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Energy Policy in the EU – Regulations of the EU 20-20 Strategy

1. Theoretical Background

1. Opening Thoughts

The subject is very much innovative and most listeners/ readers are likely not to be familiar with it at all. Although it certainly is an issue we must pay attention to, as the questions being dealt with are indeed actual. The possible solutions and regulations are primarily (but not exclusively) focused on Community level, but it is not an exaggeration to claim that it also has its effects on a global scale. Basically the question of 'Energy', and through it the need for the (possibly full) transformation of the Energy Sector as a whole and on a smaller scale, the Energy "Market" arose in the 21st Century.

The reason for the need of such (sometimes dramatic) changes are served by general "threats" that should be considered on a global scale. These include the common question of global warming, or the more recently defined 'climate change'. The reason these were referred to as "threats" is that not long ago they were thought by most people to be only well-prepared 'weapons' of environmental activists, but since then, they were proven to be true. Other circumstances further enhance the need of creating regulations and conducting researches on this field. These include the fact that the fossil-fuel supplies are running low worldwide and are nearly drained and exhausted completely. The life standards of today's "modern man" uses such fuels on a much larger scale and with an increased speed that nature cannot keep up with it. The replenishment of such fuels take thousands of years. Taking into consideration only the economic effects the exhaustion of fossil-fuels would cause, the consequences would be drastic. Especially in countries that have not enough natural supplies on their own, or the amount they have is insufficient to cover their needs. What further worsens the situation is that the recent economic crisis, most countries had to face has proven that most markets are not to be stable enough to overcome such a situation.

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Other factors make it even harder to face such challenges, for example if the country also has a relatively large national debt.¹

2. Energy Policy – Alternate Energy as Solution?

The need for an alternate method is of no question. The question is: What could this alternate method be? The possible answers are many, but one among them seems to be the most logical, but more importantly the most achievable. And that is to change the resources of energy used currently to a more sustainable one, to change towards ‘renewables’ (renewable energy sources). Hence the importance of the issue, the question of renewables has been on discussion by influential international bodies such as the UN or the European Union itself.²

The European Union set it as a goal to develop a common, Community level energy policy that is gradually achievable for all member states and would result in creating a sustainable internal energy market for each state. These markets would be based on a common standards but would suit the specific needs of the given country and as a result these energy markets would become and stay competitive on the long-run. By accomplishing this, not only the safety of energy supply could be guaranteed for every country, but considering long-term effects, the possibility to reduce the amount of import-dependency and in a most optimal case even achieving energy-independency would become possible. According to EU experts this could only be possible through increasing the use of renewable energy sources.³

2.1 Developing EU Programs

In the process of developing a program, the European Union takes several factors into consideration concerning each and every member states. The EU determines the required deadlines (also known as “checkpoints” or “key-dates”) 10 years in advance. Setting such checkpoints requires preliminary surveys for each member states and as a result, expectancies and required goals to accomplish may vary from state to state. The reason for this lies in the abovementioned fact that numerous factors are examined preliminary, so that each member state will have to fulfil requirements that are suitable for and adapt to their specific “abilities and capabilities” making it undoubtedly possible for them to

¹ ROSSU, BALÁZS: *The Past 12 Years of the Renewable Energy Sector with Special Regard to the Situation in Hungary - All for One! One for All?* – p. 1 (under publication)

² ROSSU, BALÁZS *Ibid* p. 1

³ Regulation of Renewables in Hungary, in Your Legal Key to Hungary Newsletter BPV Jádi Németh 2010/8 1/3 (http://www.google.hu/url?sa=t&rct=j&q=mcg%C3%BAjul%C3%B3%20energia%20szab%C3%A1llyoz%C3%A1lsa&source=wcb&cd=2&ved=0CCoQFjAB&url=http%3A%2F%2Fwww.bpv-jadi.com%2F_site%2F100714_energia_newsletter_final_honlapra.pdf%3FPHPESSID%3D6721517c701f86a5cf780a-b985ce5ab6&ei=6Qc4T6u_C9HgtQat_aSzDA&usg=AFQjCNHy-r6bhGmxBS8aMQcl7AQPnkcen9g&cad=rja downloaded: 18.01.2012.)

make the required changes and or improvements by the time given. This system works in accordance to the flexible security (flexicurity) principle of the European Union.

