain and Norway higher household incomes proportionally decrease the burden of energy taxes, resulting in an apparent decline in taxation proportional to income. The only exceptions are the Dutch where it still rose.) Enterprises had to pay a total of 92 billion euros as energy taxes in the 15 Member States in 2003, 42% of it made up by traffic and storage taxes (38 billion) and a significant amount by other service providers (mining, processing industry.) However, a great number of exemptions were granted for the corporate sector by the Member States to ensure international competitiveness (e.g. the exemption of kerosene used as jet fuel and international shipping.)

3. THE STANDARDIZED ENERGY TAXATION OF THE EU

Several conceptions pivotal to the development of energy taxation have been put forward in the specialized literature. The Green Paper on tools based on the market points

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3 Statistics do not include the data for Romania, Bulgaria and Croatia.
out the direction of the development.\(^8\) The energy tax combines the promotional aspect of the taxes with the ability to generate income in order to enhance energy efficiency and to ensure environmentally sound consumption but the general and flexible approach does not always allow for measures of harmonization. Policy objectives have to be combined with energy taxation to ensure success. (The EU undertook to decrease emission by 30% compared to the level of 1990 until 2020, making the policy objectives very clear.)

One of these concepts would divide Community tax minimums into energy and environmental elements which would appear in the form of energy taxes and emission taxes on the national scale. This would allow for decisions in the field of energy taxation more favorable for the protection of the environment.

In order to avoid unified promotion and distortions between energy products taxation should be uniform and based on energy content among fuels. Moreover, environmental factors of energy consumption should be addressed in the tax: greenhouse gases and non-greenhouse gases should be distinguished. This approach would enable discerning environmentally sound resources.

Another problem stems from the regulations of heating and motor fuels requiring further differentiation based on the form of use. The energy tax is in interaction with other market-based tools. Although energy tax is the most thorough of those tools in some aspects it needs improvement. These aspects include its relation to the EU-ETS system, which combined with the energy tax would enable the extension of the scope of the tax augmenting the system of the EU-ETS. While the EU-ETS focuses on emissions of burning plants and industrial facilities the energy tax covers the use of heating and motor fuel. (The system of the energy tax excludes both energy products and electricity used as industrial resources and energy products used for producing electricity or energy products.)

The scope of the energy tax according to EU regulations doesn’t cover the most energy intense sectors. The Committee leans toward the exemption of these sectors if their emission levels can be controlled effectively through the EU-ETS system. Some manufacturers do not participate in the EU-ETS (for example due to the small size of their enterprise) however. The scope of the regulation should be extended to include these manufacturers. Also, to avoid possible conflicts with the EU-ETS system, environmental effects regulated by it should be removed from the scope of the energy tax.

That said, energy taxation could fuel innovation and the development of energy technologies. Its effect on innovation is made up of three steps: (Schmidt-Hansen-Tops-Jensen-Jespersen, 2010)

- the correct tax system makes fossil resources more expensive to private and industrial consumers,
- increases the demand for technical solutions that save energy or use less fossil resources, making technologies more economical,
- brings innovation to the attention of enterprises.

Experience shows that a price or tax rate change of only 1% decreases energy consumption by several percentages. As pointed out by literature, global or at least

regional taxes have a stronger effect on innovation than national regulations. This has two main reasons: first, companies can simply transfer their production to another country to avoid national taxation instead of investing into energy efficiency; and second, environmentally sound technologies are not profitable if global sales make up only a small portion of the local market and therefore discourage technological development.

The empirical and bibliographical researches prompt the transformation of the EU regulations. The European Committee made a proposal on the rework of the system in April of 2012 but it was not supported by the European Parliament. The goal of the Committee was to encourage the fight on climate change and to decrease the emission levels of greenhouse gases. The tax minimum determined for every energy product would be changed to a dual-component one. One of them would charge manufacturers 20 euro per ton on emission disregarding the type of the energy product used. The other one would constitute a tax minimum raised annually after 2013 and it would reach 9.6 euro/GJ for motor fuels and 0.15 euro/GJ for heating fuels until 2018. (Naturally, member states are free to set higher tax rates.)

The modification of the Directive mainly aimed the unification of taxes. According to the Committee, member states use unreasonably favorable tariffs for some energy products (like coal and diesel oil) which conflicts climate protection and energy efficiency objectives of the EU. The new tax system would encourage member states and enterprises to favor renewable energy.

