REPUBLIC OF BULGARIA

MINISTRY OF ENERGY

THIRD NATIONAL REPORT
ON BULGARIA'S PROGRESS IN THE PROMOTION AND USE OF ENERGY FROM RENEWABLE SOURCES

Drafted in accordance with Article 22(1) of Directive 2009/28/EC on the promotion of the use of energy from renewable sources

and in accordance with the

Template for Member State progress reports under Directive 2009/28/EC

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ACRONYMS

AUER	Agency for Sustainable Energy Development
RES	Renewable energy sources
HPP	Hydropower plant
VNDNBNIEVI	Second National Report on Bulgaria's Progress in the Promotion and Use of Energy from Renewable Sources
RS	Renewable sources
WPP	Wind power plant
DAMTN	State Agency for Metrological and Technical Surveillance
DKEVR	State Energy and Water Regulatory Commission
EU	European Union
ESO EAD	Electricity System Operator EAD
PP	Power plant
ZVAEIB	Renewable and Alternative Energy Sources and Biofuels Act
ZE	Energy Act
ZEE	Energy Efficiency Act
ZEVI	Energy from Renewable Sources Act
ZID	Act Amending and Supplementing
KEVR	Energy and Water Regulatory Committee
EERECL	Energy Efficiency and Renewable Energy Credit Line
SHPP	Small hydropower plant
ME	Ministry of Energy
MZH	Ministry of Agriculture and Food
MOSV	Ministry of Environment and Water
NEK	National Electric Company
NPDEVI	National Renewable Energy Action Plan
NSI	National Statistical Institute
EIA	Environmental Impact Assessment
OP	Operational Programme

PSHPP	Pumped storage hydropower plant
PG	Greenhouse gases
AAUs	Assigned amount units
RIOSV	Regional Inspectorate for the Environment
OEA	Opinion on environmental assessment
V	Medium voltage
ETS	Emissions Trading Scheme
PPP	Photovoltaic power plant
FEEVI	Energy Efficiency and Renewable Sources Fund

UNITS OF MEASUREMENT

Y	year
BGN	leva
GJ	gigajoule
MJ	megajoule
MW	megawatt
MWh	megawatt-hour
GWh	gigawatt-hour
ha	hectare
ktoe	tonne oil equivalent
kW	kilowatt
m^3	cubic metre

1. Sectoral and overall shares and actual consumption of energy from renewable sources in the preceding two years (2013 and 2014) *(Article 22(1) of Directive 2009/28/EC)*

In the Second National Report on Bulgaria's Progress in the Promotion and Use of Energy from Renewable Sources (VNDNBNIEVI), the Republic of Bulgaria reported attainment of the mandatory national target of a 16 % share of renewable energy in the gross final energy consumption for 2020. In 2013 and 2014, the share of renewable energy continued to increase reaching a share of 19 % and 18 % of the gross final consumption of energy.

The shares of RE in 2013 (5.6 %) and 2014 (5.3 %) in the transport sector exceed the target shares for these two years set out in the National Renewable Energy Action Plan (NPDEVI, 3.3 % for 2013 and 4.5 % for 2014) and are close to the estimated 5.8 % share of renewable energy in the transport sector for 2015.

The distribution of renewable energy by sectors is presented in Table 1 for the period 2009–2014. The data have been updated in accordance with Article 22(4) of Directive 2009/28/EC on the promotion of the use of energy from renewable sources (Directive 2009/28/EC).

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

	2009	2010	2011	2012	2013	2014
RES-H&C (%)[2]	21.7 %	24.4 %	24.9 %	27.5 %	29.2 %	28.3 %
RES-E (%)[3]	11.3 %	12.7 %	12.9 %	16.1 %	18.9 %	18.9 %
RES-T (%)[4]	0.5 %	1.0 %	0.4 %	0.3 %	5.6 %	5.3 %
Overall RES share (%)[5]	**12.2 %**	**14.1 %**	**14.3 %**	**16.1 %**	**19.0 %**	**18.0 %**

[1] Facilitates comparison with Table 3 and Table 4a of the NPDEVI.
[2] 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 the NPDEVI is used.
[3] Share of renewable energy, used for 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 NPDEVI is used.
[4] Share of renewable energy in transport: final energy from renewable sources consumed in transport (as defined in Article 5(1)(c) and 5(5) of Directive 2009/28/EC 2009/28/EC), divided by the total consumption in transport of: 1) petrol; 2) diesel fuel; 3) biofuels used in road and railway transport and 4) electricity used in land transport (as reflected in row 3 of Table 1 of the NPDEVI). The same methodology as in Table 3 of the NPDEVI is used.
[5] Share of the renewable energy in the gross final consumption of energy. The same methodology as in Table 3 of the NPDEVI is used.

	2009	2010	2011	2012	2013	2014
Of which share of renewable energy generated under the cooperation mechanisms (%)[6]	0	0	0	0	0	0
Surplus for cooperation mechanism (%)[7]	0	0	0	0	0	0

***Source**: The table uses assessments of the NSI submitted to the ME prior to their official publication.*

In 2013 and 2014 the gross final consumption of RES energy was 1 846.1 ktoe and 1 806.5 ktoe, respectively. In the period under review, 2013–2014, compared to the preceding period (2011-2012), the gross final consumption of RES energy increased by 16.7 %. This is due to the electricity and transport sectors, where the use of RES energy increased.

[6] In percentage point of overall RES share.
[7] In percentage point of overall RES share.

Table 1a. *Calculation table for the renewable energy contribution of each sector to final energy consumption (ktoe)*[8]

	2009	**2010**	**2011**	**2012**	**2013**	**2014**
(A) Gross final consumption of RES for heating and cooling	811.5	974.3	1 043.3	1 122.0	1 142.5	1 087.3
(B) Gross final consumption of electricity from RES	354.8	403.1	430.1	523.2	594.2	602.2
(C) Gross final consumption of energy from RES in transport	10.2	19.2	6.0	5.1	109.4	117.0
(D) Gross total RES consumption[9]	**1 176.6**	**1 396.7**	**1 479.4**	**1 650.2**	**1 846.1**	**1 806.5**
(E) Transfer of RES to other Member States	0	0	0	0	0	0
(F) Transfer of RES from other Member States and 3rd countries	0	0	0	0	0	0
(G) RES consumption adjusted for target (D)-(E)+(F)	0	0	0	0	0	0

Source*: The table uses assessments of the NSI submitted to the ME prior to their official publication.*

In the reporting period 2013–2014 the new facilities for the production of electricity from RES put into operation increased by 55 MW in 2013, compared to 2012, and by 45 MW in 2014, compared to 2013. In accordance with the requirements of Directive 2009/28/EC, the production of electricity from water and wind plants was normalised. The electricity generated from RES in 2014 amounts to 7 075.2 GWh, which is a 15.2 % increase compared to 2012. In 2014, production by biomass plants increased more than threefold, the production from photovoltaic plants grew by 54 % and from wind plants by 25 %.

[8] Facilitates comparison with Table 4a of the NPDEVI.
[9] According to Article 5(1) of Directive 2009/28/EC gas, electricity and hydrogen from renewable energy sources shall only be considered once. No double counting is allowed.

Table 1b. *Total actual contribution (installed capacity, gross electricity generation) from each renewable energy technology in the Republic of Bulgaria to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity*[10]

	2009		2010		2011		2012		2013		2014	
	MW	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**
Hydro[11]	**3 001**	**3 913**	**3 048**	**4 102**	**3 108**	**4 113**	**3 181**	**4 225**	**3 203**	**4 277**	**3 219**	**4 321**
non pumped	1 988	2 846	2 035	3 248	2 095	3 551	2 168	3 926	2 190	4 017	2 206	4 103
<1 MW	40	71	49	101	47	106	61	146	64	156	67	171
1 MW–10 MW	201	371	224	469	226	509	249	601	251	605	264	674
>10 MW	1 747	2 820	1 762	3 112	1 822	3 367	1 858	3 600	1 875	3 670	1 875	3 666
pumped	864		864		864		864		864		864	
mixed (with and without pump accumulation)[12]	149	416	149	434	149	431	149	421	149	413	149	409
Geothermal	**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**
Solar	**2**	**3**	**25**	**15**	**154**	**101**	**1 013**	**814**	**1 020**	**1 361**	**1 026**	**1 252**
photovoltaic	2	3	25	15	154	101	1 013	814	1 020	1 361	1 026	1 252
concentrated solar power	0	0	0	0	0	0	0	0	0	0	0	0
Tide, wave, ocean	0	0	0	0	0	0	0	0	0	0	0	0
Wind	**333**	**278**	**488**	**604**	**541**	**802**	**677**	**1 039**	**683**	**1 220**	**700**	**1 301**
onshore												

[10] Facilitates comparison with Table 10a of the NPDEVI.
[11] Normalised in accordance with Directive 2009/28/EC and Eurostat methodology.
[12] In accordance with new Eurostat methodology.

	2009		2010		2011		2012		2013		2014	
	MW	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**	**MW**	**GWh**
offshore												
Biomass[13]	**9**	**7**	**10**	**35**	**11**	**56**	**14**	**66**	**34**	**112**	**40**	**201**
solid biomass	6	6	6	20		37	14	65	30	95	30	139
biogas	3	2	4	16	5	19	0	1	4	17	10	62
bio liquids	0	0	0	0		0	0	0	0	0	0	0
TOTAL	**3 345**	**4 202**	**3 571**	**4 756**	**3 814**	**5 072**	**4 885**	**6 144**	**4 940**	**6 970**	**4 985**	**7 075**
of which in CHP		7		35		56		66		110		182

***Source**: The table uses assessments of the NSI submitted to the ME prior to their official publication.*

The solid biomass is an RS with the broadest application in the Heat Energy and Cooling Energy sector and its share in the consumption of RES energy in this sector is around 90 %. A positive trend is the increase in the use of timber, dump renewable and plant waste, primarily used for energy production in industry and agriculture. The use of solar energy and energy from heat pumps is also gradually increasing. In the period 2013–2014, the use of solar energy increased by 33 % on average and the use of energy from heat pumps increased by 46 %, compared to the previous reporting period 2011–2012.

[13] Take into account only those complying with applicable sustainability criteria, cf. Article 5(1) of Directive 2009/28/EC last subparagraph.

Table 1c. *Total actual contribution (final energy consumption[14]) from each renewable energy technology in the Republic of Bulgaria to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in heating and cooling (ktoe)[15]*

	2009	**2010**	**2011**	**2012**	**2013**	**2014**
Geothermal (excluding low temperature geothermal heat in heat pump applications)	33	33	33	33	33	33
Solar	0	10	14	15	19	20
Biomass[16]	741	884	944	1 005	1 010	963
solid biomass	741	883	943	1 005	1 010	961
biogas	0	1	1	0	1	2
bioliquids	0	0	0	0	0	0
Renewable energy from heat pumps:	32	38	42	47	64	65
of which aerothermal	0	0	0	0	0	0
of which geothermal	0	0	0	0	0	0
of which hydrothermal	0	0	0	0	0	0
TOTAL	**806**	**964**	**1 033**	**1 101**	**1 127**	**1 081**
Of which DH[17]						
Of which biomass in households[18]	653	711	747	759	750	733

Source*: The table uses assessments of the NSI submitted to the ME prior to their official publication.*

The Second National Report on Bulgaria's Progress in the Promotion and Use of Energy from Renewable Sources did not report on the consumption of biofuels in the Transport sector due to the later adoption of the legislation regulating the requirements for the criteria for sustainability of biofuels and bioliquids. After the entry into force of the Regulation on the Criteria for Sustainability of Biofuels and Bioliquids at the beginning of 2013 (SG No 95 of

[14] Direct use and district heat as defined in Article 5(4) of Directive 2009/28/EC.
[15] Facilitates comparison with Table 11 of the NPDEVI.
[16] Take into account only those complying with applicable sustainability criteria, cf. Article 5(1) last subparagraph of Directive 2009/28/EC.
[17] District heating and / or cooling from total renewable heating and cooling consumption (RES-DH).
[18] [18] From the total renewable heating and cooling consumption.

4 December 2012, effective from 4 January 2013), the consumption of RES energy in the Transport sector increased considerably in 2013 and 2014, up to 110.9 ktoe in 2013 and 119.5 ktoe in 2014, respectively.

Table 1d: *Total actual contribution from each renewable energy technology in the Republic of Bulgaria to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the transport sector (ktoe)*[19,20]

	2009	2010	2011	2012	2013	2014
Bioethanol (bio-ETBE)	**0.0**	**0.0**	**0.0**	**0.0**	**8.4**	**14.8**
of which biofuels[21] *Article 21(2)*	0.0	0.0	0.0	0.0	0.0	0.0
of which imported[22]	0.0	0.0	0.0	0.0	0.6	1.6
Biodiesel	**3.7**	**13.4**	**0.0**	**0.0**	**95.9**	**95.9**
of which biofuels[23] *Article 21(2)*	0.0	0.0	0.0	0.0	0.0	0.0
of which imported[24]	0.0	0.0	0.0	0.0	89.4	59.2
Hydrogen from renewables	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Renewable electricity	**8.1**	**7.5**	**8.0**	**6.1**	**6.6**	**8.8**
of which road transport	2.7	2.8	3.4	1.7	2.4	4.4
of which non-road transport	5.4	4.7	4.6	4.4	4.2	4.4
Others (as biogas, vegetable oils, etc.) — please specify	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
of which biofuels[25] *Article 21(2)*	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**11.8**	**20.9**	**8.0**	**6.1**	**110.9**	**119.5**

Source: *The table uses assessments of the NSI submitted to the ME prior to their official publication.*

[19] For biofuels take into account only those compliant with the sustainability criteria, cf. Article 5(1) last subparagraph.
[20] Facilitates comparison with Table 12 of the NPDEVI.
[21] Biofuels that are included in Article 21(2) of Directive 2009/28/EC.
[22] From the whole amount of bioethanol / bio-ETBE.
[23] Biofuels that are included in Article 21(2) of Directive 2009/28/EC.
[24] From the whole amount of biodiesel.
[25] Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

2. Measures taken in the preceding 2 years (2011 and 2012) 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 your National Renewable Energy Action Plan. *(Article 22(1)(a) of Directive 2009/28/EC)*

