

# Renewable Energy and Energy Efficiency Quarterly



## Q3 2014

### EDITORIAL

We have launched this newsletter to provide timely and concise information on the development of renewable energy markets and energy efficiency policy developments in Hungary and in Europe.

The 2020 renewable energy target of Hungary is 13% according to 2009/28/EC but Hungary decided to aim at 14.65% (as stated in its NREAP). Hungary currently exceeds the target value of the NREAP trajectory due to the higher than planned RES heat consumption and – not least – to the shrinking primary energy use compared to which the percentage target is defined: recent estimate for primary energy use in 2020 is 11% lower than the one used in the NREAP. This optimistic picture – however – needs to be complemented by the fact that renewable electricity generation is behind the target (based on 2013 data) and the development of new capacities are set back by regulatory uncertainties, the lack of new wind capacity openings and the non-action on the long planned new renewable support regime (METÁR).

The newsletter is organised into 5 sections that we consider to be of interest to companies (planning to be) engaged in renewable energy and/or electricity/heat markets that are affected by energy efficiency policies. In Focus we feature a recent policy event that is of major importance to the market. In this issue it is the implementation of the Energy Efficiency Directive. The second section covers the price development of RES technologies (focusing on the most rapidly chan-

ging PV price) and fuel prices where the fuelwood price development is demonstrated. The next two section deals with the regulatory changes and news in Hungary and the EU, respectively with the aim of keeping the Reader updated on policy assessments and changes in Hungarian RES licence holders as well.

The last section provides information on the funding sources for renewable and energy efficiency investments in Hungary.

We truly hope that our ambition meets the expectation of the reader,

András Mezősi

Editor-in-chief

## FOCUS

### Implementation of the EED

The Energy Efficiency Directive (2012/27/EU) is a horizontal legislation aiming at energy savings - that are additional to the savings from already existing policies and measures - in the MSs to reach the 2020 community goal via a range of mandatory and recommended policy interventions in various sectors. The main provisions of the Directive are:

- ◆ **Setting of an indicative national energy efficiency target** (by 30 April 2013) in either in primary/final savings, intensity but translated into absolute level of primary and final energy consumption in 2020
- ◆ **Achievement of a certain amount of final energy savings** between 2014 and 2020 by using **energy efficiency obligations schemes** or other targeted policy measures („alternative measures“)
- ◆ **Information provision for consumers:** easy and free-of-charge access to data on real-time and historical energy consumption through more accurate individual metering (implementation by 2015)
- ◆ **Energy audits:**
  - *Obligation for large enterprises* to carry out an energy audit at least every four years (the first executed by 5 December 2015)
  - *Incentives for SMEs* to undergo energy audits to identify energy saving options
- ◆ **Public sector:**
  - renovating 3% of buildings owned and occupied by the central governments (from 2014)
  - energy efficiency considerations in public procurement
- ◆ **Heating and cooling:**
  - comprehensive assessment of the H/C potential for the application of high-efficiency cogeneration and efficient district heating and cooling (by 2015)
  - mandatory cost benefit analyses whenever existing thermal electricity generation installations, industrial installations or DHC networks (above 20 MWth) are planned or substantially refurbished with a view of promoting co-generation
- ◆ **Energy transport:** Identifying measures and investments for energy efficiency improvements in the network infra-

structure (with timetable for their introduction)

This long list implies that the transposition of EED requires a multitude of legislative alignments. Member States were required to implement most of its provision by 5 June 2014 and several reporting deadlines have been set by the Directive. According to the current state of affairs (August 2014) Hungary is lagging behind with many requirements of the Directive.

Hungary has set and reported its indicative energy savings target for 2014-2020 that is 1113 PJ primary energy consumption in 2020 (236 PJ savings compared to business-as-usual), resulting in 760 PJ final energy consumption reflecting the Joint Effort Scenario of the National Energy Strategy 2030.<sup>1</sup>

Hungary has submitted its notification on the implementation of Art. 7 (introduction of energy efficiency obligation schemes), however it is virtually void of content and only expresses the plan of Hungary to decide on the measures of implementation (energy efficiency obligation scheme and/or alternative measures) at a later date.<sup>2</sup> The notification does not include the cumulated energy savings target of Art 7 for 2014-2020 as no decision has been made on the use the max. 25% reduction option to the baseline granted by Art 7(2).

