

Hungary
Ministry of National Development

Report

on the use of renewable energy sources in Hungary in 2009 and 2010
(Reporting by the Member States pursuant to Article 22 of Directive
2009/28/EC)

Budapest

Introduction

Environmental sustainability and responsible management of resources with limited availability are values of special importance for Hungary. This idea is represented in the highest legislation in Hungary, in the country's new Fundamental Law adopted in 2011, which mentions the careful utilisation of natural resources. In 2011 the Parliament of Hungary adopted the National Energy Strategy which stated that energy efficiency and renewable energy sources play an important strategic role in reducing dependence on energy import.

Hungary's Renewable Energy Utilisation Action Plan adopted in 2010 (hereinafter referred to as: Action Plan) aims at achieving a share of 14.65% of renewable energy sources by 2020 compared to the total gross energy consumption.

The laws adopted and measures taken on the subject by the Government and the Parliament of Hungary from the second half of 2010 aimed at causing a shift towards sustainable energy management in line with the above, thereby promoting energy efficiency and the increasing utilisation of renewable energy sources. Some of these measures already had an impact in 2010. The objectives stipulated in the Action Plan were fulfilled in due course; the 2010 final statistical factual data even exceed the objectives undertaken for 2010. Based on preliminary data the 2011 objectives set out in the Action Plan were also fulfilled. Table 1 shows the objectives of the Action Plan and the known results.

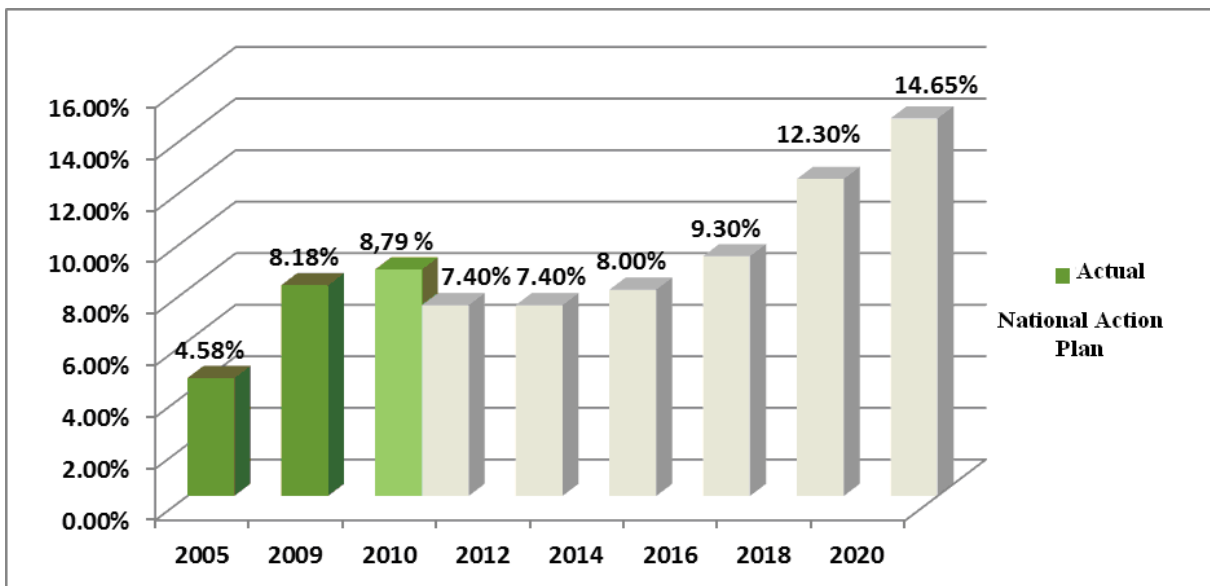


Table 1: Share of renewable energy in gross final energy consumption

The aim of the aforementioned report is to demonstrate – as part of the reporting obligation of Member States defined under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC (hereinafter referred to as RED), published in the Official Journal of the European Union L 110, 5.6.2009 – the progress achieved in the utilisation of renewable energy sources in 2009 and 2010.

The report has been prepared using the form specified by the European Commission, with the structure and data content specified therein.

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1. Sectoral and overall shares and actual total consumption of energy from renewable sources in 2009 and 2010

Hungary has made significant progress in the utilisation of renewable energy sources in 2010, which is also shown by the data included in the below tables of the form. Hungary's Renewable Energy Utilisation Action Plan (hereinafter referred to as Action Plan) aimed at achieving a 7.4% share of energy from renewable sources within gross final consumption by 2010. Based on statistical data **the target share was significantly exceeded**, because the actual share was 8.79% in 2010.

In light of the statistical data it can be concluded that the quantity of energy from renewable sources has increased, although the excess of the Action Plan target share values was facilitated by the halt in energy consumption due to the economic crisis. The data on volumes support this as follows.

The 2010 target for RES consumption was 1 344 ktoe according to the Action Plan. However, Hungary reached an actual value of 1 491 ktoe in 2010, **the volume of which exceeds the Action Plan target by more than 10%**.

The 2010 target value in the Action Plan for the installed capacity suitable for the production of electricity from renewable energy was 755 MW, while the actual installed capacity was 14% higher (861.5 MW) than this value. Also, realised gross electricity production (3 021 GWh) exceeded the 2010 target value of 2 843 GWh by more than 6%.

Target shares for renewable energy sources used in transportation were also exceeded in 2010. The Action Plan aimed at reaching 150 ktoe for 2010, while the actual utilisation was 191 ktoe, meaning that the target was exceeded by more than 27%.

It can be concluded on the basis of the above that the targets laid down in the Action Plan for 2010 were exceeded in every segment.

Table 1: The sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources

Name	2009	2010
RES-H&C ¹ (%)	10.53	11.08
RES-E ² (%)	6.96	7.09
RES-T ³ (%)	4.19	4.72
Overall RES share ⁴ (%)	8.18	8.79
<i>Of which from cooperation mechanism* (%)</i>	0*	0*
<i>Surplus for cooperation mechanism* (%)</i>	0*	0*

* Hungary has not entered into partnership agreements with other Member States yet, but is open to transferring the surplus under a partnership agreement.

¹ Share of renewable energy in heating and cooling: gross final consumption of energy from renewable sources for heating and cooling (as defined in Articles 5(1)(b) and 5(4) of Directive 2009/28/EC) divided by gross final consumption of energy for heating and cooling. The same methodology as in Table 3 of National Renewable Energy Action Plans applies.

² Share of renewable energy in electricity: gross final consumption of electricity from renewable sources for electricity (as defined in Articles 5(1)(a) and 5(3) of Directive 2009/28/EC) divided by total gross final consumption of electricity. The same methodology as in Table 3 of the National Renewable Energy Action Plans applies.

³ Share of renewable energy in transport: gross final energy from renewable sources consumed in transport (final energy consumption) (cf. Article 5(1)(c) and 5(5) of Directive 2009/28/EC) divided by the consumption in transport of 1) petrol; 2) diesel; 3) biofuels used in road and rail transport and 4) electricity in land transport (as reflected in row 3 of Table 1). The same methodology as in Table 3 of the National Renewable Energy Action Plans applies.

⁴ Share of renewable energy in gross final energy consumption. The same methodology as in Table 3 of the National Renewable Energy Action Plans applies.

