

Winners or losers?

State measures in crisis management and the energy markets

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Several studies have been made about the present global financial crisis that has affected real economy as well. We know the root causes and its consequences. However we found a sector that has not been examined comprehensively in inland studies on the ground of changing environment. It is worth examining the effects on energy sector on the basis of their stages and impacts. Among governmental responses we can find several that hit energy markets, like super-taxes, privatisation or the broadening of state ownership. National supports were introduced for the handling of the financial crisis within the energy sector. However we must add that energy market supports served rather development purposes and not company salvage like we have seen it in other sectors. Also competition rules remained almost as consistent as we experienced it before. Moreover, if recent EU level energy policy projects come true, energy sector can even realize profit from the crisis. Future of the European energy markets depends on the recognition and exploitation of the possibilities coming from new circumstances.

Keywords: energy markets, economic crisis, state measures

1. Introduction

Present economic crisis has different effects on each sector owing to their original condition and their nature. Thanks to its characteristics energy is a special segment of all economies and so it is worth reviewing whether crisis has any special outcome or does the sector have any role in crisis management that is worth mentioning.

Several studies have analyzed the effects of the crisis on some parts of energy markets, but no comprehensive study can be found about the interaction between state crisis management measures and energy markets, more precisely power and gas markets. Because of the high level of interlocking on European energy markets, we examine the situation from an EU perspective and line up examples from several member states that explain, support or rather contradict mainstream processes.

First of all *we show the effects of the crisis on energy prices*, demand and investments. Then we analyze the relationship between state crisis management and energetics, examine not only the supports and allowances but also discovering *a kind of donor rule of energetics in recent state actions*. Finally we illuminate those possibilities which have appeared thanks to the new circumstances. In our opinion this is important because the EU- and state-level responses given to the crisis will determine the future path of community energy policy.

Our research is an assimilation – beside relevant EU and OECD documents – of domestic and international studies, but in order to be up-to-date information from the daily press had been applied as well.

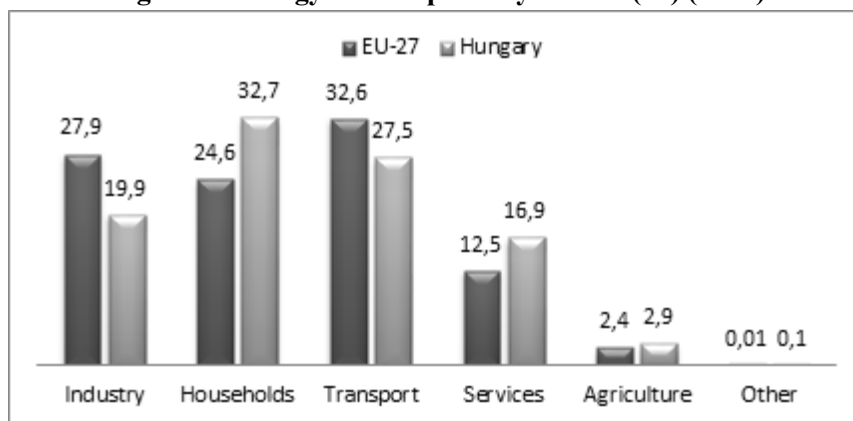
2. The effects of crisis on energy markets

Recent years of European energetic history contained many exciting turns and episodes. The huge oil-price increase of 2008 and the Russian-Ukrainian gas dispute of the subsequent winter were events with probably unprecedented effects on general European energetics. However according to the Commission the global financial and economic crisis proved to be the biggest challenge that has long-term effects on Member States' energy markets (European Commission, 2009).

2.1. Energy consumption and determination of energy prices

Energy consumption stabilized by the end of 2007 has fallen in the next two years due to the crisis. Changes in energy demand are affected by several factors, among them by the energy-using sub-sectors. On Figure 1 below it is shown how these sectors – using energy as input for their activities – shared energy consumption in the European Union and in Hungary before the crisis.

Figure 1: Energy consumption by sectors (%) (2007)



Source: Own edition based on European Commission (2010a)

Households, transport and industry are the three biggest groups of consumers. Among energy-intensive sectors the processing (car manufacturing and machinery) and building industries suffered from the biggest losses owing to recent years' events. The decrease of energy consumption is less imputable to households and the transport sector. Compared to other products' and services' energy needs, demand seems to be less flexible thanks to the importance and high proportion of the later mentioned sectors. Accordingly energetics are said to be 'crisis-proof': energy consumption has fallen less compared to the processing industry (Figure 2).