Hungary has not submitted:

- ◆ its National Energy Efficiency Action Plan (due in April 2014)
- ◆ legal transposition document (due June 2014)
- ◆ building renovation strategy (Art 4).

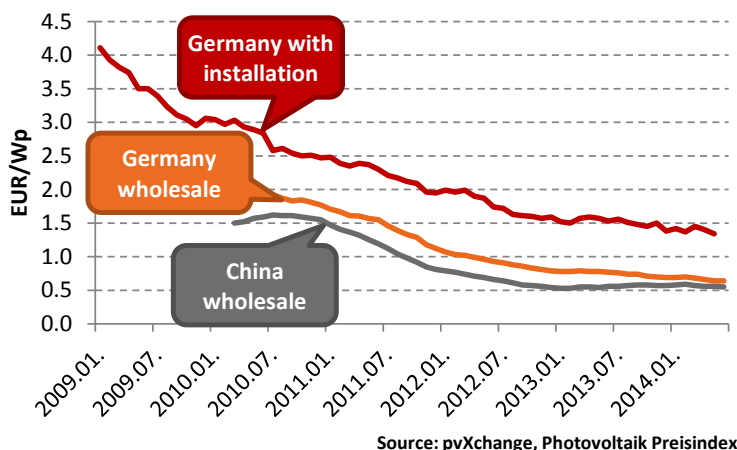
The role of the NEEAP is to provide an overall plan with what measures Hungary plans to reach its energy savings target (including but not limited to measure of Art 7). The initial draft of the Building Renovation Strategy (Nemzeti Épületenergetikai Stratégia) has been prepared in 2013 but has been launched for public consultation just recently (11 Sept. 2014).<sup>3</sup>

Hungary has a quite mixed implementation record as outlined in the previous section but only a handful of MSs managed to comply fully with the requirements. The Commission has made a first assessment of the implementation of EED and plans to initiate an infringement procedure against 24 member states.<sup>4</sup>

# DEVELOPMENT OF TECHNOLOGY AND FUEL PRICES

## PV PANEL PRICES IN GERMANY

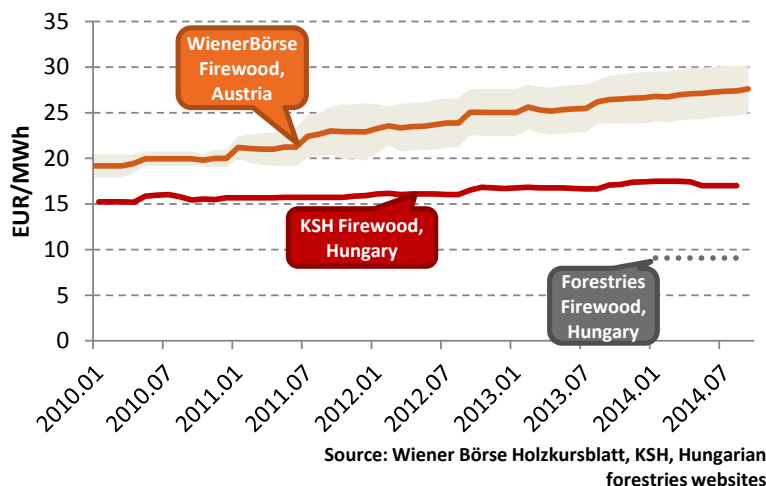
Figure 1 PV panel wholesale prices and prices with intrallation



We assessed two data sources for PV technology cost. pvXchange is a platform for wholesale panel trade that publishes monthly price index for German, Chinese, Japanese/Korean and South-East Asian produced crystalline modules since 2010. Prices do not include VAT but have been customs cleared in all cases. These prices refer to the panels only, costs of additional equipment (like inverters) and installation are not included. What is apparent at first sight is that China offers a price advantage of 10 cent/W over Germany (Note that this price advantage has been diminishing since 2010).

Photovoltaik Preisindex is an industry initiative, based on monthly questioning of 300 companies in Germany. The cost reflects average costs of installation and machinery.

Figure 2 Firewood price developments in the Austrian commodity exchange compared with Hungarian end-user firewood price and forestries' firewood price (net of VAT)



Long-term tendencies show that crystalline module prices dropped to 1/3 of the price level from 2010 by 2014. Similarly, the German price index (which includes installation and other machinery costs as well) fell from 3000 EUR/kWp in 2010 to 1300 EUR/kWp in 2014.

