Assessment of climate change policies in the context of the European Semester

Country Report: Hungary

Ecologic Institute

Authors team: Lucy O. Smith, Andrew Eberle, Lena Donat, Eike Karola Velten, Matthias Duwe

eclareon

Author: Ingrid Bozsoki

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Ecologic Institute

Ecologic Institute, Berlin:

Pfalzburger Strasse 43/44
10717 Berlin
Germany

www.ecologic.eu

Contact:

Eike Karola Velten,
Fellow Climate and Energy

Tel. +49 (30) 86880-165
Fax +49 (30) 86880-100
eike.velten(at)ecologic.eu

eclareon

eclareon GmbH

Giesebrechtstraße 20
10629 Berlin
Germany

www.eclareon.eu

Contact:

Ingrid Bozsoki
Consultant, Policy Department

Tel. +49 (30) 88 66 74 000
Fax +49 (30) 88 66 74 010
ib(at)eclareon.com

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The report provides an overview of current emission trends and progress towards targets as well as policy developments that took place over the period from February 2013 to November 2013.

Please feel free to provide any comments or suggestions to the authors through the contacts listed above.

Short summary

Background: Long-term national strategies were developed for the transport sector and for energy efficiency in buildings. The 2013 National Transport Strategy outlines long term goals for the sector for 2020, 2030 and 2040. A National Building Energy Strategy outlined long-term plans for upgrading Hungarian buildings to be more efficient, as well as for the construction of new buildings.

Non-ETS emission reduction target: The Hungarian 2020 target is +10% (compared to 2005) and so allows for some growth, but in actually fact emissions decreased by 16% between 2005 and 2011. Based on the latest national projections and if existing measures are taken into account, it is expected that the target will be reached with a significant margin of 26 percentage points: -16% in 2020 compared to 2005.

Key indicators 2011:

GHG emissions	HU	EU
ESD EU 2020 GHG target (comp. 2005)	+10%	
ESD GHG emissions in 2011 (comp.2005)	-16%	-9%
Total GHG emissions 2012 (comp.2005)	-20%	-12%
GHG emissions/capita (tCO_2eq)	6.6	9.0

→ **27% lower** per capita emissions than EU average.

GHG emissions per sector	HU	EU
Energy/power industry sector	28%	33%
Transport	17%	20%
Industry (incl. industrial processes)	15%	20%
Agriculture (incl. forestry & fishery)	15%	12%
Residential & Commercial	19%	12%
Waste & others	6%	3%

→ **Energy/power industry sector** followed by Residential & Commercial, and Transport

Energy	HU	EU
EU 2020 RES target	+13%	
Primary energy consumption/capita (toe)	2.5	3.4
Energy intensity (kgoe/1000 €)	283	144
Energy to trade balance (% of GDP)	-6.0%	-3.2%

→ Around **25% lower** per capita consumption, nearly **double the level** of energy intensity and contribution of energy to trade balance compared to EU average.

Taxes	HU	EU
Share of environmental taxes (% of GDP)	2.5%	2.4%
Implicit tax rate on energy (€/toe)	74	184

→ **Slightly higher** share of environmental taxes and **60% lower** implicit tax rate on energy than EU average.

Key policy development in 2013: Progress has been made in the field of energy efficiency and renewables through several subsidy programmes, however, calls for applications were stopped due to exhausted funds. In the transport sector, a subsidy programme for purchasing buses running on compressed natural gas (CNG) was implemented. Hungary introduced a new e-toll system on heavy vehicles. Legislative modifications have been introduced in the waste sector where procedures for paying the landfill contribution fees entered into force.

Key challenges: Energy efficiency of Hungarian households has only increased 4% between 1998 and 2010, and the residential sector has significant energy savings potential. Despite an extensive number of subsidy programmes aimed at improving energy efficiency in buildings, the number of renovations remains low because funds are available only at short notice for short periods of time. Emissions from transport have increased between 1990 and 2011 and their proportion among total emissions has increased to 17%, indicating the need for management of these sector's emissions over the long term. The newly developed strategy might help to step up efforts towards low carbon mobility.

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1 Background on climate and energy policies

In Hungary, climate change is obtaining increasing attention in policy and public discussion. Hungary does have a national Climate Change Strategy for the period of 2008-2025, but measures to support energy efficiency and renewable energy are often framed in a sectoral or economic policy context. In the period from February 2013 to November 2013, several policy developments in relation to climate change and specifically energy efficiency, renewable energy sources and transport have taken place.

In Hungary, renewable energy and energy efficiency are discussed in an economic development context, with the benefits of 1) securing low energy prices for the industry and the population and 2) enhancing energy supply security by decreasing dependence on Russia. The focus, therefore, is still on economic development more generally, which may incorporate aspects of green growth but not comprehensively.

Current policy priorities in climate and energy still emphasize the importance of nuclear power. The four reactors of the Paks Nuclear Power Plant (NPP), the first and only operating nuclear power station in the country, accounts for over 40% of Hungary's electricity production. In the context of its 20-year lifetime extension, campaigns for increasing public acceptance of nuclear power are planned, with for instance the forthcoming Awareness Raising Action Plan that is currently being developed. The government stresses its intention to diversify energy supply technologies, however, it does not focus on renewable energy exclusively and counts on nuclear power for Hungarian's future energy mix. Additionally, the Hungarian government shows serious intentions to broaden and secure state control over the energy markets. In 2013, the government stated its intention to acquire majority stakes in all gas storage facilities and is currently negotiating the purchase of 6-7 utility companies. The government argues that state ownership will secure supplies and independence from Russia and will help regulate high prices. In 2013, the government completed a deal between the state-owned MVM (Hungarian Electricity Ltd.) and E.ON for their gas business unit (4-traders 2013; The Wall Street Journal 2013).

Hungarian energy prices are regulated. The "universal service systems" (egyetemes szolgaltatas) foresees regulated prices for the population and small consumers for electricity and natural gas. The Ministry of National Development determines the energy prices every year on the basis of the recommendations of the energy regulator, the Hungarian Energy Office. In addition, on 1 January 2013, a 10% reduction of the final consumer prices entered into force referring to electricity, gas, and district heating prices. This policy includes that all consumers under the universal service system – meaning the population and small consumers – have also been exempted from paying the feed-in tariff levy. Further reduction of final consumer prices for electricity and gas by 11.1% were introduced on 1 November 2013. The Minister of State argued that the reduction of energy prices is necessary due to the disparity of household energy expenses compared to average income. As a result of reducing consumer prices between January and November 2013, energy expenses of Hungarian households decreased by 20% compared to last year's energy prices (EEM 2013; Fidesz 2013).

The National Climate Change Strategy 2008-2025 focuses mainly on three areas: reduction of greenhouse gases (mitigation), adaptation to the effects of climate change, and raising public awareness about climate change. The document has been reviewed and a Hungarian national decarbonisation schedule has been integrated – see evaluation

of the National Reform Programme in section **Fehler! Verweisquelle konnte nicht gefunden werden.**

Regarding green jobs, data from the Hungarian Central Statistical Office, KSH, only provides estimates of environmental related employment (OECD 2012). However, the share of employment in water collection, sewerage, waste collection, and remediation activities in Hungary was above 1% in 2011. The share of employment in the RE sector as percentage share of total employment was below 0.5% in 2010 (Green Jobs 2012). According to a study conducted for DG Employment, two-hundred thousand jobs are expected to be created by policy measures of the new Széchenyi Plan (a national investment plan for economic and social development) by 2020 (OECD 2012). The new Széchenyi Plan is national investment plan to foster national economic and social development of Hungary. To this end, various subsidy programmes, including a broad number of programmes under the Environmental and Energy Operative Programme financed by the European Regional Development Fund (ERDF), will be launched on a regular basis.