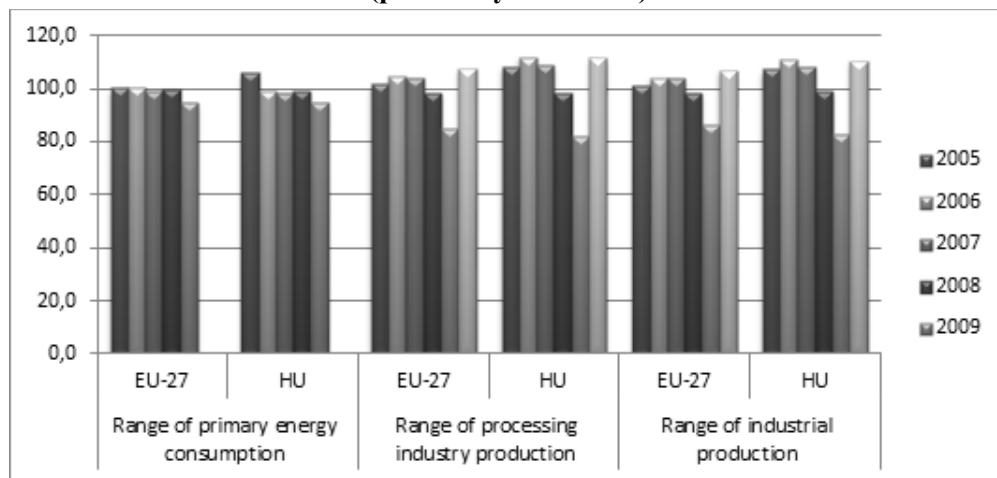
We must add that despite the crisis recent years' energy consumption exceeded the level of the early 1990s. In EU Member States it has touched bottom level in 1994 with its 1053.152 million tones (which is 94 percent of the amount of 2009). In the meantime in Hungary the worst year from this perspective was 1997 with its 15.952 million tones which is 97 percent of the 2009 data).¹

By the decrease of demand oversupply had an effect on energy prices as well. By the summer of 2008 the oil price (per barrel) reached an extraordinary level of 140 USD, but with the economic turmoil it fall to 43 USD in the first half of 2009 and stabilized around 70 USD in the summer of 2009. This brought a decrease in wholesale gas and electricity prices as well. Figure 3 shows the above mentioned

¹ From this point of view the recent economic crisis could be considered to outweigh previous recessions. If we count the growing tendency of energy consumption the higher amount of 2009 can only be attributed to the increasing energy intensity of the last two decades in each sector.

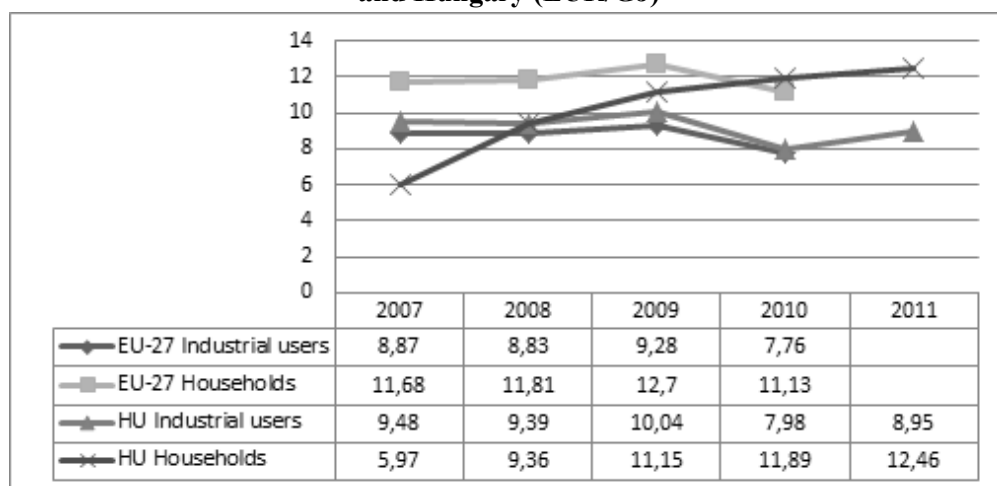
peak in 2009 and decrease in 2010. The reason of delayed representation is the oil price based gas price determination.

Figure 2: The set of different economic data of the EU and Hungary between 2005 and 2009 (previous year=100%)