Table 1a: Calculation table for the renewable energy contribution of each sector to final energy consumption (ktoe)

Name	2009	2010
(A) Gross final consumption of RES for heating and cooling	945	1 055
(B) Gross final consumption of electricity from RES	248	259
(C) Gross final consumption of energy from RES in transport	185	191
(D) Gross total RES consumption	1 361	1 491
(E) Transfer of RES to other Member States	0	0
(F) Transfer of RES from other Member States and 3rd countries	0	0
(G) RES consumption adjusted for target (D)-(E)+(F)	1 361	1 491

Table 1b: Total actual contribution (installed capacity, gross electricity generation) from each renewable energy technology in Hungary to meet the binding 2020 targets and the indicative interim trajectory for the period until 2020 for the shares of energy from renewable resources in electricity

Energy source type	2009		2010	
	MW	GWh	MW	GWh
Hydro: ⁵	53	212	53	211
non pumped	53	212	53	211
< 1 MW	4	21	4	20
1 MW–10 MW	10	37	10	38
> 10 MW	39	154	39	153
pumped	0	0	0	0
mixed ⁶	0	0	0	0
Geothermal:	0	0	0	0
Solar:	1	1	2	1
photovoltaic	1	1	2	1
concentrated solar power	0	0	0	0
Tide, wave, ocean	0	0	0	0
Wind:	203	338	293	518
onshore	203	338	293	518
offshore	0	0	0	0
Biomass: ⁷	509	2 335	513.5	2 291
solid biomass	485	2 239	489.5	2 179
biogas	24	96	24	112
bioliquids ⁸	0	0	0	0
TOTAL	766	2 886	861.5	3 021
<i>Of which in CHP</i>	111	295	136	320

⁵ Normalised in accordance with Directive 2009/28/EC and Eurostat methodology.

⁶ In accordance with new Eurostat methodology.

⁷ Only those complying with applicable sustainability criteria were taken into account, in line with Article 5(1) of Directive 2009/28/EC last subparagraph.

⁸ This table refers to electricity produced from biofuels (quantity: 0)

Table 1c: Total actual contribution (final energy consumption⁹) from each renewable energy technology in Hungary to meet the binding 2020 targets and the indicative interim trajectory for the period until 2020 for the shares of energy from renewable resources in heating and cooling (ktoe)

Name	2009	2010
Geothermal (excluding low temperature geothermal heat in heat pump applications)	96	99
Solar	5	5
Biomass	844	951
<i>solid biomass</i>	836	942
<i>biogas</i>	8	9
<i>bioliquids</i>	0	0
Renewable energy from heat pumps*	NA	NA
<i>of which aerothermal</i>	NA	NA
<i>of which geothermal</i>	NA	NA
<i>of which hydrothermal</i>	NA	NA
TOTAL	945	1 055
<i>Of which DH¹⁰</i>	58	66
<i>Of which biomass in households¹¹</i>	581	658

* taking into account that in the interest of reducing administrative burden, the establishment of heat pumps is not always subject to a licence, reliable data is not yet available for the whole volume

⁹ Direct use and district heat as defined in Article 5(4) of Directive 2009/28/EC.

¹⁰ District heating and/or cooling from total renewable heating and cooling consumption (RES- DH).

¹¹ From the total renewable heating and cooling consumption.

Table 1d: Total actual contribution from each renewable energy technology in Hungary to meet the binding 2020 targets and the indicative interim trajectory for the period until 2020 for the shares of energy from renewable resources in the transport sector (ktoe)

Name	2009	2010
Bioethanol/ bio-ETBE	46	57
<i>Of which biofuels under Article 21(2)</i>	0	0
<i>Of which imported¹²</i>	7	44
Biodiesel	123	119
<i>Of which biofuels under Article 21(2)</i>	0	0
<i>Of which imported¹³</i>	21	21
Hydrogen from renewables	0	0
Renewable electricity	16	15
<i>Of which road transport</i>	0	0
<i>Of which non-road transport</i>	16	15
Others (such as biogas, vegetable oils, etc.) – please specify	0	0
<i>Of which biofuels under Article 21(2)</i>	0	0
TOTAL	185	191

¹² From the whole amount of bioethanol / bio-ETBE.

¹³ From the whole amount of biodiesel.

2. Measures taken in 2009 and 2010 and/or planned at national level to promote the growth of energy from renewable sources taking into account the indicative trajectory for achieving the national RES targets as outlined in the National Renewable Energy Action Plan

Table 2: Overview of all policies and measures

Name and reference of the measure	Type of measure	Expected result ¹⁴	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
1. Mandatory off-take of electricity at a guaranteed price	financial	New installed capacities and increase in the quantity of energy produced. <u>In numbers:</u> 2009: Sold quantity: 2 091 GWh (179.75 ktoe); Aid: HUF 23 789 million (EUR 84.78 million) 2010: Sold quantity: 2 289 GWh (196.79 ktoe); Aid: HUF 28 400 million (EUR 103.13 million) ¹⁵	target group: investors, power plants activity: electricity production	existing	From: 1 January 2003; no final date is established, but the system is currently under revision (METÁR)

¹⁴The amount of aid was determined in line with the “Report on the mandatory off-take scheme in 2010” published by the Hungarian Energy Office (hereinafter referred to as HEO).

¹⁵ The conversion to EUR was performed by applying the average of the official foreign currency rates published by the Hungarian Central Bank for the given year.

Source: <http://demo.mtieco.hu/Pages/hist.aspx?sub=1&CategoryId=19&menuid=f86de2d3-4f83-4952-852e-14a09776a2f2>

<p>2. On the detailed conditions for subsidies provided for the modernisation of livestock installations from the European Agricultural Fund for Rural Development</p>	<p>investment subsidy FVM Decree No 27/2007 (IV. 17.)</p>	<p>Results: installation of new biogas plants at livestock installations. Altogether 45 biogas plants have been installed.</p>	<p>agricultural producers/manure processing with anaerobic fermentation</p>	<p>Continuously until 2014, then adjusted to the new EU agricultural subsidy system</p>	<p>Submission period I for applications for subsidy: 23 April 2007–23 May 2007 Submission period II for applications for subsidy: 13 August 2007–17 September 2007 Submission period III for applications for subsidy: 16 November 2009–15 December 2009</p>
<p>3. On the detailed conditions for subsidies provided for the purchase of independent machines and technological equipment not requiring assembly from the European Agricultural Fund for Rural Development</p>	<p>investment subsidy FVM Decree No 26/2007 (IV. 17.)</p>	<p>Results: increase in the quantity of biomass for energy purposes and in the utilisation of renewable energy sources in agriculture.</p>	<p>agricultural producers /also for the purchase of machines and tools used for biomass production and utilisation, such as biomass boilers, pelleting and briquette making machines, special biomass harvesting machines/</p>	<p>Continuously until 2014, then adjusted to the new EU agricultural subsidy system</p>	<p>Submission period I for applications for subsidy: 16 May 2007–15 June 2007 Submission period II for applications for subsidy: 15 June 2009–15 July 2009</p>
<p>4. On the detailed conditions for subsidies provided for the modernisation of horticulture from the European Agricultural Fund for Rural Development</p>	<p>investment subsidy FVM Decree No 25/2008 (III. 7.)</p>	<p>Results: increase in the utilisation of renewable energy sources in horticultural establishments.</p>	<p>agricultural producers /implementation of investments ensuring the energy supply of and the sustainability of the energy supply of horticultural establishments/</p>	<p>Continuously until 2014, then adjusted to the new EU agricultural subsidy system</p>	<p>Submission period I for applications for subsidy: 1 April 2008–30 May 2008 Submission period II for applications for subsidy: 1 December 2009–15 January 2010</p>