Although the concept of green growth in particular is not discussed much in Hungarian society or politics, some energy policies hold job opportunities. This is particularly true in rural areas, where unemployment is highest and crop subsidies for plants used in biofuels and biomass electricity generation support agricultural incomes. Energy efficiency upgrades in buildings also create demand for skilled workers in the construction sector as well as appliance specialists and electricians. In addition, ongoing as well as future subsidy programmes on energy efficiency in buildings are expected to generate large investments in the national building sector in the coming years.

1 GHG projections

Background information

In 2011, Hungary emitted 66.1 Mt CO_2eq, around one third less than in 1990 (UNFCCC inventory 2011). Energy industries, energy use, and transport are currently responsible for the highest shares of emissions. However, emissions from energy supply and use have been reduced significantly between 1990 and 2011 (by around 30 and 50%, respectively). This is the result of an increased share of renewable and nuclear power in energy supply, as well as efficiency measures in the residential sector and the shift from coal to gas.

In contrast, emissions from transport have grown by more than a third between 1990 and 2011, resulting from a shift from public transport to private vehicles that accompanied improved living standards. Only a slight decline was observed in the last years. Emissions from industrial processes and agriculture decreased by more than 40% respectively between 1990 and 2011, due to the reduced economic activity following Hungary's transition to a market-economy (UNFCCC inventory 2011, UNFCCC 2012, EEA 2012). From 2011 to 2012, GHG emissions were further reduced mainly through the emissions reductions from energy supply and use (including transport) (EEA 2013c).

Progress on greenhouse gas targets

There are two sets of targets to evaluate: 1) the Kyoto Protocol targets for the period 2008-12 (which has just ended) and 2) the 2020 targets for emissions not covered by the EU ETS.

Under the Kyoto-Protocol the emission reduction target for Hungary for the period 2008-2012 has been set to minus 6% based on 1985-87 for CO_2, CH_4 and N_2O and on 1995 for F-gases. An evaluation of the latest complete set of greenhouse gas data (for the year 2011; there is only preliminary data for 2012) shows that Hungary's emissions have decreased on average by 42.7% against the Kyoto baseline (EEA 2013a). Hence, Hungary is expected to meet its Kyoto target through domestic emissions reductions.

By 2020, Hungary can increase its emissions not covered by the EU ETS by 10% compared to 2005, according to the Effort Sharing Decision (ESD) ([1]). An evaluation of the latest complete set of greenhouse gas data (for the year 2011; there is only preliminary data for 2012) shows that Hungary is on track to meet the Annual Emissions Allocation ([2]) for the year 2013. By 2020, national projections (EEA 2013b) show that the country will overachieve its 2020 target by about 27 percentage points with existing and by 31 percentage points with additional measures (see **Fehler! Verweisquelle konnte nicht gefunden werden.**).

[1] Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020.

[2] Commission decision of 26 March 2013 on determining Member States' annual emission allocations for the period from 2013 to 2020 pursuant to Decision No 406/2009/EC of the European Parliament and of the Council. Online available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:090:0106:0110:EN:PDF

Table 1: GHG emission developments, ESD-targets and projections (in Mt CO_2eq)

						ESD target**		2020 Projections***	
	1990	2005	2010	2011	2012*	2013	2020	WEM	WAM
Total	99.0	79.5	67.9	66.1	63.7				
Non-ETS		51.8	45.0	43.7	42.4	49.3	56.6	43	40
(% from 2005)					-18%	-5%	10%	-16%	-21%
Energy supply	22.7	18.4	16.7	16.0					
(% share of total)	23%	23%	25%	24%					
Energy use (w/o transport)	34.7	24.5	18.2	17.6					
(% share of total)	35%	31%	27%	27%					
Transport	8.3	11.9	11.8	11.4					
(% share of total)	8%	15%	17%	17%					
Industrial processes	11.6	8.9	6.4	6.2					
(% share of total)	12%	11%	9%	9%					
Agriculture	15.5	9.2	8.5	8.8					
(% share of total)	16%	12%	13%	13%					

Source: UNFCCC inventories; EEA (2013b); Calculations provided by the EEA and own calculations.

** proxies for 2012 emissions summarised by EEA (2013b)*

*** The ESD target for 2013 and for 2020 refer to different scopes of the ETS: the 2013 target is compared with 2012 data and is therefore consistent with the scope of the ETS from 2008-2012; the 2020 target is compared to 2020 projections and is therefore consistent with the adjusted scope of the ETS from 2013-2020. 2005 non-ETS emissions for the scope of the ETS from 2013-2020 amounted to 51 Mt CO_2eq.*

**** Projections with existing measures (WEM) or with additional measures (WAM).*

Legend for colour coding: green = target is being (over)achieved; orange = not on track to meet the target

Total greenhouse gas emissions (GHG) and shares of GHG do not include emissions and removals from LULUCF (carbon sinks) and emissions from international aviation and international maritime transport.

National projections of GHG emissions up to 2020 need to be prepared by the Member States in accordance with the EU Monitoring Mechanism ([3]) every two years, and the latest submission was due in 2013. The projections need to be prepared reflecting a scenario that estimates total GHG emissions reductions in line with policies and measures that have already been implemented (with existing measures, WEM), and an additional scenario that reflects developments with measures and policies that are in the planning phase (with additional measures, WAM) may also be submitted.

In the following two tables, these measures have been summarised with a focus on national measures and those EU instruments expected to reduce emissions the most. Please note that the table includes also measures that address GHG emissions covered under the ETS such as measures reducing emissions from electricity generation (e.g. feed-in tariffs). An update on the status of the policies and measures is included in order to assess the validity of the scenarios.

[3] Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

Table 2: Existing and additional measures as stated in the 2013 GHG projections

Existing Measures (only important national measures)		Status of policy in November 2013
Energy	KÁT subsidy for renewable power: electricity providers must purchase renewable power at subsidized prices	Ongoing, new tariffs adjusted to reflect level of inflation came into force on 1 January 2013
	Direct financial support for the preparation and construction of renewable power projects	Projects implemented under the New Széchenyi Plan were stopped in February and March 2013 due to exhausted funds; Specific programmes included: "meeting local heat and electricity demand with renewable energy sources" and "meeting the local heating and cooling demand with renewable energy sources"
	KÁT subsidy for waste-generated power: electricity providers must purchase power from waste projects at subsidized prices	Ongoing, new tariffs adjusted to reflect the level of inflation came into force on 01.01.2013
	Financing or co-financing modernization of district heating systems	Call for projects of the subsidy programme "modernising the district heating sector by utilizing renewable energy sources" under the New Széchenyi Plan was closed due to exhausted funds in February 2013.
Energy Efficiency	Regulation on energy performance and efficiency of buildings	Ongoing, based on Decree No. 7/2006. (V.24.) by the Ministry without Portfolio; the decree foresees for example to consider the use renewable energy sources in newly built buildings and buildings undergoing renovation or extended.
	Energy certification of buildings	Ongoing, based on Decree No. 7/2006. (V.24.) by the Ministry without Portfolio and by Government Decree No. 176/2008 (VI.30.)
	Power saving households programme	Implemented
	Reducing the energy use of enterprises	Implemented as subsidy programme "Producing Electricity and Combined Heat and Power from Renewable Energy Sources, as well as Methane" under the New Széchenyi Plan was closed due to exhausted funds in February 2013.
	Subsidy for energy efficiency improvement projects in residential building and multi-storey dwellings	Implemented as subsidy programmes "Supporting the utilization of renewable energy sources by expanding the use of solar installations for heat generation" and "Heating refurbishment" for residential buildings. Implementation and financing of the winning projects is ongoing; subsidy programme on increasing energy efficiency of multi-storey dwellings launched in August 2013; call for projects lasted only one day due to enormous demand for this programme.
Transport	Mandatory share of biofuels within the traded amount of fuels, heavy fines for non-compliance	Ongoing, for 2014 the quota amounts to 4.9% for both petrol and diesel