Factors that must be taken into consideration regarding each member states primarily include the following:

- political,
- economical and
- social situation⁴ of the given country must always be examined, but regarding the given topic, (renewables) the following factors must be analysed with special regard:
- environmental abilities and capabilities of the state, meaning
 - does the country have (actually or at least potentially) access to renewable energy sources, and if the answer is yes,
 - of what kinds
 - in what quantity and proportion;
 - what is the level of usage and utilisation of these at the moment,
 - how much time would it require to increase it to the required level, and
 - what financial investments would this require;
- the level of technological development (considering the field of renewables); and last but possibly of the most importance:
- what (level of development) does the state of the given country guarantee⁵

EU Programs within the topic of development and support of the renewable energy sector are most commonly set for ten-year intervals, and so determine the goals and expectations to be fulfilled and achieved by then.

2.2 Programs for Renewables – 20-20 Strategy and its Background

The first Program directly set in this field of research and theme has closed in 2010, but the process itself has not ended and is far from fulfilment yet. As a follow-up program, to guarantee the continuity, by the coordination of certain members of the European Union, those who are ahead of the rest considering the topic of renewables, such as Germany and Spain, a Summit was organised in March 2007. During this summit, the fundamentals of the follow-up EU program, serving as the next step towards renewable energy sources were laid down. This Program is considered the biggest (and most renown) among all Community level initiatives within this topic. Just as its predecessor, this Program also sets the new achievable goals for a ten-year period. This initiative requires the member states to commit everything necessary to be able to achieve or even exceed the predetermined 20 percent proportion of the total energy demand of the country to be utilised from renewable sources of energy by year 2020. As mentioned above, the program closed in 2010 could

⁴ TÓTH FERENC: *System and Development of Industrial Relations*. Published by Szent István University, Gödöllő-Budapest 2008., p. 45

⁵ ROSSU BALÁZS *Ibid* p. 3

be considered a predecessor of this initiative, although there are some significant changes. Primarily that Program only concentrated on a certain sub-sector of the renewable energy sector and as such, determined the requirements much narrower. The numbers and ratios decided were limited only to RES-E. RES is the widely accepted, official abbreviated form of the Renewable Energy Sector, the “-E” identifies a sub-sector within, meaning electricity, or any kind of electric power. This altogether means that RES-E stands for a special kind of electric energy, that was produced by using only renewable sources, that is, instead of coal-, or fossil-based energy sources or atomic energy, solar-, wind-, hydro-, or geothermic energy or possibly biomass was utilised.

This Program however is more complex than the previously discussed one. It did not only set the goal to achieve a 20 percent proportion of the total (annual) energy demand of the member states to be solely produced from biomass, but also to cut down the carbon-dioxide and other greenhouse gas emission (again taking into consideration the annual emission levels to determine the proportion). The initiative was aptly named (Europe) 20-20, or 20-20-20 Program, or Strategy. This name was given as a result of amount of the set goals and the pronunciation of the key-date are similar. The Program is also different from its predecessors in that it did set exact, personalised goals for every member state, basically the minimum requirement was set as a common 20 percent and achieving less or receiving any allowances to differ in any other way is only possible in special circumstances (supported by proofs). This Program is very complex and as such, extremely punctual planning and organisation is required to precede its actual practical fulfilment. As a result, the European Union expected every member state to prepare and assemble a so called National Renewable Action Plan by 30. June 2010. Since some countries already reached or even exceeded the 20 percent ratio, the EU set higher goals for them to achieve by the deadline.⁶

The Strategy essentially aims to raise the living standards of citizens of the European Union, and to do so also aims to fight unemployment by creating more jobs, this being a strategic tool (if not the only possible way) to fight and ease this problem on the long-run.⁷

