

лицензионного договора, объем будущего производства, наличие инжиниринговых услуг.

Вывод

Рассматривая перспективы практической реализации предлагаемого метода необходимо ориентироваться на ряд существующих разработок и, в частности, на методику оценки изобретения при его продаже, безусловно с учетом тех специфических отличий, которые оказывают непосредственное влияние на коммерческую ценность ноу-хау, а следовательно и на цену лицензии при его продаже.

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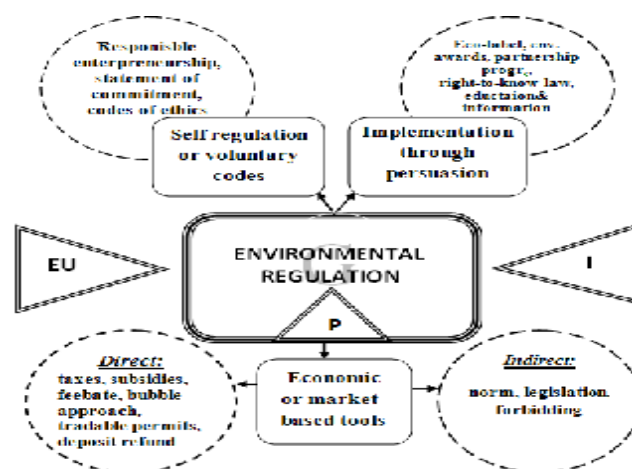
GREEN TAXES AND SUBVENTIONS

В последнее десятилетие все государства-члены ЕС пытаются покрыть свое увеличивающееся энергопотребление ресурсами возобновляемого источника энергии. Это не только приписывается Директивами ЕС, но и несколькими экономическими комплексами – а также экологическими льготами. Можно также заявить, что нет никакой согласованной зеленой дотации энергии в ЕС, государства-члены ЕС имеют свои различные методы. Цель статьи состоит в подведении итогов и анализе эффективности действующего законодательства.

In the recent decade all EU member states try to cover their increasing energy demand with renewable energy resources. It is not only incited by EU Directives but also several complex economic- and environmental benefits. We can also state that there is no harmonized green energy subvention in the EU, the member states has different practices. In this study my goal is to summarize and to analyze the efficiency of the current legislations and supportive instruments.

AIM AND TOOLS OF ENVIRONMENTAL LEGISLATION. By now we can surely state that the appearance of the environmental thinking and attitude has become one of the most determinative psychic current by the end of the 20th Century. It is also recognized that this trend expends and sooner or later can become one of the most dominant mobilizing – strengthened by its multidisciplinary dimension - factor of the world's economy and politics.

Although environmental thinking had to fight its battle: it took long time to worth being green. Man realized that in the quality of life highly depend on the environment and therefore on the economic activity of the market actors. So a company, a consumer, the government should take responsibility to its actions. Among these actors the role of the state and government should be highly emphasized. Because this actor not only produce and supply but also gives a framework to influence the others how to behave how to use, develop and to protect the environment to improve its quality and to preserve its resources. This framework is called environmental policy and includes the basic environmental principles.



Notes: EU (European Union), I (international institutions), G (government), and P (people) represent the influencing factor on a country's environmental policy

Fig. 1: Kinds of environmental regulations and the influencing factors [14]

To validate these, the government should define environmental regulation policy. The strategic goal of a country's environmental regulation in general is to harmonize the economy's goals and activities that are against the environment in the short-run with the environment long-term sustainable interests, so to everybody complies with certain environmental quality norms [7]. To achieve this goal it has several tools which have widened in the past decades (Fig. 1). In this study because of the lack of space I will focus only on regulations that are in use to support renewable energy against fossil resources.

ENVIRONMENTAL AND ENERGY POLICY IN THE EUROPEAN UNION. The European Union realized that all the member states have to act together to prepare and be ready for the upcoming environmental problems of the world. So in 1972 the Summit Conference of Heads of State and

Government held in Paris opened the way to the implementation of a common policy on environmental protection. The Commission prepared action programmes and strategies for the reduction of pollution and nuisances and for the management of environmental resources. This step proved that where is a pressure from public opinion, political will and absence of deep-rooted national policies, the European institutions are capable of legislative work comparable to that of an individual State. This work is also strengthened by the EU's sustainable development strategy which is a key objective for all European Community policies. The Göteborg European Council approved it on the 15-16th of June in 2001 and it is based on: coordinated development of common policies addressing the economic, environmental and social dimension of sustainability; a set of headline objectives to limit climate change and increase use of clean energy. [10] By now the green energy plays a key role in the EU's environmental and in the energy policy¹ too.