	Road toll for heavy vehicles	e-toll system for heavy vehicles over 3.5t introduced on 1 July 2013 and is ongoing, regulated by Government Decree No. 209/2013 (VI.18.).
Other non-ETS sectors	Government investment in state-owned forests, subsidy for afforestation projects by private entrepreneurs, National Forest Programme for increasing forest area	Implementation ongoing within the National Reforestation Programme from 2008 and subsidy programme by the "New Hungarian Rural Development Programme 2007-2013" including afforestation and reforestation measures

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, June 2013

Additional Measures (only important national measures)		Status of policy in November 2013
Other non-ETS sectors	Prevention of waste	Governmental Decree No. 318/2013. (VIII.28.) on the Arrangements for Payment of Landfill Contributions adopted in August 2013; for more information see chapter 4 under the section on waste.

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, June 2013.

According to the current state of implementation, a large number of the policies listed as existing measures appear to have been realised or are in the process of being implemented, giving no significant indication as to a direct risk of them not providing their assumed emission reduction benefit. Progress has been specifically made in the field of energy efficiency, renewable energy sources and transport, though a significant share of subsidy programmes on renewable energy sources and energy efficiency stopped calls for applications. Some progress has also been made to advance the instrument listed as additional measure.

In total, the assessment of the WEM/WAM scenarios indicates no obvious risk of the target not being met. Considering the fact that projected emissions are well below the target and there is progress under the existing and additional measures, there seems to be a high degree of certainty that the target will be met with a wide margin.

2 Evaluation of National Reform Programme 2013 (NRP)

In April of each year, Member States are required to prepare their National Reform Programmes (NRPs), which outline the country's progress regarding the targets of the EU 2020 Strategy. The NRPs describe the country's national targets under the Strategy and contain a description of how the country intends to meet these targets. For climate change and energy, three headline targets exist: 1) the reduction of GHG emissions, 2) the increase of renewable energy generation, and 3) an increase in energy efficiency ([4]).

[4] There are specific targets for all MS by 2020 for non-ETS GHG emission reductions (see section 2) as well as for the renewable energy share in the energy mix by 2020 (see section 4, renewable energies). Specific energy efficiency targets will be defined (or revised) by the MS until the end of April 2013 in line with the methodology laid out in Article 3 (3) of the Energy Efficiency Directive (Directive 2012/27/EU).

The NRP focuses mainly on strategic measures for climate change policies in general as well as more specific strategies for energy efficiency and renewable energies. Another key aspect is subsidy programmes on energy efficiency and renewable energy sources in buildings and in the business sector. However, no measures on environmental taxation are mentioned.

In the following table, the main policies and measures as outlined in the NRP of April 2013 ([5]) have been summarised, and their current status (implemented, amended, abolished, or expired) is given, with specifics on latest developments.

Table 3: Main policies and measures as outlined in the NRP, April 2013

National Climate Change Strategy	
Status as stated in the NRP	Review planned.
Status as per Nov 2013	Revision has been finalised, a draft version has been put up for public debate in October 2013.
Description of policy or measure	The revision of Hungary's National Climate Change Strategy was necessary due to significantly altered economic conditions as well as a rapidly changing natural environment. The Strategy focuses on the expected effects of climate change on Hungary and elaborates on measures for reducing Hungary's GHG emissions as well as adaption measures.

Awareness Raising Action Plan	
Status as stated in the NRP	To be adopted in 2013.
Status as per Nov 2013	Elaboration has been finalised in October 2013 and has been put up for public debate together with the revised National Climate Change Strategy.
Description of policy or measure	The Action Plan elaborates various awareness raining measures in order to achieve Hungary's renewable energy, energy efficiency and GHG targets. The plan foresees increasing public support for increasing energy efficiency and the use of renewable energy sources, securing support for nuclear energy and enhancing the acceptance of realisation of a low-carbon-society.

Preparation of Hungarian Decarbonisation Schedule (HDS) 2050	
Status as stated in the NRP	Currently under review
Status as per Nov 2013	Hungarian Decarbonisation Schedule has been finalised in October 2013 and is integrated into the National Climate Change Strategy.
Description of policy or measure	Studies examine key sectors (energy, transport, built environment, industry, agriculture, etc.) under various scenarios: with what costs and what benefits can Hungarian emissions be reduced radically, in line with the European decarbonisation process?

[5] All NRPs are available at: http://ec.europa.eu/europe2020/making-it-happen/country-specific-recommendations/index_en.htm

Renewable Energy Utilisation Action Plan	
Status as stated in the NRP	Planned.
Status as per Nov 2013	Revision of Hungary's Renewable Energy Utilisation Action Plan has started in summer 2013 and is still ongoing.
Description of policy or measure	The Action Plan outlines the financial and administrative instruments foreseen for promoting the use of renewable energy sources. Its revision will focus on adapting the plan to the technological developments in the energy sector.

Consultations with the European Commission and social partners regarding the regulatory environment of the renewable energy sources feed-in tariff system	
Status as stated in the NRP	Planned.
Status as per Nov 2013	The subsidy programmes under the fourth priority axis of the Environment and Energy Operational Programme have been stopped in February and March 2013 due to exhausted funds. This includes the programmes "meeting local heat and electricity demand with renewable energy sources", "meeting the local heating and cooling demand with renewable energy sources" and "producing electricity and combined heat and power from renewable energy sources, as well as methane"; a proposal for reforming the Hungarian feed-in tariff has been submitted to the European Commission for pre-notification.
Description of policy or measure	Approval of the EU Commission is necessary for ensuring that an amount of HUF 40 billion is available for supporting renewable energy sources within the frame of the fourth priority axis of the Environment and Energy Operational Programme (EEOP), financed by the European Regional Development Fund (ERDF).

Solar installations on buildings of public institutions	
Status as stated in the NRP	Planned.
Status as per Nov 2013	Has been launched on 5 September 2013 and ended in September 2013 due to exhausted funds.
Description of policy or measure	The programme supports the procurement of solar panels. Eligible parties are specialized social care institutions and residential child protection institutions, which are sustained by the General Directorate for Social Care and Child Protection and which are under the professional supervision of the Ministry of Human Resources. The programme is financed under the New Széchenyi Plan Green Investment System through revenues from the auctioning of allowances under the EU Emissions Trading System (ETS). The programme's subsidy budget amounts to HUF 867.2 million (approximately € 2.9 million). The purchasing costs for solar energy installations can be refunded, up to 100%.