The EP didn’t approve of this proposal because of its effect on the industry and it raising the price of diesel oil. The EP would gradually abolish the system of energy tax benefits while providing compensation instead.

It’s easy to see that the current regulation has multiple issues. The basis of the EU regulation is the 2003/96/EK Directive of the Council. The goals of the Union scale regulation of energy taxation include tax harmonization and environmental policies, too. One of the most important one of these policies is the fulfillment of the objectives of the Kyoto Protocol which views taxation of energy products and electricity as basic tools. The proper operation of the internal market also prompted the unified energy taxation. The lack of a tax minimum and the different tax rates set by the Member States hindered this operation, however. From the perspective of the internal market ensuring equal competition through taxation is paramount since it’s needed in order to correct the distortions experienced by operators.

The system of energy taxation shows unique characteristics in comparison with other tax types: (Galántainé, 2004)
- factoring external environmental effects into energy prices;
- encouraging operators to use energy-saving methods and to decrease energy costs;
- using up-to-date technologies and thereby improving long term competitiveness;
- public funding of the protection of the environment and other expenditures;
- living up to international environment protection standards.

According to the Directive energy products and electric energy constitute the subjects of the tax. The subject materials are not only assigned with special codes, their specified means of use also bears significance.

9 The Directive takes effect on the 1st of January, 2004
The scope of the Directive does not cover the taxation of heat-production and the specific use of energy products and electric energy, (Darák, 2012) which include:
- use of energy products not as motor or heating;
- dual use of energy products;
- electric energy used primarily for chemical reactions, electrolysis and specific processes in the metal industry;
- electric energy if it exceeds 50% of the overall costs of the production;
- mineralogical processes;
- energy products used as fuel found in the fuel tanks of vehicles used in commerce if they are legal to use in one of the Member States.

The Directive does not specify provisions regarding the taxpayers but it’s easy to see that all taxable persons are taxed. The most problematic field of the regulation is the issue of exemptions and benefits.

4. TAX RATES AND TAX PREFERENCES IN ENERGY TAXATION

The EU regulations use natural units in accordance with the physical characteristics of the energy products. Compared to the basis of the tax, the Directive regulates tax rates much more thoroughly. The aim of these regulations and the unified tax rates is to improve the operation of the internal market through decreasing the differences between national tax rates. It sets a tax minimum for energy products from which Member States are free deviate. Tax rates are regulated in a complicated system according to complicated principles. The rate of the tax corresponds to the total costs of direct or indirect taxes (excluding VAT) on the energy product or electric energy at the date of being put into circulation. This means that the minimum rate of the energy tax includes other taxes, too. (This enabled the Hungarian regulation to tax mineral oil products in the form of excise duty as the tax rate is above the minimum level set out by the EU.)

At determining the tax rates the EU regulations differentiate between specified purposes of use based on three factors. The regulations distinguish motor and heating fuels and electric energy. Tax rates for motor fuels are generally lower than the rates for heating fuels and electric energy. The regulation further differentiates between the use of

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10 The codes are assigned based on the 1. Annex of the Council Regulation on the tariff and statistical nomenclature and on the Common Customs Tariff
11 Energy products subject to taxation include motor and heating fuel, leaded and unleaded petrol, diesel oil, kerosene, LPG, natural gas, heavy fuel, coal and coke.
12 The author considers these compulsory exemptions.
13 (b) of the 4th paragraph of Article 2 of the Directive. An energy product has a dual use when it is used both as heating fuel and for purposes other than as motor fuel and heating fuel. For example the use of energy products for chemical reduction and in electrolytic and metallurgical processes shall be regarded as dual use.
14 The Directive defines the costs of production as the sum of overall costs of the acquisition of resources and services, the costs of labor and amortization. The costs of electric energy is its real value at the date of acquisition or the cost of production.
15 The Directive considers the production of non-metal products a mineralogical process.
16 Article 24 of the Directive regulates this matter under taxation regulations.
17 The unit of electric energy is megawatt per hour, gigajoule for natural gas, thousand kilograms for coal and a thousand liters for petrol and diesel oil.
heating fuels and electric energy for business and non-business purposes. Tax rates do not necessarily vary but if they do, usually tax rates for non-business use are higher.