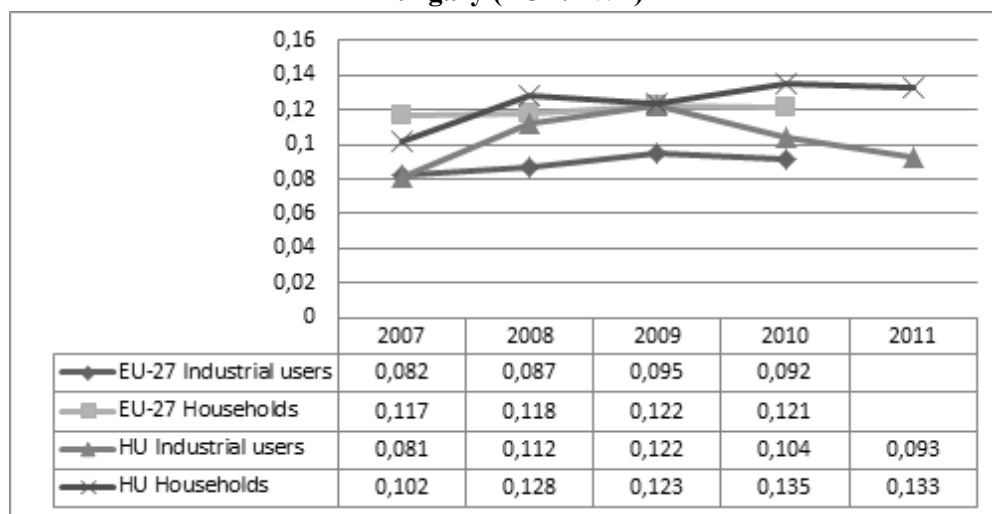
Source: Own edition based on the data of Hungarian Central Statistical Office

Figure 3: Fluctuation of natural gas prices for industrial and household consumers in the EU and Hungary (EUR/GJ)



Source: Own edition based on the data of Eurostat

The change is not so prominent but nevertheless appears on electricity market as well. According to the data of Eurostat price maximum could be measured by European and Hungarian industry users and EU-27 households in the first half of 2009. Hungarian households experienced the price increase a little bit later (Figure 4).

Figure 4: Fluctuation of electricity prices for industrial and household consumers in the EU and Hungary (EUR/kWh)

Source: Own edition based on the data of Eurostat

2.2. The effect of the crisis on energetic investments

In long term the most unfavourable turn of economic turmoil is the line of delayed or cancelled investments. From this point the most important question is that for how long will the crisis be drawn out. The longer the energy demand decreasing and price depressing crisis runs, the more uncertain will the return of investments be. The London based World Economic Council has made a research already in autumn 2008 with the participation of 65 energetic companies from 16 European countries. At that time investment willingness appeared to be optimistic, since companies thought that 20 percentages of investments could be fulfilled in time, 40 percentages would be postponed for 2 years and only 20 percentages of them would be delayed for uncertain deadline.

According to the 2009 report of OECD strong and financially stable companies have maintained their plans but others announced to supervise their investment strategies within and outside the EU as well. Energy market players have reduced such spending with about one fifth (around 100 billion US dollars) (OECD-IEA, 2009). Development of renewable energy resources has fallen a lot more, with about 38 percentages. Similarly to OECD countries, the efforts of re-structuring the European Union's energy markets halted, nevertheless clean energy investments exceeded other areas' investments both in 2008 and in 2009 (New Energy Finance, 2009).

The paralyzed credit market, higher capital costs and risk avoiding, altogether *the difficulties of receiving credit are the reason for lower investment willingness*. Falling demand and prices, the uncertain starting point of recovery make energy investments less attractive among service providers as well (Houssin, 2009). The development of new technologies have been set back because none of the states were forced to pay attention to the improvement of energy efficiency. This will cause serious problems by the end of the turmoil, when energy demand will rise again and the investments – that should have provided the replacement of running out resources – had been cancelled or at least reduced (Connor, 2009).

Analyses of the consequences of the economic crisis confirms that energetics are among the crisis-proof sectors notwithstanding that consumption and prices have fallen. Natural gas and electricity demand is relatively inflexible irrespective of the fact that the circumstances have changed. Indirectly, through the recession of financial and processing sectors and services economic crisis affects

energetics. This appears mostly in slight reduction of demand, in the cut of credit financing energy investments and in the permanent subsistence of economic uncertainty.

3. The relationship of state crisis management and energy markets

Economies are hit severely by real economic crisis in three areas. The amount of credits and market possibilities has decreased and numerous employment possibilities ceased. Hence we introduce those crisis managing measures that are somehow in connection with energy markets.

3.1. State crisis management by the help of energy sectors

Measures shall be sorted by the period of their effects in order to differentiate the emergency steps from those having permanent result. Most energetic companies – because of their management and ownership structure – are suitable to provide short term income for governments in the way of paying super-taxes or by the clearance sale of company assets.

According to its effects, the introduction and transaction period of super-tax assessment on well prospering sectors, like banking, telecommunication, energetics and retail trade is the fastest measure/tool. It is neither unknown in inland practice.

In connection with the 2006 economic stabilization Hungarian government has assessed extra burden on banks and pharmaceutical companies among others. The purpose of the so called Robin Hood-tax applied to energetic companies with profit over 8 percentages was to decrease the fee of distance heating. In 2010 the government has extended both the group of stricken sectors and the rate of the tax. New burden was introduced in the energetics and the income was generally provided for the correction of the budgetary deficit (Voszka, 2011).