National Building Energy Strategy	
Status as stated in the NRP	Planned.
Status as per Nov 2013	The strategy has been finalised in autumn 2013 and will be put up for public debate during the following weeks.
Description of policy or measure	The long-term strategy for energy efficiency in buildings aims at presenting a conceptual framework for upgrading Hungarian buildings to be more energy efficient, as well as for the constructing of new buildings. Having an overall concept in place allows for more effective incentive programmes in this area in the future, including further subsidies.

Energy efficiency programmes in residential buildings: support budget of HUF 1.9 billion is planned for continuation of existing programs through 2020	
Status as stated in the NRP	Planned.
Status as per Nov 2013	Subsidy programme for improving energy efficiency in Hungarian schools launched in autumn 2013 under the EEA (European Economic Area) Grants. The programme allocates € 8.708.894 and was available until 2 December 2013. For more information on this programme see chapter 4 energy efficiency section.
Description of policy or measure	Existing programs are funded in part by proceeds from AAU sales and from Hungary's national renewal fund (New Széchenyi Plan), which is financed by EU payments and other grants. These programmes include sub-programmes of the New Széchenyi Plan such as "Complex energy efficiency restoration of residential buildings having been built in the traditional way," a "Climate Friendly Home," the „Our Home" renovation, and the „Building New Home" sub-programmes. Green Investment Scheme sub-programmes include one for promotion of renewable energy usage, one for installation of multifunctional solar collector systems for residential hot water and heating, as well as a (planned) environmental awareness programme targeting consumers. The Norway Grants and EEA Grants are based on bilateral agreements between Hungary and Norway or Lichtenstein, Iceland and Norway respectively. The EEA Grants support for example energy efficiency measures, renewable energy projects or adaptation to climate change.

Improving the energy efficiency of businesses	
Status as stated in the NRP	New support programmes were planned to be launched in 2012.
Status as per Nov 2013	Subsidy programmes "Buildings' energy development and public lighting transformation" and "Buildings' energy development combined with use of renewable energy sources" both ended due to exhausted funds in February 2013.
Description of policy or measure	The measure extends existing support for energy efficiency through programmes of the New Széchenyi Plan to businesses specifically. The programmes in question are the subsidy programmes on "Buildings' energy development and public lighting transformation" and "Buildings' energy development combined with use of renewable energy sources".

Spreading of environmentally friendly transport modes: develop fixed-rail transportation and replace vehicles used in public transport (buses) with new, environmentally friendly vehicles	
Status as stated in the NRP	Published
Status as per Nov 2013	Subsidy programme "Supporting Purchasing CNG buses for Public Transport" *(Közösségi közlekedésben üzemeltetett gázüzemü (CNG) autóbuszok beszerzését elösegítö)* was launched in April 2013 and is available until 31 December 2013. Construction of Underground line No. 4 in Budapest ongoing.
Description of policy or measure	Goal of the measures: reduce GHG emissions and particulate matter from old, inefficient buses. Some parts of the overall policy are already underway, financed by EU funds allocated to the Transport Operational Programme: tram project in Debrecen, Underground line No. 4 in Budapest.

3 Policy development

This section covers significant developments made in key policy areas between February 2013 and November 2013. It does not attempt to describe every instrument in the given thematic area.

Environmental Taxation

The share of Hungary's environmental tax revenues in its total tax revenues was at 6.81% in 2011, above the EU average. This is also the case if these tax revenues are compared to the country's GDP. In this case the share was about 2.52%. Hungary has no explicit carbon tax in place. The implicit tax rate on energy amounted only to 74.2 € per tonne of oil equivalent (toe) in 2011, which is the 5th lowest value compared to other MS. Also, Hungary's energy intensity was below the EU average in 2010. Although the implicit tax rate is very low, the share of energy tax revenues in total tax revenues is above the EU average (Eurostat 2013a).

Law No. LXXXV of 2011 introduces an environmental tax on environment damaging products like accumulators, packaging and plastic bags, electronic equipment, fossil oil products, paper advertisement, and tires. The tax targets those persons or legal entities that introduce the listed products or use it for further processing on the national market. The tax is calculated on the basis of the product weight and differs according to the product. In November 2013, the Ministry of Rural Development pointed out, that the number of small plastic bags decreased from more than 300 million to less than 200 million plastic bags in the last year as a result of the environmental tax (Ministry of Rural Development 2013d). After having reduced final consumer prices for electricity, gas and district heating by 10% in January 2013, the second stage of reductions was introduced 1 November 2013. Prices for final consumer for electricity, natural gas, and district heating decreased by 11.1%. According to the Ministry of National Development Hungarian households will be able to save HUF 170-180 million (approx. € 582,000-616,000) per year. Taking into consideration the reduction of final consumer prices for energy from January 2013, Hungarian households will pay 20% less for electricity, natural gas and district heating compared to last year's energy prices (Fidesz 2013).

This development is part of a larger governmental project reducing various charges and levies. From 1 July 2013, wastewater levy and prices for butane and propane gas were reduced by 10% in addition to waste disposal charges and chimney sweeping levies (EEM 2013).

Energy Efficiency

The energy intensity of the Hungarian economy declined since 2005 by 10% until 2011. Final energy consumption was also decreasing at the same rate over the same period of time. Albeit still declining, the reduction of the energy consumption was much slower between 2010 and 2011 (-2%) and even fell behind the EU average (Eurostat, 2013a).

The energy efficiency of Hungary's industry increased in the period between 1998 and 2010 by 40%. Most improvements were made in the machinery and metal sector, complemented by the switch of the manufacturing industry to less energy consuming branches. The efficiency of Hungarian households has increased 4% from 1998 and 2010. Efficiency was mainly boosted by switching fuel from coal and oil fuelled heating to more efficient gas boilers. However, improvements are hampered by the fact that the renovation rate of dwellings is low (Odyssee 2012).

Hungary's National Development Ministry and ÉMI prepared a long-term national strategy for energy efficiency in buildings. The strategy had been finalised recently and was presented to an audience of professionals during a conference in November 2013. The plan aims to present a conceptual framework for upgrading Hungarian buildings to be more energy efficient, as well as for constructing new buildings. Having an overall concept in place will allow for more effective incentive programmes in this area, including further subsidies. According to the Ministry of Rural Development, in Hungary, energetic rehabilitation is advisable for approximately two million buildings. The strategy's publication was expected by the end of November 2013, but has not been published so far (Ministry of Rural Development 2013a; Ministry of National Development 2013l).

In recent years, Hungary has set up an impressive array of subsidy programmes aimed at improving the energy efficiency of buildings. The residential sector has significant energy savings potential (and therefore greenhouse gas emission avoidance), as simple upgrades to old soviet-era housing complexes can decrease power and heat use significantly. Financing for the building energy efficiency programmes comes mainly from the EU via various funds, including the Environmental and Energy Operative Framework, but also from revenues made by selling surplus Kyoto Protocol assigned amount units (AAUs) to countries like Austria and Spain. However, these subsidy programmes are usually available at short notice and only for a short period. This also applied to the subsidy programmes launched during 2013.

Among the relevant subsidy programmes on energy efficiency in buildings in 2013 the subsidy programme for multi-storey buildings' Energetic Refurbishment *(ZBR Panel II.)* has been allocated additional HUF 4.56 billion (approx. € 15.25 million) used to finance project proposals on the waiting list of the last call for projects (Ministry of National Development 2013a; Ministry of National Development 2013c). Another programme, launched in August 2013, offering grants to energy efficiency measures in multi-storey dwellings was stopped after only one day due to the enormous demand for this subsidy programme (Ministry of National Development 2013d). Beside support for increasing energy efficiency of residential buildings, a subsidy programme on energy efficiency in public schools had been launched under the EEA Grants in the end of September 2013.