The Directive specifies the use for business purposes. It is used for business purposes if the operator autonomously conducts production or servicing activities with no regard to its objectives and results. Activities of producers, merchants and persons providing services (including mining and agricultural activities) constitute economic activity. National, regional and local administrative bodies are not considered operators when performing official tasks or public-service missions. However, the regulation of business companies apply to them if they conduct economic activity, otherwise competition would become distorted. (Terra-Wattel, 2005) The Directive considers mixed use, as well. If one type is negligible it may be disregarded otherwise tax rates are determined by proportioning. Differentiation between the use for business and non-business purposes is not compulsory for member states, the range of tax benefits of the use for business purposes may be restricted. (The Hungarian regulation does not differentiate, it uses a unified tax rate system.)

The regulation establishes general and reduced tax rates on fuels. Reduced rates are used in case of industrial and commercial uses specified by law (like agricultural activity, construction equipment and non-road mobile vehicles.

This shows that different rates of taxes apply to the same product based on the purpose of use impairing the control of energy taxation and increasing administrative costs.

The tax rates for the energy products listed by the Directive are determined by the regulation but this does not mean they do not apply to other products subject to the same regulation as energy products. (Terra-Wattel, 2005) The same tax rates apply to every product used or sold as fuel, fuel additive or diluent and to all hydrocarbon used or sold as heating fuel as to their most closely related energy product.

The principle of flexibility permits Member States to adjust the regulation in accordance with national circumstances. Member states hold jurisdiction over the tax measures in connection with the implementation of the Taxation Framework of the Community. The fact that Member States may decide not to increase the overall tax burden if it helps modernize their tax system, encourages the protection of the environment and makes better use of the work force indicates flexibility in respect of the overall tax burden. Member States may establish different national tax rates from the rates of the Community on the same unit if they are in accordance with the minimum rate and the rules of competitiveness of the internal market.

These distinct tax rates can only be applied under fiscal control and only to specific energy product for specific use:

- if the distinct tax rates and the quality of the product are directly related;
- if the distinct tax rates align with the amount of energy product or electric energy used as heating fuel;
- specific purposes (local public transportation, waste collection, armed forces, administration, disabled persons, medical transportation);

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19 Article 8 of the Directive

20 Article 5 of the Directive
- use of heating fuels and electric energy for business and non-business purposes.

The regulation also permits the use of distinct units and currency for the tax rates (the exchange rate has to be specified annually.) The regulation does not differentiate between the commercial and non-commercial fuel use of diesel oil but Member States are permitted to do so. This also enables to reduce the differences between the taxation of the use of non-commercial diesel oil fuel as motor fuel and the taxation of petrol.\(^{21}\) At the same time, the taxation of fuel used by transporters conducting their activity within the Community requires special regulation in accordance with the system of tolls.

One of the most complex aspects of the EU regulation is the range of exemptions and benefits. These are granted for multiple reasons:
- the lack of harmonization on the scale of the Community,
- the risk of losing international competitiveness,
- international obligations,
- environmental concerns,
- other concerns.

The Directive sets procedural requirements for providing exemptions and benefits. They are provided for sets amount of time and they are regularly reviewed. Member States must notify the Committee about the national actions regarding tax exemptions and benefits. Since they are considered state aid, EU regulation applies to them, as well.

There are multiple ways to categorize exemptions, one of them is the differentiation between general exemptions on EU level set out by the Directive and unique national exemptions. The exemptions and benefits of the EU can be either optional or compulsory.\(^{(Terra-Wattel, 2005)}\) The regulation is characteristically optional meaning it’s up to the Member States to decide whether or not to apply the exemptions and to decide on their scale. Compulsory exemptions include exemptions based on international undertakings (energy products sold for use in aerial and sea traffic) and the previously mentioned cases not under the scope of the Directive (heat-production, chemical reduction etc.) However, some bibliographical sources do consider these latter as compulsory exemptions.\(^{(Darák, 2012)}\) Optional exemptions can be divided into full and partial exemptions.

General tax reductions can be applied in three forms by the Member States: \(^{(Terra-Wattel, 2005)}\)
- directly,
- through distinct tax rates,
- by fully or partially refunding the paid tax.

Based on the characteristics of the regulation three types of EU tax reductions can be distinguished:
- environmentally significant exemptions,
- benefits for prioritized enterprises,
- other exemptions and benefits.