Table 2: Overview of all policies and measures

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
Existing measures under Article 5 of the NPDEVI					
1. Feed-in tariffs for electricity produced from renewable sources (FiT)	Financial	Energy generated (ktoe)	Investors	Existing*	Started in 2007. The measure is effective but changes were implemented during the reporting period. They are presented in item 2a of the Third National Report of Bulgaria for the Promotion of the Use of Energy from Renewable Sources (Third National Report). As of 27 July 2015 its application was limited to: - small energy sites, set out in items 1 and 3 of Article 24 of the ZEVI.
2. Obligatory and priority connection of producers of electricity from renewable sources to the grid	Regulatory	Energy generated (ktoe)	Investors	Existing**	Started in 2007. The ZEVI, adopted in 2011, introduced a new approach.
3. Payment only of the direct costs of connection to the grid	Regulatory	Installed capacity (MW/year)	Investors	Existing**	Started in 2011. The measure is effective. No deadline.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
4. Long-term contract for the purchase of electricity generated from RES	Regulatory	Electricity generated energy (ktoe)	Investors	Existing*	Started in 2007. The measure is effective but changes were implemented in the reporting period. They are presented in item 2a of the Third National Report. Since 27 July 2015, its implementation has been limited to only small energy sites under items 1 and 3 of Article 24 of the ZEVI.
5. Obligatory purchase of electricity produced from renewable sources, except for RS of HPPs with installed capacity over 10 MW.	Regulatory	Energy generated (ktoe)	Investors	Existing**	In the period 2007 – May 2011, in accordance with the ZVAEIB. The measure is effective but changes were implemented in the reporting period. They are presented in item 2a of the Third National Report. Since 27 July 2015 its implementation has been limited to only small energy sites under items 1 and 3 of Article 24 of the ZEVI.
6. Penalty payments in the event of curtailment of production due to the network operator's fault	Financial	Energy generated (ktoe)	Investors	Existing**	Started in May 2011. The measure is effective.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
7. Compensation mechanism for the costs of the Public Supplier and Public Retailers of purchasing electricity from renewable sources at feed-in prices	Regulatory	Energy generated (ktoe)	Operators of grids, investors and consumers	Existing*	From 1 July 2012 to 30 June 2013, the costs were compensated in accordance with the Methodology for Compensation of Costs of the Public Supplier and the Public Retailers, stemming from the public service obligation imposed on them for the purchase at preferential prices of electricity generated from RS and co-generation of heat and electricity. Since 1 August 2013 the costs have been compensated in accordance with the Methodology for Compensation of Costs under Article 35 of the Energy Act (ZE) and for the Distribution of These Costs among End Clients Connected to the grid. Since 1 August 2013 a Mechanism for Application of the Adopted Methodology for Compensation of the Costs of NEK EAD for Purchased RES Electricity under Feed-in Tariff has also been applied.
8. Licensing procedures for producers of electricity from renewable sources with installed capacity over 5 MW	Regulatory	Energy generated	Producers	Existing*	The measure is effective. No deadline.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
9. Certificates of origin	Regulatory	Generated electricity from RS (ktoe)	Investors	Existing**	The measure is effective. The guarantees of origin are issued by the Agency for Sustainable Energy Development (AUER) in accordance with Regulation No RD-16-1117 of 14 October 2011 on the conditions and procedure for the issuing, transfer, revocation and recognition of guarantees of origin of energy from renewable sources.
10. Obligation of the persons placing on the market petroleum-derived liquid fuels for transport purposes to offer fuels for diesel and petrol engines blended with biofuels in the percentage terms laid down in the ZVAEIB and, currently, in the ZEVI	Regulatory	Production and use of biofuel (ktoe)	Investors, traders	Existing*	The ZEVI envisages a blending obligation, with a phased increase of the content of biocomponents in petroleum-derived liquid fuels, used in the Transport sector. -
11. Energy Efficiency and Renewable Energy Credit Line (EERECL)	Financial	Energy generated (ktoe)	Investors, end consumers (business)	Existing**	Funds have been provided through the credit line since 2004.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
12. Operational Programme Development of the Competitiveness of the Bulgarian Economy 2007–2013	Financial	Energy generated (ktoe)	Investors	Existing**	Measure launched in 2010. In the reporting period, procedures related to the improvement of energy efficiency and the use of RS in Bulgarian undertakings were implemented under the Operational Programme Development of the Competitiveness of the Bulgarian Economy 2007–2013. In the new programming period, funds will be provided under Operational Programme Innovations and Competitiveness 2014–2020.
13. Rural Development Programme, 2007–2013	Financial	Generation of energy from RS	Investors	Existing**	Measure launched in 2007. During the reporting period, procedures related to the improvement of energy efficiency and the use of RS were implemented under the Rural Development Programme. The measure is also effective for the new programming period 2014–2020.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
14. Operational Programme Environment	Financial	Electricity generation through utilisation of gas emissions (methane) from household waste dumps	Municipalities	Existing**	Measure launched in 2007. Funds for utilisation of waste and generation of RDF-fuels were extended under the Operational Programme Environment. No funding of projects in the field of energy from RS under Operational Programme Environment 2014–2020 is envisaged for the next programming period.
Measures planned under Table 5 (Annex 1) of the NPDEVI					
1. Establishment of an Agency for Sustainable Energy Development	Administrative	Installed capacity, generated and used energy from RS, behavioural change	Investors, energy undertakings, end consumers, planning authorities, associations and sectoral chambers, installation structures	Implemented***	The Agency was set up in 2011 under the ZEVI as a successor to the Energy Efficiency Agency.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
2. Elaboration of a geographical information system for Bulgaria	Soft	Installed capacity, energy generation	Investors, public administration, end consumers	Planned****	Establishment of an Information Platform for Interoperability of Spatial Data and Services for Use by the Public Administration and Citizens in Relation to RES Energy under Operational Programme. Administrative Capacity, priority axis III 'Quality Administrative Service Delivery and E-governance Development', Sub-priority 3.2. 'Standard Information and Communication Environment and Interoperability'. The project was completed in July 2014.
3. One-stop shops	Administrative	New installed capacity (MW/year)	Investors, end consumers	Implemented	A web-based system introduced by the AUER for on-line submission, registration and handling of applications and information regarding generation of energy from RS, guarantees of origin, transmission and distribution of electricity, production and use of biofuels. Started in July 2014. No deadline for implementation.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
4. Enhancing the administrative competence and capacity of officials responsible for authorisation and licensing	Administrative	Behavioural change	Authorities, Authorisation bodies (all levels)	Implemented***	Ongoing implementation; no deadline for Project 'Enhancing the institutional capacity of the AUER with a view to increasing the number and quality of services in the field of energy efficiency'. Programme BG04 'Energy Efficiency and Renewable Energy' under the Financial Mechanism of the European Economic Area 2009–2014 (FM of EEA) provides funds for strengthening the administrative capacity of experts of state institutions and municipalities with respect to measures for energy efficiency and renewable energy. Duration of the programme: until 30 April 2017.
5. Financing of projects for the production of energy from RS and energy efficiency	Financial	Installed capacity, energy generated and consumed, emissions savings	Investors, end consumers	Implemented***	Ongoing implementation; no deadline for application.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
6. Developing rules and using financial resources from the Emissions Trading Scheme	Financial	Installed capacity, energy generated and consumed, emissions savings	Investors, end consumers	Planned	Since 1 August 2013, a Mechanism for Application of the Adopted Methodology for Compensation of the Costs of NEK EAD for Purchased RES Electricity under Feed-in Tariff has been applied.
7. Enhancing the procedures for issuing authorisations and signing connection contracts	Regulatory	Installed capacity, energy generation	Electricity companies, investors	Implemented**	Started in 2011 – permanent. No deadline.
8. Support for construction new transmission and distribution infrastructure, in relation to the connection of new producers from RS: status of a national infrastructure site	Administrative and regulatory	New installed capacity (MW/year)	Investors, end consumers	Implemented***	Started in 2010 – permanent. No deadline.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
9. Competition between RS for energy generation	Regulatory	Installed capacity, energy generation	Electricity companies, investors	Planned***	A Bulgarian Independent Energy Exchange was set up with a view to the full liberalisation of the electricity market. It signed a cooperation agreement with the exchange operator Nord Pool Spot for the selection of a platform. Since 24 July 2015 all new producers of electricity should sell their electricity on the electricity market. The only exceptions are energy sites under items 1 and 3 of Article 24 of the ZEVI.
10. Assistance for the development of intelligent networks and accumulating facilities	Regulatory	Installed capacity (more effective integration)	Grid owners, Investors, end consumers	Existing*	Regulations for Management of the Grid were adopted in 2014 (SG No 6 of 21 January 2014), which envisage that the plans for the development of the electricity system are developed every two years in accordance with the development of the transmission and distribution grids, including intelligent networks, and the construction of regulating and accumulating facilities, related to the secure operation of the electricity system in the development of the production of energy from RS.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
11. Use of options for managing consumption and load reaction	Regulatory	Installed capacity (more efficient integration)	Research community, industry	Existing***	Regulations for Management of the Grid (SG No 6 of 21 January 2014). Regulations for Trade in Electricity (SG No 66 of 26 July 2013, effective from 26 July 2013, amended and supplements No 39 of 9 May 2014, No 90 of 20 November 2015, effective from 20 November 2015).
12. List of qualified installers	Regulatory	Behavioural change, energy generated	Installer organisations, end consumers, investors, authorisation bodies, financial organisations	Implemented***	The institutions licensed to provide vocational education and training under the ZPOO shall be obliged to submit a list of persons qualified to carry out the activities annually to the AUER.
13. Application or use of cost/benefit analysis	Indefinite, financial, regulatory	Improving the business environment	Investors, end consumers, planning authorities	Implemented***	Permanent. No deadline for application.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
14. Public awareness campaign, promoting RS	Indeterminate	Behavioural change	Installer organisations, end consumers, investors, authorising, bodies, financial organisations	Existing****	2012 – permanent. No deadline.
15. List of facilities for generating energy from RS	Informational	Behavioural change	Investors, end consumers, public administration	Existing**	Started in 2012. The AUER maintains an electronic register of the guarantees of origin and publishes data from it on its webpage, including data for the facilities. No deadline.
16. List with detailed current information on the investment interest and the condition of the administrative and licensing procedures	Informational	New installed capacity (MW/year)	Investors, end consumers	Implemented**	Started in 2011. Ongoing implementation; no deadline for application.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
17. Harmonisation of the Bulgarian legislation with the requirements of the amended Directive 2002/91/EC and of Directive 2009/28/EC, Directive 2009/29/EC, Directive 2009/30/EC.	Regulatory	Development and improvement of the legal framework for the implementation of the national policy for reducing greenhouse gas emissions	Construction, designers, public administration	Implemented	Ongoing implementation; no deadline for application. Legal documents, detailed in item 2a, were adopted in 2014.
18. Replacement of liquid fuels and electricity used for heating public buildings with biofuels and energy from RS	Regulatory and financial	ktoe	Energy suppliers, municipalities	Existing**	The measure is permanent. No deadline.
19. Mandatory use of RS in new buildings	Legislative	ktoe	Investors, construction, designers, end consumers, public administration	Existing**	The measure has been introduced by the Energy Efficiency Act (ZEE) and the ZEVI. No deadline.
20. Funding of projects under FEEVI	Financial	ktoe	End consumers	Existing**	The measure is permanent. No deadline.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
21. Promotion of the use of individual systems for generating energy from RS	Financial	New installed capacity (MW/year)	Investors, end consumers, public administration	Implemented**	The measure was introduced by the ZEVI and the ZEE. No deadline.
22. Aid scheme for heat generation and cooling from RS in industry	Financial, regulatory	Behavioural change, installed capacity (MW/year), energy generated (ktoe)	Investors, end consumers, public administration	Proposed	Programme BG04 'Energy Efficiency and Renewable Energy' under FM of EEA provides funds for the implementation of projects, involving measures for energy efficiency and renewable energy. Duration of the programme: until 30 April 2017.
23. Aid scheme for heat generation from RS in residential and public buildings	Financial, regulatory	Behavioural change, installed capacity (MW/year), energy generated (ktoe)	Investors, end consumers, public administration	Existing	The measure is permanent. No deadline.
24. Programme for Financial Incentives for the Use of Non-District Heating	Financial	ktoe	Investors	Planned	2013: permanent. No deadline.
25. Tax incentives for investment in the production of energy from RS for household consumption	Financial	ktoe	End consumers	Existing**	The measure was introduced in 2009 (Local Taxes and Fees Act). No deadline.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
26. Elaboration of assessment procedures, requiring mandatory marking of equipment used for the incineration of biomass	Regulatory, financial	ktoe	Energy suppliers	Implemented**	The measure was introduced in 2012. The marking is carried out in accordance with the Technical Requirements for Products Act, in accordance with the requirements for ecodesign. No deadline.
27. Gradual increase in the share of fuels from biomass in the Energy Aid Programme	Regulatory, financial	ktoe	Energy suppliers	Planned	The measure was introduced in 2012. No deadline.
28. Development of a Programme for Accelerated Switch of Public Transport Vehicles to Biofuels	Regulatory, financial	ktoe	Energy suppliers	Implemented**	The ZEVI regulates obligations on local authorities to adopt programmes for the promotion of the use of energy from RS and biofuels. Ongoing implementation; no deadline for application.
29. Biofuels quality control system	Regulatory, financial	ktoe	Energy suppliers	Existing**	The measure was initially introduced by the ZVAEIB in 2007 and updated under the ZEVI in 2011. No deadline.
30. Programme for the Promotion and Introduction of Electric Cars	Indeterminate	Installed capacity (more efficient integration)	Research community, industry	Implemented***	National Action Plan for the promotion of the manufacturing and accelerated introduction of environmentally friendly vehicles, including electric mobility in Bulgaria in 2012–2014.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
Measures implemented in the reporting period in addition to those given in Table 5 of the NPDEVI					
1. National Waste Management Plan 2014–2020 (adopted in 2014)	Regulatory/ informational	Defining future measures related to waste management.	Waste to energy	Complementary	The measure was implemented for the period 2013–2020.
2. Elaboration of a legal framework for regulating the management of bio-waste in the country	Regulatory/ informational	Storage and rational use of natural resources through an increase in the volume of recycled and utilised bio-waste.	Production of gaseous fuel, generated from biomass and/or from biodegradable fractions of waste.	Complementary	Started in July 2013. No deadline.
3. Development of a single concept for the treatment of the sludge from urban waste water treatment plants	Regulatory/ informational	Sustainable national management of sludge from waste water treatment plants in the country	Generation of gaseous fuel from waste water treatment plants	Complementary	The measure was implemented for the period 2013–2014.

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	Existing or planned	Start and end dates of the measure
4. Application of possibilities for financing projects for reduction of greenhouse gas emissions through the National Scheme for Green Investments (NSGI)	Financial	Financing projects for generating energy from RS	Financing of projects for generating energy from RS	Complementary	NSGI was developed in 2010. Ongoing implementation; no deadline for application.
5. National Trust EcoFund (NDEF)	Financial	Reducing greenhouse gas emissions	Generating heat from waste and electricity from wind energy	Existing	Funds are extended within this measure to finance activities for energy efficiency and renewable energy sources. Ongoing implementation; no deadline for application.

* The measure features in Table 5 of the NPDEVI as 'Existing' and has not been changed in the reporting period;
** The measure features in Table 5 of the NPDEVI as 'Existing' and has not been changed in the reporting period compared to the previous reporting period;
*** The measure features in Table 5 of the NPDEVI as 'Planned' and became effective in the reporting period;
**** The measure features in Table 5 of the NPDEVI as 'Planned' and its implementation began in the reporting period. It is an ongoing measure.

2.a Please describe the progress made in evaluating and improving administrative procedures to remove regulatory and non-regulatory barriers to the development of renewable energy. *(Article 22(1)(e) of Directive 2009/28/EC)*

The Energy from Renewable Sources Act (ZEVI) was adopted in 2011. It regulates the generation and consumption of energy from RS with the aim of creating conditions which allow the national targets for the share of energy from RS in final gross energy consumption to be achieved.