The horizontal environmental policy's targets meets with the EU's sectoral energy policy targets too. Europe has to deal with major challenges in energy: the threat of climate change, slow progress in energy efficiency, the ongoing difficult situation on the oil and gas markets, the increasing import dependency, high and volatile energy prices, growing global energy demand, and security risks also affecting producing and transit countries as well as transport routes. In the 2006 Green Paper the Commission defined the European energy policy, which aims at three major objectives: sustainable development, competitiveness and security supply.² It has called for six debates and one of it is the more sustainable, efficient and diverse energy mix. For most of the debates one of the answers can be the more effective and intensive utilization of renewable energy. [10] So the EU has set the ambitious target of a 20% share of energy from renewable sources in the overall energy mix, the EU plans to focus efforts on the electricity, heating and cooling sectors and on biofuels. In transport, which is almost exclusively dependent on oil, the Commission hopes to increase the current target of a 5.75% share of biofuels in overall fuel consumption by 2010 to a 10% share by 2020 (Fig. 3).³

¹ Energy sector produce the biggest GHG emissions (energy industries:1591.16, manufacturing and construction 665.81, transport 992.28, Industrial Processes 416.54, Agriculture 472.92, waste 147.89, other 767.12 million t CO₂ equivalent in 2006 at EU27 level

² COM/2006/105, 08.03.2006.

³ New Directives on renewable energy, 2008/0016 (COD), Brussels, 26 March 2009

SUBSIDIES FOR RENEWABLES. Renewable sources of energy – wind power, solar power (thermal and photovoltaic), hydro-electric power, tidal power, geothermal energy and biomass – are an essential alternative to energy gained from fossil resources. Using these sources helps not only to reduce greenhouse gas emissions from energy generation and consumption but also to reduce the European Union's dependence on imports of fossil fuels [19]. In the recent decade all EU member states try to cover their increasing energy demand with renewable energy resources. It is not only incited by EU.

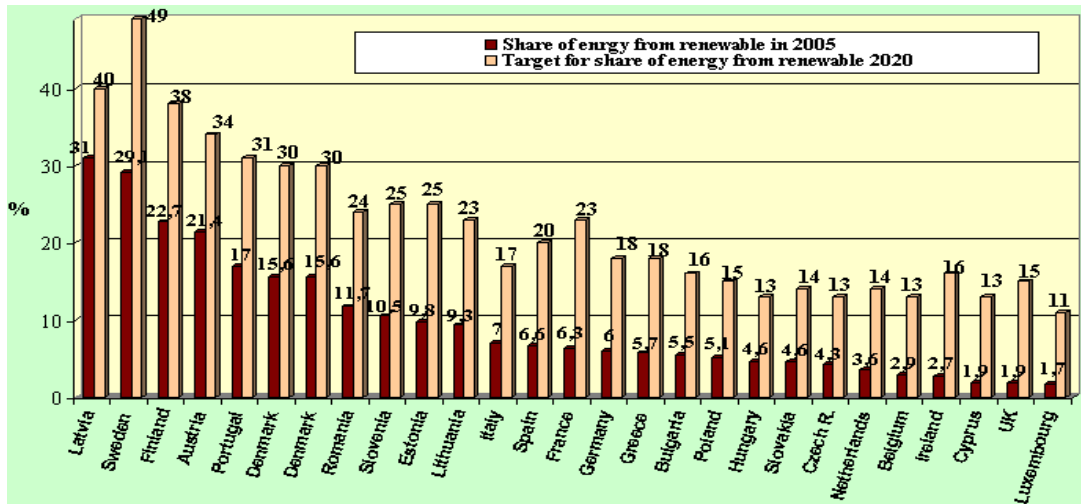


Fig. 2: National overall share and targets for the share of energy from renewable sources in gross final consumption of energy in 2020 [18].