5. On the detailed conditions for the use of subsidies provided from the European Agricultural Fund for Rural Development for the modernisation of crop production establishments	investment subsidy FVM Decree No 35/2008 (III. 27.)	Results: increase in the utilisation of renewable energy sources in crop production, including in crop drying.	agricultural producers /modernisation of post-harvest crop production establishments; crop drying with biomass combustion systems/	Continuously until 2014, then adjusted to the new EU agricultural subsidy system	Submission period I for applications for subsidy: 28 March 2008– 30 May 2008 Submission period II for applications for subsidy: 1 March 2010– 31 March 2010
6. On the detailed conditions for subsidies provided from the European Agricultural Fund for Rural Development for the production of energy used in agriculture from renewable energy sources	investment subsidy FVM Decree No 78/2007 (VII. 30.)	Results: increase in the use of biomass for energy purposes within agriculture.	agricultural producers / spread of renewable energy sources, purchase of solid biomass combustion boilers	Continuously until 2014, then adjusted to the new EU agricultural subsidy system	17 September 2007– 5 November 2007
7. On the detailed conditions for subsidies provided from the European Agricultural Fund for Rural Development for the establishment of non-food low-capacity vegetal raw alcohol and crude oil production plants	investment subsidy FVM Decree No 44/2009 (IV. 11.)	Results: granting of subsidy for 27 clients with a total capacity of 165 ktonnes/year.	agricultural producers / use of agricultural raw materials for biofuel purposes	Continuously until 2014, then adjusted to the new EU agricultural subsidy system	15 September 2009– 16 November 2009
8. On the detailed conditions for subsidies provided from the European Agricultural Fund for Rural Development for the planting of perennial herbaceous energy crops	investment subsidy FVM Decree No 71/2007 (VII. 27.)	Results: increase in the quantity of biomass for energy purposes by planting herbaceous energy crops (e.g. Miscanthus).	agricultural producers / to increase the share of renewable energy source utilisation	Continuously until 2014, then adjusted to the new EU agricultural subsidy system	Submission period I for applications for subsidy: 1 October 2007– 14 December 2007 Submission period II for applications for subsidy: 28 March 2008– 30 April 2008 Submission period III for applications for subsidy: 1 October–2 November

					Submission period IV for applications for subsidy: 15 April 2009–15 May 2009 Submission period V for applications for subsidy: 1 March 2010– 31 March 2010
9. On the detailed conditions for the use of subsidies provided for the planting of short rotation woody energy crops from the European Agricultural Fund for Rural Development	investment subsidy FVM Decree No 72/2007 (VII. 27.)	Results: increase in the quantity of biomass for energy purposes by planting short rotation woody energy crops (SRC).	agricultural producers / to increase the share of renewable energy source utilisation	Continuously until 2014, then adjusted to the new EU agricultural subsidy system	Submission period I for applications for subsidy: 1 October 2007– 14 December 2007 Submission period II for applications for subsidy: 28 March 2008– 30 April 2008 Submission period III for applications for subsidy: 1 October–2 November Submission period IV for applications for subsidy: 15 April 2009–15 May 2009 Submission period V for applications for subsidy: 1 March 2010– 31 March 2010
10. LEADER*	subsidy title on the basis of legal provision	Changes in approach; establishment of new local renewable energy production capacities.	The measure is targeted at end-users and investors.	programme under implementation, supplementary	1 October 2009
11. KEOP-2007-4.1.0 (NHDP) Support of heat/electricity	financial	Reduction of greenhouse gas emissions (tonnes/year): 151 666 Utilisation of renewable energy	enterprises budgetary bodies and bodies operating according to the	existing	from 18 September 2007

production from renewable energy sources ¹⁶		sources (GJ/year): 2 323 476 Increase of renewable energy source-based electricity production (GWh/year): 46.31	budgetary regime, non-profit organisations and other organisations not for profit, temporary and technical classifications, public and higher education institutions		
12. KEOP-2009-4.2.0/A (NHDP) Fulfilment of local heating and cooling demand with renewable energy sources ¹⁶	financial	Reduction of greenhouse gas emissions (tonnes/year): 2 252 Utilisation of renewable energy sources (GJ/year): 35 936	enterprises budgetary bodies and bodies operating according to the budgetary regime, non-profit organisations and other organisations not for profit, temporary and technical classifications, public and higher education institutions	existing	18 August 2009– 21 December 2010
13. KEOP-2009-4.2.0/B (NHDP) Fulfilment of local heating and/or cooling demand with renewable energy sources ¹⁶	financial	Reduction of greenhouse gas emissions (tonnes/year): 115 884 Utilisation of renewable energy sources (GJ/year): 2 257 258 Increase of renewable energy source-based electricity production (GWh/year): 145	enterprises budgetary bodies and bodies operating according to the budgetary regime, non-profit organisations and other organisations not for profit, temporary and technical classifications, public and higher education institutions	existing	10 March 2009– 21 December 2010
14. KEOP-2009-4.3.0 (NHDP) Renewables-based regional development ¹⁶	financial	Complex regional development with renewable energy sources	enterprises budgetary bodies and bodies operating according to the budgetary regime, non-profit organisations and other	existing	21 December 2009– 21 December 2010

¹⁶The data show the planned values of the indicators of measures taken in 2009 and 2010 and/or planned (projects submitted between 2007 and 2010 and having been granted KEOP subsidy). The factual values of these indicators will materialise in the project maintenance period (from the ending date of the given project, i.e. from 2009-2013). Factual values may differ from planned values by no more than 25%.

			organisations not for profit, temporary and technical classifications, public and higher education institutions		
15. KEOP-2009-7.4.3.0 (NHDP) Renewables-based regional development ¹⁶	financial	Establishment of regions based on renewable energy utilisation. (production, rational utilisation)	enterprises, budgetary bodies and bodies operating according to the budgetary regime, non-profit organisations and other organisations not for profit, temporary and technical classifications, public and higher education institutions	existing	21 December 2009– 21 December 2010
16. KEOP-2009-4.4.0 (NHDP) Renewable energy-based electricity, combined heat and electricity, and biomethane production ¹⁶	financial	Reduction of greenhouse gas emissions (tonnes/year): 111 654 Utilisation of renewable energy sources (GJ/year): 369 971 Increase of renewable energy source-based electricity production (GWh/year): 47.15	enterprises, budgetary bodies and bodies operating according to the budgetary regime, non-profit organisations and other organisations not for profit, temporary and technical classifications, public and higher education institutions	existing	10 March 2009– 21 December 2010
18. KEOP-2010-4.7.0 (NHDP) Support for the preparation and project development of geothermal-based heat and electricity production projects ¹⁶	financial	Preparation of geothermal capacity construction.	enterprises, budgetary bodies	existing	18 March 2010– 21 December 2010
19. KEOP-2011-4.2.0/A (New Széchenyi Plan) Fulfilment of local heating/cooling and electricity demand with renewable energy sources	financial	Reduction of greenhouse gas emissions (tonnes/year): 8 764 Utilisation of renewable energy sources (GJ/year): 48 096 Increase in utilisation of renewable energy sources (electricity production), (GJ/year): 6.393	enterprises, budgetary bodies and bodies operating according to the budgetary regime, non-profit organisations and other organisations not for profit, temporary and technical	existing	10 February 2011– 26 July 2011