## BIOMASS PRICE DEVELOPMENTS

Hungary's renewable generation is dominated by biomass. Fuelwood prices are decisive for biomass generation, therefore we present some time series of fuelwood price developments. We assessed three products:

- ◆ Fuelwood prices in the Vienna Commodity Exchange (Wiener Börse Firewood): The exchange publishes the lowest and highest price of the first Wednesday of every month, this is indicated with the gray area, the orange line denoting the average of the two. What is apparent at first sight is that fuelwood prices has been on the increase
- ◆ Fuelwood prices published by the Central Statistical Office of Hungary (KSH firewood), net of VAT. According to the Statistical Office, fuelwood price have slightly been increasing in the past four years, on average by 2-4%. Hungarian firewood can be purchase with a 10 EUR/MWh discount compared to the Austrian firewood.
- ◆ An overview of Hungarian state-owned forestries' fuelwood offers. (Forestries firewood). Out of 22 forestries, 15 published prices for fuelwood. The average of these prices net of VAT was 9 EUR/MWh, which is the third of the Austrian price. The reason for the discount is the fact that forestries do not include transport, storage and loading price, which is a considerable factor.

# HUNGARIAN REGULATORY PANORAMA

## CHANGES IN LEGISLATION

In 2014, considerable changes were made in the way of cost allocation of feed-in tariffs:

- ◆ 40-60% renewable production now needs to be sold on HUPX. The revenues will alleviate the costs of balancing group operators
- ◆ Balancing group operators still need to pay for the remaining renewable electricity (ie. not sold on the HUPX)
- ◆ Renewable producers were expected to schedule production one month ahead, this was changed to day-ahead schedule.

These changes required the amendment of 389/2007 Government Decree, 107/2009 Government Decree and 309/2013 Government Decree. Detailed rules were set in the commercial Code of MAVIR which was accepted by MEKH.

In the first semester the reformed system showed great savings due to two factors:

- ◆ The scheduling is closer to real-time production reducing the need for balancing energy and – consequently - balancing costs halved.
- ◆ Revenues from HUPX sales decreased the costs paid by balancing group operators.

Changes in regulation made the financing of renewable support more sustainable. However, we find no explanation for not marketing the total renewable production on the day-ahead exchange.

## CHANGES IN RENEWABLE CAPACITIES BASED ON MEKH RESOLUTIONS

To assess the latest developments in the period, we present a summary of the MEKH resolutions on issued, modified and withdrawn licenses between 1 Jan and 1 June 2014 for renewable production to get an overview of the market.

It seems that apart from mid- and large sized market players, renewable investments are not very lucrative. Few licenses were issued and some withdrawn and power producers seek to postpone the commencement of commercial operation.

## MORE RENEWABLE QUOTAS FOR MÁTRA, 15 MWe PV CAPACITIES

The generating license of Mátrai Erőmű was changed twice. In January the power plant submitted its intention for commissioning a 15 MW photovoltaic unit. As an investment support, Mátra received a quota of 17 GWh for the period of 11 years (Resolution 420/2014). Quota means the amount of energy generated and sold at a feed-in price. The timeframe and the quantity of the quota is set so that it allows for the financing of the investment.

In February its biomass quota was more than doubled (from 182 GWh to 556.5 GWh) and the timeframe extended (from 2015 to 2016). According to MEKH, the reason for the modification was that on the one hand Mátra did not produce all the allowed 174.5 GWh in 2013, only 74.5 GWh and the remaining 100 GWh was added to the next period. Second, due to the implementation of 2010/75/EU Directive, stricter NOx emission requirements were introduced in Hungary. Consequently, Mátra is required to make additional investments at its biomass unit and seeks to recover the investment costs by applying for higher quotas and longer feed-in period (Resolution 1031/2014).

## NO CONSIDERABLE WITHDRAWALS

Four renewable power producers' permits were withdrawn in the period. Altogether this resulted only in a 0.6 MW capacity loss, since most withdrawals involved power plants which had not been commissioned yet. Licenses set a commissioning time for all power plants. The licence is withdrawn if the unit does not come online within three years after the date included in the licence. Three power plants happened to be in this situation: the claimed reasons are the lack of financing and difficult market conditions. The fourth licence holder, an already operating power plant found it difficult to run in the current market conditions: one of its gas engines broke and the fuel supply turned out to be problematic for the other.