The EEA Grants are provided by Norway, Iceland and Liechtenstein and aim at reducing economic and social disparities between the European Economic Area (EEA) and some member states of the European Union, amongst others Hungary. This subsidy programme on energy efficiency allocates altogether € 8.708.894 to Hungarian public schools and was available until 2 December 2013 (EEA Grants 2013).

Renewable Energy

Between 2005 and 2011, Hungary managed to more than double the share of renewable in overall energy consumption, which came in at 9.1% of the total. Though the rapidity of this growth is impressive, the country still has far to go to reach its 13% target by 2020. Electricity generation from renewable source as a percentage of the whole increased over the same time period, reaching 6.4% in 2011 (Eurostat, 2013b).

The primary renewable energy support measure in Hungary is a feed-in tariff for renewably generated electricity. All renewable technologies are eligible. Biomass currently accounts for the largest share, ahead of wind and solar. The current tariffs for 2013 were published in December 2012. A unique aspect of Hungary's feed in programme is that the tariffs, or guaranteed prices the producers are paid for renewably generated electricity, vary by time of day and day of the week depending on demand. The rate is higher for renewable power supplied during peak hours. This system helps to make generators sensitive to electricity demand and provides a market incentive to optimize power generation.

Even though reforms were announced in 2011, there have been no reforms of the feed-in tariff system to this date. Suggestions for reforming the system have been made by the Hungarian Energy and Public Utility Regulatory Authority and transmitted to the Secretary of State for Climate and Energy Policy. The Secretary of State has submitted a proposal for reforming the feed-in tariff system to the European Commission for pre-notification, but it is unclear, if it is the proposal made by the Hungarian Energy and Public Utility Regulatory Authority.

Aside from the feed-in tariff, renewable energy is a beneficiary of subsidy programmes under the same EU Environmental and Energy Operative Framework that funds the many energy efficiency initiatives launched in the course of 2013. However, the same problem applies to these subsidy programmes as they are stopped at short notice and they are usually available only for a short period.

However, in September and November 2013, new subsidy programmes promoting the use of renewable energy sources have been launched as well. One of these programmes is the "Increasing the use of renewable energy sources" programme (KMOP-3.3.3-13.„Megújuló energiahordozó-felhasználás növelése") and is administered by the National Development Agency. The call for applications reopened on 5 November 2013 and lasted until 2 December 2013. Eligible parties were ecclesiastical legal entities. The programme supports PV installations and wind energy for electricity generation, as well as solar, biomass, geothermal installations and heat pumps for heating and cooling purposes (NFU 2013a). Another subsidy programme focuses on the use of solar installations on buildings of public institutions. The call for applications opened on 5 September 2013. The programme ended in September 2013 due to exhausted funds. The programme's subsidy budget amounted to HUF 867.2 million (approximately € 2.9 million). The purchasing costs for solar energy installations can be refunded, up to 100%. Eligible parties are specialized social care institutions and residential child protection

institutions, which are sustained by the General Directorate for Social Care and Child Protection and which are under the professional supervision of the Ministry of Human Resources. The programme is financed under the New Széchenyi Plan Green Investment System through revenues from the auctioning of allowances under the EU Emissions Trading System (ETS). Both programmes were available for a few weeks only due to exhausted funds (Ministry of National Development 2013h).

Energy Networks

The subsidy for district heating infrastructure "modernising the district heating sector by utilizing renewable energy sources" closed in February 2013 due to over demand. The overall budget was HUF 4 billion HUF for 2012-2013, and financing covered expenses incurred in improvement of district heating infrastructure. The programme addresses different forms of enterprises like limited liability companies, stock companies or cooperatives (Ministry for National Development 2012; NFU 2013b).

Transport

Emissions from transport have increased between 1990 and 2011 but show a slight downward trend since 2005. However, their proportion among Hungary's total emissions has increased to 17%, indicating the importance of this sector in the future (Table 1).

Average emissions for newly registered cars are very high in Hungary with a level of 146.9 CO_2/km. The level is the 4th highest in the EU and decreased at a lower rate than the EU average between 2005 and 2012 (Eurostat 2013a). In Hungary, the registration tax is based on EURO emission standards as well as engine capacity. However, the tax is depreciated for second hand cars, according to the time passed since their first circulation. The ownership tax for passenger and company cars depends on the engine capacity and the number of years since the production year (ACEA 2012). Tax rates for both petrol and diesel are below the EU average. In contrast to most EU MS, they are both taxed at almost the same rate (European Commission 2013).

In order to get a handle on this sector's emission trajectory, Hungary's Coordination Center for Transport Development (Közlekedésfejlesztési Koordinációs Központ) has finalised a *National Transport Strategy*[6] in November 2013 and has been put up for public debate from 19 November until 19 December 2013. The strategy sets long-term goals for the years 2020, 2030, and 2050 with an action plan for 2014-2020. Legal adoption is expected to be completed by July 2014. In the context of this project, separate documents will be prepared for the Action Plan on Improving Energy Efficiency in Transport, a National Bicycle Concept and Infrastructure Plan or a National Railway Development Concept (Ministry of National Development 2013i). Aside from this long-range vision, Hungary also has specific transportation policies in place: the Hungarian government introduced an e-toll system on 1 July 2013. The e-toll system applies to heavy vehicles of more than 3.5t. The tariffs vary mainly depending on the number of vehicle axles, the environmental categorisation of the vehicle, the type of roads used and

[6] The draft version of the National Transport Strategy, which was put up for public debate, can be downloaded in English here: http://www.kkk.gov.hu/remos_downloads/NTS_Strategic%20document_version%20for%20public%20discussion_EN_2013.70.pdf

the distance travelled. The tariffs are applied for motorways and main roads connecting municipalities. The e-toll system is regulated by Governmental Decree no. 209/2013 on the tariffs for motorways and main roads utilisation. During the first week of operation, the e-toll system generated some € 9.5 million. The Ministry of National Development expects to generate HUF 150 billion (approx. € 508 million) annually more from heavy vehicles than under the former road tariffs system (Ministry of National Development 2013b).

In addition, some subsidy programmes have been introduced aiming at reducing the transport sector's GHG emissions. One of these programmes is the subsidy programme "Supporting Purchasing CNG buses for Public Transport" *(Közösségi közlekedésben üzemeltetett gázüzemü (CNG) autóbuszok beszerzését elösegítö)* which was launched in April 2013. In October 2013, the call for proposals has been extended until 31 December 2013. The programme promotes purchasing new buses with CNG-engine for public transportation. Eligible parties are public transportation companies owned by state or local administrations. The Ministry of National Development had received numerous requests for extending the application time for this subsidy programme to the end of year in part because of the time consuming nature of the application procedure. The subsidy covers the price difference between conventional new diesel buses and new buses on CNG. The subsidy amount is max. HUF 18 million (approx. € 60,200) for normal buses and HUF 24 million (approx. € 80,300) for articulated buses. The programme's overall budget amounts to HUF 1.6 billion (app. EUR 5.35). The subsidy programme is administered by the Non-Profit Limited Liability Company for Quality Control and Innovation in Building (ÉMI) *(Építésügyi Minöségellenörzö Innovációs Nonprofit KFT).* The subsidy is granted only to those projects which achieve a reduction in CO_2 emissions of minimum five percent (Ministry of National Development 2013j; Ministry of National Development 2013k).