			classifications, public and higher education institutions		
20. KEOP-2011-4.2.0/B (New Széchenyi Plan) Fulfilment of local heating and cooling demand with renewable energy sources	financial	Reduction of greenhouse gas emissions, renewable energy source utilisation, increase in utilisation of renewable energy sources (electricity production).	enterprises, budgetary bodies and bodies operating according to the budgetary regime, non-profit organisations and other organisations not for profit, temporary and technical classifications, public and higher education institutions	existing	10 February 2011– 26 July 2011
21. KEOP-2011-4.3.0 (New Széchenyi Plan) Renewable energy-based regional development	financial	Establishment of regions based on renewable energy utilisation. (production, rational utilisation)	enterprises, budgetary bodies and bodies operating according to the budgetary regime, non-profit organisations and other organisations not for profit, temporary and technical classifications, public and higher education institutions	existing	10 February 2011–
22. KEOP-2011-4.4.0 (New Széchenyi Plan) Renewable energy-based electricity, combined heat and electricity, and biomethane production	financial	Reduction of greenhouse gas emissions (tonnes/year): 62 Increase of renewable energy source-based electricity production (GWh/year): 0.0663	enterprises, budgetary bodies and bodies operating according to the budgetary regime, non-profit organisations and other organisations not for profit, temporary and technical classifications, public and higher education institutions	existing	10 February 2011– 19 May 2011
23. KEOP-2011-4.7.0 (New Széchenyi Plan) Support for the preparation and project development of geothermal-based heat and electricity production	financial	Preparation of geothermal capacity construction.	enterprises, budgetary bodies and bodies operating according to the budgetary regime	existing	10 February 2011–

projects					
24. KEOP-2011-4.9.0 (New Széchenyi Plan) Development of the energy performance of buildings combined with the utilisation of renewable energy sources	financial	Reduction of greenhouse gas emissions, increase in the utilisation of renewable energy sources, development of the energy performance of buildings	enterprises regarded as SMEs, budgetary bodies and bodies operating according to the budgetary regime, non-profit organisations public and higher education institutions	existing	10 February 2011– 14 May 2011

*The measures included in Axes III and IV of the New Hungary Rural Development Programme (hereinafter referred to as: NHRDP) are measures that are not directly aimed at promoting the utilisation of renewable energy; however, solutions for energy efficiency and renewable energy utilisation mean extra points among horizontal assessment criteria at the assessment of investments (applications).

However, in the LEADER programme (Axis IV of the NHRDP), target areas announced specifically for the utilisation of renewable energy and for related awareness-raising were included among the calls for applications published by LEADER local action groups participating in implementation. In addition, energy efficiency and the utilisation of renewable energy in investments are important aspects of the other target areas of the calls for applications as well. Based on the observations of LEADER local action groups, almost HUF 0.5 billion of subsidy was granted in the field of renewable energy sources utilisation.

2a. The progress made in evaluating and improving administrative procedures to remove regulatory and non-regulatory barriers to the development of renewable energy

From the second half of 2010 the reorganisation of public administration was commenced in Hungary, aiming at the reduction of administrative burdens, the increase of the transparency of authorisation procedures and the rationalisation of operation. Consequently, as a first step of the Hungarian administrative reform, government offices (territorial bodies) commenced their operation in the capital, as well as in the counties on 1 January 2011. In the beginning, clients could receive their licences relating to the given activities in fourteen case types – the number of which has been expanding constantly – in a uniform organisational system under the “one-stop-shop administration”. This significantly decreases administrative and material costs for clients by reducing the time needed for administration. With the establishment of government offices the functional duties of various authorities have been integrated into a single office and existing overlaps have been eliminated. Due to the modification the authorisation of investments based on the utilisation of renewable energy sources has been partially simplified. In several cases where the application of the client requires contact with various authorities under the authorisation procedure, the case will be administered within one organisation instead of the previous, fragmented authority structure. We note that simplification currently does not affect the proceedings of specialised authorities.

The simplification of official procedures also affects the administrative authorisation procedures of investments based on the utilisation of renewable energy sources. As part of the above the revision of legal provisions regulating the area, and the preparation of impact assessments has been commenced.

Based on the experiences and results of the revision, the proposals for the simplification of authorisation procedures for investments based on the utilisation of renewable energy sources are to be integrated into the Simple State Programme, which includes the total reform schedule of Hungarian public administration. As a result, authorisation procedures concerning renewable energy sources, too, will be gradually simplified in the future, procedural deadlines will be shortened and the administrative costs of market participants will be reduced.

Besides authorisation procedures, Hungary places significant emphasis on simplifying support procedures and making them more ‘client friendly’. As a first step, the application procedures for certain investment supports were highly simplified in the first half of 2011. First, the simplified electronic application management process was introduced more widely in certain support schemes published in the Environment and Energy Operational Programme; then, in the second half of 2011, an electronic application submission system was introduced for residential Solar collector applications under the Green Investment Scheme (GIS) as well.

2b. The measures in ensuring the transmission and distribution of electricity produced from renewable energy sources and in improving the framework or rules for bearing and sharing of costs related to grid connections and grid reinforcements

The measures taken in 2009 and 2010 were described in detail in Hungary's Renewable Energy Utilisation Action Plan 2010-2020 sent to the European Commission; therefore, the Report includes only a short summary of said measures.

Pursuant to Article 25(3) of Act LXXXVI of 2007 on Electric Energy (hereinafter referred to as: Act on Electric Energy), the promotion of the production of electricity produced from renewable energy sources, too, must be taken into account when planning grid development. The Hungarian Energy Office (hereinafter referred to as the HEO) approved the grid development plan for both 2010 and 2011.

Considering the provisions of Directive 2006/32/EC on energy end-use efficiency and energy services and Directive 2009/71/EC adopted as part of the third EU energy package, Article 170(19) of the Act on Electric Energy stipulates that the rules governing the installation of electronic consumption meters at users must be set out by a government decree.

The HEO requested an expert selected under an application procedure to draw up a study with a view to preparing the introduction of the government decree and the smart metering system in Hungary.

Further studies and pilot projects will be introduced and evaluated for the decisions concerning users. This is the first step to realising smart grids, which promotes the optimal operation of the grid and therefore the integration of renewable energy sources.

The HEO requested the preparation of a study with the title "Promotion of the grid connection of new electricity producers that use renewable energy sources and connect to the distribution network". The study was prepared in July 2011, and is available on the website of the HEO: http://www.eh.gov.hu/gcpdocs/201108/mecs_infrapont_egi_vegleges_20110720.pdf. The proposals of the study are currently being consulted on with the industry and are being put in practice. As a result, pursuant to Article 6(8) of NFM Decree No 76/2011 (XII. 21.) on the financial and technical conditions of connection to the public electric grid, the distributors must give information annually via their websites on the available connection possibilities in their areas of operation.

3. The support schemes and other measures currently in place that are applied to promote energy from renewable sources and developments in the measures used with respect to those set out in the National Renewable Energy Action Plan

The mandatory off-take scheme is of utmost importance in the field of electricity produced from renewable energy sources and renewable-based combined heat energy production. The full revision of the system was commenced in 2011 in line with the provisions specified in the Action Plan. The regulatory concept of a new mandatory off-take scheme for heat and electricity produced from renewable and alternative energy sources (METÁR) was created on the basis of the revision, introducing stricter sustainability criteria (especially for wood combustion) on the one hand and more reliable regulatory conditions for clients on the other hand.