However, an initiative launched only “on paper” is not enough. People should be made to understand the importance of these changes, they themselves, both as individuals and as members of the society (both families, smaller communities and whole nations) must want to take steps in order to achieve the common goals. People should be made aware of the real reasons, since they will play a significant role in the process. The creation (or in some countries the growth) of a new sector will result in significant changes. To be able to meet the labour requirements of the renewable energy sector, a diverse restructuring is/will be needed in the labour market. During this process (in the optimal case) a large proportion of unemployed people will have a chance to re-enter the labour market. However, the opinion

⁶ *Environmentally Conscious Work (Green Jobs), in the Reflection of the Relationship between Female Workers and the Renewable Energy Industry* in: *Opuscula Szegediensia 4 The Fourth Conference of PhD Students on the field of Labour- and Social Law*, p. 213, ed.: GABRIELLA BERKI, Szeged, 2011

⁷ Europe 2020 strategy – p. 2

[http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:HU:PDF\(downloaded:22.03.2012.\)](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:HU:PDF(downloaded:22.03.2012.))

of experts on this matter differ. It is an undeniable fact that the paradigm shift, will result in the termination or at least the decrease in the use of old, high carbon-emitting technologies which will lead to the growth of the number of unemployed persons.

According to a group of experts on other opinions, the number of jobs created in the new sector is negligible, and as such, it will be unable to offer as many jobs as it would be needed to rehire the vast numbers of employees who lost their jobs as a result to the cuts made to old, high carbon-emitting workplaces.

On the other hand, a third study, based on analysis of available data and figures on steps taken so far, shows that it is expected that both the number of new, green jobs, and the number of unemployed people in the old sector(s) will be high, and approximately the same, and as such the two “impacts” will simply cancel each other out.⁸

2.3 The European Commission on the Subject

According to the European Commission, there are five main areas that must be developed during the upcoming years as a priority. These areas are:

- employment,
- research and innovation,
- climate change and energy,
- education, and
- fighting poverty

the ones where setting up measurable and accountable, mostly quantitative goals on a Community level is possible and achievable, and to be able to move onward towards the long-term goals, necessary to be developed and be cleared of faults.

For true achievability these development schemes should be converted into national goals either in advance. The Strategy is linked to the name of Juan Manuel Barroso (President of the European Commission).

Apart from the previously mentioned economic crisis, the European Union constantly has to face hardships caused by the result of the aging of societies, less and harder accessibility of resources and a growing tension as their result, or the negative effects of globalisation.⁹

Within the strategy, three principles were formed that constantly strengthen and aid each others’ effects and thus help the fulfilment of the Strategy. These are:¹⁰

- “Intelligent growth”, which means to create an economy based on knowledge and innovation,

⁸ BALÁZS ROSSU 2011 p. 214

⁹ Europe 2020 Strategy – Summary p. 6

¹⁰ Europe 2020 Strategy – Summary p. 6

- “Sustainable growth (or development)”, aims to make the economy more competitive and make growth possible by providing access to resources in an easier and just as importantly a more environment aware, environmental friendly way
- “Inclusive growth”, including the expansion of the ratio of employed people as well as inspiring regional and social cohesion and strengthening and stabilizing economy true these instruments

The goals for battling climate-change and set within the topic of energy are of top priority within the Europe 20-20 Strategy. As such, the Commission constantly works on and proposes newer and newer initiatives and propositions and prominently supports programs and projects that aim to develop or encourage development within the most important areas of these issues. These include:

- the creation of a “resource-efficient Europe”,
- separation of economic growth and the use of resources,
- supporting the change towards a low(er) carbon-dioxide emitting economy,
- the increasing use of renewables, and
- modernisation of the transportation sector.¹¹

2.4 The Treaty of Lisbon

Considering the question of renewable energy sources and utilisation of renewable energy, it was the Treaty of Lisbon that meant the first true milestone. It was signed on the 13th of December in 2007, and it’s primary goal was to find a common, standard solution to the pressing questions of climate change and energy supplies applicable for all EU member states (as mentioned above). The leaders of the member states have realised that these issues are global, and as such cannot be countered effectively by one country due to their complexity. According to Article 6 of the Treaty, came into force after a relatively long period of time (almost two years) for preparation, on the 1st of December in 2009. Since all member states participated in the creation of the Treaty all 27 of them ratified the text of the Treaty.¹² The Treaty is considered unique in several aspects. For example it was the first legal regulation to mention the question of energy as a separate title on Community level and also the first to officially mention the issue of inspiring renewable energy sources. Title XX of the Treaty bears the name “Energy” and Article 176 A states the following:

In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to:

- a. ensure the functioning of the energy market;

¹¹ Europe 2020 Strategy – Summary p. 7

¹² For the 21st Century Europe: http://europa.eu/lisbon_treaty/take/index_hu.htm (downloaded: 10.01. 2012.)