Similar efforts have been made in Slovakia, where the Fico administration called upon foreign owned companies to decrease energy prices. Their aim was to support public expenditures of social groups with low income level from their profit – like in the case of Robin Hood-tax (Szilvássy, 2006).

Super-taxes and other profit decreasing regulations can have a pressing down effect on relevant company assets. That is why these tools are unfavorable in case of energy company privatization, the other emergency problem-solving method. In turn some European countries chose this way of budget balancing. Greece, being maybe in the worst position, has also announced to put together a privatization package of 50 billion euro.

According to the CEO of the company the biggest challenge will be the sale of 17 percentages of PPC, the energy company with already 51 percentages of state majority. Although Greek crisis decreases stock rates it is not sure that serious interest will appear. Its appeal/seduction diminishes since the administration is willing to keep management rights, and energy demand is decreasing because liberalization process in the European perspective is lagging behind (Galambos P., 2011b).

The Greek example is not standing alone. Poland has also announced to privatize 16 percentages of Enea energy company in order to lessen the country's debt. Swedish prime minister has mentioned the electricity interested Vattenfall group among those who may realize profit from the appearance of a new minority owner (Adósságkezelő privatizáció, 2010). The possibility of getting income this way is a narrow path, since the majority of EU member states do not dispose over significant ownership in natural gas and electricity sectors. Among the exceptions we can find Ireland, Poland, Greece,

Slovakia, France, Denmark and Austria in 2008. Sweden and the Czech Republic had significant state majority only in the electricity sector (Wölfl et al., 2009; Haney and Pollitt, 2010).

In turn a converse tool could be applied for handling budgetary or debt problems where energy privatization took place earlier. This is the *set back of a significant level of state ownership in stabile, long term dividend income providing companies*. This measure belongs to those that have permanent results in longer term.

We can find examples for these measures again in Slovakia, which appeared to be the most active in this field. Seven years after its sale, it has bought back the 49 percentages of Transpetrol for triple costs in 2009.² The administration has announced further deals alluding strategic companies (Ficoék..., 2009). The water power plant of Gabčíkovo, which is now hired by Slovenské Elektrárne (The Slovakian Electricity Company) from the Italian Enel group is among these possible transactions. This re-secularization is helped by the adoption of an act in 2009 about strategic companies. According to the act, the state can practise ownership rights over companies that are in serious economic turmoil because of the crisis until it may find proper buyer, who declares to run it in long term (Mentőövbe..., 2009).

The extension of state ownership is an important aim of the Hungarian administration that has entered into office in 2010. This appears in the energy sector, although super-taxes, demand decrease and other regulation did not have a stock rate decreasing effect.

The biggest case was the purchase of 21 percentages block of shares of MOL Hungarian Oil Company with a regional leading role in 2011. The remains of the IMF credit covered the transaction. Moreover the administration has subordinated the tasks of South Stream gas transmission pipeline under the supervision of the state-owned power producer, Magyar Villamos Művek Zrt. (MVM) and the re-purchase of the whole gas-business from E.On also became an issue (Az MVM-é..., 2011). The expected dividend income may have an important share in the decision to prefer the wholly state-owned MVM compared to MOL, which is only partially under parliamentary control.

We can see similar processes also outside the European Union. The Croatian government has made several efforts towards the recuperation of majority shares of INA oil company. These facts are insistent because the other actor of the deal is the previously mentioned Hungarian energetic company.

Two dominant shareholders of INA are the MOL with its 47.2 and the Croatian government with its 44.8 percentage of shares (Mindenkinek..., 2011). After the 2008 privatization they have made an agreement about the help in crisis management in favour of management rights received by the MOL (Galambos M., 2011). Croatian administration deployed several capital market and regulative measures to obtain the majority or to cut the management rights in the hands of MOL (Diszkriminativnak..., 2011). Until now these efforts failed but recently penal procedures have been initiated which may be motivated by internal affairs in connection with the recent Croatian elections (Galambos P., 2011a).

The financial effect of extending state ownership is quite uncertain. Recent volatility of stock rates, the non-aligned governmental actions can easily bring the devaluation of block of shares, as we can already see it in the case of MOL. In this case the return of the investment from dividend income can shift for longer period.

² The company runs the Slovakian part of Friendship oil transport pipeline, through which the MOL owned Slovnaft refinery receives oil.

3.2. Handling the crisis of energy sectors

Temporary allowances of competition regulation – the control of mergers and acquisitions, antitrust measures and actions against cartels – belong to crisis management tools. Beside extended state aid possibilities, more flexible evaluation of fusions, dominant position and the permission of crisis-cartels can help to avoid the deepening of recession. The European Union has made such efforts, but finally the legal background remained and only the procedures became more flexible. In case of energetics we focus to the evaluation of fusions.