Environmentally significant exemptions include benefits for environmentally sound technologies, renewable energy resources and specific transportation methods.

\(^{21}\) Paragraph 20 of the preamble of the Directive
Environmentally significant exemptions can be applied as partial or full exemptions. These are:
- taxable products used in the development of environmentally sound technologies;
- taxable products used in the production of fuel made of renewable resources;
- electric energy produced with renewable resources;\(^{22}\)
- energy product and electric energy used in the production of linked heat and electric energy;
- electric energy produced by environmentally sound generators used for linked heat and electric energy production;
- energy products and electric energy used as fuel for inland shipping;
- biomass.

The Directive applies special provisions only for biomass.\(^{23}\) Member States may use full exemption and reduced tax rates, too. Tax rates below the tax minimum may be applied to energy products containing biomass. Energy products made up entirely of biomass may be granted full exemption. However, regulation restricts these exemptions by setting maximum rates for them and by taking the changes of energy prices into account, maximum rate meaning that the rate of the exemption cannot exceed the sum of the tax. To avoid overcompensation, resource prices have to be taken into consideration when applying the benefits and the exemptions. Exemptions and benefits changed after their expiry date on the 31th of December, 2012. On procedural grounds this is a special exemption which may only be granted for a one year time periods but only for up to six consecutive years.

The reduced tax rates for prioritized enterprises can be used on energy products used as heating fuel, and motor fuel for construction equipment and immobile engines. Prioritized Enterprises include energy intense companies and other prominent companies signing agreements with the Member States aiming to achieve environmental goals and to improve their energy-saving. These goals and improvements have to be performed at such a rate as if the minimum tax rate of the Community had been applied. The tax rates of energy intense enterprises max be reduced to zero. In other cases the minimum is set at 50%.

The range of other exemptions and benefits covers a wide spectrum of taxpayers and tax subjects. Taxable persons include households and charitable organizations. Benefits based on the type of the energy product are either based on the energy product itself (natural gas),\(^{24}\) or on the purpose of use. The latter include fuels used for aerial traffic and

\(^{22}\) Article 15 of the Directive: Renewable resources include solar, wind, tidal, geothermal energy, energy of hydraulic origin produced in hydroelectric installation, energy generated from biomass or from products produced from biomass, energy generated from methane emitted by abandoned coalmines and energy generated from fuel cells.

\(^{23}\) (A) paragraph of Article 16 of the Directive. "Biomass" shall mean the biodegradable fraction of products, waste and residues from agriculture (including vegetal and animal substances), forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste.

\(^{24}\) (G) of the 1st paragraph of Article 15 of the Directive. The total or partial exemptions or reductions may apply for a maximum period of ten years after the entry into force of this Directive or until the national share of natural gas in final energy consumption reaches 25 %, whichever is the sooner. However, as soon as the national share of natural gas in final energy consumption reaches 20 %, the Member States concerned shall apply a strictly
for shipping on territorial waters and energy products used in agricultural, horticultural, fish farming and forest management activities. In the case of energy products used for agricultural purposes the Directive highlights that its rate may be reduced to zero.

The Directive regulates a wide range of national exemptions. These unique exemptions helped to avoid economic hardships caused by the implementation of a minimum tax rate in countries with no previously existing energy taxes or energy taxes with lower rates. Therefore, Member States may apply for exemptions of specific energy products. Implementing exemptions from the application of the minimum tax rate was possible until the 1st of January, 2007 but in case specific treatment this date could be extended.

(Hungary also applied for this type of exemption and achieved tax exemption for coal and coke until the 1st of January, 2009. A transitional period was applied to electric energy, natural gas, coal, coke used in district heating and national tax rates had to be adjusted to the minimum rate. The other newly joining Member States also applied for these exemptions in 2004 and most of the previous Member States were granted some of these exemptions, too.)

Most of the exemptions apply to energy products used as heating fuel, diesel oil and unleaded petrol used as motor fuel and energy products related to public law activities.

The Directive created a special procedure for the application of individual exemptions. Based on the proposal of the Committee an unanimous vote of the Council is needed to grant such an exemption. The Committee examines the issue and forms a proposal. When forming the proposal the following principles are taken into consideration:

- the unimpaired operation of the internal market,
- ensuring fair competition,
- Community policies (health care, environmental protection, energy and traffic policies).