The data for the mandatory off-take of electricity for the years 2009 and 2010 are shown in Table 3. Certain elements of the relevant table of the form were not filled in, as the questions provided there were not relevant to the Hungarian situation.

Table 3: Support schemes for renewable energy

2009	Average feed-in tariff ¹⁷		Per unit subsidy*		Total subsidy*	
	HUF/kWh	EUR/MWh	HUF/kWh	EUR/MWh	MHUF	MEUR
Renewables	26.64	94.96	10.95	39.04	23 292	83.01
Hydropower plant over 5 MW	15.73	56.05	0.00	0.00	0	0.00
Hydropower plant below 5 MW	27.18	96.89	11.49	40.94	714	2.55
Biomass	27.43	97.77	11.73	41.81	18 318	65.29
Landfill gas	27.75	98.90	11.85	42.23	195	0.69
Sewage treatment plant gas	27.70	98.74	11.72	41.76	31	0.11
Biogas	27.37	97.56	11.64	41.47	272	0.97
Wind power plant	28.13	100.26	12.52	44.63	3 761	13.41
Waste¹⁸	22.82	81.34	7.20	25.66	1 046	3.73

2010	Average feed-in tariff		Per unit subsidy*		Total subsidy*	
	HUF/kWh	EUR/MWh	HUF/kWh	EUR/MWh	MHUF	MEUR
Renewables	28.27	102.65	12.06	43.79	28 007	101.69
Hydropower plant over 5 MW	16.07	58.34	0.00	0.00	0	0.00
Hydropower plant below 5 MW	28.13	102.12	12.02	43.66	802	2.91
Biomass	28.85	104.74	12.47	45.29	19 520	70.87
Landfill gas	29.14	105.81	12.74	46.25	205	0.75
Sewage treatment plant gas	30.97	112.45	13.96	50.68	19	0.07
Biogas	28.43	103.21	12.24	44.45	649	2.36
Wind power plant	29.28	106.31	13.52	49.11	6 812	24.73
Waste	23.77	86.31	7.54	27.38	827	3.00

*The amount of aid was determined in line with the “Report on the development of the mandatory off-take scheme in 2010” published by the HEO.

¹⁷ The conversion to EUR was performed by applying the average of the official foreign currency rates published by the Hungarian Central Bank for the given year. Source: <http://demo.mtieco.hu/Pages/hist.aspx?sub=1&CategoryId=19&menuid=f86de2d3-4f83-4952-852e-14a09776a2f2>

¹⁸ The category of waste does not belong to renewables. However, FKF ZRt. sold electricity produced from municipal waste in this category, and half of that can be accounted for as renewable energy. This is why we included the category of waste.

3.1. Information on how supported electricity is allocated to final customers for purposes of Article 3(6) of Directive 2003/54/EC

The rules governing the allocation of electricity taken off under mandatory off-take are regulated in Article 13 of the Act on Electric Energy. Pursuant to this provision, electricity traders (including providers of universal services) and authorised producers supplying electricity directly to end users are required according to the provisions of specific other legislation (GKM Decree No 109/2007 (XII.23.) on the allocation of electricity subject to off-take obligation by the transmission system operator and on the method of determining the prices applicable during allocation) to procure electricity that is subject to purchasing obligation consistent with the quantity of electricity they sell to end users, and to enter into an agreement with the transmission system operator to this end.

Users engaged in the importation of electricity are required to procure electricity that is subject to off-take obligation consistent with the quantity of electricity they use for own consumption, and to enter into an agreement with the transmission system operator to this end. Electricity generated by a household power plant is not subject to the mandatory off-take scheme; the electricity produced by their operators must be taken off by the electricity trader that supplies electricity at the connection point in question (the details are regulated by Articles 4 and 5 of Gov. Decree No 273/2007 (X. 19.) implementing certain provisions of the Act on Electric Energy).

4. Information on how the support schemes have been structured in Hungary to take into account RES applications that give additional benefits, but may also have higher costs, including biofuels made from wastes, residues, non-food cellulosic material, and ligno-cellulosic material

Considering the fact that in Hungary no demand emerged from market participants for second generation biofuel production from wastes, non-food residues or cellulosic materials in 2009 and 2010, no separate measure or support differentiation was prepared for this field. Hungary is open to adequately differentiating incentive schemes as long as realistic demand arises from market participants. With respect to wastes, biodiesel production from used frying oil was realised to a notable degree, but currently does not require regulations differing from the regulations on biodiesel made directly from vegetable oil.

5. Information on the functioning of the system of guarantees of origin for electricity and heating and cooling from RES, and the measures taken to ensure reliability and protection against fraud of the system

At the request of the electricity producer, the HEO issues a certificate of origin and arranges for the electronic registration of such certificates under Articles 6/A and 12(1) of the Act on Electric Energy. The details rules pertaining to the certificates of origin are set out in Government Decree No 389/2007 (XII.23.) on the mandatory off-take and purchase price of power generated from waste or from renewable energy sources and of cogenerated power (hereinafter referred to as Mandatory Off-take Decree). Any producer may request a certificate of origin; however, producers selling under the mandatory off-take scheme must always certify with a certificate of origin their compliance with the requirements for mandatory off-take following the reference year (Article 8(1) of the Mandatory Off-take Decree). The quantity of electricity sold under the mandatory off-take scheme may not exceed the quantity of electricity laid down in the certificate of origin (Article 7(1) of the Mandatory Off-take Decree).

Checks are conducted by the HEO mainly through individual checks and through comparison with other data sources. Pursuant to Article 9(1) of the Mandatory Off-take Decree, if during its check the HEO establishes that the adequate certificate of origin is missing or that the Vendor or the electricity (or part of the electricity) sold under the scope of the Decree does not comply with the legal requirements in the given annual production period, in the period following the end of this period or at any given time, the HEO may, in its resolution,

- (a) determine the amount of kWh sold under the mandatory off-take scheme in the context of the violation of the Decree's provisions;
- (b) considering the provisions of Article 9(2) and (3) of the Mandatory Off-take Decree – and in case of combined electricity production, considering only the legislation in effect at the time of sale – determine the exact amount of reimbursement payable to the Receiver as well as the time schedule thereof by establishing a time-limit for performance (partial performance);
- (c) determine the criteria the Vendor must fulfil in order to be allowed to continue to sell electricity under the mandatory off-take scheme; and
- (d) impose penalties under Article 96(1)(b) of the Act on Electric Energy on the Vendor and may apply further sanctions defined in the Act on Electric Energy, if necessary.

Further rules are stipulated in Articles 9 and 9/A of the Mandatory Off-take Decree.

Producers whose sales eligibility was established before 1 January 2008 and who sell electricity under the mandatory off-take scheme must obtain the certificate of origin for the first time for the electricity sold in 2011 (Article 11(3) of the Mandatory Off-take Decree).

6. Developments in 2009 and 2010 in the availability and use of biomass resources for energy purposes

The support scheme defined in FVM Decree No 27/2007 (IV. 17.) for promoting the modernisation of livestock installations was published for the third time under the New Hungary Rural Development Programme (hereinafter referred to as NHRDP) in the fourth quarter of 2009. It became possible to support 45 biogas plants after the submission period was over (including previous openings).