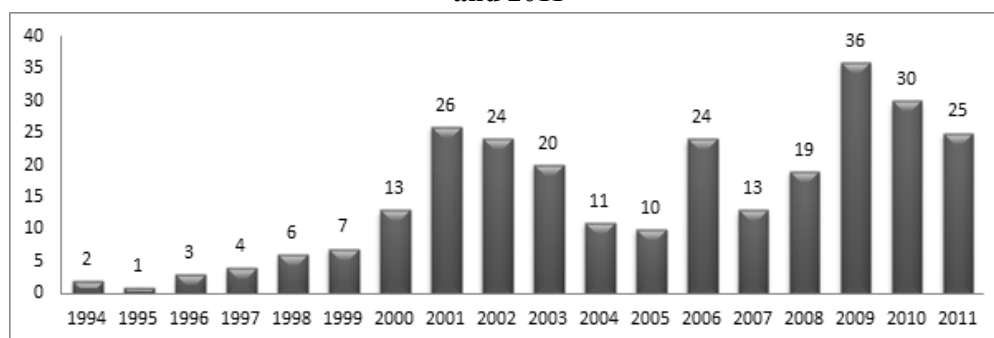
3.2.1 Consideration of energetic fusions

The judgement of a fusion should always be subject of detailed consideration because higher concentration, beside its efficiency benefits, usually means lower level of competition. In case of economic crisis it is of high importance whether supporting companies in economic difficulties or permitting a fusion holds lower risks. Namely latter may distort market structure while government support is only a temporary action (Laki and Voszka, 2010).

With the economic turmoil the number of fusions announced to the Commission decreased. In 2007 there were 402, in 2008 347 and in 2009 only 259 cases were recorded by the Competition DG. An upswing came in 2010 with its 274 cases and it seems to continue in 2011 according to the mid-term 228 announcement.³ The temporary decline in the number of fusions is explained with the fact that during economic crisis company saving fusions are more general within national borders, so they do not reach Community market (Reynolds et al., 2011).

The number of EU-level energetic company fusions reflects the opposite tendency. The peak of 2001-2003 was followed by a lower merger activity, apart from fusions in 2006. Mergers multiplied from 2007, they reached the highest level of the decade in 2009 and only started to decline in 2010.

Figure 5: The range of energetic fusions announced to the European Commission between 1994 and 2011



Source: Own edition based on the data of European Commission Competition DG

The numbers shown in Figure 5 reflect the fact that energetic companies did not get into serious crisis, the economic turmoil has boosted/accelerated the already started consolidation process on the EU energy market. (Moreover these data do not contain the national transactions which are said to be a general characteristic of this special sector.⁴) In this economic turmoil the number of fusions both in national markets and with EU relevancy increased. If we examine the decisions, the Commission had

³ Data are from Competitive Merger Case Statistics from the official homepage of the Commission.

⁴ Often smaller energetic companies get sold, so there is no need for Community approval. An example for such case is the acquisition of Envacom by Gazprom, with which the German authority has approved the Russian player to be set on German electricity market (Kis lépés ez..., 2011).

investigated 110 cases during the crisis (from the summer of 2008 until autumn 2011) and all of them were permitted. This fits the trend, since only 3 of the altogether 2956 mergers from all sectors of European economies were not allowed to be created.⁵ Thus in our opinion there is no evidence for the temporary allowances made within competition regulation.

Analyzing the range of fusions permitted with commitments in the period from 2008 compared to the previous period might be even more meaningful. There were only 5 cases in energetics from 2002 until September 2008.⁶ Since the crisis commenced there were no case in which phase II. proceeding was initiated. At the same time commitments were made in phase I proceedings 5 times. The first decision was made in case of a merger between a French and a British energy provider (COMP/M.5224 – EdF/British Energy).

EdF has announced its intent to buy British Energy in 2008. With this transaction two significant players of the British electricity market could join, but their aggregated market share is still less than 30 percentages. In order to get the permission in phase I procedure of the decision, relevant companies undertook to sell two power plants, and to launch an amount of electricity into the wholesale market. Furthermore, EdF has committed itself to making sites suited for nuclear new build available to competitors (Drauz et al., 2010).

Similarly the Commission has imposed commitments in cases of EdF/Segebel (COMP/M.5549), Nuon Energy/Vattenfall (COMP/M.5496) and in the acquisition of Essent by RWE (COMP/M.5467). With the 5th decision made in January 2011, Gaz de France could obtain interests in international power market by the help of a merger with International Power Plc. (COMP/M.5978). According to the commitments the latter had to sell its power market interest and divest relationship with RWE in order to maintain the level of competition in the Belgian market.