Directives but also several complex economic- and environmental benefits (Fig. 3). And by now there is a dynamically growing new industry that deals with renewable energy production and consumption.

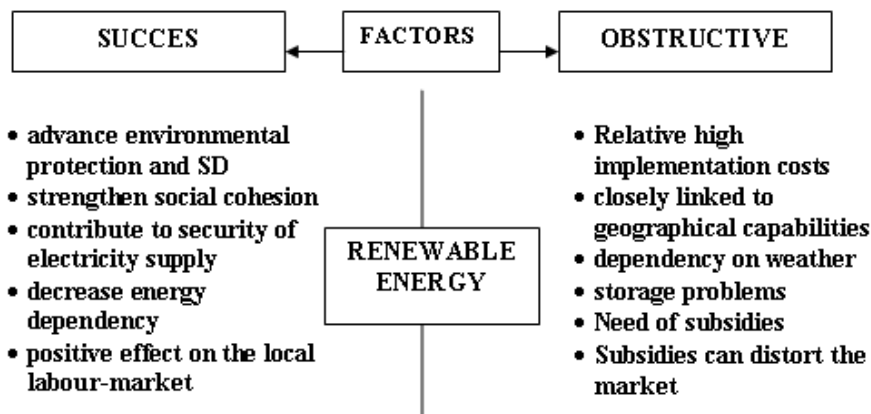


Fig. 3: Success and obstructive factors of renewable energy [9].

But in the EU we can neither speak about harmonized energy taxes [2] and green energy subsidies nor harmonised reporting mechanism for energy

subsidies yet. And the term energy subsidy has not been clarified yet.⁴ It may include cash transfers paid directly to producers, consumers and related bodies, as well as less transparent support mechanism, such as tax restrictions, planning consent and limits on market access (Table 1). It may also cover government failure to correct market imperfections such as external cost arising from energy production or consumption.

Table 1 - Type of energy subsidies [12].

Government intervention	Example	How the subsidy usually works		
		Lower cost of production	Raises price to producer	Lowers price to consumer
Direct financial transfer	Grants to producers	x		
	Grants to consumers			x
	Low-interest or preferential loans	x		
Preferential tax treatment	Rebates or exemptions on royalties, sales, taxes producer levies and tariffs	x		
	Tax credit	x		x
	Accelerated depreciation allowances on energy-supply equipment	x		
Trade restriction	Quotas, technical restrictions and trade embargoes		x	
Energy-related services provided directly by government at least than full cost	Direct investment in energy infrastructure	x		
	Public research and development	x		
	Liability insurance and facility decommissioning costs	x		
Regulation of the energy sector	Demand guarantees and mandated deployment rates	x	x	
	Price controls		x	x
	Market-access restrictions		x	

Realizing that rapid expansion of renewable energy will not happen in the energy market now Member states has developed their own subsidy system to achieve targets they have undertaken by 2010⁵ and 2020 (Figure 2). Various support mechanisms are under consideration but the two major categories are the tradable green certificates (established e.g.: in Belgium, Italy, Poland, Romania Sweden, United Kingdom) and feed-in tariffs (established in the other 21 EU Member States including Hungary). Experiences from several countries in Europe suggests that feed-in tariffs deliver larger and faster penetration of renewable energies than tradable green certificates, at lower costs [5]. To assume the amount the Members pay to support energy production we should see Table 2. Other estimates suggest supports to energy producers is about €15-22,7 milliard in OECD Countries (including all kinds of resources) in 2001 other

⁴ Although some report has been delivered analysis about the Union energy subsidy practises by the OECD 2005, EEA 2004, UNEP/EEA 2004, UNEP 2008.

⁵ The targets by 2010 indicates 12% share of gross inland energy consumption and a 22% share of electricity produced from renewable energy sources (Directive 2001/77/ec) and a 5.75% share of biofuels in petrol and diesel for transport purposes by 2010 (European Directive 2003/30/EC).

estimate states that support to energy producers may be closer to €60.6 billion [12], and transport subsidies was approximately 240 milliard EURO worth in 2005 [4].

Table 2: Indicative estimates of total energy subsidies, EU15, (EUR bn) [4].