Pursuant to FVM Decree No 44/2009 (IV. 11.), 27 low-capacity “decentralised” bioethanol plants (with an average capacity of 5 000 tonnes/plant, and altogether 164 000 tonnes of end product output) are under construction based on the “energy farm” concept. These small ethanol plants plan to process locally produced corn, and the by-product produced would be utilised by local livestock farming. Energy would be supplied by the biogas plant or biomass heating plant expected to be constructed next to them, thereby providing a solution for the management and utilisation of wastes, plant production by-products and liquid manure produced in the farm. Besides electricity, the plant would also produce heat energy, which may be suitable for heating horticultural establishments (greenhouses, polytunnels) apart from the ethanol plant as well.

Also, 6 applications aimed at constructing and modernising oil-presses were also supported under this support method. The total planned capacity to be realised in case of these applications is approx. 33 000 tonnes/year.

Table 4: Biomass supply for energy use

	Amount of domestic raw material		Primary energy in domestic raw material (ktoe)		Amount of imported raw material from EU		Primary energy in amount of imported raw material from EU (ktoe)		Amount of imported raw material from non EU		Primary energy in amount of imported raw material from non EU (ktoe)	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
Biomass supply for heating and electricity:												
Direct supply of wood biomass from forests and other wooded land for energy generation	3 525 502 m ³ of firewood, 7 650 tonnes of pellets, 998 tonnes of wood briquettes	3 659 828 m ³ of firewood, 10 258 tonnes of pellets, 103 tonnes of wood briquettes	635.2	660.1	17 954 m ³ of firewood and wood briquettes, 25 679 tonnes of pellets	5 305 m ³ of firewood and wood briquettes, 41 583 tonnes of pellets	22.4	63.9	71 545 m ³ of firewood and wood briquettes, 894 tonnes of pellets	243 158 m ³ of firewood and wood briquettes, 1 820 tonnes of pellets	13.2	44.3
Indirect supply of wood biomass	77 876 m ³ of wastes from wood industry for energy purposes	139 837 m ³ of wastes from wood industry for energy purposes	14	25	44 663 m ³ of wastes from wood industry for energy purposes	146 353 m ³ of wastes from wood industry for energy purposes	8	26.2	13 014 m ³ of wastes from wood industry for energy purposes	21 970 m ³ of wastes from wood industry for energy purposes	2.3	3.9
Energy crops and short rotation trees	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Agricultural by-products / processed residues and fishery by-products	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Biomass from wastes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Biomass supply for transport:</i>												
Common arable crops for biofuels	corn: 400 000 tonnes; rapeseed: 550 000 tonnes	corn: 430 000 tonnes; rapeseed: 550 000 tonnes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Energy crops and short rotation trees for biofuels	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

One fraction of the data on biomass from wastes pertains to stocks, i.e. shows the total available quantity, while the other fraction of the data is about biomass already used or recycled for a certain purpose (e.g. for energy or heating/cooling purposes).

The Ministry of Rural Development disposes of data about the quantity of biodegradable waste (in tonnes) used by the Waste Utilisation Works for energy purposes, as well as about the quantity of the biodegradable part of industrial waste (paper and cardboard wastes; wood wastes; textile wastes; food processing and food product wastes; sorting wastes; agricultural wastes and silviculture wastes) on the basis of the data contained in the Waste Management Information System (HIR) and the estimated quantity of sewage sludge. Since the majority of separately collected biodegradable wastes are composted, the biogas quantity from biodegradable wastes means the biogas collected and treated at landfills. **The 2010 data are forecast data for information purposes only.**

Supplementary table 4.1: Biomass supply from wastes

Biomass from wastes		Quantity (tonnes)	
		2009	2010
1/a	Biodegradable fraction of solid municipal waste**	215 358	215 575
1/b	Landfill gas (m ³)	13 725 100	14 630 300
2	Biodegradable fraction of industrial waste*	1 101 012	1 408 146***
3	Sewage sludge*	90 063	96 727***

* Based on the produced quantities reported in the HIR as part of the data supply process (tonnes)

** Biodegradable fraction of solid municipal waste used by the Waste Utilisation Works for energy purposes (tonnes)

*** : Forecast data from HIR (tonnes)

In the calculation of the share of biodegradable wastes within wastes used for energy production we took into account the quantitative data and percentages provided on the basis of the check conducted by the Waste Utilisation Works on the standard composition of mixed municipal wastes transported to the incinerator. The **share of biodegradable** municipal waste used for energy production (solid municipal waste incinerated in the Waste Utilisation Works) was **52.8 m/m% in 2009 and 52.7 m/m% in 2010.**

Table 4a: Current domestic agricultural land use for the production of crops dedicated to energy production (ha)

Land use	Surface (ha)	
	2009	2010
1. Land used for common arable crops and oilseeds	378 681	337 634
2. Land used for short rotation trees	2 562	4 268
3. Land used for other energy crops such as grasses, sorghum	4 981	807 669

The data on the size of land used for the production of traditional arable crops (wheat, sugar beet etc.) and oilseeds (rapeseed, sunflower etc.) are estimates. They represent the size of the land (2009: 378 681 ha, 2010: 337 634 ha) that may serve energy purposes within the total cultivation area of arable crops. Naturally, the cultivation area of arable crops is significantly larger than the data provided.

7. Information on changes in commodity prices and land use within Hungary in 2009 and 2010 associated with increased use of biomass and other forms of energy from renewable sources

The grain section of the **Budapest Stock Exchange** (BSE) is the commodities market in Hungary. Out of the types of produce used for energy purposes futures can be made here on (fodder) corn (raw material for bioethanol) and rapeseed (raw material for biodiesel) and/or options can be made on the forward contracts of these types of produce. The quotations of the derivatives of both types of produce are influenced mainly by the quotations of the corn and rapeseed derivatives of the Paris MATIF (member of the NYSE Euronext) which are gaining more significance throughout Europe, even though they are low-liquidity markets at global level. The BSE-MATIF basis usually fluctuates between 30-40 EUR/tonne for both types of produce, which is approximately identical to the transport costs between the BSE and MATIF delivery parities. A greater difference can usually be due to the very modest liquidity of Hungarian markets and the insignificant number or, in certain periods, complete lack of transactions.

In Hungary 400 000 and 430 000 tonnes of corn, respectively, was used for bioethanol production, while no more than 150 000 tonnes of rapeseed was transported to Hungarian oil pressing facilities to produce rapeseed oil for biodiesel production in 2009 and 2010. By contrast, in 2009 7.528 million tonnes of corn and 579 000 tonnes of rapeseed was produced, and in 2010 6.967 million tonnes of corn and 560 000 tonnes of rapeseed was produced. 4.1 million to 4.4 million tonnes of corn was exported, while the whole quantity of unprocessed rapeseed left the country. Therefore, the major part of produced corn and rapeseed are transported to foreign markets. The result of the growing popularity of biofuel production is that the export commodity reserve is somewhat reduced, but the increase of industrial utilisation at such a quick pace does not have any noticeable effect on the trends of futures and options, in particular because it is in parallel with the decrease in domestic fodder utilisation.

Impact assessments were not conducted, because data on Hungarian derivative markets is not available in a quality and frequency that would allow for the reliable use of mathematical and statistical instruments. Nevertheless, it can be said in general that international trends apply in the grain section of BSE and price and volatility transmission between BSE and MATIF seems clear.