The Council may grant permission for a time period of up to 6 years but the procedure can be renewed. Individual exemptions and benefits may also be revoked. If the Committee deems the exemption impossible to maintain, it makes a proposal to the Council, which decides with an unanimous vote.

Precedents related to the energy tax also raise issues with the tax exemptions and benefits. One of these issues at hand is the direct effect of the exemptions was examined by the European Court of Justice in its C-226/07. case. The verdict was issued in the lawsuit between Flughafen Köln/Bonn GmbH and Hauptzollamt Köln, which was filed for the disapproval of the application for a refund of taxes on diesel oil used in the production of electric energy by the custom office in 2004.

The parties pleaded that the operator of the airport uses energy generating aggregators on the ground to generate onboard electricity for the airplanes. The airport applied for a tax refund based on the first paragraph of Article 14 of the Directive at the main custom office in Köln but its request was rejected. The custom office referred to the German Act on Tax on Mineral Oil which did not grant tax refunds for taxable diesel oil used in the production of electric energy and pleaded that point (a) of the first paragraph of Article 14...
of the 2003/96. Directive does not have direct effect. The justification of the Court pointed out that although the quoted paragraph grants exemption, the second sentence of the provision hints that Member States may tax these energy products to enforce environmental policies. The Court established that although the regulation permits national legislature to distinguish between taxable and non-taxable energy products, it has to be examined whether or not the Member State actually exercised this authority. In this case, German legislators did not specifically apply taxes to diesel oil used in the production of electric energy in the Act on Tax on Mineral Oil. Legislation did not implement the Directive into the national legal system until the 1st of August, 2006. According to the settled case law of the Court if the provisions of a Directive are unconditional and sufficiently precise any person may refer to them against the state before the national court, if the state fails to implement the provisions within the time frame provided by the Directive.

The verdict determined that exempting provision has direct effect in the sense that anyone may refer to it - regarding the time frame during which the state failed to implement this Directive – in lawsuits filed against customs offices of this state before the national court aiming to disregard the conflicting national regulation and to grant a tax refund. Since the restriction of the exempting rule is case specific, the state at fault cannot refer to its own failure in order to deny a taxpayer the exemption which based on the provisions of the Directive he is entitled to.

The C-201/08. case of the ECJ regarded the early termination of exemption on bio-fuel by national authorities. The verdict was submitted related to the lawsuit between the GmbH of Plana and the main custom office of Darmstadt about the payment of energy taxes. The Community regulations specify the list of energy products and states that every other product used or sold as fuel, fuel additive or diluent are subject to the tax rates of the most closely related energy product. The German Energy Tax Act taxed bio-fuel allowing applications for exemptions until the 31th of December, 2009. The applicant has been marketing “planatol-diesel” fuel since 2005. However, the custom office called upon the applicant to pay the tax after the 1st of January, 2007 since due to the modification of the Energy Tax Act the tax exemption of the bio-fuel marketed by the applicant was terminated.

The Court established that EU regulations do not conflict with national regulations which exclude mixtures of vegetable oil, fossil fuel and special additives (like the one in this case) from the tax exemption system. Moreover, in accordance with the principles of legal certainty and the protection of legitimate expectations Member States are not prohibited to terminate tax exemption of products such as the one at issue in the main proceedings before the original date of expiry.

25 (A) of the 1st paragraph of Article 14 of the Directive. Member states shall exempt energy products and electricity used to produce electricity and electricity used to maintain the ability to produce electricity from taxation. However, Member States may, for reasons of environmental policy, subject these products to taxation without having to respect the minimum levels of taxation laid down in this Directive. In such case, the taxation of these products shall not be taken into account for the purpose of satisfying the minimum level of taxation on electricity laid down in Article 10.