	Solid fuel	Oil and Gas	Nuclear	Renewables	Total
2001 – on budget	>6.4	>0.2	>1.0	>0.6	>8.2
2001 off budget	>6.6	>8.5	>1.2	>4.7	>21.0
Total	>13.0	>8.7	>2.2	>5.3	>29.2

Note: Energy subsidies allocated to fuels on basis of generation inputs. Excludes external costs.

RENEWABLES SUPPORT IN HUNGARY. The 2001/77/EK Directive indicates to support electricity deriving from renewable energy. It is the Member States competency to choose the form of regulation to incite renewable energy to achieve the country's targets but the Commission evaluates its efficiency. In general in Hungary the main two categories are the support of energy production and investment but they are often combined together. Direct investment support for renewable is available through EEOP, financed from EU Structural Funds. Between 2007-2013 €250 million is available for supporting renewable projects [11].

Electricity. The feed-in tariff has been in place since the Electricity Act 2001 (Act 2001/CX). To receive the feed-in tariff a licence is required from the Hungarian Energy Office. The volume of electricity for which it is paid, as well as the duration of the feed-in tariff in the licence is limited by the HEO, based on the project payback period [3]. The KAP⁶ feed-in tariff system was set by Parliament at HUF k*23,8 per kWh⁷, more than double the average price of Hungary's electricity at wholesale level. The cost of the feed-in tariff has risen rapidly since 2003 [13]. Because of the guaranteed prices and the decrease of investment risk this system enhanced the entrepreneur investment activity in the Country. The country's renewable electricity also increased till 2005 than slowly decreased and now stagnates at 3,9% (Fig.4 - *Source: Hungarian Power Companies Ltd statistics,2009*).

⁶ KAP Feed-In Tariff Payments and System Charges in Hungary

⁷ The obligatory reception is k*23 where k represents the consumer price-index.

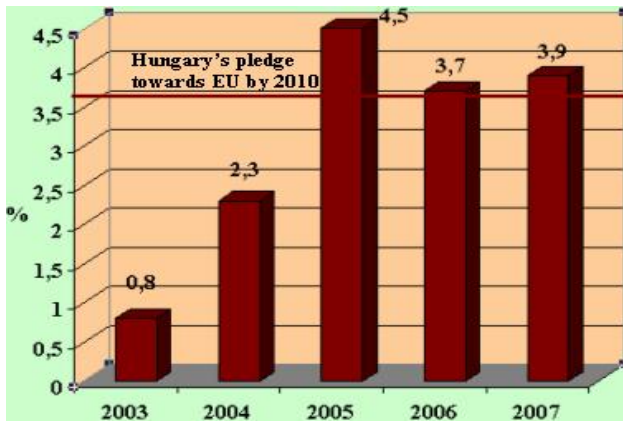


Fig.4 : Ratio of electricity generated from renewables compared to the domestic consumption of electricity (%)

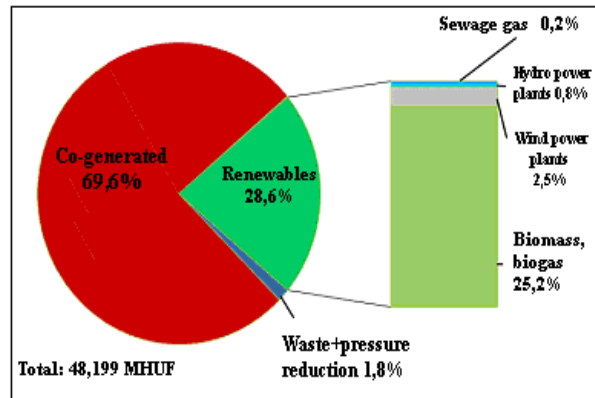


Fig.5 :Settled subsidy payments per categories (%)

Since 1 January 2008 the KÁT⁸ feed-in obligation came in to force. KÁP was replaced by a separate balance circle for power plants generating electricity in the scheme of feed-in obligation. The Act LXXXVI of 2007 on Electricity orders that traders selling electricity to domestic users, generation licensees selling electricity directly to users and all users who import electricity shall take over the electricity settled in the separate balance circle at administrative prices based on contract concluded with the Transmission System Operator [8]. The calculated amount of “subsidy” for the electricity settled at a price that can be regarded as subsidized in the KÁT balance circle (the difference of the effective price and the market-based base price⁹) was 33 billion HUF in the first half year of 2008. At Fig. 5 we can see that 69,6% of KAP¹⁰ covered the feed-in tariff for co-generated electricity and 28,6% for renewables. Within renewables the biomass and biogas feed-in tariffs was the highest with the percentage of 25,2 which also show us the Hungarian biomass dominance. In the first half year of 2008 the amount calculated for co-generation grew by 7.4 billion HUF (44%), while the amount calculated for electricity generated from renewables rose by 1.3 billion HUF (18%) comparing to year 2007 [8].