Agricultural and silvicultural biomass utilisation had practically no influence on **land use** in the reference period. Silvicultural raw materials are used to the highest degree, with 90% of biomass for energy purposes being firewood. The quantity of timber produced for energy purposes is constantly increasing. (We produced altogether 3.5 million m³ of thick and thin firewood and forest chips in 2009 and 3.7 million m³ of these kinds of produce in 2010.) Wood residues from the cutting area remain almost completely unused; therefore, we only use 60% to 70% of the firewood quantity that can be collected from domestic forests. Agricultural by-products provide the greatest quantity of biomass besides the raw materials from silviculture. However, the majority of the approximately 8 million tonnes of biomass from arable crop production is at this point only a worthless by-product for the processing industry and is used only to an insignificant degree in energy production. Similarly to agricultural by-products, the approx. 700 000 tonnes of biomass produced during annual grapevine and fruit plantation pruning is almost completely burned at the plantations without being used for

energy purposes. We use 62 000 to 66 000 ha, i.e. 1.1% to 1.2% of the total cultivation area for domestic bioethanol production. Pursuant to the decrees on support for the planting of herbaceous and woody energy crops (FVM Decree No 71/2007 (VII. 27.) and FVM Decree No 72/2007 (VII. 27.)), the total area covered by applications for the production of these crops was 7 543 hectares in 2009 and 8 125 hectares in 2010.

According to the estimates of the Research Institute of Agricultural Economics, approx. 100 000 tonnes of corn and sweet sorghum silage could be used in biogas plants, which may need about 5 000 hectares of land, but this amount, too, seems insignificant compared to the 4.5 million hectares of arable land and the 80 000 hectares of land used for growing fodder silage corn.

Based on the expert estimates on the Hungarian biomass potential and the calculations made by the Research Institute of Agricultural Economics, the biomass quantity intended for direct burning that is necessary for achieving the 2020 share of renewable energy sources can be produced from the forests in a sustainable manner and can be collected as wastes from the wood industry or furniture industry or as agricultural by-products from arable lands.

8. The development and share of biofuels made from wastes, residues, non-food cellulosic material, and lingo cellulosic material

In Hungary no demand emerged from market participants for biofuel production from wastes, non-food residues or cellulosic materials in 2009 and 2010. No separate measure or support differentiation was prepared for this field, but Hungary is open to adequately differentiating incentive systems as long as realistic demand arises from market participants.

Table 5: Production and consumption of Article 21(2) biofuels (ktoe)

Article 21(2) biofuels ¹⁹	2009	2010
Production – Fuel type X (Please specify)	0	0
Consumption – Fuel type X (Please specify)	0	0
Total production of Article 21(2) biofuels	0	0
Total consumption of Article 21(2) biofuels	0	0
% share of Article 21(2) biofuels from total RES-T	0	0

¹⁹ Biofuels made from wastes, residues, non-food cellulosic material, and ligno-cellulosic material.

9. Information on the estimated impacts of the production of biofuels and bioliquids on biodiversity, water resources, water quality and soil quality within Hungary in 2009 and 2010

When assessing the impact of biofuel production it must be taken into account that Hungary has long been a net exporter of both oil crops and cereals. An additional 1.1 million tonnes of corn above the current 400 000 tonnes, that is, altogether 1.5 million tonnes of corn are necessary for the production of the 475 000 tonnes of ethanol which is needed for achieving the 2020 bioethanol target values determined in the Action Plan. This can be produced on 240 000 hectares of land, i.e. on one-fifth of the 1.2 million hectares of Hungarian corn lands. If the production structure of arable crop production does not change and livestock numbers remain stagnant, it may still become possible to export 1.4 million to 2.4 million tonnes of corn annually after satisfying the Hungarian domestic demand.

The primary raw material for biodiesel production in Hungary is rape. We can calculate with an annual production of at least 550 000 tonnes of rapeseed; therefore, the forecast biodiesel demand of Hungary for 2020, too, could be satisfied from domestic materials. Rape production was undoubtedly enlarged significantly since the middle of the last decade. This is due partly to the invigoration of biofuel demand within the European Union. However, rape did not occupy extensive areas with high biodiversity; rather it was in many cases planted on irrigable arable lands with a high productivity level that had been disengaged due to the decline in canning industry and sugar industry demand, partly in the interest of sustaining the rotation system.

The aforementioned data support the fact that the production of biofuels in 2009 and 2010 did not require that the production of raw materials be increased (the quantity necessary for the increase in biofuel utilisation was produced from the existing export reserve). As a result, biofuel production in Hungary currently has not additional environmental impact outside the factory; thus, it has no separate effect on water use or biodiversity either.

Hungarian regulations establish sustainability criteria for biofuels in line with the provisions of the RED. According to the Hungarian regulations, only those biofuels can be included in the quantity to be placed on the market mandatorily by the operator, as stipulated in law, and in the national target which are produced from raw materials produced/used in compliance with the sustainability criteria.

Pursuant to the sustainability criteria, biomass serving as a raw material for biofuels may be produced only in a default area categorised as arable land, for which a uniform area-based support request was submitted in the year 2008, and which is not regarded as a sensitive area listed in law (including the criteria of the RED). Biomass which is from a sensitive area where cultivation compatible with the protection of that area is performed is also regarded as sustainable.

Furthermore, another sustainability criterion stipulated by Hungarian regulations (in line with the RED) is that the biofuel is only sustainable if greenhouse gas emission saving from the use of biofuel is at least 35%. Compliance of the biomass with the sustainability criteria is checked by the Central Agricultural Office.

According to estimates, in Hungary approximately 200 000 hectares of land that has unfavourable growing conditions (below 17 Golden Crowns, sandy or jeopardised by inland waters/flood) and is not suitable for crop production or for use as grassland (degraded land) can be used in a sustainable way for solid biomass production.

The indicators of estimated impacts on biodiversity, water resources, water quality and soil quality may differ to a great extent depending on technology and the environment; the effects of biofuel production on Hungary could be predicted on the basis of measurements and calculations adjusted to domestic conditions, production technology practices and technologies. However, no such measurements and calculations have been carried out yet. The extent to and the period until which biofuel production and utilisation serves energy security and climate protection objectives depending on production could only be determined in possession of the results of these calculations.

The sustainability certification system under the RED was introduced at the end of 2010, when no raw material was produced in Hungary due to winter time. Therefore, relevant conclusions on impacts on biodiversity, water resources, water quality and soil quality can be drawn from 2011 on, taking account of the experiences gained from the sustainability system.

10. Estimate of the net greenhouse gas (GHG) emission savings due to the use of energy from renewable sources

Table 6: Estimated net GHG emission savings from the use of renewable energy (t CO₂eq)

Environmental aspects	2009	2010
Total estimated net GHG emission saving from using renewable energy²⁰	4 053 698	4 348 242
– Estimated net GHG saving from the use of renewable <u>electricity</u>	1 323 768	1 272 501
– Estimated net GHG saving from the use of renewable energy in <u>heating and cooling</u>	2 458 113	2 792 998
– Estimated net GHG saving from the use of renewable energy in <u>transport</u>	271 817	282 743

²⁰The net greenhouse gas emission savings from the use of renewable energy were calculated taking account of the specific CO₂ emissions of the various fuel types, the typical values for biofuels under Part A of Annex V to the RED, and the typical values for electricity and energy for cooling and heating under Commission Communication COM(2010)/11.

11. Information and estimate concerning the excess/deficit production of energy from renewable sources compared to the indicative trajectory which could be transferred to/imported from other Member States and/or third countries. Estimated potential for joint projects until 2020

No excess was transferred to or imported from other Member States in the years 2009 and 2010. The energy policy instruments of Hungary ensure that the target shares are met, and therefore it will likely not be needed to import excess from other Member States in the future either.