- Slovakia: 31%;
- Czech Republic: 8%;
- Poland: 7,5%;
- Hungary: 3,6%

The percentage means a ratio towards the total energy supply of the given country or state. When the values were set up, different factors were taken into consideration, to ensure the actuality of the calculations and to guarantee a fitting value for each state. Geographical and technological capabilities, the achievement of the countries up to that point considering renewable and each country's own opinion and prognosis on the issue were all taken into account, which explains the (sometimes significant) differences.¹⁵

The objectives were clear, but the to achieve it was far from simple, as the construction of a complex support-system or support scheme was needed on the part of each individual state. This was especially important as only on their own could they construct a system capable of achieving and sustaining such goals and take the given country's special requirements (strengths and weaknesses) into consideration in the same time. In this case, interpreting the term 'scheme' strictly as 'financial aid' is not sufficient.

Apart from creating economic opportunities regarding the renewable energy sector, a stable, supportive legal and institutional background needed to (and in most places still needs to) be developed. This should have the means and instrument necessary to make the change towards renewables (primarily in the area of electricity generation) most importantly potentially possible and to make the process as smooth and rapid as possible. The directive also contains essential requirements in respect to the support scheme which by all means have to be met. These include the following (for example):

- The support scheme should be perfectly compatible with principles of the domestic (internal) electricity market;
- The schemes must be in accordance with community (level) guidelines, with special regard to those on state financed aids and programs for environmental protection;
- They must take it into account that geographic differences may result in different needs in technologies, as well as the specificities (vast amounts or complete lack of some or) of each renewable energy sources;
- Schemes must also be Economically feasible (should be able to guarantee that projects will benefit);
- If possible, the emphasis should be placed on winning the confidence of investors;

¹⁵ Based on the presentation by Tamas Toth: http://www.szc.hu/ctk/_konferencia/publikacio/Net/cloadas_toth_tamas.doc

- Schemes should also be kept as simple and transparent as the given situation allows it to be;
- Cost-effectiveness and public acceptance should always be considered as the most important criteria.¹⁶

1.2 Initiatives and their Effects on the Present (and Future) of the Energy Sector

According to the plans, the process of a socio-economic transformation has noticeably started. Which has shown to have had a significant impact on the energy sector over the past one and a half/ two decades, by starting to transform it through both incredible technological advancements (either by finding new ways of cultivating renewable energy by domestic inventions or by adapting methods experimented by others), and through the use of liberalisation and privatisation, to achieve and ensure the necessary financial instruments. It is difficult to evaluate their success however, as the process has not yet stopped and is even currently taking place, but it is beyond doubt that there were quite a few results in this area, such as the introduction of a new concept and scientific term (which was unclear till this very point), the concept of 'sustainable energy management'.