⁸ KÁT: Obligatory feed-in of electricity generated from renewable energy sources, by energy from waste and co-generated electricity in accordance with the order of procedure [8].

⁹ In 2007 administrative public utility wholesale prices; in 2008: prices (excluding 'subsidy') specified in Section 4 of Annex (renewables and wastes) and Section 3 of Annex (co-generation) to the governmental decree 389/2007 (23.12) [8]

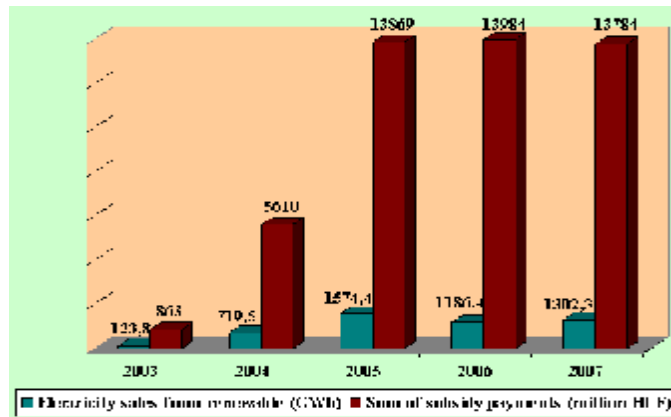


Fig. 6: Electricity sales from renewable (GWh and sum of subsidy payments (million HUF))

Biofuel. Hungary have to comply with the Directive under Article 4(1) of 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport. The Directive indicates to take measures to promote the use of biofuels or other renewable fuels, to replace diesel or petrol for transport purposes. In accordance with the country goals the Hungarian Government set the objective ¹¹ of achieving a biofuel proportion of 5.75% in the fuel market in terms of the energy content of total fuel consumption for transport by 2010, as indicated in the relevant Directive [17]. To reach this objective used cooking oil in public transport coupled with reduced excise tax; biofuel raw material production and processing capacities are developed to supply the domestic and European market; National Development Plan II subsidises raw material production, processing; establishment of small biofuel production capacities and production technology, biofuel application and creating second-generation organic waste biofuels research are supported [6].

In order to promote the sale of biofuels conforming to the Directive on Taxation of Energy Products the further following measures was taken: E85 fuel became a national standard; on the 1th of January, 2005 Hungary introduced an excise tax exemption in the form of a tax refund on blended biodiesel fuels, as well as on ETBE fuels produced from bioethanol. Since both types of fuels are blended in mineral oil derivatives, the excise tax exemption only covers the blends' biofuel portion; as of 1 July 2007¹², two tax levels became effective: a tax reduction to 0% excise tax will apply for biofuels blended up to 4.4% of the volume of gasoline. From 1 January 2008 this is also applied to 4.4% of biodiesel blended into diesel. Fuel distribution companies not complying with the 4.4% requirement will have an extra tax burden of HUF 8 per litre of fuel at

¹¹ further targets by 2013: 8%, by 2020: 10% [17]

¹² (own calculation on company statistics)

the wholesale level. The measure aimed to create commercial biofuel production capacities and to launch biofuels blended with traditional fuels. By 2008 the bioethanol production capacities assumed to be about 230 thousand tonnes and biodiesel is 210 thousand tonnes¹³.

CONCLUSION. However the governments form the market regulation tools, their can be incentive or repulsive too. Therefore the regulations need to be more flexible institutions as the public administration in general is, because it has to fulfill different demands in really different situations and terms. With the absence of this flexibility environmental regulations may lead to the victim of the lobby interests. The tax reforms and subsidies created a better economic environment for energy production derived from renewables in Hungary. But the government should focus in long-term sustainability. Now only the too subsidized market can make the utilization of renewables marketable.

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