In addition, the biofuel quota promotes biofuels and hydrogen produced with energy from biomass or other renewable sources. Only certified biofuels satisfying specific sustainability criteria and outlined by law count toward fulfilling the prescribed quota. In the course of 2013, there have been minor amendments to Law No. CXVII of 2010 on the promotion of renewable energy in the transport sector and the reduction of greenhouse gases in the transport sector, but the quota level was not affected. However, amendments mainly focused on procedural modifications such as reducing reporting obligations of fuel traders from once a month to once a year (Law No. CXVII of 2010).

Waste

Legislative modifications have been introduced in the waste sector. The Hungarian government adopted Governmental Decree No. 318/2013. (VIII.28.) on the Arrangements for Payment of Landfill Contributions (318/2013. (VIII.28.) Kormány Rendelet a hulladéklerakási járulék megfizetéséröl és felhasználásának céljairól), which entered into force on 30 August 2013. The Decree defines the procedure for paying the landfill contribution fees, which were established by Law no. CLXXXV from 2012 on waste (2012. évi CLXXV törvény a hulladékól). The fees are set according to different sources of waste and amount to HUF 1500 (approx. € 5), HUF 2000 (approx. € 6.7), and HUF 3000 (approx. € 10) per one ton of waste. The new Decree is supposed to minimise the amount of waste being disposed in landfills and to enhance selective collection and recycling of waste.

Additionally, the Ministry of Rural Development is currently working on legislation for introducing a refund system for packaging waste (csomagolási hulladékokhoz kapcsolódó betétdíj). However, the law will come into force earliest in the beginning of 2015. For this purpose investments by the Ministry of Rural Development of approximately HUF 10 billion (approx. € 34.54 million) will be necessary. Starting with the first year of the refund system, the Ministry of Rural Development expects state revenues of HUF 17 billion (approx. € 58.74 million). Illés Zoltán emphasized that consumers' budgets would not be burdened by the refund system. A surcharge of HUF 30 (approx. € 0.10) will be imposed to PET beverage bottles and will be refunded when taking back the empty bottles to the retailers (Ministry of Rural Development 2013b).

Land Use, Land Use Change and Forestry

In November 2013, the Ministry of Rural Development presented the finalised Sector Strategy for Vegetable and Fruit (*zöldség-gyümölcs ágazati stratégia*)[7] up for public debate until 4 December 2013. The strategy intends to increase the yearly production of vegetables and fruit by 1 million tons per annum – from production currently around 2.5 million tons. Furthermore, the strategy aims at increasing employment in this sector by 100.000 persons. In this context, a subsidy programme on promoting the horticultural sector was accessible from 15 August until 18 October 2013. Expenses for purchasing horticultural machinery and facilities will be refunded. The programme's budget amounts to HUF 24 billion (approx. € 80.5 million) and covers 35% of the expenses (Ministry for Rural Development 2013c; Ministry for Rural Development 2013e; Decree no.62/2013).

Adaptation

With regards to adaptation, the Ministry for National Development launched a new project to better understand the effects of climate change on Hungary in October 2013. The Hungarian Institute of Geology Geophysics (*Magyar Földtani és Geofizikai Intézet*) is in charge of "Developing a National Geographic Adaptation System" *(Nemzeti Alkalmazkodási Térinformatikai Rendszer (NATéR) kialakítása).* This project should give valuable input to Hungary's climate change policy in the upcoming years. The project will run until April 2016 (Ministry for National Development 2013m).

[7] The draft version of the Sector Strategy for Vegetable and Fruit, which was put up for public debate, can be downloaded here: http://www.kormany.hu/download/a/31/11000/magyar_zoldseg-gyumolcs_agazati_strategia_130829.pdf

4 Policy progress on past CSRs

As part of the European Semester, Country Specific Recommendations (CSRs) for each MS are provided by the EU Commission in June of each year for consideration and endorsement by the European Council. The recommendations are designed to address the major challenges facing each country in relation to the targets outlined in the EU 2020 Strategy. In the following table, those CSRs that are relevant for climate change and energy that were adopted in 2013 are listed, and their progress towards their implementation is assessed.

Existing Country Specific Recommendations	Progress
Continue making taxation of labour more employment friendly […] by shifting taxation away to environmental taxes.	Environmental taxes were not increased in the past year. In contrast, the regulated prices for electricity, natural gas, and district heating were decreased by 11.1% and from 1 July 2013, wastewater levy and prices for butane and propane gas were reduced by 10% in addition to waste disposal charges and chimney sweeping levies (see also Chp.4: Environmental Taxation).
Gradually abolish regulated energy prices while ensuring the effective protection of economically vulnerable consumers. Take further steps to ensure the independence of the national regulator	No changes regarding abolishing regulated energy prices; final consumer prices for electricity have been reduced by additional 11.1% in November 2013; the former Energy Office has been restructured and renamed as Hungarian Energy and Public Utility Regulatory Authority; independence from the Ministry of National Development has been strengthening.

5 References

4-Traders (2013): Hungary State-Owned MVM Buys E.ON Natural Gas Firms for $1.27 Billion. Online available at: http://www.4-traders.com/EON-SE-3818998/news/Hungary-State-Owned-MVM-Buys-EON-Natural-Gas-Firms-for-127-Billion-17313286/

ACEA (European Automobile Manufacturer's Association) (2012). Taxation Guide 2012: Online available at: http://yourfleet.volvocars.com/media/45427/taxguide2012.pdf

Boros and Nagy (2012) Resource Efficiency Gains and Green Growth Perspectives in Hungary, study commissioned by the Friedrich Ebert Stiftung. Available online at http://library.fes.de/pdf-files/id-moe/09350.pdf

CE Delft (2012): An inventory of measures for internalising external costs in transport. Final report. European Commission, Directorate-General for Mobility and Transport European Commission (2013): Excise duty tables. Part II – Energy products and Electricity. RED 1036. January 2013. DG Taxation.

Decree no. 4/2011 on the price building under the universal service system for electricity by the Ministry of National Development. Online available at: http://www.njt.hu/cgi_bin/njt_doc.cgi?docid=137081.235856

Decree No. 62/2013 (VII. 24.) by the Ministry of Rural Development on the 2013 subsidy programme promoting horticultural machinery and facilities financed by the European Agricultural Fund for Rural Development (62/2013. (VII.24.) VM rendelet az Európai Mezögazdasági Vidékfejlesztési Alapból a kertészeti gépek, technológiai berendezések beszerzéséhez a 2013. évben nyújtandó támogatások részletes feltételeiröl. Online available at: http://njt.hu/cgi_bin/njt_doc.cgi?docid=162148.245717

Decree no. 318/2013 on the Arrangements for Payment of Landfill Contributions by the Hungarian Government. Online available at: http://njt.hu/cgi_bin/njt_doc.cgi?docid=162715.247099

Decree no. 343/2011 – 343/2011 (XII.29.) Korm. Rendelet a környezetvédelmi termékdíjról szóló 2011. évi LXXXV. törvény végrehajtásáról. Online available at: http://njt.hu/cgi_bin/njt_doc.cgi?docid=142904.241508

Decree 209/2013 - 209/2013 Korm. rendelet az autópályák, autóutak és föutak használatáért fizentendö megtett úttal arányos díjról szóló 2013. évi LXVII. Törvény végrehajtásáról. Online available at: http://njt.hu/cgi_bin/njt_doc.cgi?docid=161221.243352