The growing number of mergers and acquisitions does not mean that the importance and value of the cases are also increasing. The size of the firms, the uncertain economic circumstances, the decrease of demand and the measures of crisis management that bring the ease of listing rates are all responsible for that.⁷ Even though the number of energetic fusions has increased on relevant markets of the EU, we could not find serious change in the proceedings of the authorization compared to the experience of the previous decade. This may be traced back to the quantitatively more but in significance smaller cases. It is difficult to answer whether the number of M&A has increased because of the current economic background or owing to the consolidation resulting from more than 10 years of liberalization process. In the justification and evaluation we can rarely find the crisis, after all new circumstances brought new guidelines in consolidation. Profitability and secure capital background became even more important. Meanwhile the pressure from the market and regulators are much more intensive towards development of infrastructure and energy efficiency. So it seems to be a good strategy also in Europe to find a partner with stabile financial background to be able to invest, as it is written by Feibelman (2011) in connection with the American market.

⁵ In the previous 13 years, between 1990 and 2002 18 mergers/acquisitions did not receive Community approval.

⁶ The legal background of the judgements was articles 8(2) and 6(2) of the former Regulation No. 4064/89 and the current Regulation No. 139/2004 about merger control.

⁷ According to Ross (2011) similar happens on US energy markets. Even the number of fusions did not change (it was 37 in 2010 and 36 until November 2011), the value that they represent has declined. Worries coming from the volatile stock prices and from public debt have important share in this.

3.2.2 State aid in energy sectors

With the outbreak of the crisis state aids referred significantly to the corrections of financial market and for bank savings. Banks have resorted 1600 billions of Euros (the 13 percentages of GDP of the EU) in the period between October 2008 and the end of 2010 (European Commission, 2011c).⁸ Commission has stressed that bank supporting is important because of its special function and must not be considered as a precedent for other sectors of the economy (Kroes, 2009). Nevertheless, supports and state aids have spread in real economy as well, but in much lower extent thanks to the mediate prosperous effect of bank supports. Fields beside the financial sector received altogether 81 billions of Euros, but only 26 percentages (0.2 percentages of EU GDP) have been used to recovery until the end of 2010 (European Commission, 2011d). This belongs to the second wave of crisis management tools, among the stimulant measures. These measures are generally based on Keynes' theory which means demand side economic policy with budgetary expansion but may vary from each other (Dessewffy, 2009).⁹

The mediate effect of supporting the financial and real economy sectors had improved the conditions of energetics as well. Even though it was not the energetic sector that has been damaged seriously in recent years, its strategic characteristic and its long term potential make it impossible to leave it alone neither on EU-level nor on national level. We have found some examples for economic stimulation.

The Commission has approved several state aid in energetics between 2009 and 2011. Such action was to support the construction of CO2 capture, transport and storage facilities in the Rotterdam area, The Netherlands (N381/2010), the support for the construction of a district heating network in the Northeast of Paris, France (N630/2009) or the construction of interconnection and cross-border power line between Poland and Lithuania (N542/2010) (Feldner and Thalhammer, 2011). Another example could be the €16 million Austrian support approved by the Commission to an environment-friendly project by Verbund-Austrian Thermal Power (N295/2008).

The above mentioned cases are all development supports, which affirms that serious company-saving actions or capitalizations were redundant in the energetics because of its defensive characteristic.

Tax-allowances also stimulate energy management. Great amount of this is the reduction of taxes on CO2 emissions or the exemption from energy based taxes. An example for the latter mentioned is the tax rate reduction for the glasshouse horticulture sector in the Netherlands (N270/2010). Unfortunately such reductions and allowances prefer also energy-intensive or polluting industries (Commission of..., 2009). Such happened in the SA.32875 case when lower rate for supplies of natural gas in Northern Ireland (to industrial and services sectors and agriculture) was approved.

Using fixed energy prices is also a tool serving the reserve of energy demand. In 2008 Slovakia and in 2010 Hungary applied this measure temporarily, but in 2011 electricity prices rose again in Hungary.

Among general economic stimulant measures we can find more and more examples that serve energy efficiency or support the usage of green/clear energy. Belgium, Finland, France, Poland, Portugal, Spain, Slovakia and the United Kingdom have launched programs in order to help the economic

⁸ Bank guarantees mean further 1.2 billion of EUR (9.8 percentages of EU total GDP) (European Commission, 2011b).

⁹ We can find government orders, public infrastructure developments, the support of private investments or the increase of household consumption through decreased taxes or increased social expenditure (Laki and Voszka, 2010).

recovery through energy industry as well (OECD, 2009). In 2009 13.2 billions of Euros were spent through state aid for such projects within the European Union (European Commission, 2011a). These steps bring us towards the long term efforts of crisis management.