Due to the highly favourable conditions for investments in the electricity sector laid down in the ZEVI and the preceding Renewable and Alternative Energy Sources and Biofuels Act (ZVAEIB), there was a gross increase of the production of this type of energy in Bulgaria (mostly solar and wind energy) in the recent years.

The purchase of large amounts of electricity from RS at feed-in prices has serious adverse social and economic consequences, which prompted the implementation of a number of legislative and regulatory measures.

It was also necessary to undertake urgent actions for overcoming obstacles in the electricity sector related to the management of the electricity system, to ensuring a balance between production and consumption, the export of electricity and the trending increase in the prices of electricity for end consumers. At the same time, to facilitate the effective integration of generating facilities using RS, which have grown significantly in number, it is necessary to invest in the development of power grids and introduce new technologies when constructing intelligent networks, regulating facilities, modern accumulating systems and communication systems, etc.

The following more important changes were made in the ZEVI in 2013 and 2014:

1. **Amendments to the ZEVI through the Act Amending and Supplementing the Energy Act (SG No 59 of 5 July 2013, effective from 5 July 2013)**

The changes adopted regulate an obligation of the DKEVR to develop a methodology for the distribution of costs across all end clients connected to the country's electricity system arising from the obligatory purchase of electricity from RS at feed-in prices.

This text amends the preceding text of item 2 of Article 2 of the ZEVI regulating the obligation of the DKEVR to develop a methodology for fair distribution of the difference between the market and the feed-in prices of electricity generated from RS across all consumers, including

traders of electricity, with respect to exported volumes.

2. Amendment and supplement of the ZEVI through the 2014 National Budget of the Republic of Bulgaria Act (SG No 109 of 20 December 2013, effective from 1 January 2014)

The above amendments and supplements, as proposed by a group of MPs, were elaborated during consideration of the National Budget Bill by the Budget and Finance Committee of the 42nd National Assembly.

Paragraph 6 of the 2014 National Budget of the Republic of Bulgaria Act envisaged the development of Section V 'Fees for Electricity Generation from Wind and Solar Energy' within Chapter Four of the ZEVI, consisting of articles 35a to 35c. The provisions introduced regulate the obligation for paying charges for the generation of electricity from wind and solar energy, the mechanism for determining the fees, their charging and submission, and the consequences of the failure to submit them on time.

By Judgement No 13 of 31 July 2014 delivered under constitutional case 1/2014, the Constitutional Court declared the following items of the ZEVI to be unconstitutional: items 2 and 3 of § 6 of the Final Provisions of the National Budget for 2014 Act creating Article 35a(1), (2) and (3), Article 35b(1), (2), (3) and (4), Article 35c(1), (2) and (3) and Article 73(1), (2), (3) and (4).

After Judgement No 13 of 31 July 2014 entered into force, the collection of charges under Article 35a and adherence to the ZEVI were terminated.

3. Act Amending the ZEVI (SG No 33 of 11 April 2014).

In order to reduce the administrative burden, the requirements for the State Agency for Metrological and Technical Surveillance (DAMTN) to maintain a register of the persons installing, maintaining, and restructuring facilities on energy sites with a total installed capacity up to 30 kW and up to 200 kW on roofs and facades in urbanised territories were lifted.

4. Act Amending and Supplementing the ZEVI (SG No 17 of 6 March 2015, effective from 6 March 2015)

The adopted amendments and supplements to the ZEVI provide that incentives for mandatory purchase of generated electricity at feed-in prices and under long-term contracts shall not

apply to energy sites producing electricity from RS which were put into operation after the law entered into force. Exceptions are made for small sites with a total installed capacity 30 kW or less which are planned to be built on roofs and facades of manufacturing units and warehouses, connected to the electricity transmission and electricity distribution grids in urbanised territories (sites under item 1 of Article 24 of the ZEVI) and sites for co-generation and indirect use of biomass which are planned to be built in urbanised territories, farms or production zones and which have an installed power capacity of up to:

- 1.5 MW and use biomass, of which the overall weight of manure is at least 60 % (sites under Article 24(3)(a) of the ZEVI);

- 500 kW and use biomass from plant waste from their own farming production (sites under Article 24(3)(b) of the ZEVI).

5. Amendments to the ZEVI (SG No 35 of 15 May 2015, effective from 15 May 2015) through the Energy Efficiency Act

These amendments delay the obligation of persons releasing petroleum-derived liquid fuels onto the market to continue to gradually increase the bio-component percentage of the fuel. It is envisaged that in the period from 1 March 2015 to 1 September 2018 the fuel for petrol engines should contain a bio-component of at least 7 per cent volume. After this date the increase of the percentage share will increase as follows:

- as of 1 September 2018: fuel for petrol engines will have a minimum content of 8 per cent volume of bioethanol or ethers produced from bioethanol;

- as of 1 March 2019: fuel for petrol engines will have a minimum content of 9 per cent volume of bioethanol or ethers produced from bioethanol;

6. Amendments to the ZEVI (SG No 56 of 24 July 2015, effective from 24 July 2015 through the Act Amending and Supplementing the Energy Act (ZID ZE)

These amendments envisage that the Public Supplier and Public Retailers will purchase electricity from RS at a preferential price up to a volume of electricity which will guarantee revenues for RES producers in accordance with the price formation elements set in the feed-in tariff. The requirement does not apply to sites under item 3 of Article 24 of the ZEVI.

Under this amendment of the ZEVI, there was an additional reduction in the timeframe within

which preferences for certain categories of generation of energy from RS remained into force. Therefore, preferences were kept only for sites with an installed capacity 30 kW or less which are planned to be built on roofs and facades of manufacturing units and warehouses and the sites for the production of electricity from biomass under item 3 of Article 24 of the ZEVI to be put into operation by 1 July 2016.

In accordance with §18, paragraph 1 of the Transitional and Final Provisions of the ZID ZE, producers of electricity from RS through energy sites, which are built with funds under a national or EU aid scheme and for which the aid applications had been submitted by the entry of the ZEVI into force, will have their electricity purchased through a group pricing structure set by KEVR under the Regulation on Electricity Prices and last determined by a KEVR decision by the date these changes enter into force.

7. Legal Framework for implementing the national policy for the reduction of greenhouse gas emissions:

- **Reduction of Climate Change Act (SG No 22 of 11 March 2014, effective from 11 March 2014, amended SG No 14 of 20 February 2015, supplemented No 17 of 6 March 2015, effective from 6 March 2015, amended and supplemented No 41 of 5 June 2015, amended No 56 of 24/07/2015, effective from 24/07/2015)**

The Reduction of Climate Change Act has provided an overall legal framework for the public relations regarding the implementation of the policy on climate change by determining the competent authorities, implementing climate policy, and regulating their powers. The law also determines the private legal entities with rights and obligations under the different procedures and main activities and processes through which the Republic of Bulgaria fulfils its obligations in the area of climate change at international and EU level.

- **Regulation on the conditions and procedure for issuing and reviewing permits for greenhouse gas emissions from plants and for operators monitoring plants and air operators participating in the EU Emissions Trading Scheme (SG No 74 of 5 September 2014, effective from 5 September 2014)**

- **Regulation on the conditions, procedure and method for drafting reports, for verifying reports on plants operators and air operators, and for drafting applications from new participants (SG No 75 of 9 September 2014, effective from 9 September 2014);**

- **Regulation on the conditions and procedure for administering the National Register of Greenhouse Gas Emission Allowance Trading (SG No 74 of 5 September 2014, effective from 5 September 2014);**

- **Regulation on the conditions and procedure for organising national inventories of emissions of harmful substances and greenhouse gases in the atmosphere (SG No 74 of 5 September 2014, effective from 5 September 2014).**

Development and improvement of the legal framework for the implementation of the national policy for reducing greenhouse gas emissions in accordance with the obligations of the Republic of Bulgaria, arising from European law and the country's international commitments.

The adopted Reduction of Climate Change Act and the relevant secondary legislation regulated the organisation of and participation in the auctions of allowances of greenhouse gas emissions from plants and aviation activities within the EU Emissions Trading Scheme as well as activities related to the reduction of climate change which can be financed by revenues received, including activities for the development of RES. At the same time, amendments to the Energy Act (Article 35(5) and (6)) and the Energy Efficiency Act (Article 58(2)), adopted in 2013, envisage that the proceeds from the sale of greenhouse gas emission allocations be used for compensation of the costs arising from the public service obligations for public suppliers to purchase electricity from RS at preferential prices. As a consequence, in 2013 and 2014, the proceeds from the auction sale of greenhouse gas emission allowances were allocated to the Ministry of Energy as compensation for the additional costs to the public supplier, NEK EAD, incurred by the purchase of green energy generated from RS at feed-in prices.

8. Policy in the field of waste management

- **National Plan on Waste Management 2014–2020 (adopted in 2014).**

The National Plan lays down future measures for the prevention of waste generation, the promotion of recycling, the reuse and environmentally-friendly disposal of waste and more efficient use of resources, the development of sustainable systems of management of specific waste flows, and the promotion of investments and activities related to waste management.

With a view to promoting the utilisation of the energy potential of waste, facilities for composting and digestion of biodegradable waste and facilities for household waste utilisation are to be built in order to reduce and prevent greenhouse gas emissions (capture of landfill gas).

- **Elaboration of a legal framework for regulating the management of bio-waste in the country**

The following regulations were adopted in the reporting period: regulations for the treatment and separate collection of bio-waste (2013) and instructions for laying down national technical specification for bio-waste treatment facilities (composting and digestion), control and on-the-spot checking of the facilities and enforcement of the legal requirements related to bio-waste management (2014).

- **Development of a single concept for the treatment of sludge from urban waste water treatment plants**

2014 saw the adoption of a National Strategic Plan for the Management of Sludge from Urban Waste Water Treatment Plants (WWTP) on the Territory of the Republic of Bulgaria for the period 2014–2020 as well as the elaboration of recommended procedures for the WWTP operators for disposal of sludge from WWTP and technical guidelines for the treatment of sludge from city WWTP with a view to adopting the best available techniques (BAT).

The purpose is to achieve a national strategy for the sustainable management of the sludge from WWTP which will result in the prevention of risks to the environment and people's health as well as the provision of an energy source and a valuable resource for improving the quality of soils and recultivation of disturbed terrains.

- **Adoption of new and amendment to existing legal and administrative acts in 2013 and 2014:**

- Regulation No 3 of 21 March 2013 on the licensing of energy activities (SG No 33 of 5 April 2013).

- Regulation on the Regulatory Control of Electricity Prices (SG No 17 of 2 March 2004, amended SG No 62 of 31 July 2007, amended and supplemented SG No 42 of 5 June 2012, repealed SG No 33 of 5 April 2013, repealed SG No 38 of 23 April 2013;

- Regulations on the Management of the Electricity System (SG No 6 of 21 January 2014);

- Regulations for Trade in Electricity (SG No 66 of 26 July 2013, effective from

26 July 2013, amended and supplemented SG No 39 of 9 May 2014, No 90 of 20 November 2015, effective from 20 November 2015);

– Methodology for Compensation of Costs under Article 35 of the ZE and the Distribution of These Costs among End Clients Connected to the Grid, adopted by a decision under item 3 of DKEVR Protocol No 110/18.07.2013;

– DKEVR Decision No Ts-19 of 28 June 2013 on the determination as of 1 July 2013 of feed-in prices for the purchase of electricity generated from RS and from hydropower plants with an installed capacity up to 10 MWt before VAT;

– DKEVR Decision No Ts-20 of 28 June 2013 on the determination as of 1 July 2013 of prices for the purchase of electricity generated from RS where the investment for the construction of the energy site is supported by funds under a national or EU aid scheme;

– DKEVR Decision No EM-02 of 28 June 2013 regarding approval of planned electricity facilities which may be made available for connection via the electricity transmission and distribution grids to sites for the generation of electricity from RS by regional connection and voltage levels from 1 July 2013 to 30 June 2014. The decision was published on the DKEVR webpage on 28 June 2013;

– DKEVR Decision No Ts–13 of 1 July 2014 on the determination of feed-in prices for the purchase of electricity generated from RS and hydropower plants with an installed capacity up to 10 MWt;

– DKEVR Decision No Ts–14 of 1 July 2014 on the determination of prices as of 1 July 2014 for the purchase of electricity, generated from RS where the investment for construction the energy site is supported by funds under a national or EU aid scheme;

– DKEVR Decision No EM–03 of 1 July 2014 regarding the approval of the planned electricity facilities which may be made available for connection via the electricity transmission and distribution grids to sites for the generation of electricity from RS by regional connection and voltage levels from 1 July 2014 to 30 June 2015.

2.b Please describe 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. *(Article 22(1)(f) of Directive 2009/28/EC)*

The generation and consumption of electricity from RS are regulated by the ZEVI and are detailed in the Second National Report on Bulgaria's Progress in the Promotion and Use of Energy from Renewable Sources.

Energy sites of producers with signed preliminary contracts and contracts for the connection of energy sites for the production of electricity from RS as well as sites under Article 24 of the ZEVI were connected to the electricity transmission and distribution grids in the reporting period.

The high number of planned investments for the construction of sites for the production of electricity from RS prompted amendments to the ZEVI (§ 18 of PRZ to the ZID ZEVI, SG No 29 of 2012, effective from 10 April 2012) envisaging rescheduled timetables for the connection of these sites to the electricity transmission and distribution grids. The timetables for connecting energy sites under signed preliminary connection contracts cover an extended period to 2018.

In accordance with Article 28(1) of the ZEVI and in order to satisfy the objectives and measures set out in the NPDEVI, the annual investment and maintenance programmes of electricity transmission and distribution grid operators shall include funds for the development of the grids with respect to the connection, transmission and distribution of electricity produced from renewable sources .

Considerable investment is required by the operators of the transmission and distribution undertakings in order to accommodate the rapid increase of installed capacities from RS.

In the period 2013–2014 restrictions were imposed on producers from North-eastern Bulgaria, connected to the Dobrich Ring of the electricity system and biannual reports were drafted and submitted to the DKEVR in accordance with Article 30(7) of the ZEVI and Article 57 of Regulation No 3 of 21 March 2013.

In order to overcome the restrictions on the producers of electricity from RS in North-eastern Bulgaria, measures were undertaken to develop the electricity transmission grid in the region. A new 110 kV nodal station 'Mayak' was built for this purpose, the 110/20 kV substation

'Kavarna' was rehabilitated as well as a new double 110 kV power transmission line 'Belgun–Senokos' with a section of ASO 400 conductors connecting the 110 kV nodal station 'Mayak' with the 400/110 kV substation 'Dobroudzha'.

Restrictions on producers of electricity from RS were lifted in December 2014 as a result of the actions undertaken by ESO EAD and the 110 kV power transmission line 'Belgun–Senokos' coming on line.

The rehabilitation of the 110/20 kV substation 'Kavarna' and the construction of a new 110 kV nodal station 'Mayak' were carried out with financing attracted from the European Bank for Reconstruction and Development in the following ratio: 70 % from the Bank and 30 % from ESO EAD. The 110 kV double power transmission line 'Belgun–Senokos' was fully financed by ESO EAD. The costs incurred by ESO EAD for the development of the grid in the region of North-eastern Bulgaria in order to prevent restrictions on producers of electricity from RS totalled BGN 14 968 841.