## HAMBURGER HUNGÁRIA TO COMMISSION A 42 MW RES CO-FIRING UNIT

Packaging plant Hamburger Hungária aims to install a 42 MWe unit which would be fuelled with its industrial waste, natural gas or biomass. The unit will run mainly on paper waste – a byproduct of the packaging plant.



### NEGLECTIBLE NEW WASTE AND BIO-GAS TO THE GRID

A 0.812 MWe hazardous material incinerating plant which has been operating and selling power and heat to the market since 2002 applied for production license. MEKH issued a license and fined the owner (HUF 50,000). A waste depot seeks to install a 1.487 MWe capacity biogas engine that would come online by 01.09.2014. A biogas plant has been finished and passed all test before entering commercial operation but found the current market conditions unfavourable requested to postpone the date of commercial operation to 01.09.2015. from 01.09.2012. Two biogas plants applied for the extension of their quota period and quantities. This implies that the investments have not recovered their costs.

In the examined period 6 quota permits were withdrawn and 5 new issued.

### GEOTHERMAL CONCESSIONS

















The Hungarian Mining Office (MBFH) is in charge of auctioning concession areas for geothermal exploitation. So far, three areas have been opened for geothermal concession:

- ◆ Ferencszállás
- ◆ Jászberény
- ◆ Kecskemét

The tenders were organised in late 2013. No bids were submitted for Kecskemét and Ferencszállás. Jászberény (395.6 km<sup>2</sup>) was contracted in June 2014 for CEGE ZRt for 35 years. CEGE is a joint venture of MOL (65%) and an Australian investor Green Rock Energy International (35%). Minimum bid for the area was 38.5 Mn HUF + VAT. Mining royalties amount to 3% plus the royalty set in the Mining Act.

Currently one geothermal concession is open, the area of Battonya (358.5 km<sup>2</sup>). Tenders are expected until 16.09.2014. The lowest concession fee (starting bid) was set at 27.5 Mn HUF + VAT. An additional 1.5 Mn HUF is to be paid upon entering the concession process. Mining royalty for the area is 2%.

Table 1 Summary of MEKH resolutions

Power plant	Resolution	Resolution type	Fuel	Capacity (MWe)	Commercial operation / expected commercial operation*	Annual quota (MWh)	Period	Total quota (MWh)
Nádudvar Biogáz Erőmű Kft.	894/2014 	Withdrawal	Biogas	0 (not finished yet)	-	-	-	-
Rossi Biofuel Bioüzemanyag Gyártó és Kereskedelmi Zrt.	1091/2014 	Withdrawal	Biogas	0.6	-	-	-	-
BIOWEG Bioenergia Kft.	1756/2014 	Withdrawal	Biogas	0 (not finished yet)	-	-	-	-
Claessens Bioenergetikai Kft	1917/2014 	Withdrawal	Biogas	0 (not finished yet)	-	-	-	-
Sarpi Dorog Környezetvédelmi Kft.	955/2014 	New license	Waste, natural gas	0.812	2002	-	-	-
Ferment Hungary Hulladékkezelő- és Hasznosító Kft.	1094/2014 	New license	Biogas	1.487	01.09.2014.*	-	-	-
Hamburger Hungária Erőmű Kft.	1916/2014 	New license	Waste, biogas, natural gas, biomass	42.34	01.12.2015.*	-	-	-
Mátra	1031/2014 	Modification of license	coal, PV, biomass	+15 PV (not finished yet)	?	Biomass: 185500 PV: 16996	Biomass 3 years, PV 11 years	Biomass: 556500 PV: 186954
Mátra	420/2014 	Modification of license	coal, PV, biomass	0		Biomass 2014 107500 Biomass 2015 74500 PV: 16996	Biomass 2 years, PV 11 years	Biomass:182500 PV: 186954
Ferment Hungary Hulladékkezelő- és Hasznosító Kft.	1337/2014 	Modification of license	Biogas	1.487	2014.09.01	11450	7 years 6 months	85874
AGRÁR OFFA Mezőgazdasági Kft.	1397/2014 	Modification of license	Biogas	0.625	2010.08.01	3820	7 years 6 months	28577
Spartak Kft.	821/2014 	New quota permit	PV	0.412	2014.03.01*	510	16 years 6 months	8465
Monostorpályi Község Önkormányzata	950/2014 	New quota permit	PV	0.25	?	292	16 years 6 months	4810
ENER-G Energia Technológia Zrt.	1336/2014 	New quota permit	Waste gas	0.498	2013.11.01	3735	2013.11.01.- 2018.10.31.	18675
Nord-Point Kft.	1909/2014 	New quota permit	PV	0.495	2014.07.01.*	651	16 years 6 months	10745
ZÖLDEPÓNIA Kft.	2046/2014 	New quota permit	Waste gas	0.48	2014.07.01.*	3600	5 years	18000