4. Proceeds and possibilities on energy markets resulting from the crisis

During economic fire-fighting we have to take into consideration that *power and sustainability of growing in European economies can be ensured only by energy system re-structuring, which means improved energy safety and lower emission of greenhouse gases*. That is why in 2009 the European Union has decided to establish a programme to aid economic recovery by granting Community financial assistance to projects in the field of energy (European Parliament..., 2009). The dedicated financial facility (fund) connected to this program has special importance, because crisis has extinguished large amount of energetic investments.¹⁰ This fund can help increasing the investments in order to reach the above mentioned goals.

Since the project is a Community initiative, it does not belong to the category of traditional state aid formally. The European Commission has chosen three fields – gas and electricity infrastructure, offshore wind energy, carbon capture and storage – that are capable of making efficient and effective use of significant amounts of financial assistance and catalyzing extra investment from other sources, like the European Investment Bank.¹¹ This may have positive effects not only on related sectors and companies but on the whole economy thanks to its spill-over effects.

The budget of the European Energy Programme for Recovery (EPR) in 2009 and 2010 could allocate almost EUR 4 billion financing the three chosen fields (European Commission, 2010b). The evaluation report of 2011 is prosperous: *“The programme provided a unique opportunity to boost strategic EU investment projects, particularly during a period when pure commercial considerations, combined with the economic and financial crisis, were limiting new investment.”* (European Commission, 2011e, p. 5). Financial sources may be increased from further state investments, as the Energy Commissioner has highlighted it. According to him state participation in energetic investments of inter-connections is worth considering, since public sector in average gives 16 percentages of all energy consumption within the EU (Rosemberg, 2010).

4.1. Will there be a green outcome from the crisis?

One benefit of the decreasing electricity and gas demand of recent years is that there is a markable decrease in the emission of greenhouse gases and carbon-dioxide. It may happen that this effect will be seen only in short term and only because of the recession (OECD, 2009). The running of energy efficiency and saving projects can be questioned because of the low oil prices and so the return possibilities of green energy investments.¹² Owing to the short term crisis management preferences can change and state incomes can lower and may distract resources from energy efficiency and climate change programs. Investment re-scheduling and supervising are not answers belonging only to governments, but in recent years the measures of companies, citizens and local authorities have also

¹⁰ Regulation (EC) No 663/2009

¹¹ The annex of the regulation contains those projects that are considered to be worth of supports by the Commission. Such project is the establishment of Southern Gas corridor, the Baltic interconnection and further 9 programs of Central and South-Eastern Europe, out of which Hungary is involved in 5 projects.

¹² If the renewables could compete only with governmental support at an oil price of 140 USD/barrel, then a permanent price of 80-100 USD/barrel is even worse from the aspect of future return.

decreased. All the today cancelled green or efficiency based energy investments will cause higher emission in longer term.

EU-level and state commitment towards green energy seems to be strong despite of the recession (Robins et al., 2009). Crisis gave new impetus to create and put a new and – from the perspective of energy and pollution – cleaner production structure into the focus of economy stimulating programs. From state crisis management packages of autumn 2008 almost 14 percentages (around 28 billion of EUR) were destined to such investments (Robins et al., 2009). But we must add that different member states represent different attitude in this field.

The average 14 percentages comes from contributions like: the United Kingdom 7, France 8, Germany 19, Italy 1 and Spain 10 percentages (Robins et al., 2009). The new Central and Eastern European Member States differ also in their approach. In case of Slovenia, Slovakia, Latvia, Lithuania and Hungary we cannot see significant opening towards the support of renewable energy sources. Meanwhile the Czech Republic and Poland give at least chance to the economy stimulant power of renewables, and Bulgaria, Estonia and Romania have addressed supports to several energetic investments related to renewables since the economic turmoil (Fouquet, 2009).

A possible “green get-out” is supported by an EU-level 2011 initiative about the introduction of a common energy tax system, which can help cleaner energy resources becoming cheaper than those charging the environment. The “budgetary green reform” would mean finding the balance between the decrease of income taxes and the increase of taxes assessed on energy resources and contaminants (Hayles and Normander, 2011).

Previous decisions also meet this idea. The Commission has accepted an Italian initiative in 2008 about a lower tax rate on bio-fuel compared to the 22 percentages rate on traditional fuels (N 529/08).

The European Union and its member states see the solution not in introducing new taxes, but in the reconstruction of the tax system, in order to serve those consumers that use environmentally more friendly energy resources (Lomas, 2011). It can be easily seen how the worsening financial and economic situation and the commitment towards green energy strain each other. We will see the stronger force from the level of emphasis of environmental aspects among answers in crisis management, and from how these measures will be carry out.¹³

4.2. Changes in the regulation

4.2.1 The effects of crisis on Community energy market liberalization process

During crisis usually national challenges and urgent economic problems are solved contrary to the previously accepted common international interest, risking also further opening for instance. In energetics the situation is not that sharp.