Decree no. 309/2013 - 309/2013 (VIII.16.) Korm. rendelet a megújuló energiaforrásból és a nagy hatásfokú kapcsolt energiatermelésből nyert villamos energia származásának igazolásáról. Online available at: http://njt.hu/cgi_bin/njt_doc.cgi?docid=162575.246801

European Commission (Ecfin) (2013). European Economy: Member States' Energy Dependence: An Indicator-Based Assessment. Occasional Papers 145. Online available at: http://ec.europa.eu/economy_finance/publications/occasional_paper/2013/pdf/ocp145_en.pdf

EEA (2012): Greenhouse gas emission trends and projections in Europe 2012 - Tracking progress towards Kyoto and 2020 targets. EEA Report No 6/2012. Online available at: http://www.eea.europa.eu/publications/ghg-trends-and-projections-2012

EEA (2013a): EEA greenhouse gas - data viewer: Change in emissions by country (%), Kyoto base year - 2011. Online available at: http://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer

EEA (2013b): Trends and projections in Europe 2013. Tracking progress towards Europe's climate and energy targets until 2020. EEA Report No 10/2013. Online available at: http://www.eea.europa.eu/publications/trends-and-projections-2013

EEA (2013c): Climate and energy country profiles - Key facts and figures for EEA member countries. EEA Technical report No 17/2013. Online available: http://www.eea.europa.eu/publications/climate-and-energy-country-profiles

EEA Grants (2013): Megjelent az energiahatékony iskolák fejlesztése címü pályázati felhívás. Online available at: http://www.norvegalap.hu/de/-/megjelent-az-energiahatekony-iskolak-fejlesztese-cimu-palyazati-felhivas

EEM – Emberi Eröforrások Minisztériuma (Ministry of Human Resources) (2013): Doncsev András parlamenti államtitkár a rezsicsökkentésröl beszélt Nagykanizsán. Online available at: http://www.kormany.hu/hu/emberi-eroforrasok-miniszteriuma/parlamenti-allamtitkarsag/hirek/doncsev-andras-parlamenti-allamtitkar-a-rezsicsokkentesrol-beszelt-nagykanizsan

Eurostat (2012): Source of data is Eurostat "Taxation trends in the European Union 2012". Collection: Statistical books. 2012. Brussels.

Eurostat (2013a): Source of data is Eurostat using the following tables: Implicit tax rate on energy (tsdcc360). Energy intensity of the economy (tsdec360). Final energy consumption (ten00095). Share of renewable energy in gross final energy consumption (t2020_31). Average carbon dioxide emissions per km from new passenger cars (tsdtr450). Final energy consumption. by sector (tsdpc320). Greenhouse gas emissions by sector (tsdcc210). Environmental tax revenues - % of total revenues from taxes and social contributions (ten00064). Total environmental tax revenues as a share of GDP (ten00065).

Eurostat (2013b): Shares 2011 – Short assessment of renewable energy sources. Last update: 11 June 2013 including the latest data on renewable energy generation. Online available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/other_documents

Fidesz (2013): Megvédjük a rezsicsökkentés politikáját. Online available at: http://www.fidesz.hu/hirek/2013-10-13/megvedjuk-a-rezsicsokkentes-politikajat/

Government of Hungary (2012): National Reform Programme 2012 of Hungary. Online available at: http://ec.europa.eu/europe2020/pdf/nd/nrp2012_hungary_en.pdf

Green Jobs (2012): Green Jobs: Employment Potential and Challenges. Online available at: http://ec.europa.eu/europe2020/pdf/themes/green_jobs.pdf

hir24 (2013): Sokmilliárdos sarc jöhet étolajra, benzinre. Online available at: http://www.hir24.hu/gazdasag/2013/05/13/sokmilliardos-sarc-johet-etolajra-benzinre/

Hvg (2011): A hét, amikor Orbán mégse kezdett tábort szervezni Brüsszel ellen. Online available at: http://hvg.hu/gazdasag/20120304_Brusszelkohezios_penzalap_M4_Vizmuvek_dev

Law No. LXXXV of 2011 on environmental protection product charges as amended on 01.07.2013 (2011 évi LXXXV. Törvény a környezetvédelmi termékdíjról): Online available at: http://njt.hu/cgi_bin/njt_doc.cgi?docid=138957.243278

Law No. LXXXVI of 2007 on Electric Energy as amended on 01.10.2013 (2007. évi LXXXVI. törvény a villamos energiáról). Online available at: http://njt.hu/cgi_bin/njt_doc.cgi?docid=110829.248762

Law No. CXVII of 2010 on the promotion of renewable energy in the transport sector and the reduction of greenhouse gases in the transport sector (2010. évi CXVII. törvény a megújuló energia közlekedési célú felhasználásának előmozdításáról és a közlekedésben felhasznált energia üvegházhatású gázkibocsátásának csökkentéséről). Online available at: http://njt.hu/cgi_bin/njt_doc.cgi?docid=132636.243642

Law no. CLXXXV from 2012 on waste (2012. évi CLXXV törvény a hulladékól). Online available at. http://njt.hu/cgi_bin/njt_doc.cgi?docid=156602.244680

MEKH – Magyar Energetikai és Közmüszabályozási Hivatal (2013a): A MEKH rendelete biztosítja a rezsicsökkentés zökkenömentességét. Online available at: http://www.mekh.hu/adatok-statisztikak-2/sajto/sajtokozlemenyek-2/715-a-mekh-rendelete-biztositja-a-rezsicsokkentes-zokkenomentesseget.html

MEKH - Magyar Energetikai és Közmüszabályozási Hivatal (2013b): Feed-in tariffs 2008-2013. Online available at: http://www.mekh.hu/hatosagi-arak-2/villamos-energia/kotelezo-atvetel.html

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2008): Nemzeti Éghajlatváltozási Stratégia 2008-2025. Online available at: http://www.kvvm.hu/cimg/documents/nes080214.pdf

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2012): Pályázati Felhívás a Környezet és Energia Operatív Program Távhö-szektor energetikai korszerüsítése, megújuló energiaforrások felhasználásának lehetöségével pályázati konstrukcióhoz – KEOP-2012-5.4.0. Online available at: http://www.nfu.hu/doc/3867

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013a): Újabb 3 milliárd forint a beragadt panelpályázatokra. Online available at: http://www.kormany.hu/hu/nemzeti-fejlesztesi-miniszterium/fejlesztes-es-klimapolitikaert-valamint-kiemelt-kozszolgaltatasokert-felelos-allamtitkarsag/hirek/ujabb-3-milliard-forint-a-beragadt-panelpalyazatokra

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013b): Kevés reklamáló, 2,8 milliárd bevétel. Online available at: http://www.kormany.hu/hu/nemzeti-fejlesztesi-miniszterium/infrastrukturaert-elelos-allamtitkarsag/hirek/keves-reklamalo-2-8-milliard-bevetel

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013c): Többletforrás a kvótabevételböl a panelpályázatra. Online available at: http://www.emi.hu/EMI/web.nsf/Pub/G1OS2U/$FILE/NFM_k%C3%B6zlem%C3%A9ny_2013.02.14_T%C3%B6bbletforr%C3%A1s_a_kv%C3%B3tabev%C3%A9telekb%C5%91l_%20a_ZBR_Panel_II_p%C3%A1ly%C3%A1zatokra.pdf

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013d): Pályázati Útmutató és kiírás – Új Széchenyi Terv Társasházak Energetikai Felújitása Alprogram. Online available at: http://www.kormany.hu/download/6/e4/f0000/USZT-TEF-%C3%BAtmutat%C3%B3-ki%C3%ADr%C3%A1s-2013-v02.pdf