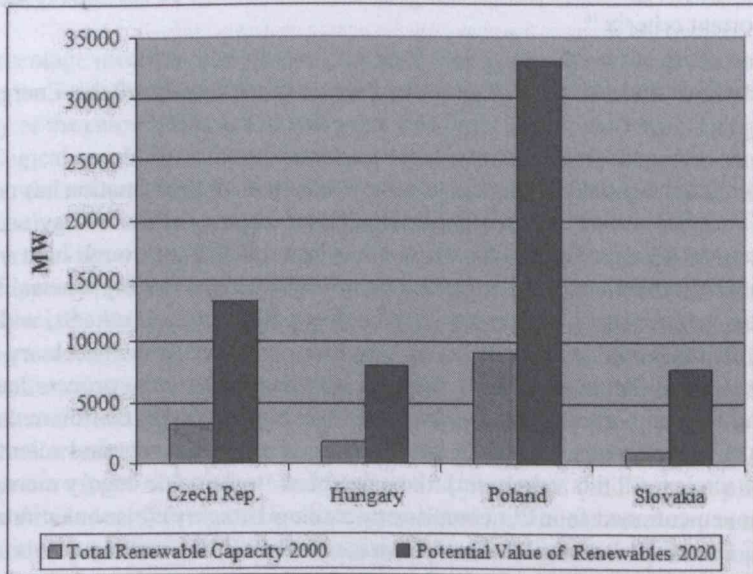
The abovementioned four EU countries (including Hungary) (also mentioned by the 2001/77 EC Directive) were said to already possess a remarkable potential towards renewable energy usage, in the year 2000 and furthermore they have already been actively utilised to some extent at least) The capacity of each of these four countries is illustrated in Figure 1. The Figure also shows a possible (projected) value based on prognosis after taking the determinative factors into consideration. The Prognosis shows the most feasible values the given country is expected to reach by the year 2020. The EU legislation and regulations both tend to achieve a positive feedback regarding the use of renewable. In some countries the expectations are indeed very positive due to these instruments whereas others just seem to be left behind.¹⁷

¹⁶ Based on the presentation by Tamas Toth: http://www.szc.hu/ctk/_konferencia/publikacio/Nct/cloadas_toth_tamas.doc

¹⁷ Based on the presentation by Tamas Toth: http://www.szc.hu/ctk/_konferencia/publikacio/Nct/cloadas_toth_tamas.doc

Figure 1

Renewable Energy Sources Currently in use by the Electricity Sector (2000) and the Potentially Possible Values Based on Technological Advance (2020)



Source: WWF: The Eastern Promise (2004)

1.3. The Most Commonly Used Supporting Instruments of RES-E

A large variety of supporting instruments are available to be able to make introduction of renewable energy in the electric power sector possible and spread it's area of use as wide as possible. Here is a non-exhaustive list of possible examples (the following ones are among the most influential instruments):

- It is a possible method to support the investments themselves directly. This tool does not target production, or the operation of the enterprise, but its launch. In this scheme, the state offers support for starting up the entrepreneurship, to bear the costs of fixed assets. To achieve this, any usual method, (usually carried out by the state to help entrepreneurs on other fields) might be applied. For example:
 - o After presenting an invoice for the expenses, the State fully compensates the investor or repays a portion of the investment costs, or
 - o The State may offer added interest-rate subsidies to the loan issued for the start of the investment;
- The State may also offer a so called "subsidized purchase price" for the product produced using the supported method or technology. This means that the State guarantees to purchase the given product (in this case) to take over the 'green

electricity' on a longer term for at least one of the predefined prices (commonly these are settled within legal framework), or, if necessary, the operator of the Central system is obliged to do so. This model is suitable for regulating the quantity being produced through regulation of the price.

- It is also possible to determine different "quotas". In this case, the quota is to be understood as a non-negative boundary, its role being the regulation of the production of green electricity through quantity. In this model, in addition to the producers consumers and service providers may also be requested by the regulatory authority to purchase or produce a given quantity of green electricity over a specified period of time, which is usually one year. The given quantity is predetermined as a percentage of their total consumption in advance in most cases.
- The State may also provide various tax incentives to support investors and producers or in some cases even consumers. In this model the State may decide to decrease the amount of the value-added tax on green power produced or completely relieve it, or makes it possible for producers to ask for a total refund at a later date.

In practice, it is common that countries choose to apply more of the possible models at the same time, or differentiate between various sectors or sub-sectors. But it is also possible that a given country does not choose to completely use any of the pre-established models but combines some of their characteristic to form new, mixed models, which might be more suitable for their specific needs.¹⁸

*2. How CSR interprets Environment*¹⁹

2.1 Defining Environment

Anyone who has or plans to have children (should) feel it their personal responsibility to take measures to ensure the stability of the current state of environment or in an optimal case even make steps towards restoration. But apart from the moral issues, environment is linked very much to business. Someone who is utilising his/her environment in the best way possible, not only has the best way to use raw materials but also sees through and is capable of monitoring the best practices throughout the entire system and process of supply or production.