In the main proceedings of the C-368/04 case multiple applicants filed a lawsuit against the Austrian customs office (Finanzlandesdirektion). The Act on Energy Tax Refunds (EAVG) grants partial refunds of taxes on electric energy and natural gas. Energy taxes are to be refunded in case they exceed 0.35% of the net production value of the energy consumer. (Refunds are granted after the subtraction of up to 363 euro worth of own contribution.) Only enterprises producing material products as part of their main activity are entitled to the refund. The applicants do not fall under this category. During the proceedings it had to be addressed whether energy tax refunds are considered state aid by Community law. The Court established previously in the verdict of C-143/99 that national measures granting refunds of taxes on natural gas and electric energy only to enterprises producing material products are considered state aid. According to this the Court established that since the Committee hasn’t previously been notified about the EAVG, authorities cannot base their decisions to deny refunds to companies not producing material products based on this law. The Court found however, that the illegality of the situation (the lack of notification) does not warrant a tax refund for companies with non-material activities. Since granting aid in the form of unlawful, partial refund based on the breach of the obligation to provide information would make allowing tax refunds for other companies inconsistent with the interests of the Community, if it instead of rectifying the situation it worsened the implications by widening the range of recipients of the benefits.

5. FUTURE CHANGES IN THE FIELD OF ENERGY TAXATION

In the field of energy taxation changes are to be expected in the EU regulations which would also induce changes on a national level due to the obligatory tax harmonization. The proposal prepared by the Committee addresses the issues of energy taxation and highlights the aspects of the regulation requiring revision.

The proposal points out that the EU undertook significant commitments until 2020 with goals regarding to climate change and energy policies. The Europe 2020 Strategy aims to realize a more efficient use of energy and environmentally sound, sustainable development. Energy taxation might play an important role in achieving these objectives and therefore it has to be harmonized with the energy policy and the climate change objectives of the EU. The issue was further complicated by the financial crisis. There is a growing need for policy solutions able to ensure both the improvement of the environment and soothe social tension.

The objectives to be reached in the field of energy taxation are:

- cleaner and more efficient energy consumption through logical and specific energy taxation;

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29 The proposal also underlines that energy consumption is the cause of a large part of greenhouse gas emission which makes up 79% of total emission.
- balance of tax rates on fuels based on objective factors (energy content and carbon dioxide emission);
- to help the modernization and reorganization of national tax systems;
- to strengthen the coordination between Member States.

The Committee also emphasizes the importance of the need of the changes and modification of the Directive, underlining the problems with the current regulation. One of these is the matter of the minimum tax rates. These are not sustainable, harmful incentives since they do not reflect the energy content and carbon dioxide emission of energy products.\(^{30}\) This leads to inefficient energy use and conflicts with the energy policy and climate change objectives. It also doesn’t sufficiently support the use of alternate energy sources and doesn’t encourage energy-saving on the side of consumers.

The Directive through the several individual exemptions and alternative exemptions diversifies national regulations which distorts competition within the EU and causes problems for enterprises with activities in multiple Member States.

The Committee proposes several elaborated amendments. One of them touches the field of minimum tax rates. The concept divides the tax rates into two parts: taxing the carbon dioxide emission on the one hand and taxing the general taxation of energy consumption on the other. The rate of carbon dioxide taxation is based on the amount of emitted carbon dioxide (20 euro per emitted ton). Tax rates would be zero for bio-fuels fitting the sustainability criteria.\(^{31}\) Those emitters who participate in the EU system of trade of emission would be exempted from this tax. The other tax rate would correspond with the amount of energy consumed in GJ instead of the previously used units (liter, kilogram) as a basis. This would favor the efficient use of energy. It is important to preserve the real value of the minimum rates and to that end tax rates would be regularly adapted.

Another important task is the correction of inconsistencies in the regulation of exemptions and benefits. Energy products with high energy content (diesel oil, LPG etc.) would lose their excess tax benefits in the future.

The proposal also addresses the issues of the implementation of new tax regulations. One of these issues may be that companies leave Europe, transfer their production facilities due to the high tax rates. These types of facilities would receive a lump sum credit based on specific referential values. The enactment of the proposal could induce sudden changes in price levels which would lead to social tension and economic difficulties, and, in order to avoid this, the Committee proposes a transitional period for the implementation of the carbon dioxide taxation. All this makes it easy to see, that budgetary, environmental and social effects could affect the implementation and the efficiency of the regulation of taxation and therefore these factors must be taken into account.

\(^{30}\) The proposal highlights that low tax rates promote the use of coal as heating fuel causing high levels of damaging emission. Similarly, the Directive distinguishes between tax rates of petrol and diesel oil, favoring the latter.

\(^{31}\) The criteria is set by Article 17 of the 2009/28/EK Directive
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