European energy markets were hit by the crisis in a period when the liberalization process started in 1996 had not yet been closed. The third package of energy liberalization was accepted by the Commission after a long period of negotiations in 2009, so during the economic turmoil. The Directive

¹³ According to a January 2010 report of Energiacentrum, the green investments have increased by 5-10 percentages compared to previous year. Its reason may be that investors are disappointed in other fields of the economy and seeing perspective in this field they open toward renewables.

contains three important changes: the improvement of the access conditions to gas and trans-border electricity transmission systems and the establishment of the Agency for the Cooperation of Energy Regulators (ACER).

However this regulation did not also force giant energy market players to make real ownership unbundling – which was the original Commission recommendation – but they could keep their previous networks with the creation of an independent supervision. It is not easy to decide whether this outcome results directly from the crisis or this way of regulation would have happened also if the economic turmoil had not taken place. Anyway during the 2009 negotiations we could already hear voices/opinions about the need for a new, fourth package to assure further development (Johnstone, 2009; Simon, 2010).

The deadline of making essential steps involved in the third package expired in spring 2011, but none of the member states has signed to fulfil their duties in the beginning of the same year. On the contrary, at that time more than 60 infringement proceedings were under way on the second internal energy package alone (European Commission, 2011b).

The preparation of new liberalization provisions were followed by the *Climate/energy package* adopted in December 2008. It became part of *acquis communautaire* only in 2010 as part of Europe's transformation, an answer to the crisis by the EU 2020 Strategy. The relationship between climate change and energy is a key element of the strategy, where the detailed “20/20/20” goal became drafted. Its meaning/aim is to “*reduce greenhouse gas emissions by at least 20% compared to 1990 levels or by 30%, if the conditions are right; increase the share of renewable energy sources in our final energy consumption to 20%; and a 20% increase in energy efficiency*” (European Commission, 2010c, p. 11).

In 2011 the European Union could reach only one important achievement, which was the draft directive about energy efficiency (Tindale, 2011). One of its ideas is that recovery from the crisis would be easier and it would help the environment if Europe is able to utilize available energy. Unfortunately the adoption of the document seems to be difficult because of substantial member-state opposition to this Commission proposal – some on grounds of subsidiarity, and some on grounds of cost.

4.2.2 New system instead of regulatory patchworking?

It looks like energy sectors are being emphasized Europe-wide because of the crisis and thanks to the leadership of the EU not only the previously mentioned member states dedicate further importance to green energy. From financial market experiences we can say that the perfection of energy regulation would be crucial. Getaway financial market investors see perspective in energy projects if an effective framework gives assurance to them.

The complexity and success of energy market regulation is highly determined by political and institutional circumstances and by current regulation-economic aspects. Three levels of energetic regulation can be observed on European markets in the last 20 years: recognition of the importance of supranational interventions, then creation of necessary institutions and finally the adaptation to the requirements of the growing European Union (Vasconcelos, 2009). Present economic crisis strengthens the necessity of supranational regulation in this field also. And if we take into consideration the central elements of the new Climate/energy package – energy efficiency, efforts to create a clean energy portfolio or interconnection of different energy systems – reconsidering original energy market measures seems to be of highest importance. The period of changes would be a perfect background to take this step. Both the European Union and member states can make the first steps in

the adaptation of energy market regulation to post-crisis situation. Without effective European energy market regulation the supervision can become stronger also on national level, which leads to the creation of regional energy markets. This outcome is also supported by the EU.

5. Summary

Crisis has also left its signs on crisis-proof energy sectors. Energy demand decreased, although thanks to its inflexibility in lower amount compared to other sectors. The fall of investments caused by the decrease of prices and demand and the general uncertainties were somehow balanced by surplus of money and political and economic interests coming from other sectors.

Primarily/Mainly national level supports treated the energetic effects of economic crisis. However competition regulation slacked less in connection with this sector and supports serve rather development than company-saving. Other measures of crisis management – like extra taxes, privatization and the extent of state ownership – can be observed here, but mainly in the sense to obtain and assure short or long term income from the sector. *Energetics became not only the subject but the measure of crisis management.*

Beyond the continuation of liberalization process the European Union is committed to the fight against climate change and to energy efficiency. So even if it seems that during economic and now euro-crisis non-financial sectors get into the upstage, it looks like energetics are getting more attention. *The sector may obtain gains from crisis if approved state aids and energy projects with Community financial assistance are realized.*

Future of the European energy market is determined by today's crisis management measures. The period that holds the possibility of changes gives good circumstances to the regulative restructure, the strengthening of international coordination even if the lack of financial and natural resources restricts the attainment of commonly accepted goals. Next few years will show how Europe can exploit the possibilities coming from energetics and regulation economic adaptation. The significance of regulation and tax-system changes made in the name of "green get-out", supports from the Community and their execution could be much bigger as it is seen from today's short term interests.

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