Hungary is open to cooperating with other Member States to transfer excess renewables production statistically and to establish common support schemes. Currently no quantified information can be provided on such projects or cooperations, because no such cooperation has been established yet.

Table 7: Actual and estimated excess (+) and/or deficit (-) production of renewable energy compared to the indicative trajectory which could be transferred to/from other Member States and/or third countries in [Member State] (ktoe)^{21,22}

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Actual/estimated excess or deficit production (Please distinguish per type of renewable energy and per origin/destination of import/export)*	0	0	547	283	323	267	280	274	516	464	679	325

* In accordance with the values specified in Hungary's Renewable Energy Utilisation Action Plan; actual values may differ.

²¹ Please use actual figures to report on the excess production in the two years preceding submission of the report, and estimates for the following years up to 2020. In each report the Member State may correct the data of the previous reports.

²² When filling in the table, for deficit production please mark the shortage of production using negative numbers (e.g. -x ktoe).

11.1. Details of statistical transfers, joint projects and joint support scheme decision rules

Pursuant to Articles 6, 7, 9 and 11 of the RED, Member States may agree on statistical transfers, joint projects and joint support schemes (hereinafter jointly referred to as cooperation mechanisms).

Pursuant to the RED, the substantial elements of these agreements are stipulated in the agreements concluded by the Member States – in this particular case by Hungary – and the EEA States (or third countries, where applicable).

Hungary did not conclude a cooperation agreement with any country until 31 December 2011. In accordance with the relevant articles of the RED, Hungary transposed the concepts of joint investment, joint support scheme and statistical transfer with points 6, 7 and 13 of Article 1(1) of NFM Decree No 1/2012 (I.20.) on the calculation methodology of the share of energy from renewable sources (hereinafter referred to as calculation decree). The calculation decree stipulates the national calculation methodologies and procedures on the share of energy from renewable sources for cooperation mechanisms. Thus, the legal conditions necessary for the conclusion of intergovernmental agreements are available.

The calculation decree therefore stipulates – in line with the RED – that if Hungary concludes cooperation agreements with other countries, the provisions of the cooperation agreements must be taken into account when determining the share of energy from renewable sources in Hungary. The calculation decree stipulates, *inter alia*, that the energy from renewable sources transferred by Hungary to another country under, for instance, a statistical transfer may not be taken in account when determining the share of energy from domestic renewable sources, or, on the contrary, the quantity imported from other Member States must be added to the domestic share.

The establishment of the regulation ensures the possibility for Hungary to transfer its statistical excess – in accordance with the provisions of the RED – to other Member States under the provisions of the cooperation agreement if such demand arises.

12. Information on how the share for biodegradable waste in waste used for producing energy has been estimated in Hungary, and what steps have been taken to improve and verify such estimates

In accordance with the practices of other Member States, 50% of municipal waste was regarded as biodegradable waste in the course of the preparation of the Report.

Accepted in international practices as well, this value is also supported by the fact that the **share of biodegradable** municipal waste was **52.8 m/m% in 2009 and 52.7 m/m% in 2010** based on the quantitative and percentage data provided by the check conducted by the Budapest Waste Utilisation Works on the standard composition of mixed municipal wastes transported to the incinerator.

The following supplementary table shows the energy production from biodegradable wastes for the years 2009 and 2010, calculated using the 50% value.

Supplementary table: Energy production from biodegradable wastes

		2009	2010
RES-E	MWh	113 160	144 860
RES-H	TJ	528	538

13. Information on measures planned on the basis of Article 22(3) of Directive 2009/28/EC

Information on Article 22(3)(a) of the RED:

Hungary is currently *not planning* to establish a body/authority which engages exclusively in the authorisation of establishments for energy produced from renewable sources. *We intend to encourage* the spread of renewable energy plants – with a view to promoting the diversification and decentralisation of these power plants – mainly *by gradually simplifying the currently effective authorisation rules*.

Act LXXXVI of 2007 on Electric Energy (hereinafter referred to as the Act on Electric Energy) does not provide for issuing a separate authorisation for the establishment of power plants with a nominal capacity of 0.5 MW or less, whereas, pursuant to Article 80(1) and (2) of the Act on Electric Energy, the Regulatory Office (HEO) issues a *combined micro power plant authorisation* for micro power plants with a nominal capacity of between 0.5 MW and 50 MW *under a simplified authorisation procedure, both for establishing the plant and producing electricity*. Pursuant to the relevant European Union directives, in addition to these authorisations, environmental permits must also be obtained.

Furthermore, Act LIII of 2006 on Simplifying and Accelerating the Execution of Investments of National Economic Priority (hereinafter referred to as the Priority Projects Act) lays down that *investments partly or fully implemented using European Union assistance and/or promoting the accomplishment of environmental or research and development objectives, i.e. procedures initiated in the case of “priority issues” may be conducted in a shorter timeframe than that stipulated in general regulations*. Investments in renewable energy plants may also belong to this category. The authorities must evaluate the applications as a matter of urgency in case of priority issues; the maximum time provided for each phase of the authorisation procedure is also set. The Government must set out the rules for the classification of an issue as a priority issue in a decree.

In priority cases, the time for administrative handling of authorisation procedures concerning the construction of electrical installations was reduced significantly with the amendment of the Priority Projects Act which entered into force on 1 May 2012, further simplifying the rules of procedure for priority cases. The competent authority must render a decision on issues within the scope of the Priority Projects Act and classified as issues within the scope of that Act within **30 days**, instead of within the previous two months.

Information on Article 22(3)(b) of the RED:

Article 71(2) of Act CXL of 2004 on the General Rules of Administrative Proceedings and Services (hereinafter referred to as Act on Administrative Proceedings) provides for the automatic acquisition of certain authorisations according to the following rules:

“Article 71 [] (2) Where a request made by a client pertains to the acquisition of some right, and there is no adverse party involved in the first instance, instead of the appointment of another authority or a special authority the relevant legislation may lay down that:

*(a) the client shall be considered to have been authorised to exercise the right in question if the authority fails to adopt a decision within the prescribed time limit,
(b) the consent of the special authority shall be considered granted if the special authority in question fails to provide a position paper within the prescribed time limit.”*

However, it must be noted that although the Act on Administrative Proceedings provides for “automatic consent” by the special authority, this rule may only apply if it is provided for in separate legislation.

Information on Article 22(3)(c) of the RED:

Act XVIII of 2005 on District Heat Supply (hereinafter referred to as District Heat Supply Act) provides for the construction of district heat establishments and their equipment in case they are not located on public premises or are located on land owned by an entity other than the authorised operator.

Pursuant to Article 21(1) of the District Heat Supply Act, the establishment of cable rights or rights of use may be requested from the authority. The Authority may *establish cable rights* expressly *concerning the construction and operation of a district heat pipe system or a pipe forming part of the system* at the request of and to the benefit of the district heat service provider, provided that such construction work does not significantly obstruct normal use of the property. The establishment of cable rights *must be registered in the property register*.

Pursuant to the currently effective legislation district heat pipes can be constructed on third-party property upon request, under the specific decision of the competent authority (unless the construction concerns property other than public premises).

Various surveys and analyses are currently being carried out to analyse the potential of the individual regions regarding the use of renewable energy sources.