## EU REGULATION

### 2030 CLIMATE AND ENERGY POLICY FRAMEWORK – FINAL DECISION EXPECTED IN OCTOBER

The *Communication COM (2014) 15* released in January 2014 by the European Commission proposes a 40% community level greenhouse gas reduction target and the objective to increase the share of renewable energy to at least 27% but without national renewable targets.<sup>5</sup> The package was completed by a 30% energy use reduction target on July 23, on the basis of the evaluation of progress towards meeting the 2020 energy efficiency goal and reflecting the increased demand to reduce dependency on Russian energy sources.<sup>6</sup> To ensure the attainment of the EU-level renewable target the Communication suggests that member states make commitments in their „national plans“ accompanied by a new governance system that would continuously review the targets and achievements through an iterative process. Beside the European Parliament, the IEA expressed concerns about the effect of lacking national RES targets on the effectiveness of overall EU target in its *Medium-Term renewable Energy Market Report*.

The European Parliament voted against the proposal in February and asked for more ambitious RES and EE targets, and no agreement was reached in the two European Council meetings in March and June due to the diverging view of MSs on the proposal. The Green Growth Group, embracing 13 EU countries, issued a joint statement to urge the Council to agree as soon as possible, while the Visegrad group – including Hungary – together with Bulgaria and Romania (V4+2) requires national impact assessments to be carried out. They claim that a fair effort-sharing policy should be elaborated based on those assessments as regards the non-ETS sector, and that the 40% GHG reduction target should be conditional on a global climate deal.

The position of the Visegrad group is disappointing to those who wanted the EU to take a leading role in the international climate talks and to announce officially its 40% greenhouse gas reduction target before the UN Secretary General's summit in September, in order to set an international benchmark for other nations. The V4+2 also opposes the legally binding national renewable and efficiency targets. However, all member states expressed their concerns about the new

governance mechanism proposed by the Commission, having the fear that it would weaken existing national competences in designing their own energy mix.

### REKK OPINION

**A**ccording to REKK estimates a Hungarian non-ETS emission reduction target, which is set by a burden-sharing rule based on differences in per capita GDP, is significantly lower than a target calculated by a burden-sharing rule based on the so-called pan-European level cost-effectiveness principle. This latter would, in general, impose a larger burden on new Member States, since in our region the low-cost GHG emission reduction options are more abundant than in the higher income Member States. It should be noted that the national reduction target of a GDP-based allocation is very sensitive to the parametrisation of the allocation (the allowed spread).<sup>7</sup>

A final decision is expected to be made in October 2014. According to the conclusions of the European Council after the summit of 26/27 June „All efforts will be mobilised in order to meet this agreed deadline.“

### COMMUNICATION ON ENERGY EFFICIENCY AND ITS CONTRIBUTION TO ENERGY SECURITY AND THE 2030 FRAMEWORK FOR CLIMATE AND ENERGY POLICY

A new energy efficiency target for 2030 was presented by the European Commission in July. As forecasts imply that the current 2020 target (20%) is being achieved, the Commission considers that it is appropriate to set a higher target of 30% for 2030. The proposed target is higher than the level required to achieve a 40% reduction of GHG emissions by 2030 (25%).<sup>8</sup>

The Communication points out, that the majority of the energy-saving potential is in the building sector as 40% of the EU's energy consumption relates to buildings. The creation of new business opportunities for the construction sector will also create jobs. Private ownership of buildings is really high in EU, so there is a need for significant private financing. To leverage private capital a minimum of €38 billion of public funds will be

available for low carbon economy investments under the European Structural and Investment Funds 2014-2020.

## REKK OPINION

*There are limited information about the assumptions and modelling tools used for the Commission Communication results. It is stated elsewhere that a 25% energy efficiency target would reduce gas imports by 44 bcm. REKK modelling estimates that a proportionate reduction of all EU countries gas demand by this 44 bcm, even with the present 2014 gas infrastructure would result in a minimum of 5-11% gas price reduction on an EU average. For the new member states - those that rely more on Russian gas this price increase is slightly slower, around 4-10%. Assuming that until 2030 the key priority infrastructure projects (PCI) would be built, the same demand reduction would bring a price decrease of 6-18%.*

The Commission emphasises that energy efficiency brings many further advantages for the EU. According to estimates, every additional 1% in energy savings cuts gas imports by 2.6% and will lead to gas prices being about 0.4% lower in 2030.