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013e): Pályázati Felhívás a Környezet és Energia Operatív Program KEOP-2012-4.10.0/A Helyi hö, és villamosenergia-igény kielégítése megújuló energiaforrásokkal címü konstrukcióhoz. Online available at: http://www.nfu.hu/doc/3984

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013f): Pályázati Felhívás a Környezet és Energia Operatív Program Helyi hö és hütési igény kielégítése megújuló energiaforrásokkal pályázati címü konstrukcióhoz. Online available at: http://www.nfu.hu/doc/3986

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013g): Pályázati Felhívás a Környezet és Energia Operatív Program Megújuló energia alapú villamos energia, kapcsolt hö és villamos energia, valamint biometán termelés. Online available at: http://www.nfu.hu/doc/3985

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013h): Mintegy 870 millió forintos pályázat indul közintézményi napkollektoros fejlesztésekre. Online available at: http://www.kormany.hu/hu/nemzeti-fejlesztesi-miniszterium/fejlesztes-es-klimapolitikaert-valamint-kiemelt-kozszolgaltatasokert-felelos-allamtitkarsag/hirek/mintegy-870-millio-forintos-palyazat-indul-kozintezmenyi-napkollektoros-fejlesztesekre

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013i): Társadalmi egyesztetésen a Nemzeti Közlekedési Stratégia. Online available at:

http://www.kormany.hu/hu/nemzeti-fejlesztesi-miniszterium/infrastrukturaert-elelos-allamtitkarsag/hirek/tarsadalmi-egyeztetesen-a-nemzeti-kozlekedesi-strategia2013

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013j):1,6 milliárd forintos pályázat gázüzemü autóbuszok beszerzésére. Online available at: http://zbr.kormany.hu/1-6-milliard-forintos-palyazat-gazuzemu-autobuszok-beszerzesere

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013k): Év végéig nyújtható be pályázat földgázüzemü autóbuszok beszerzésére. Online available at: http://www.kormany.hu/hu/nemzeti-fejlesztesi-miniszterium/fejlesztes-es-klimapolitikaert-valamint-kiemelt-kozszolgaltatasokert-felelos-allamtitkarsag/hirek/ev-vegeig-nyujthato-be-palyazat-foldgazuzemu-autobuszok-beszerzesere

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013l): Az épületek energiafelhasználást csökkentené az új stratégia. Online available at: http://www.kormany.hu/hu/nemzeti-fejlesztesi-miniszterium/fejlesztes-es-klimapolitikaert-valamint-kiemelt-kozszolgaltatasokert-felelos-allamtitkarsag/hirek/az-epuletek-energiafelhasznalasat-csokkentene-az-uj-strategia

Nemzeti Féjlesztési Minisztérium (Ministry of National Development) (2013m): Új rendszer a klímaváltozás kihívásainak kezelésére. Online available at: http://www.kormany.hu/hu/nemzeti-fejlesztesi-miniszterium/fejlesztes-es-klimapolitikaert-valamint-kiemelt-kozszolgaltatasokert-felelos-allamtitkarsag/hirek/uj-rendszer-a-klimavaltozas-kihivasainak-kezelesere

NFU – Nemzeti Fejlesztési Ügynökség (National Development Agency) (2013a): Új pályázati felhívás megújuló energiahordozó-felhasználás növelésére Közép-Magyarországon. Online available at: http://www.nfu.hu/doc/4248

NFU – Nemzeti Fejlesztési Ügynökség (National Development Agency) (2013b): Tavhö-szektor energetikai korszerüsítése megújuló energiaforrások felhasználásának lehetöségével címü kiírás felfüggesztése. Online available at: http://www.nfu.hu/tavho_szektor_energetikai_korszerusitese_megujulo_energiaforrasok_felhasznalasanak_lehetosegevel_cimu_kiiras_felfuggesztese

Odyssee (2012): Energy Efficiency in the EU - Country Profiles and National Reports. Online available at: http://www.odyssee-indicators.org/publications/country_profiles.php and http://www.odyssee-indicators.org/publications/national_reports.php

OECD (2012): The Jobs Potential of a Shift Towards a Low-carbon Economy. Final Report for the European Commission - DG Employment. 4th June 2012. Available at: http://www.oecd.org/els/employmentpoliciesanddata/50503551.pdf

OECD (2013): Taxing Energy Use. A graphical analysis. OECD Publishing.

Reporting of Member States in accordance with Decision No 280/2004/EC of the European Parliament and of the Council concerning a mechanism for monitoring Community GHG emissions and for implementing the Kyoto Protocol. Last submission: May/June 2013. Overview on policies and measures available at the website of the EEA: http://www.eea.europa.eu/data-and-maps/pam

The Wall Street Journal (2013): Hungary Buys RWE Stake in Budapest Gas Supplier for HUF 41b. Online available at: http://online.wsj.com/article/BT-CO-20131217-704223.html#

UNFCCC inventory (1990-2011): National greenhouse gas inventories (IPCC Common Reporting Format sector classification). Online available for the EU: http://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer (Last modified : May 29, 2013 09:30 AM)

UNFCCC (2012) Reports on in-depth reviews of the fifth national communications of Annex I Parties. Online available: http://unfccc.int/national_reports/annex_i_natcom/idr_reports/items/4056.php

Vidékfejlesztési Minisztérium (Ministry of Rural Development) (2013a): Még az idén elkészül a Nemzeti Épületenergetikai Stratégia. Online available at: http://www.kormany.hu/hu/videkfejlesztesi-miniszterium/kornyezetugyert-felelos-allamtitkarsag/hirek/illes-az-oreg-csaladi-hazak-energetikai-felujitasa-2017-ben-indulhat

Vidékfejlesztési Minisztérium (Ministry of Rural Development) (2013b): Illés Zoltán: ebben a ciklusban még nem alkalmazzák a betétdíjtörvényt. Online available at: http://www.kormany.hu/hu/videkfejlesztesi-miniszterium/kornyezetugyert-felelos-allamtitkarsag/hirek/illes-zoltan-ebben-a-ciklusban-meg-nem-alkalmazzak-a-betetdijtorvenyt

Vidékfejlesztési Minisztérium (Ministry of Rural Development) (2013c): A kormány elé kerül a zöldség-gyümölcs ágazati stratégia. Online available at: http://www.kormany.hu/hu/videkfejlesztesi-miniszterium/agrargazdasagert-felelos-allamtitkarsag/hirek/a-kormany-ele-kerul-a-zoldseg-gyumolcs-agazati-strategia

Vidékfejlesztési Minisztérium (Ministry of Rural Development) (2013d): OHÜ: Magyarországon már visszaesett a müanyagzacskó-hsználat. Online available at: http://www.kormany.hu/hu/videkfejlesztesi-miniszterium/kornyezetugyert-felelos-allamtitkarsag/hirek/ohu-magyarorszagon-mar-visszaesett-a-muanyagzacsko-hasznalat

Vidékfejlesztési Minisztérium (Ministry of Rural Development) (2013e): Megjelent a Magyar Zöldség-Gyümölcs Ágazati Stratégia. Online available at: http://www.kormany.hu/hu/videkfejlesztesi-miniszterium/agrargazdasagert-felelos-allamtitkarsag/hirek/megjelent-a-magyar-zoldseg-gyumolcs-agazati-strategia