While implementing their investment programmes for 2013 and 2014, the operators of the electricity distribution companies restructured and modernised the electricity transmission grid in order to provide a connection for sites belonging to RES producers.

The main activities performed included constructing new distribution facilities, restructuring and building kiosk switchgears to connect producers of electricity from RS, construction new medium-voltage (MV) cable lines (CpH), restructuring MV overhead power transmission line, installing equipment for remote reporting and remote control of the distribution of electricity, etc.

The total investment reported in 2013 by the electricity distribution companies in relation to the above activities stood at BGN 15 969 900 and BGN 3 591 700 in 2014.

The Regulations for Management of the Grid, adopted in 2014, (SG No 6 of 21 January 2014) laid down the procedures for planning the development of the transmission grid, the technical requirements for connection to the transmission grid, the procedures for using the transmission grid, the procedures for planning the operation of the electricity system, the procedures for real-time management of the electricity system, the activities of the transmission grid operator and the users of the transmission grid with respect to quality control of the operation of the electricity system and its testing procedures.

The Regulations stipulate that the plans for the development of the electricity system are

elaborated every two years in accordance with the development of the electricity transmission and distribution grids, including intelligent networks, and the construction of regulating and accumulating facilities, with respect to secure operation of the electricity system at the point at which electricity is generated from RS based on the following:

– New facilities are required for the generation of electricity under Article 4(2)(5) of the ZE in the interest of securing the electricity supply, for fulfilling the obligatory quota of RES energy in the gross final energy consumption, and in the interest of environmental protection and the promotion of new technologies when these targets cannot be met through market investment mechanisms;

– Aid schemes under Article 2(2)(4) of the ZEVI, for the development of the electricity transmission and distribution grids, including interconnectors of intelligent networks, and the construction of regulating and accumulating facilities for the secure operation of the electricity system as the development of RES energy generation continues.

3. Please describe the support schemes and other measures currently in place that are applied to promote energy from renewable sources and report on any developments in the measures used with respect to those set out in your National Renewable Energy Action Plan. *(Article 22(1)(b) of Directive 2009/28/EC)*

The utilisation of the potential of energy from RS in Bulgaria is stimulated by a system of measures: administrative, financial, regulatory and informational.

- **Administrative measures:**

The Second National Report on Bulgaria's Progress in the Promotion and Use of Energy from Renewable Sources provides information regarding the following effective administrative measures for the promotion of the use of energy from RS, which have been changed in compliance with the NPDEVI texts and which are still effective:

– Agency for Sustainable Energy Development;

– Arrangements for achieving a balance of responsibilities between the investor and the connecting company;
– Simplified procedures for investment projects depending on the installed capacity and the type of renewable sources used;
– Qualification requirements for installers.

During the reporting period, changes were made regarding the following administrative measures laid down in the NPDEVI:

– **One-stop shops:**

Since July 2014 the AUER has been administrating an Information Platform for Interoperability of Spatial Data and Services in relation to RES. The platform is implemented within a project, financed under Operational Programme Administrative Capacity, co-financed by the European Union through the European Social Fund. The information system consists of two main modules:
AUER portal: web-based system for on-line submission of:

- Applications for issuing and transfer of guarantees of origin of RES energy;
- Applications for issuing guarantees of origin of RES energy;
- Applications for transferring guarantees of origin of RES energy;
- Submission of three-month and annual information on the production, transmission

and distribution of electricity;

- Submission of three-month and annual information on the production of biofuels and bioliquids and information on the supply of biofuels on the Bulgarian market by distributors, persons importing from the EU and persons importing from third countries;

- Submission of three-month and annual information on the production of gas from RS.

The following items are maintained on the Information Platform: guarantees of origin of RES energy, information on sites and facilities by type of RS, administrative regions, municipalities, date put operation, etc.

AUER office: web-based system for registering and processing applications which allows registration of documents and applications for one-stop shop, automatic distribution of document processing tasks, a check of applications and three-month and annual information, generation of orders, automated maintenance of the register, etc.

– **Enhancing the administrative competence and capacity of officials responsible for authorisation and licensing;**

- **Project 'Enhancing the institutional capacity of the AUER with a view to increasing the quantity and quality of services in the field of energy efficiency'.**

In 2014, the AUER implemented a project ‘Enhancing the institutional capacity of the AUER with a view to increasing the quantity and quality of services in the field of energy efficiency'. The project was implemented with the financial support of Operational Programme Development of the Competitiveness of the Bulgarian Economy 2007–2013, Priority Axis 4 'Strengthening the international market positions of the Bulgarian economy, area of intervention 4.3. 'Improvement of the national quality infrastructure''.

The main project activities include:

– Drafting/performing analyses, surveys, assessments, studies, etc. in the field of energy efficiency, including defining the necessary legal and institutional preconditions for applying financial mechanisms;

- Elaboration and adoption of specialised methodologies for assessing energy savings;

- Organising and holding awareness campaigns to promote financial mechanisms in the field of energy efficiency, including the use of awareness and advertising materials;

- Drafting manuals/handbooks/guidelines for managing the energy efficiency of undertakings;

- Organising and holding seminars/training for managing the energy efficiency of undertakings, including seminars/training under BDS EN ISO 50001;

- Organising and holding specialised training of AUER employees to strengthen their capacity to apply financial mechanisms in the field of energy efficiency.

  - **Programme BG04 'Energy Efficiency and Renewable Energy' under FM of EEA 2009–2014;**

Procedure BG04-04-05: 'Training to strengthen the administrative capacity in relation to measures for energy efficiency and renewable energy', financed under Programme BG04 'Energy Efficiency and Renewable Energy' under FM of EEA 2009–2014: provides funding to strengthen administrative capacity of experts from the public institutions and municipalities in the country with respect to energy efficiency and renewable energy measures. Budget for Procedure BG04-04-05: over EUR 670 000.

Duration of the programme: to 30 April 2017.

- **Regulatory measures;**

During the reporting period, the following regulatory measures regarding relations between the countries participating in the production, transmission and distribution of energy from RS were changed in addition to items given in section 2:

- **Compensation mechanism for the costs incurred by the Public Supplier and Public Retailers when purchasing electricity from renewable sources at feed-in prices;**

In order to compensate for the costs incurred by the Public Supplier and the Public Retailers when purchasing energy at feed-in prices, the DKEVR (as it was then called) adopted the Methodology for Compensation of Costs incurred by the Public Supplier and the Public Retailers, stemming from the public service obligation imposed on them to purchase, at feed-

in prices, electricity, generated from RS and co-generation.

According to this Methodology, the undertaking uses the funds from the green energy surcharge on the price for transmission via the electricity transmission grid to reimburse the Public Supplier and the Public Retailers the costs incurred due to the obligation imposed on them when purchasing electricity from RS.

Under the amendments to the ZE (SG No 59 of 2013, effective from 5 July 2013), as of 1 August 2013, the financing of the preferential prices for the purchase of electricity from RS is guaranteed in accordance with Article 35(5) of the ZE, which provides that 'the manner of compensation for costs resulting from public obligations shall be determined by a methodology adopted by the DKEVR for allocation of these costs in a transparent manner among all end customers, including those using imported electricity, that are connected to the electric power grid and/or through another procedure provided for in law.' (Methodology for Compensation of Costs under Article 35 of the ZE and the Distribution of These Costs among End Clients Connected to the Grid, adopted by a decision under item 3 of DKEVR Protocol No 110/18.07.2013).

In accordance with Article 35(6) of the ZE and the above Methodology, the costs are compensated through:

- the price to end consumers buying electricity on the regulated market;
- 'the public service obligation price' paid by end consumers buying electricity at freely negotiated prices;
- proceeds from auctions of greenhouse gas emission allocations, laid down in the National Budget Act for 2013 and 2014.

Since 1 August 2013, a Mechanism for Application of the Adopted Methodology for Compensation of the Costs to NEK EAD for Purchased RES Electricity at Feed-in Prices has also been applied.

The Mechanism was elaborated in accordance with Article 36(6) of the ZE (amended and supplemented SG No 59 of 5 July 2013, amended SG No 66 of 26 July 2013). The ZE amendments also guaranteed additional financial resources for compensating the costs for the purchase of electricity from RS at feed-in prices. The funds are provided by the proceeds from the auctions of greenhouse gas emission allocations, as provided for in the Environment

Protection Act.

- **Regulations for Trade in Electricity (SG No 66 of 26 July 2013, effective from 26 July 2013, amended and supplemented No 39 of 9 May 2014, No 90 of 20 November 2015, effective from 20 November 2015);**

The Regulations lay down the structure of the electricity market, the conditions for participation in the electricity market, the rules for the conclusion of transactions for electricity through bilateral contracts at regulated and freely negotiated prices, transactions on the electricity exchange, the regulations for the registration of balancing group coordinators, providers of additional services and providers of balancing energy, the procedures for the registration of hourly schedules, performance of settlement between the commercial participants and the independent transmission operator, the requirements for the submission to the independent transmission operator and balancing group coordinators of data on measured amounts of electricity, the requirements for exchange of data between the commercial participants, the rules for the organisation of the energy balancing market, the rules of organisation of the reserve and additional services market, the rules for settlement, the balancing principles and a methodology for determining the prices for balancing energy.

- **Financial measures:**

The effective financial measures in 2013 and 2014 were as follows:

- **Feed-in tariff**

No later than 30 June of each year, the KEVR determines the feed-in prices for the purchase of electricity produced from renewable sources, with the exception of electricity produced by hydroelectric power plants with installed capacity of over 10 MW. The KEVR may set feed-in prices for the purchase of electricity from RS more than once a year when a major variation in one of the elements determining the price under Article 32(2) of the ZEVI is detected as a result of ongoing analysis.

In accordance with Article 32(2) of the ZEVI, feed-in prices shall be set under the procedure of the regulation, laid down in Article 36(3) of the ZE[26], taking into account the type of RS, the specific technology, the installed capacity of the site, the facilities' location place installation and other technical and economic parameters affecting the way in which the feed-

[26] Regulation on the Regulatory Control of Electricity Prices (SG No 17 of 2 March 2004, amended and supplemented SG No 62 of 31 July 2007, SG No 42 of 5 June 2012, repealed No 38 of 23 April 2013, Regulation No 1 of 18 March 2013 on the Regulatory Control of Electricity Prices (SG No 33 of 05 April 2013).

in prices are set. The feed-in prices are fixed for the whole period of the purchase of RES electricity with the exception of factors anticipated when setting the feed-in price for electricity generated from biomass; these are updated in accordance with Article 32(4) of the ZEVI.

The Second National Report on Bulgaria's Progress in the Promotion and Use of Energy from Renewable Sources reported that the mandatory national target of a 16 % share of RES energy in the final gross consumption of energy in 2020 was achieved.

In accordance with Article 18(2) of the ZEVI, this provides grounds to cease implementation of some of the incentives for energy sites generating electricity from RS, namely: the procedure for connection to the relevant grids, regulated in Section II of the ZEVI, shall not apply to these energy sites. The electricity generated by these sites will not be subject to compulsory purchase by the Public Supplier and the Public Retailers at feed-in prices and under long-term contracts.

Amendments to the ZEVI, adopted in 2015, envisaged a cessation of the purchase of electricity from RS at feed-in prices and under long-term contracts as described in detail in item 2a of this report. These amendments ensure compliance with the Guidelines concerning state aid in the field of environment and energy in 2014–2020 and Commission Regulation No 651/2014 of 17 June 2014.

The feed-in prices set by DKEVR decisions are provided in Annex 1 and Annex 2 to the present report.

- **EU-financed programmes;**

The utilisation of the RES potential may be financed under three Operational Programmes (OP):

- **OP Development of the Competitiveness of the Bulgarian Economy 2007–2013;**

The programme is managed by the Ministry of Economy and Energy (known as the Ministry of Economy, Energy and Tourism during the period 2011-2012). In 2011 and 2012, under this OP, targeted support for enhancing energy efficiency, including promotion of the use of energy from RS, was provided as part of two grant aid procedures under intervention area 2.3. 'Introduction of energy-saving technologies and renewable energy sources', as follows:

BG161PO003-2.3.01 Green industry investments

The call for proposals was announced on 17 November 2011. The procedure is aimed at large undertakings in Bulgaria which most frequently encounter problems related to energy production capacity and the adverse impact on the environment. The eligible activities include introduction of systems for heating and AC from RS.

There are 320 grant aid contracts, including RS. The RES technologies used are as follows:

- Solar plants for hot water;
- Boilers operating on biomass, including sawdust, and waste wood (a small percentage).
- Heat pumps/chillers.
- Construction of cogeneration facilities: only one project has been implemented: the plant operates on biomass waste and has a total electric power of 9 kW. The energy generated is for own use only.

The projects implemented under this procedure have a total installed RS capacity of 8 240.21 kW and the emissions savings are around 66 371 t/g.

BG161PO003-2.3.02 'Energy efficiency and green economy'

The call for proposals was announced on 28 June 2012 with an initial deadline for project submission of 31 October 2013, subsequently extended to 31 January 2014. The procedure is oriented towards micro, small and medium-sized enterprises. The eligible activities include purchase, supply, installation and putting into operation of systems for heating and AC for own needs (solar and geothermal systems, heat pumps and utilisation of secondary biomass) from RS not listed in Annex I of the Treaty on the Functioning of the EU.

Six contracts were signed under procedure 2.3.02 'Energy efficiency and green economy'. They include RS to a total installed capacity of 763.53 kW. The RES technologies used are as follows:

- solar system (plant) for hot water, including two collectors, a hydromodule and a boiler;

- Solar plant for a heat exchange medium for household hot water supply (90 solar panels);

- solar system for hot water generation;

- plant using waste energy from flue gases released in the course of drying processes.

- **OP Environment 2007–2013**

Under Priority Axis 2, 'Improvement and development of waste treatment infrastructure', the programme finances the building of plants for the utilisation of gas emissions (methane) from the household waste landfills to generate electricity.

The following more important projects for the construction of regional systems for waste management and energy utilisation of waste were implemented in the reporting period with the financial support of OP Environment 2007–2013:

Project No DIR-592113-1-9 'Construction an integrated system of facilities for the treatment of the household waste of the Sofia Municipality', with the contracted financing totalling BGN 291.53 million and the Sofia Municipality as beneficiary

The main goal of the project is to build a modern, integrated system for managing the household waste of the Sofia Municipality which complies with the EU environmental legislation.

The overall project includes the implementation of key investment measures. Along with the construction on the Han Bogrov site of a depot for non-hazardous waste, i.e. plants for green and bio-waste which is collected separately, a pilot project for separate collection of packaging waste in two administrative regions in Sofia and improvement of the existing plant for separating household waste on the Suhodol site, the project includes the construction of a plant for the mechanical and biological treatment of waste on the Sadinata site with a capacity of 410 000 t/g which is expected to process all household waste in Sofia (with the exception of the bio-waste and green waste which is collected separately).

The mechanical and biological treatment processes in the new plant include mechanical/manual separation and sorting, biological treatment of organic waste and the generation of fuel from RDF fraction which may be used as alternative fuel in TPP and/or cement plants in Bulgaria.