The European Council aims to agree on targets for 2030 in October to allow the Union to play an active role in the ongoing international climate negotiations. A review of the progress on energy efficiency is expected in 2017.

## RESULTS OF THE SECOND CALL OF NER300

In July the European Commission has awarded €1 billion to 19 projects under the second award decision. NER300 is a financial instrument for the support of carbon capture and storage (CCS) and innovative renewable projects in the EU. The fund is managed by the European Investment Bank, the European Commission and the member states. It is financed from the sale of 300 million emission allowances from the new entrants' reserve (NER) of the EU ETS.

After the first call of the programme in 2012 December - where 23 projects were funded from €1.2 billion - this July, under the second call, the Commission awarded 19 projects, with a funding of €1 billion all together. This support is estimated to bring another €900 million of private investment for Europe. The projects cover a wide range of technologies. Not only renewable power plants (bioenergy, geothermal power, photovoltaics and concentrated solar power, wind power, and ocean energy) but also smart grid projects, and - for the first time - a CCS project as well. The projects will be implemented in twelve countries: Croatia, Cyprus, Denmark, Estonia, France, Ireland, Italy, Latvia, Portugal, Spain, Sweden and the United Kingdom.

In the first call one Hungarian project was awarded: a geothermal power plant project of EU-FIRE and Mannvit won € 39.3 million. In the second call, after a pre-qualification by the Ministry of National Development, Hungary submitted two applicants, but none of them was awarded.



# MONITORING OF INVESTMENT SUPPORT OPTIONS

## EU FUNDING FOR RENEWABLE ENERGY AND ENERGY EFFICIENCY IN THE 2014-2020 PERIOD

EU funds will be allocated in Hungary in the 2014-2020 period in the framework of the Széchenyi 2020 program on the basis of 7 operation programs (OPs)– aligning to the EU 2020 Strategy.<sup>9</sup>

Renewable and energy efficiency investments will be funded dominantly from the operation program called KEHOP except from municipalities (funded from TOP and VEKOP) and companies investing in RES electricity and heat production for own use (belonging to GINOP). In case of the residential, public and non-profit sectors plus churches KEHOP is the exclusive source for investment support. A new feature of KEHOP is that while in the previous, 2007-2013 period (under KEOP) renewable and energy efficiency goals has been allocated into separate priorities (112.4 bn HUF for energy efficiency and and 115.4 bn HUF for renewable projects), the division in KEHOP is not based on the goal of the investment but the support type. Consequently, 300 bn HUF will be available for non-refundable grants (Priority Axis 5) and 60 bn HUF for other financial instruments (Priority Axis 6).<sup>10</sup>

The OPs submitted to the Commission are in the final negotiating stage between Hungary and the EC. First calls are to be expected in October. These calls are most likely to relate 'derogation projects' (i.e. investment intensive policy areas where Hungary was granted derogation from the timely implementation of community legislation) such as waste and sewage. As far as energy projects are concerned, the calls are expected to be

made after the finalization of the OP but no further deadline is set.

## INVESTMENT SUPPORT: EEA AND NORWAY GRANTS FOR GEOTHERMAL DISTRICT HEATING

Under the EEA Financial Mechanisms 2009-2014 Renewable Energy Programme Area a call for proposal '*Implementation of Geothermal Based District Heating Systems – Replacing Existing Fossil Fuel Based District Heating*' has been published on the 4<sup>th</sup> February, 2014 that was open until 7<sup>th</sup> April 2014. The total amount available at this call was 6.3 million Euro (1.78 billion HUF). The call was open for public and private entities as well, and partnerships of Hungarian and Donor States organizations could also participate. Only those projects could apply which would be implemented in Hungary and change primary energy source (in part or totally) of the district heating providers and suppliers from fossil fuel to geothermal, through the following project activities:

- ◆ *Installation of new geothermal capacities*, which will contribute to the reduced use of fossil fuels at those settlements where district heating network is already in place.
- ◆ *Drilling new production and reinjection wells/systems*, installing a system to produce heat for domestic hot water supply, for heating or production energy needs, creating water storage systems as required by the related regulation.
- ◆ *Utilizing or rehabilitating existing but currently unused thermal well systems* to