2.2 Connecting to Business

The basic question that needs to be answered regarding environment is no other than the use of energy. The basic idea is that the more the type of energy used by the company

¹⁸ Based on the presentation by Tamas Toth: http://www.sze.hu/ctk/_konferencia/publikacio/Net/cloadas_toth_tamas.doc

¹⁹ Based on: <http://www.mallenbakcr.net/csr/Environment.html> (downloaded: 30.04.2012.)

contributes to global concerns such as global warming, greenhouse-effect or climate change, the more cost they will mean to the company as different forms of environmental 'compensations' will have to be paid or the state may even put increased taxes on these type on resources to encourage companies to shift to renewable. But the type of energy is not always the lone factor responsible for high operational costs, but also the amounts used of these resources or of water for example.

2.3 Possible Benefits

2.3.1 Achieving Customer Satisfaction

Not only suppliers, but customers are also changing. They are becoming more and more demanding. They are no longer satisfied by being able to get the best ranking brands on the market, sometimes even the lowest price is not enough. Since environmental awareness is a key concern these days, customers are globally looking for suppliers and companies who can offer quality for a reasonable price without having to worry about compromising their own, or their children's future.

2.3.2 Cut down on operational costs

Switching the production methods or updating them to be energy efficient always pays off on the long run, even if investment seems costly in the beginning. Even if the energy, water or raw materials go to waste, they had to be paid for, and in this sense the company gets nothing in return for their money only one more concern as sometimes these wastes and unused resources have to be disposed of, and should the company choose to do it legally it will become an extra expense. On the other hand, if the company chooses to take to illegal storing or dispensing methods, the risk of getting a fine and damaging company reputation arises.

2.4 Environmental Issues

- A company always has to face the risk of potential environmental accidents. These accidents (may not always be accidental at all) include
 - the release of pollution or pollutants into
 - water,
 - land, or
 - air
 - or the storage of these materials using illegal methods
- During production, undisputedly, but also during everyday life one can regulate the amount of contribution to greenhouse gas emission by updating parts of (production) processes and the kind and amount of energy used
- The use of raw materials (and different transportation methods), is always a significant and central question in the life of a company

- the use of non-renewable sources are increasingly costly as by definition they are not sustainable in the long term,
- on the other hand renewable energy sources might be (by definition) sustainable, using them could not be considered sustainable for the company, as the methods used to produce them are way too expensive and inefficient in most cases.

ROSSU BALÁZS

ENERGIA POLITIKA AZ EU-BAN - AZ EU 20-20 STRATÉGIA ELŐÍRÁSAI

(Összefoglalás)

Az „energia” és ezen keresztül az energia szektor (valószínűsíthetően teljes körű) átalakulásának, vagy az energia „piac” átrendeződésének szükségessége csak a XXI. században jelentkezett. Ennek okául pedig olyan általános „fenyegetettségek” és potenciális veszélyforrások szolgálnak, melyeket már nem elégséges lokálisan kezelni, globális szintű válaszlépések váltak szükségessé. A mai „modern életvitel” fenntartásához olyan mértékben szükséges az energia, melynek előállításához a tradicionális (üzem)anyagok nem tekinthetők gazdaságosnak, hiszen felhasználásuk mértékével azok újratermelődése, azaz maga a környezet nem képes lépést tartani. Különös nehézségek elé néznek azon országok és államok, melyek nem rendelkeznek a saját energiaigényük kielégítéséhez szükséges mennyiségű nyersanyaggal. Az ebből (is) eredő nehézségeket pedig a közelmúltban bekövetkező gazdasági válság tovább mélyítette, hiszen az államoknak szembe kellett nézniük a ténnyel, hogy gazdaságuk nem elég stabil az ilyen kaliberű kihívások leküzdésére. A „környezet” több szempontból előtérbe kerül, így annak vizsgálata és teljes körű megértése különösen jelentős, nem pusztán a gazdaság, hanem például a vállalatok társadalmi felelősségvállalása (CSR) megközelítéséből is annak érdekében, hogy az esetleges lehetőségek időben felszínre kerüljenek és az érintettek azokkal élhessenek.