The biological treatment plant on the Han Bogrov site, (part of the project 'Construction an integrated system of facilities for the treatment of the household waste of the Sofia Municipality') should also be mentioned. Once it reaches its maximum capacity in 2022, it will generate over 600 MWh/y of electricity.

Project No DIR-5112122-11-79 'Construction of a regional system for waste management in the Veliko Tarnovo Region' with the contracted financing totalling BGN 30.40 million leva and the Veliko Tarnovo Municipality as beneficiary, in partnership with the municipalities of Gorna Oryahovitsa, Lyaskovets, Elena, Zlataritsa, Strazhitsa and the For Clean Settlements Association

The project envisages the construction of a depot for non-hazardous waste, a mechanical and biological treatment plant, consisting of a facility for separating the mixed household waste feed and a composting plant as well as the construction of sites and access infrastructure, auxiliary facilities (storage areas) and a filtration treatment facility.

The construction of a regional waste management system in the Veliko Tarnovo Region is expected to ensure the environmentally friendly treatment of all the mixed household waste and the green waste, collected separately at the source, and to achieve three specific goals: 1) utilisation of the recyclable materials separated from the general waste flow as raw material and of separately collected green waste as compost; 2) Utilisation of fractions, separated from the general waste flow, as RDF–modified fuels and as material in the daily burying of some of the composted organic fractions, separated from the general waste flow; 3) Final disposal of the non-recoverable waste in specially designed depots.

Project No DIR-5122130-1-172 'Construction of a regional waste management system in the system in the Haskovo Region' with contracted financing totalling BGN 26.95 million and the Haskovo Municipality as beneficiary in partnership with the municipalities of Dimitrovgrad and Mineral Spa

The project envisages the construction of a regional depot for non-hazardous waste, plant for green waste composting, a warehouse for temporary storage of household hazardous waste and a plant for waste separation and for generation of RDF fuel from waste.

- **Rural Development Programme, 2007–2013**

The programme is operated by the Ministry of Agriculture and Food. The priorities of the Rural Development Programme, 2007–2013, include generation and use of energy from RS and implementation of energy efficiency measures. The generation of RES energy, its rational use,

the improvement of the energy efficiency of farms and food processing undertakings, the forestry sector and the rural regions as well as heat and electricity generation by municipalities are important prerequisites for the sustainable development of the regions.

In 2013–2014, a total of 102 projects for the generation of electricity from RS were implemented with a total installed capacity of 9 048.50 kW to a value of BGN 33 720 870.

- **Energy Efficiency and Renewable Sources Fund (FEEVI)**

From the beginning of the operation of FEEVI to 30 June 2015 a total of 174 loan contracts were signed to ensure financing of investment projects to a total value of BGN 68 688 344. The total amount of the loans is BGN 46 568 597.

The implementation of the projects is expected to bring about the following energy savings:

- electricity: 100 493 MWh/y;
- reductions in harmful emissions: 79.2 CO_2 equivalent [kt/y].

- **Energy Efficiency and Renewable Energy Credit Line (EERECL);**

EERECL provides credits, subsidies and free consultancy services for RES projects in the following areas: wind energy, small HPPs, biomass, geothermal energy, solar energy for heating and biogas.

The following activities have been performed since the establishment of EERECL:

- financing of 290 projects;
- extended loans to a value of EUR 151.6 million;
- grants extended to companies amounting to EUR 24.4 million;
- CO_2 emissions reduced by over 710 000 tonnes.

- **Programme BG04 'Energy efficiency and renewable energy';**

Programme BG04 Energy efficiency and renewable energy' is financed by FM of EEA 2009–2014 based on a memorandum of understanding signed by the Republic of Bulgaria and Iceland, the Principality of Liechtenstein and the Kingdom of Norway. The Energy Ministry is the programme operator, while the Energy and Water Resources Department with the Ministry of Petroleum and Energy of the Kingdom of Norway is the donor.

The total budget of the programme is EUR 15 600 288, of which EUR 13 260 245 (85 %) is grant financing and EUR 2 340 043 (15 %) co-financed by the state. The programme consists of three grant schemes, a fund for bilateral relations and a preliminarily set project.

- **Grant scheme BG04-02-03: Measures for increasing the energy efficiency and use of renewable energy in municipal and public buildings and local heating systems;**

State or municipal institutions are beneficiaries within the scheme. A total of 34 contracts were concluded with 32 municipalities for the implementation of projects for energy efficiency and the use of renewable energy for heating in municipal and public buildings to a total value of EUR 10 440 000. The total installed capacity of the plants using RS for heating is 10.152 MW.

- **Grant scheme BG04-03-04: Production of fuels from biomass;**

Small and medium-sized enterprises are beneficiaries under the scheme. A total of nine contracts were signed to a total value of EUR 1 510 000.

- **Grant scheme BG04-04-05: Training and educational activities for strengthening the administrative capacity with respect to measures for energy efficiency and renewable energy;**

The main objective of the grant scheme is to strengthen the administrative capacity of state and municipal authorities and institutions for the planning and implementation of energy efficiency and renewable energy measures through the provision of training courses and consultations. A total of nine contracts were signed under the scheme to a total value of EUR 670 000.

- **National Green Investments Scheme: National Trust EcoFund;**

Under the 2010 amendments to the Environment Protection Act, the National Trust EcoFund was charged with the management of the proceeds from the sale of Assigned Amount Units (AAU). This prompted the establishment of the National Green Investments Scheme (NGIS) which is operated by the National Trust EcoFund.

NGIS is intended to cover the broadest possible range of ecological projects in the fields of energy, transport, agriculture and forestry, waste and water management, industry and other

sectors of the national economy, which result in the reduction or absorption of greenhouse gas emissions, significantly improving the quality of the environment, including reduction of air, water and soil pollution.

Two agreements on the purchase of AAU were signed between Bulgaria and Austria in October 2011 and April 2012.

The projects are financed under two main areas (axes): Axis 1 'Energy efficiency' and Axis 2 'Energy from biomass'.

A project for the generation of electricity from biomass with a total installed capacity of 1.5 MW and value of BGN 365 897 was financed as part of the first agreement on the purchase of AAU.

An extraordinary call for proposals was announced on accordance with the Austrian donor's explicit requirements for the financing projects with significant Austrian participation.

A project involving the installation of two wind turbines with total installed capacity of 4 MW was implemented within this call. Its financing stood at BGN 391 166.

- **Specific measures**

– In accordance with Article 10(1) of the ZEVI, the municipalities undertook specific measures, such as:

The Plovdiv Municipality introduced a Blue Zone parking charge pursuant to the Regulation for stopping, leaving and parking motor vehicles in the territory of the city of Plovdiv. The charge is determined by the Regulation on the determination and administration of local charges and prices for services in the Plovdiv Municipality with the exception of electric vehicles parked by an electric vehicle column and being charged by the latter.

Such measures have been introduced in a number of municipalities in the country (Dobrich, Ruse, etc.).

– The National Plan for the promotion of the manufacturing and accelerated introduction of environmentally friendly vehicles, including of electric mobility in 2012–2014 lays down seven main objectives and 29 accompanying measures for improving energy efficiency in the Transport sector[27].

[27] Based on information in the Report on the Implementation of the National Action Plan for Energy Efficiency 2014–

The priorities for 2014 are given in a report on the results of the measures and activities planned for 2013. They involve mostly extensions to the charging infrastructure.

- Electric Vehicles Industrial Cluster (EVIC)(http://www.emic-bg.org);

EVIC is a national sectoral organisation in the electric mobility sector, a member of the Bulgarian Industrial Association, which unites the efforts of its members in industrial development, strategic studies, technological development, changes to the legal framework, higher and vocational education and training, standardisation, relations with central and local authorities, etc.

EVIC members include leading research and business organisations, universities, electricity distribution companies, municipal companies 'Stolichen elektrotransport' EAD), etc., in partnership with industry and partner organisations, municipalities, the Bulgarian Red Cross, etc.

2020 http://www.seea.government.bg/documents/Otchet_NPDEE_22.07.2015.pdf

3.1 Please provide the information on how supported electricity is allocated to final customers for purposes of Article 3(6) of Directive 2003/54/EC. *(Article 22(1)(b) of Directive 2009/28/EC)*

In Accordance with Article 38b(1) of the ZE, the energy companies shall provide to its users of energy services 'information on the share of each energy source in the total energy supplied by the provider during the previous calendar year in an understandable and clearly comparable manner' and about 'existing sources of publicly accessible information on the environmental impact in relation at least to emissions of carbon dioxide and radioactive wastes resulting from production of electricity from various energy sources in the total energy supplied by the provider during the previous year.'

'The information shall be presented in the invoices or together with them in a digital format and on the energy companies' websites. In accordance with that procedure, the providers of energy and natural gas shall also provide users of energy services with a checklist adopted by the European Commission containing practical information about their rights.'

For example, CEZ has published on its webpage information on the relative share of each energy source in the total amount of electricity sold in 2014 by the public supplier NEK EAD to CEZ Electro Bulgaria AD in its capacity as Public Provider (http://www.cez.bg/bg/za-klienta/chesto-zadavani-vaprosi.html):

- Kozloduy Nuclear Power Plant: 19.33 %;
- Condensation thermo-electric power plants (TPP) operating on coal: 33.71 %;
- Combined TPP operating on coal: 8.83 %;
- Combined TPP operating on natural gas: 8.66 %;
- Wind power plants: 6.74 %;
- Photovoltaic power plants: 6.32 %;
- Hydropower plants: 14.92 %;
- Plants operating on biomass: 0.68 %;
- Electricity purchased on the balancing market: 0.80 %.

- **Assistance degree**

During the reporting period 2013–2014 the feed-in prices are the main incentive for the

promotion of electricity generation from RS in the country. It is applied for all types of renewable sources, except for HPPs with an installed capacity over 10 MW.

The assistance degree in 2014 for the producers of electricity from RS is set as follows:

An 'average price' is used based on the amounts of electricity on the regulated and free markets. These amounts are determined by Decisions No Ts–12/30.06.2014 of the DKEVR and the electricity prices for the regulated and free markets.

With a view to the considerable difference in the feed-in prices set by the KEVR, the following prices were used when calculating the total assistance for the different types of RS:

- HPPs: 189.00 BGN/MWh;
- Wind power plants: 117.00 BGN/MWh;
- Photovoltaic power plants: 145 BGN/MWh;
- Power plants on biomass: 250 BGN/MWh;
- The difference between the 'average price' and the price for the relevant type of plant is multiplied by the amount of electricity generated in 2014.

Table 3: Support schemes for renewable energy

Support schemes for 2014: Generation of electricity from RS		**Per unit support, BGN/MWh**	**Total (M€)**
Generation of electricity from HPPs with an installed capacity less than 10 MW			
Preferential price	Obligation /quota (%)	na	na
	Penalty/ Buy out option/ Buy out price (€/unit)	na	na
	Average certificate price	na	na
	Tax exemption/ refund	na	na
	Investment subsidies (capital grants or loans) (€/unit)	na	na
	Production incentives	na	na
	Feed-in tariff	**94**	**64**
	Feed-in premiums	na	na
	Auctions	na	na
Total annual estimated support in the electricity sector			64
Total annual estimated support in the heating sector			-
Total annual estimated support in the transport sector			-

Support schemes for 2014: Generation of electricity from RS		**Per unit support, BGN/MWh**	**Total (M€)**
Generation of electricity from wind power plants			
Feed-in tariff	Obligation /quota (%)	na	na
	Penalty/ Buy out option/ Buy out price (€/unit)	na	na
	Average certificate price	na	na
	Tax exemption/ refund	na	na
	Investment subsidies (capital grants or loans) (€/unit)	na	na

Support schemes for 2014: Generation of electricity from RS		**Per unit support, BGN/MWh**	**Total (M€)**
	Production incentives	na	na
	Feed-in tariff	**22**	**15**
	Feed-in premiums	na	na
	Auctions	na	na
Total annual estimated support in the electricity sector			15
Total annual estimated support in the heating sector			-
Total annual estimated support in the transport sector			-

Support schemes for 2014: Generation of electricity from RS		**Per unit support, BGN/MWh**	**Total (M€)**
Generation of electricity from photovoltaic power plants			
Feed-in tariff	Obligation /quota (%)	na	na
	Penalty/ Buy out option/ Buy out price (€/unit)	na	na
	Average certificate price	na	na
	Tax exemption/ refund	na	na
	Investment subsidies (capital grants or loans) (€/unit)	na	na
	Production incentives	na	na
	Feed-in tariff	**50**	**32**
	Feed-in premiums	na	na
	Auctions	na	na
Total annual estimated support in the electricity sector			32
Total annual estimated support in the heating sector			-
Total annual estimated support in the transport sector			-

Support schemes for 2014: Generation of electricity from RS		**Per unit support, BGN/MWh**	**Total (M€)**
Generation of electricity from power plants operating on biomass			
Feed-in tariff	Obligation /quota (%)	na	na
	Penalty/ Buy out option/ Buy out price (€/unit)	na	na
	Average certificate price	na	na
	Tax exemption/ refund	na	na
	Investment subsidies (capital grants or loans) (€/unit)	na	na
	Production incentives	na	na
	Feed-in tariff	**155**	**16**
	Feed-in premiums	na	na
	Auctions	na	na
Total annual estimated support in the electricity sector			16
Total annual estimated support in the heating sector			-
Total annual estimated support in the transport sector			-

4. Please provide information on how, where applicable, the support schemes have been structured 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. ***(Article 22(1)(c) of Directive 2009/28/EC)***

The purchase of electricity under a feed-in tariff and long-term contracts is the most attractive support scheme, compensating as it does for the higher costs of investment in RES energy generation.

Detailed information on the functioning of the scheme and the method used to calculate feed-in prices is contained in the Second National Report on Bulgaria's Progress in the Promotion and Use of Energy from Renewable Sources and in sections 2 and 3 of this report.

Under Article 31(8) of the ZEVI, where the investment for the construction of an energy facility for the production of electricity from renewable sources receives financial support under national or European support schemes, the Public Provider or Public Retailers respectively shall purchase the electricity at prices set by the DKEVR pursuant to Regulation No 1 of 18 March 2013 on the Regulatory Control of Electricity Prices (SG No 33 of 5 April 2013).

Pursuant to Decision No Ts–20 of 28 June 2013 of the DKEVR, where the investment for the construction of an energy site for the generation of RES electricity is supported under a national or EU support scheme, the price of electricity generated from RS is determined as the feed-in price for the respective technology and is corrected to reflect the impact of the funds approved under the relevant support scheme. At the same time, the value of the regulatory asset base for the feed-in prices is reduced proportionally to the amount of the investments approved for financing. In order to take into account the proportion of financing in the regulatory asset base (RAB) and the return, and pursuant to Article 13 of Regulation No 1, fixed assets acquired gratis should not be recognised as RAB. Once the price under Article 31(8) of the ZEVI has been set, the return from the approved feed-in prices is reduced by the proportion of grant financing for the approved amount of investment for each type of technology adjusted by the investments financed by funds from a national or EU support scheme. Groups are formed which reflect the average value of grant financing in the overall investment.