Table 2 Priority axes of OPs, billion HUF

Priority axis	Source of funding	Budget (EU and national sources)	Share in the total (%)
<b>1.Adaptation to climate change</b>	Cohesion Fund	309.8	27.74
<b>2.Water supply, sewage network and treatment</b>	Cohesion Fund	318.8	28.55
<b>3.Waste and environmental remediation</b>	Cohesion Fund	68.7	6.15
<b>4.Nature protection</b>	European Regional Development Fund	31.3	2.81
<b>5.Energy efficiency and renewable energy support</b>	Cohesion Fund	300.9	26.95
<b>6.Financial instruments for energy efficiency and renewable energy support</b>	European Regional Development Fund	59.1	5.29
<b>7. Technical assistance</b>	Cohesion Fund	28.1	2.52
<b>TOTAL</b>		<b>1116.8</b>	<b>100</b>

produce heat for domestic hot water supply, for heating or technological production, drilling reinjection well/ system and, creating water storage systems as required by the related regulation.

Under this call for proposal no funding could be given to:



- ◆ geothermal electricity production,
- ◆ installing wells deeper than 2,500 m,
- ◆ borehole heat exchangers or shallow groundwater wells to supply heat pumps,
- ◆ installing or modernizing secondary heating systems within the district heating network.


Besides, no applicants were eligible if they have an ongoing project in the framework of the Environment and Energy Operation Programme Priority Axis No 4 (unless it is undoubtedly different).


The rate of the non-repayable grant per project shall not exceed 85% of the eligible costs of the projects, the minimum amount of grant assistance is 600,000 Euro (170 million HUF), the maximum amount is 3.3 million Euro (935 million HUF). The project promoters must start the implementation of the project within a maximum of 3 months following the entry into force of the project contract and projects must be completed by 30 April 2016.


Almost ten applications have been submitted to the call for proposal until the deadline. Most of them would establish new production and reinjection wells in medium size cities, but some smaller DH systems are also involved. After the submission deadline, payments to Hungary under the EEA and Norway Grants have been suspended, thus the decision making and contract signing of this grant assistance have been postponed for an uncertain period.

## NOTES


1. Jelentés az Európai Bizottság részére Magyarország indikatív nemzeti energiahatékonysági célkitűzéséről a 2020. évre vonatkozóan and  National Energy Strategy 2030 


2. JELENTÉS az Európai Bizottság részére az energiahatékonyságról, a 2009/125/EK és a 2010/30/EU irányelv módosításáról, valamint a 2004/8/EK és a 2006/32/EK irányelv hatályon kívül helyezéséről szóló 2012/27/EU európai parlamenti és tanácsi irányelv 7. cikke alapján 


3. JELENTÉS az Európai Bizottság részére az energiahatékonyságról, a 2009/125/EK és a 2010/30/EU irányelv módosításáról, valamint a 2004/8/EK és a 2006/32/EK irányelv hatályon kívül helyezéséről szóló 2012/27/EU európai parlamenti és tanácsi irányelv 7. cikke alapján 


4. Financial Post: EU regulators say Germany in breach of energy law. 13.08.2014. 

5. For a detailed description see „The 2030 European climate policy plans” REKK Hungarian Energy Market Report, 2014 Q1, p. 22


6. COM(2014) 520 final: Energy Efficiency and its contribution to energy security and the 2030 framework for climate and energy policy 

7. REKK (2014): The major economic impacts of the 2030 European GHG emission reduction target on Hungary available in Hungarian at: [www.rekk.eu](http://www.rekk.eu) 

8. COM(2014) 520 final 

9. OPs submitted to the European Commission can be found at [palyazat.gov.hu](http://palyazat.gov.hu). 

10. Ministry of National Development (2014-20-as tervezés: A Környezeti és Energhahatékonysági Operatív Program fejlesztési irányai, Nemzeti Fejlesztési Minisztérium, Fejlesztés- és Klímapolitikáért, valamint Kiemelt Közzolgáltatásokért felelős Államtitkárság, előadás: Budapest, 9 Dec. 2013)

11. CALL FOR PROPOSALS under THE EEA FINANCIAL MECHANISMS 2009 - 2014 Renewable Energy Programme Area for Project Scheme HU-03-A1-2013 Implementation of Geothermal Based District Heating Systems – Replacing Existing Fossil Fuel Based District Heating 

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