According to amendments and supplements to the ZEVI, adopted in 2015 (SG No 56 of 24 July 2015, effective from 24 July 2015), the prices under Article 31(8) of the ZEVI, as last determined by a KEVR decision, will apply for producers of RES energy from sites constructed

with national or EU support scheme financing and where aid applications were submitted before the ZEVI entered into effect.

5. Please provide 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. *(Article 22(1)(d) of Directive 2009/28/EC)*

The requirements of Directive 2009/28/EC regarding the system of guarantees of origin of RES energy are transposed into Bulgarian legislation through:

- ZEVI: Chapter Four 'Production of energy from renewable sources' and Section IV 'Guarantees of origin for energy from renewable sources' and

- Regulation No RD-16-1117 of 14 October 2011 on the conditions and procedure for the issue, transfer, revocation and recognition of the guarantees of origin for energy from renewable sources[28] (Regulation No RD-16-1117).

The ZEVI provides that 'the guarantees of origin shall be issued for a standard amount of electricity 1 MWh and shall be valid for 12 months'. The issue, transfer and revocation of guarantees of origin shall be completed by the AUER Executive Director. The 'guarantee of origin' is an electronic document which has the sole function of providing proof to a final customer that a given share or quantity of energy was produced from renewable sources.

Regulation No RD-16-1117 lays down the conditions and procedure for establishing, maintaining and using the system for the issuing guarantees of origin for energy from RS, their form and the content. The Regulation also determines the conditions and procedure for maintaining the register of guarantees of origin, subject to the entry and deletion circumstances, how to obtain information from the register, and the conditions and procedure for issuing the guarantees of origin issued by the competent authorities in other EU Member States.

The guarantees of origin of the electricity from RS are used by the electricity supplier to certify the share of RES in its overall energy mix. The guarantee of origin is also used to determine the amount of energy, which the Public Supplier and the Public Retailers will purchase at feed-in tariffs set by the KEVR.

In order to obtain a guarantee of origin, the producer of energy from RS submits an application to the AUER in accordance with the requirements of the ZEVI and the Regulation.

[28] SG No 84 of 28 October 2011, effective from 1 January 2012, amended and supplemented No 54 of 17 July 2012, effective from 17 July 2012, amended No 24 of 12 March 2013 , effective from 12 March 2013, No 42 of 9 June 2015, effective from 9 June 2015.

The application may concern energy generated from RS during one or more calendar months. The applications submitted and the supporting documents are checked for compliance with the requirements within 10 days of their submission. If the application and the supporting documents do not meet the requirements, the applicant is asked to correct the inconsistencies within seven days. If the applicant fails to do so, the case file is terminated by decision of the AUER Executive Director and the applicant is notified accordingly. If the application meets the requirements of the Regulation, the AUER Executive Director issues an order and the guarantees are issued by recording them in an electronic register within 14 days of the submission of the application or of correcting the inconsistencies related to it.

The electronic register of the guarantees of origin is a database run by an information system which has been developed in accordance with the requirements of the Electronic Management Act and contains data on the producers, including the name and location of the producer's energy site(s) as well as any issued, transferred and revoked guarantees of origin. Guarantees of origin recognised by the AUER as issued by a competent authority of another EU Member State are also entered in the register. The register of the guarantees of origin is kept by the AUER in a manner which guarantees the security of the information contained in it. The register is accessible through the AUER webpage http://www.seea.government.bg/bg/garantsii-za-proizhod, which provides information on the status of the guarantee of origin on a specific date as well as a history of transfers for the guarantee of origin. The register provides access to information on pending procedures prior to the issue of guarantees of origin.

The AUER may perform ex-officio checks on the conformity of the data provided as well as the circumstances and the documents presented and perform on-the-spot inspections.

In 2013, the AUER issued 6 833 922 guarantees of origin for RES electricity, and the number of guarantees issued increased to 7 255 231 in 2014.

6. Please describe the developments in the preceding 2 years in the availability and use of biomass resources for energy purposes. *(Article 22(1)(g) of Directive 2009/28/EC)*

Biomass is the main renewable source used in this country. The gross domestic consumption of biomass in the country was 1 174 ktoe in 2013 and 1 115 ktoe in 2014.

- **Wood biomass**[29]

The majority of biomass used in the Bulgaria is wood biomass. Almost all of it is provided from local timber production. In 2013, its share in the gross domestic biomass consumption was 65.6 % and in 2014 it was 67.0 %.

The total area of forest in Bulgaria has continued to increase in recent years, reaching 4 180 121 ha or 37.7 % of the country's territory at the end of 2013. From 1990 to 2013 the total area of forest increased by 407 628 ha or 10.8 %.

In 2013 the total area was 4 180 121 ha, of which 3 811 126 ha was wooded areas, which accounts for 34.3 % of the country's territory. The total area in 2013 increased by 16 706 ha compared to 2012. This increase is due to an inventory carried out in 2012–2013 on the territory of 22 forestry and hunting farms, areas of hitherto unregulated forests and wooded and spontaneously wooded agricultural land which have acquired the characteristics of a forest.

The distribution of the total area of forest in 2013 was as follows: wooded area: 3 811 126 ha (including creeping pine: 23 953 ha), non-wooded area, designated as afforestation: 69 123 ha (including areas damaged by fire: 2 556 ha, cutting areas: 8 075 ha and clearings: 58 492 ha) and forestry areas not fit for timber production: 299 872 ha (farmed lands: 5 200 ha, meadows: 2 512 ha, lawns: 108 696 ha, nurseries: 1 602 ha, paths and cuttings: 41 609 ha, and rocks, rivers, taluses, etc.: 140 253 ha).

In 2014 the overall timber production was 6 190 957 m^3 of lying timber, of which 3 742 757 m^3 of wood. Of these:

54.1 % produced from regeneration felling, 32.2 % from liberation felling and 13.7 % from

[29] Based on information from energy balances, the National Statistical Institute; Strategic Plan on the Development of the Forestry Sector 2014–2020, MZH; Agrarian Report 2015, MZH

sanitary cutting and clearing. 97 % of the overall area of regeneration felling in 2014 was accounted for by regeneration felling with guaranteed natural regeneration.

In 2013 and 2014, the gross domestic consumption of timber for energy purposes amounted to 8 479 927 m^3 (771 ktoe) and 8 231 521 m^3 (747 ktoe) respectively. Almost all the timber (97 %) is used in the Household sector with the balance designated for the Industry, Agriculture and Service sectors. Irrespective of the drop in timber consumption by around 3 % in 2014, it remains one of the RS with the highest significance for the heating energy and cooling energy sectors.

- **Biomass from agriculture[30]**

Areas for agricultural use (PSSP) include farmed land, plantations, grasslands used for farming purposes, family gardens and farmland not tilled for more than three years. In 2014, PSSP accounted for 5 192 940 ha or 47 % of the country's territory.

In 2014, the use of vegetable waste for energy purposes increased by 94 % year-on-year: from 850 TJ (20 ktoe) in 2013 to 1 650 TJ (39 ktoe) in 2014. The growth in consumption was due to the increased use of vegetable waste in the Industry and Agriculture sectors.

In 2013 and 2014, the volumes of biofuels complying with the sustainability criteria consumed in the Transport sector were 104 ktoe and 111 ktoe, respectively, of which 105 435 t (96 ktoe) was biodiesel and 12 568 t (8 ktoe) bioethanol in 2013 and 106 321 t (96 ktoe) of biodiesel and 22 824 t (15 ktoe) of bioethanol in 2014.

- **Energy crops**

In 2013 and 2014, the agricultural land used for fast-growing timber species (willow, poplar) was 1 584 ha and 1 595 ha, respectively.

- **Wood residues[31]**

The gross domestic consumption of wood residues and waste for energy purposes in the period under review was as follows: 969.6 thousand tonnes (238 ktoe) in 2013 and 831.7 thousand tonnes (204 ktoe) in 2014. The reduced consumption in 2014 compared to the preceding year was due to a drop in final energy consumption in the Agriculture and Service

[30] Based on information from energy balances, the National Statistical Institute; Agrarian Report 2015, MZH.
[31] Based on information from the energy balances for 2013 and 2014, National Statistical Institute (NSI).

sectors. Meanwhile, the consumption of wood residues for the generation of electricity and heat energy in public and factory plants increased by 53 %. In terms of quantity, the quantity of wood residues used to generate heat and electricity was 66.5 thousand tonnes (17 ktoe) in 2013, increasing to 99.7 thousand tonnes (26 ktoe) in 2014.

In 2014, the consumption of wood residues in final energy consumption dropped by 19 % compared to 2013. Some 98 % of the wood residues used in final energy consumption, are utilised in the Industrial sector to produce paper and paperboard products, timber and timber/cork products and to manufacture furniture.

- **Waste**

In 2013, there was an improving trend in waste management practice: the household waste submitted for utilisation reached 29 %, while the amount of new household waste generated dropped by 3 % compared to 2012. The level of material recycling of household waste in Bulgaria is 103 kg/man/year and is approaching the average values in Europe (EU-28) of 130 kg/man/year. A specific indicator to measure the efficiency of the waste management system is the amount of recycled waste per inhabitant per year. In 2013, this amount was 32 kg per person and the percentage of recycled packaging is increasing every year[32].

The energy balances for 2013 and 2014 show the following consumption of landfill waste: 644 TJ (15 ktoe) in 2013 and 272 TJ (6 ktoe) in 2014. The utilisation of landfill biogas was still insignificant: it stood at 3 TJ (72 toe) in the reporting period. The use of biogas from sewage sludge and other types of biogas amounted to 93 TJ (2 ktoe) in 2013 and 435 TJ (10 ktoe) in 2014[33].

Information on the use of biomass can be found in Table 4 and Table 4a.

[32] National Report on the Condition and Protection of the Environment in Bulgaria, 2015.
[33] Based on information from the energy balances for 2013 and 2014, National Statistical Institute (NSI).

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)**	
	2013	***2014***	***2013***	***2014***	***2013***	***2014***	***2013***	***2014***	***2013***	***2014***	***2013***	***2014***
Biomass supply for heating and electricity:												
Direct supply of wood biomass from forests and other wooded land for energy generation (felling, etc.), TJ	34 439	34 513	823	825								
Indirect supply of wood biomass (residues and co-products from wood industry, etc.), TJ	11 702	8 653	280	207								
Energy crops (grasses, etc.) and short rotation trees (please specify)												

	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)**	
	2013	***2014***	***2013***	***2014***	***2013***	***2014***	***2013***	***2014***	***2013***	***2014***	***2013***	***2014***
Agricultural by-products / processed residues and fishery by-products, TJ	850	2 322	20	55								
Biomass from waste (municipal, industrial etc.), TJ	644	272	15	7								
Others (please specify)												
Biomass supply for transport:												
Common arable crops for biofuels (please specify main types)[34]												

[34] The measurement unit used for the amount of national raw materials for the habitual agricultural crops for the production of biofuels is tonnes.

	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)**	
	2013	***2014***	***2013***	***2014***	***2013***	***2014***	***2013***	***2014***	***2013***	***2014***	***2013***	***2014***
Energy crops (grasses, etc.) and short rotation trees for biofuels (please specify main types)												
Other (specify)												

Source: NSI

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

Land use	**Surface (ha)**	
	2013	**2014**
1. Land used for common arable crops (wheat, sugar beet etc.) and oil seeds (rapeseed, sunflower etc.). (Please specify main types)		
2. Land used for short rotation trees (willow, poplar). (Please specify main types) [35]	1 584	1 595
3. Land used for other energy crops such as grasses (reed canary grass — Phalaris Arundinacea, switch grass — Panicum Virgatum, Miscanthus), sorgum. (Please specify main types)		

[35] Source: Information from the Executive Forest Agency.

7. Please provide information on any changes in commodity prices and land use within your Member State in the preceding 2 years associated with increased use of biomass and other forms of energy from renewable sources. Please provide where available references to relevant documentation on these impacts in your country. *(Article 22(1)(h) of Directive 2009/28/EC)*[36]

In 2013, the farmed land was 5 258 809 ha, which accounts for approximately 47 % of the country's territory. The utilised agricultural land (UAL) comprises arable land, perennial plants, permanently grassed areas, family gardens and greenhouse areas. In 2013, PSSP accounted for 4 995 111 ha or 45 % of the country's territory. PSSP decreased by 2.5 % compared to the previous year.

The arable land includes areas involved in crop rotation, temporary grassland with grain and grasses legumes and set-aside land. In 2013, farmed land increased by 5 % compared to the previous year covering 3 462 117 ha or 69.3 % of the agricultural land used. The increase is mostly due to an increase in the areas cropped with wheat and sunflower.

In 2013 the harvested areas under cereal crops were 2 007 thousand ha or approximately 6 % up year-on-year. There was an increase in the harvested areas for most of the main cereal crops compared to 2012, with a significant increase in areas under triticale and rye, 27 % and 23 % respectively, whereas areas cropped with wheat, barley, rice and oats decreased by between 3 % and 11 %. The harvested areas planted only with maize decreased by 8 %.

2013 saw considerably higher than average yield compared to the preceding year (with the exception of rice) due to the relatively favourable weather conditions. The increase varied from 7 % for barley and oats to 74 % for maize.

As a result, the overall production of cereal crops increased by around 31 % compared to 2012 reaching 9 154 thousand tonnes.

The main oilseed crops grown in the country are sunflower and winter oilseed rape.
In 2013, the areas planted with sunflower accounted for 86 % of the overall areas planted with oilseed crops. The production of sunflower in 2013 was 1 974 425 tonnes, up by 42.3 % compared to 2012, which was a result of the increase in both the harvested area (up by 12.5 %) and the average yield (up by 26.4 %). The areas cropped with sunflower in 2013 were 882 106 ha, up by 12.2 % compared to the preceding year.

[36] Annual reports on the condition and development of agriculture (agrarian reports for 2014 and 2015), MZH

In 2013 production of rape stood at 336 731 tonnes or 24.2 % up compared to 2012. The average yield was 2 501 t/ha or 24.1 % higher than the preceding year. The areas planted with rape in 2013 were 135 037 ha, of which 134 656 ha were harvested.

There was of 5 192 940 ha farmed land in 2014 which accounts for approximately 47 % of the country's territory. During the same year, arable land increased by 2 % compared to the previous year covering 3 469 388 ha or 69.7 % of the agricultural land used. The increase is mostly due to an increase in the areas cropped with industrial crops and barley.

A total of 1 961 thousand decares under cereal crops were harvested in 2014, around 2 % less year-on-year.

Due to the favourable weather conditions, the average yields of most main cereal crops (with the exception of oats and rice) were higher than the previous year with the increase ranging from 0.5 % for wheat to 20 % for grain maize.

The overall production of cereal crops during 2014 was 9 530 thousand tonnes or approximately 4 % more than the preceding year. There was a year-on-year increase in the production of grain maize, barley and tricale, while the yields of wheat, rye, oats and rice dropped. Wheat accounted for 56 % of the overall production of grain in 2014 and maize, for 33 %.

In 2014, wheat production stood at 5 347 078 tonnes, 2.9 % less than the 2013 level, which was a result of a decrease in harvested areas of 3.5 %, while the average yield increased slightly by 0.5 %.

1 279 930 ha were planted with wheat or 2.9 % down on an annual basis, as 1 267 914 ha (99.1 %) of them were harvested.

During the year under review, maize production stood at 3 137 478 tonnes or 14.6 % more than the preceding year irrespective of the reported reduction in harvested areas of 4.6 %. The average yield was 7.68 t/ha or 20.2 % up compared to the 2013 harvest.

Maize occupied 420 470 ha in 2014, 2.1 % less than the preceding year.

Sunflower production was 2 010 668 tonnes or 1.8 % up compared to 2013 due to the higher average yield (up by 6.2 %). 843 644 ha were harvested, 4 % fewer than the previous year.

There were 849 476 ha of sunflower crop in 2014 or 3.8 % fewer compared to 2013.
During the same year, rape production increased by 56.8 % compared to the previous year reaching 527 912 tonnes due to a combination of an increase in both the harvested area by 41.2 % and the average yield by 11.2 %, up to 2.78 t/ha.

There were 191 572 ha planted with rape in 2014, of which 190 194 ha were harvested.

Areas planted with crops: harvest 2013 and 2014		
Crops	**2013**	**2014**
	Ha	
Total cereals:	**2 018 102**	**1 996 867**
of which wheat	1 318 715	1 279 930
of which rye and triticale	29 928	34 962
of which barley	198 726	217 178
of which oats	18 966	18 659
of which maize	429 354	420 470
Total technical crops:	**1 078 113**	**1 112 799**
of which sunflower	882 106	849 476
of which rape	137 718	191 572
of which soy	336	329
Land used for other energy crops such as grasses (reed canary grass, switch grass, Miscanthus), sorgum.	-	-

Source: *MZH, Agricultural Statistics Department, Yields from Crops Monitoring*

In 2014 the value of the produce from arable and livestock farming decreased on an annual basis by 5.9 % and 5.4 %, respectively which is a consequence of the lower volume of production and the drop in producer prices for the main agricultural products. On the arable side, there was a drop in both the production and prices of wheat, tobacco, potatoes and most of fruit (with the exception of grapes, nuts, pears, plums). The grain maize, sunflower and rape crop, which increased, was also sold at lower prices compared to the preceding year.

The table below contains information on producer prices for agricultural products (prices, exclude subsidies by products) which can be used for energy purposes.

Products	Unit	2013 (BGN)	2014 (BGN)
Cereals			
Durum wheat	tonne	339.82	335.52
Common wheat	tonne	315.34	314.05
Maize/corn	tonne	304.88	278.02
Rice in the husk (paddy or rough)	tonne	551.99	717.47
Barley	tonne	334.18	299.80
Barley for brewing	tonne	329.28	306.73
Barley for feed	tonne	339.68	294.20
Rye	tonne	316.13	256.16
Oats	tonne	333.02	337.70
Grain sorghum	tonne	299.33	299.59
Triticale	tonne	333.68	285.20
Industrial crops			
Peas, dry	tonne	672.33	794.61
Beans, dry	tonne	2 420.51	3 731.31
Lentils, dry	tonne	1 149.47	1 505.14
Soybeans	tonne	1 278.02	1 206.56
Peanuts/groundnuts	tonne	3 332.50	2 350.00
Rape or colza seed	tonne	693.91	602.13
Sunflower seed	tonne	607.32	597.94
Plants harvested green			
Hay from natural meadows	Kg	0.18	0.19
Lucerne	Kg	0.22	0.63
Bales of cereals	Kg	0.08	0.12
Straw from cereals	Kg	0.07	0.09
Green mass for maize silage	Kg	0.10	0.11
Lucerne (alfalfa) seed	Kg	6.54	6.65
Potatoes	tonne	467.71	398.34

Source: *NSI*

8. Please describe the development and share of biofuels made from wastes, residues, non-food cellulosic material, and lingo cellulosic material. *(Article 22(1)(i) of Directive 2009/28/EC)*

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

Article 21(2) biofuels[37]	2013	2014
Production – Fuel type X (Please specify)	0	0
Production – Fuel type X (Please specify)	0	0
Total production Art.21.2.biofuels 2	0	0
Total consumption Art.21.2. biofuels 2	0	0
% share of 21.2. fuels from total RES-T	0	0

There was no serious development of these technologies in 2013 and 2014 with a consequent lack of any significant output.

[37] Biofuels made from wastes, residues, non-food cellulosic material, and lignocellulosic material.

9. Please provide information on the estimated impacts of the production of biofuels and bioliquids on biodiversity, water resources, water quality and soil quality within your country in the preceding 2 years. Please provide information on how these impacts were assessed, with references to relevant documentation on these impacts within your country. *(Article 22 (1)(j) of Directive 2009/28/EC)*

This Third National Report on Bulgaria's Progress in the Promotion and Use of Energy from Renewable Sources Bulgaria provides further information to the Second National Report and in connection with Letter No (2015) 4359278 of 14 October 2015 of Mr. Dominique Ristori, Director General of DG Energy regarding the application of the provisions of the Aarhus Convention:

By its decision of 9 January 2013 the Council of Ministers of the Republic of Bulgaria adopted NPDEVI which was drafted in compliance with all procedures stemming from the requirements of the national environmental legislation. Public involvement in the decision-making process was ensured by, amongst other items:

- Informing the stakeholders of the forthcoming adoption by the Council of Ministers of the draft NPDEVI by publishing it on the website of the Ministry of Economy, Energy and Tourism and on the portal for public consultations with the Council of Ministers (http://www.strategy.bg), which provided an opportunity to submit proposals under the terms of Article 69(1)(1) of the Code of Administrative Procedure.

- In accordance with Article 85(1) of the Environment Protection Act (ZOOS), Article 31(4) of the Biological Diversity Act (ZBR) and Decision No 1 EO-1/2009 of the Minister for Environment and Water, the draft NPDEVI an Opinion on Environmental Assessment (OEA) was issued by the Minister for Environment and Water.

A public discussion was held within the OEA procedure. The conditions and measures for preventing, reducing and remedying as fully as possible any assumed adverse impacts arising from implementation of the plan as recommended within the consultations have been taken into account and reflected in the relevant priorities of the NPDEVI.

The Minister for Environment and Water coordinated NPDEVI under certain measures and conditions through OEA No 1-2/2012. The targets set for 2020 will be attained under the conditions of strict compliance with the measures and conditions contained in the OEA which are presented in full in Annex No 1 to NPDEVI.

Having commissioned the draft of the NPDEVI, and prior to its submission for consideration and adoption by the Council of Ministers, the Ministry of Economy, Energy and Tourism (previous name) provided the institutions responsible for implementing the plan (MSOV and AUER) with a summarised report which includes an analysis of:

- the compliance of the NPDEVI with the main results and recommendations of the OEA documentation, the results of the consultations, the conditions, measures and restrictions in the OEA and the criteria for deciding whether or not to carry out an environmental assessment;

- compliance of the NPDEVI with the alternative for attaining its goals as set out in the OEA;

- the extent to which the conditions and measures in the OEA are present in the NPDEVI.

In accordance with Article 30(3) of the Regulation on the conditions and procedure for carrying out an environmental assessment of plans and programmes, the public was given access to a summary of the report by publishing it on the Ministry of Economy, Energy and Tourism's website.

As part of the procedure for issuing an OEA, an Environmental Assessment Report and a Report on assessment of the compatibility with the objectives and the goals for the conservation of protected areas were adopted (supplemented and revised July 2012). The information below is based on the Environmental Assessment Report which was used to issue OEA.

The Report considers possible environmental impacts following the installation of current RES technologies, including biofuels in transport, bioethanol and biodiesel.

Controlling the environmental impact of the generation of energy from RS, including the production of biofuels, is implemented by the MOSV structures through their powers pursuant to ZOS and its subordinate legislation. According to the annual control plans, the regional environmental and water inspectorates will carry out checks on compliance with the requirements of the environmental legislation, on the conditions related to any environmental impact assessments which have been issued and the integrated permits of these sites.

Monitoring and control of the environmental impact once the NPDEVI is implemented are carried out based on measures and indicators set out in the OEA, as listed in Annex 3.

10. Please estimate the net greenhouse gas emission savings due to the use of energy from renewable sources. *(Article 22 (1)(k) of Directive 2009/28/EC)*

Electrical energy

The net reduction in greenhouse gas (GHG) emissions attributable to the use of electricity from renewable sources were estimated by applying a carbon emission factor for electricity calculated on the basis of the fuel types, their calorific values and their contribution to the annual electricity output in 2013 and 2014.

The calculated values for the emission factors for 2013 and 2014 were 0.50658 tCO2eq/MWh and 0.5423828 tCO2eq/MWh respectively.

Using renewable energies to produce electricity reduced GHG emissions by 3 530 863 tCO2eq in 2013 and 3 837 358 tCO2eq in 2014.

In percentage terms, the savings were 15.80 % in 2013 and 15.13 % in 2014.

Heating and cooling energy

Reductions in GHG emissions attributable to the use of heat from renewable sources (solid and gaseous biomass) were estimated by applying comparative values, validated across the EU, for emissions generated by the use of fossil fuels (fossil fuel comparators) in the production of heat and electricity, as specified in the Report on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling.

Reductions in GHG emissions attributable to the replacement of fossil fuels with solid biomass in the production of heat are calculated according to the following formula:

Reductions (savings) = (ECF(h,el,c) – ECh,el,c)/ ECF(h,el,c), where:

- ECh,el,c is the overall emissions value for the generation of a quantity of heat energy, cooling energy or electricity using biomass;

- ECF(h,el,c) is the overall emissions value for the generation of the relevant quantity of heat energy, cooling energy or electricity based on mineral fuels.

In this case, the recommended value of the fossil fuel comparator is ECF(h,el,c) = 87 gCO2eq/MJ. Traditionally, tree species with a typical default value 1 gCO2eq/MJ are used as an analogue for biomass in Bulgaria.

The comparative calculations were made for two scenarios, each with a different percentage of fossil fuel contribution to the production of heat (as per the table below) in order to estimate the reduction in GHG emissions due to the replacement of these fuels with biomass.

Proportion of fossil fuels used in the overall production of heat

Sources for replacement	Scenario 1, %	Scenario 2, %
Coal	40	45
Methane gas	30	25
Electricity	15	20
Naphtha	15	10
Total	100	100

The calculated GHG emissions at these ratios show that the values for the fossil fuel comparator will be:

- in Scenario 1: ECF(h,el,c) =81.95 gCO2eq/MJ
- in Scenario 2: ECF(h,el,c) = 85.00 gCO2eq/MJ.

The percentage reduction of GHG emissions attributable to replacing fossil fuels with biomass in the production of energy for heating and cooling purposes was 28.87 % in 2013 and 27.99 % in 2014.

The net reductions in GHG emissions achieved by the use of heating and cooling energy from RS were 4 113 740 tCO2eq in 2013 and 3 914 985 tCO2eq in 2014. Details are given in Table No 6.

The greatest reductions in GHG emissions are clearly achieved with the biomass used for the

production of heat, followed by renewable sources used for the production of electricity.

In 2013 and 2014, there was a tangible increase of the proportion of biofuels in the transport sector compared to previous years, which leads to a considerable reduction in GHG emissions due to the use of RS in transport. There was only negligible growth in the amount of electricity from RS and, therefore, the reductions in GHG emissions were close to the 2011 levels.

Table 6: Estimated GHG emission savings from the use of renewable energy (t CO_2 eq)

Environmental aspects	2013	2014
Total estimated net GHG emission saving from using renewable energy[38]	**7 793 846**	**7 914 498**
- Estimated net GHG saving from the use of renewable electricity	3 530 863	3 837 358
- Estimated net GHG saving from the use of renewable energy in heating and cooling	4 113 740	3 914 985
- Estimated net GHG saving from the use of renewable energy in transport	149 243	162 155

[38] The contribution of gas, electricity and hydrogen from renewable energy sources should be reported by final use (electricity, heating and cooling or transport) and only be counted once towards the total estimated net GHG savings.

11. Please report on (for the preceding 2 years) and estimate (for the following years up to 2020) 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, as well as estimated potential for joint projects until 2020. *(Article 22 (1)(l) and (m) of Directive 2009/28/EC)*

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 Bulgaria (ktoe)[39,40]

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Actual / estimated excess or deficit production of energy from RS		**55**	**53**	**88**	**140**	**120**	386	481	420	471	411	341

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

[40] When filling in the table, for deficit production please mark the shortage of production using negative numbers (e.g. – x ktoe).

11.1. Please provide details of statistical transfers, joint projects and joint support scheme decision rules.

During the period 2013–2014, Bulgaria did not use the cooperation mechanisms provided in Directive 2009/28/EC: statistical transfers, joint projects and joint support schemes: statistical transfers, joint projects and joint support schemes.

The progress towards the 2020 target, presented in this report and the Second National Report on Bulgaria's Progress in the Promotion and Use of Energy from Renewable Sources, suggests that there is potential for statistical transfers to Member States that may not have enough renewable energy to meet their binding targets.

12. Please provide information on how the share for biodegradable waste in waste used for producing energy has been estimated, and what steps have been taken to improve and verify such estimates. *(Article 22 (1)(n) of Directive 2009/28/EC)*

The estimated share of biodegradable waste in waste used for producing energy is based mainly on the data made available by the NSI. According to that data, the total quantity of waste generated was around 204 million tonnes in 2011 and around 163 million in 2010.

According to the NSI, the overall quantity of household waste generated in 2013 was 3 135 000 tonnes which increased to 3 193 thousand tonnes in 2014. This compares to 3 572 000 tonnes in 2011 and 3 249 000 tonnes in 2012.

Information on the drafting of an estimate of the share of biodegradable waste in 2015 and 2020 is provided in the Second National Report on Bulgaria's Progress in the Promotion and Use of Energy from Renewable Sources.

A Methodology for the identification of the morphological composition of household waste[41] is being applied at present. It is published on the MOSV website. The Methodology ensures a uniform approach to the identification and forecasting of the amount and morphological composition of household waste. This will support all stakeholders (state institutions, municipalities, recycling organisations, etc.) in long-term planning of waste management processes.

[41] http://www3.moew.government.bg/files/file/Waste/Municipal_Waste/Metodika-2012.pdf

Annex 1

Feed-in prices of renewable electricity set by DKEVR decisions for the period 2013–2014

No	Types of RES depending on the type of primary energy source	Preferential prices excluding VAT (BGN/MWh)						
		2013-1	2013-1[42]	2013-1[43]	2013-2	2014-1	2014-1[44]	2014-1[45]
1	Micro HPPs with an installed capacity up to 200 kW	197.34				193.19		
2	Low-thrust run-of-river HPPs with thrust of up to 15 metres, without diversion channel and with an installed capacity from 200 kW to 10 000 kW	242.30				236.92		
3	Low-thrust, run-of-river HPPs, diversion HPPs, reservoir HPPs and diversion HPPs with an annual compensating basin with net thrust of up to 30 metres and an installed capacity of 200 kW to 10 000 kW	193.38				189.31		
4	Medium-thrust diversion, reservoir and diversion HPPs with an annual compensating basin with net thrust of 30 to 100 metres and an installed capacity of 200 kW to 10 000 kW	162.71				159.14		
5	High-thrust diversion, reservoir and diversion HPPs with an annual compensating basin with net thrust of more than 100 metres and an installed capacity of 200 kW to 10	156.04				152.36		
6	Diversion tunnels with an annual compensating basin with an installed capacity up to 10 000 kW	229.35				224.37		

[42] Update 1 July 2013; the feed-in price of electricity generated from biomass, approved by Decision No Ts—18 of 28 June 2012.

[43] Update 1 July 2013; the feed-in price of electricity generated from biomass, approved by Decision No Ts—18 of 20 June 2011 and Decision No Ts—35 of 27 October 2011.

[44] Update 1 July 2014; the feed-in price of electricity generated from biomass, approved by Decision No Ts—19 of 28 June 2013.

[45] Update 1 July 2013; the feed-in price of electricity generated from biomass, approved by Decision No Ts—18 of 20 June 2011 and the price of electricity, generated from thermal gasification of biomass and/or biodegradable and/or biodegradable fractions of industrial and household waste, approved by Decision No TS-35 of 27 October 2011.

No	Types of RES depending on the type of primary energy source	Preferential prices excluding VAT (BGN/MWh)						
		2013-1	2013-1[42]	2013-1[43]	2013-2	2014-1	2014-1[44]	2014-1[45]
7	Micro HPPs with pumps	98.15				93.69		
8	WPPs with an installed capacity up to 30 kW	175.86				137.98		
9	WPPs with an installed capacity up to 200 kW	162.33				128.51		
10	WPPs with an installed capacity up to 1 MW	151.39				116.98		
11	WPPs with an installed capacity over 1 MW	122.50				95.55		
12	WPPs with an asynchronous cage rotor generator	105.16				83.55		
13	PPPs with a total installed capacity of 5 kW or less, mounted on roofs or facades of urban buildings or adjacent properties that are connected to the distribution grid	353.97				211.81		
14	PPPs with a total installed capacity of 30 kW or less, mounted on roofs or facades of urban buildings or adjacent properties that are connected to the distribution grid	284.18				203.97		
15	PPPs with a total installed capacity over 30 kW and up to 200 kW mounted on roofs or facades of urban buildings or adjacent properties that are connected to the distribution grid	211.40				169.12		
16	PPPs with a total installed capacity over 200 kW and up to 1000 kW mounted on roofs or facades of urban buildings or adjacent properties that are connected to the distribution grid	196.58				144.68		

No	Types of RES depending on the type of primary energy source	Preferential prices excluding VAT (BGN/MWh)						
		2013-1	2013-1[42]	2013-1[43]	2013-2	2014-1	2014-1[44]	2014-1[45]
17	PPP with an installed capacity of 30 kW and less	195.44				152.19		
18	PPP with an installed capacity over 30 kW and up to 200 kW	191.13				143.35		
19	PPP with an installed capacity over 200 kW and up to 1 000 kW	176.29				134.03		
20	PPP with an installed capacity over 10 000 kW	160.20				131.36		
21	PPs with an installed capacity up to 150 kW, indirectly using energy from household waste	225.27				225.27		
22	PPs with an installed capacity over 150 kW and up to 1 MW, indirectly using household waste	213.90				213.90		
23	PPs with an installed capacity over 500 kW and up to 1 MW, indirectly using energy from household waste	206.94				206.32		
24	PPs with an installed capacity up to 150 kW, indirectly using energy from municipal sewage sludge	125.94				125.94		
25	PPs with an installed capacity over 150 kW and up to 1 MW, indirectly using energy from municipal sewage sludge	105.15				105.15		
26	PPs with an installed capacity over 1 MW and up to 5 MW, indirectly using energy from municipal sewage sludge	89.16				89.16		
27	PPs with an installed capacity up to 5 MW, operating through direct incineration of biomass derived from wood residue biomass obtained from forest management, pruning and other wood waste	249.66	276.54	291.64		250.82	250.83 296.45[46]	

[46] Update 1 January 2014; the feed-in price of electricity generated from biomass, approved by Decision No Ts—18 of 28 June 2012.

No	Types of RES depending on the type of primary energy source	Preferential prices excluding VAT (BGN/MWh)						
		2013-1	2013-1[42]	2013-1[43]	2013-2	2014-1	2014-1[44]	2014-1[45]
28	PPs with an installed capacity up to 5 MW, operating through direct incineration of biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste, with cogeneration	277.39	295.72	313.64		278.48	278.36	317.18
29	PPs with an installed capacity over 5 MW, operating through direct incineration of biomass derived from wood residue biomass obtained from forest management, pruning and other wood waste	221.71	240.15	253.52		222.80	222.30	
30	PPs with an installed capacity up to 5 MW, using agricultural crop residues	176.96	197.32	207.67		176.96		
31	PP with an installed capacity up to 5 MW, using energy crops	164.48	187.55	196.85		164.48		
32	PPs with an installed capacity up to 500 kW, indirectly using biomass from vegetable or animal substances	453.12				453.12		
33	PPs with an installed capacity over 500 kW and up to 1.5 MW, indirectly using biomass from vegetable or animal substances	434.13				434.13	453.30	
34	PPs with an installed capacity over 1.5 MW and up to 5 MW, indirectly using biomass from vegetable or animal substances	387.53				387.53		
35	PP with an installed capacity over 500 kW and up to 1.5 MW, indirectly using biomass from vegetable or animal substances, with cogeneration	447.43				447.43		

No	Types of RES depending on the type of primary energy source	Preferential prices excluding VAT (BGN/MWh)						
		2013-1	2013-1[42]	2013-1[43]	2013-2	2014-1	2014-1[44]	2014-1[45]
36	PPs with an installed capacity of 5 MW or less, operating through thermal gasification of biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste, without cogeneration	349.04				350.22		296.45
37	PPs with an installed capacity of 5 MW or less, operating through thermal gasification of biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste, with cogeneration	387.04				387.94		
38	PPs with an installed capacity over 5 MW, operating through thermal gasification of biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste, without cogeneration	337.44				338.34		
39	PPs with an installed capacity over 5 MW, operating through thermal gasification of biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste, with cogeneration	373.76				376.66		
40	PPs with an installed capacity of 150 kW or less, indirectly using biomass from vegetable or animal substances		479.49	452.91				
41	PP with an installed capacity over 150 kW and up to 1 MW, indirectly using biomass from vegetable or animal substances		460.19	432.02				432.24
42	PP with an installed capacity over 1 MW and up to 5 MW, indirectly using biomass from vegetable or animal substances		410.09	358.08				

No	Types of RES depending on the type of primary energy source	Preferential prices excluding VAT (BGN/MWh)						
		2013-1	2013-1[42]	2013-1[43]	2013-2	2014-1	2014-1[44]	2014-1[45]
43	PP with an installed capacity over 1 MW and up to 5 MW, indirectly using biomass from vegetable or animal substances, with cogeneration		473.56	369.34				
44	PPs with an installed capacity of 5 MW or less, using thermal gasification of biomass and/or biodegradable fractions of industrial and household waste, without cogeneration		371.80	397.95				
45	PPs with an installed capacity of 5 MW or less, using thermal gasification of biomass and/or biodegradable fractions of industrial and household waste, with cogeneration		404.51	436.35		389.60		438.76
46	PPs with an installed capacity over 5 MW, using thermal gasification of biomass and/or biodegradable fractions of industrial and household waste, without cogeneration		361.87	388.04				
47	PPs with an installed capacity over 5 MW, using thermal gasification of biomass and/or biodegradable fractions of industrial and household waste, with cogeneration		394.55	425.95				

The feed-in prices are exclusive of VAT and comply with the following DKEVR decisions:

- DKEVR Decision No Ts-19 of 28 June 2013 on the determination as of 1 July 2013 of feed-in prices for the purchase of electricity, generated from RS and from hydropower plants with an installed capacity up to 10 MWt before VAT;

- DKEVR Decision No Ts–13 of 1 July 2014 on the determination of feed-in prices for the purchase of electricity, generated from RS and hydropower plants with an installed capacity up to 10 MWt.

Annex 2

Prices of electricity generated from RS where the investment for the construction of an energy site for the generation of electricity from RS is supported under a national or EU aid scheme

DECISION No. TS–20 of 28 June 2013 regarding the setting of prices for electricity generated from RS where the investment for the construction of an energy site for the generation of electricity from renewable sources is supported under a national or EU aid scheme

1. Feed-in prices under Decision Ts–19 of 28 June 2013

No	Type of RS	Feed-in tariff	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT							
			percentage of grant financing							
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %
1	***Micro HPPs with an installed capacity up to 200 kW***									
	Price	197.34	187.54	177.73	167.93	158.13	148.33	138.52	128.72	118.92
2	***Low-thrust diversion HPPs, reservoir HPPs and diversion HPPs with an annual compensating basin with net thrust of up to 30 metres and an installed capacity over 200 kW and up to 10 000 kW***									
	Price	193.38	183.77	174.17	164.56	154.96	145.35	135.74	126.14	116.53
3	***Low-thrust run-of-river HPPs with an annual compensating basin with net thrust of up to 15 metres and an installed capacity over 200 kW and up to 10 000 kW***									
	Price	242.30	230.21	218.11	206.02	193.92	181.83	169.73	157.64	145.54
4	***Medium-thrust diversion HPPs, reservoir HPPs and diversion HPPs with an annual compensating basin with net thrust from 30 to 100 metres and an installed capacity over 200 kW and up to 10 000 kW***									
	Price	162.71	154.82	146.94	139.05	131.17	123.28	115.39	107.51	99.62
5	***High-thrust diversion HPPs, reservoir HPPs and diversion HPPs with an annual compensating basin with net thrust of more than 100 metres and an installed capacity over 200 kW and up to 10 000 kW***									
	Price	156.04	148.53	141.02	133.50	125.99	118.48	110.97	103.46	95.94
6	***Diversion tunnels with an annual compensating basin up to 10 000 kW***									
	Price	229.35	217.73	206.10	194.48	182.85	171.23	159.61	147.98	136.36
7	***Micro HPPs with pumps***									
	Price	98.15	93.60	89.06	84.51	79.97	75.42	70.87	66.33	61.78

No	Type of RS	Feed-in tariff	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT							
			percentage of grant financing							
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %
8	***WPPs with an installed capacity up to 30 kW***									
	Price	175.86	169.75	163.64	157.53	151.42	145.31	139.20	133.09	126.98
9	***WPPs with an installed capacity up to 200 kW***									
	Price	162.33	156.69	151.05	145.41	139.77	134.13	128.49	122.85	117.21
10	***WPPs with an installed capacity up to 1 000 kW***									
	Price	151.39	146.91	142.42	137.94	133.45	128.97	124.48	120.00	115.51
11	***WPPs with an installed capacity over 1 000 kW***									
	Price	122.50	118.83	115.16	111.49	107.82	104.16	100.49	96.82	93.15
11	***WPPs with an asynchronous cage rotor generator***									
	Price	105.16	102.74	100.32	97.90	95.48	93.06	90.63	88.21	85.79
12	***PPPs with an installed capacity up to 5 kW mounted on roofs or facades***									
	Price	353.97	339.66	325.35	311.05	296.74	282.43	268.12	253.81	239.51
13	***PPPs with an installed capacity over 5 kW and up to 30 kW mounted on roofs or facades***									
	Price	284.18	272.73	261.28	249.82	238.37	226.92	215.47	204.02	192.56
14	***PPPs with an installed capacity over 30 kW and up to 200 kW mounted on roofs or facades***									
	Price	211.40	202.81	194.22	185.64	177.05	168.46	159.87	151.28	142.70
15	***PPPs with an installed capacity over 200 kW and up to 1 000 kW mounted on roofs or facades***									
	Price	196.58	188.63	180.68	172.72	164.77	156.82	148.87	140.92	132.96
16	***PPPs with an installed capacity up to 30 kW***									
	Price	195.44	187.68	179.91	172.15	164.38	156.62	148.85	141.09	133.32
17	***PPP with an installed capacity over 30 kW and up to 200 kW***									
	Price	191.13	183.49	175.86	168.22	160.59	152.95	145.31	137.68	130.04
18	***PPP with an installed capacity over 200 kW and up to 10 000 kW***									
	Price	176.29	169.18	162.06	154.95	147.84	140.73	133.61	126.50	119.39
19	***PPPs with an installed capacity over 10 000 kW***									
	Price	160.20	153.84	147.47	141.11	134.74	128.38	122.02	115.65	109.29
20	***PPs with an installed capacity up to 5 000 kW, operating on biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***									
	Price	249.66	245.46	241.26	237.06	232.86	228.66	224.46	220.26	216.06
21	***PPs with an installed capacity up to 5 000 kW, with cogeneration and using biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***									

No	Type of RS	Feed-in tariff	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT							
			percentage of grant financing							
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %
	Price	277.39	272.14	266.90	261.65	256.40	251.16	245.91	240.66	235.41
22	***PPs with an installed capacity over 5 000 kW, operating on biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***									
	Price	221.71	217.80	213.90	209.99	206.09	202.18	198.27	194.37	190.46
23	***PPs with an installed capacity up to 5 000 kW using agricultural crop residues***									
	Price	176.96	174.33	171.70	169.07	166.44	163.81	161.18	158.55	155.92
24	***PPs with an installed capacity up to 5 000 kW using energy crops***									
	Price	164.48	161.85	159.22	156.58	153.95	151.32	148.69	146.06	143.42
25	***PPs with an installed capacity up to 500 kW, indirectly using biomass from vegetable or animal substances***									
	Price	453.12	444.65	436.18	427.72	419.25	410.78	402.31	393.84	385.38
26	***PP with an installed capacity over 500 kW and up to 1 500 kW, indirectly using biomass from vegetable or animal substances***									
	Price	434.13	427.88	421.62	415.37	409.11	402.86	396.61	390.35	384.10
27	***PP with an installed capacity over 1 500 kW and up to 5 000 kW, indirectly using biomass from vegetable or animal substances***									
	Price	387.53	381.92	376.31	370.70	365.09	359.48	353.86	348.25	342.64
28	***PP with an installed capacity over 500 kW and up to 1 500 kW, with cogeneration, indirectly using biomass from vegetable or animal substances***									
	Price	447.43	440.56	433.68	426.81	419.94	413.07	406.19	399.32	392.45
29	***PPs with an installed capacity over 150 kW, indirectly using energy from household waste***									
	Price	225.27	219.68	214.09	208.50	202.91	197.32	191.73	186.14	180.55
30	***PPs with an installed capacity over 150 kW and up to 1 000 kW, indirectly using energy from household waste***									
	Price	213.90	208.69	203.47	198.26	193.05	187.84	182.62	177.41	172.20
31	***PPs with an installed capacity over 500 kW and up to 5 000 kW, indirectly using energy from household waste***									
	Price	206.32	201.44	196.57	191.69	186.82	181.94	177.06	172.19	167.31
32	***PPs with an installed capacity up to 150 kW, indirectly using energy from municipal sewage sludge***									
	Price	125.94	121.63	117.31	113.00	108.68	104.37	100.05	95.74	91.42
33	***PPs with an installed capacity over 150 kW and up to 1 000 kW, indirectly using energy from municipal sewage sludge***									

No	Type of RS	Feed-in tariff	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT							
			percentage of grant financing							
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %
	Price	105.15	101.55	97.94	94.34	90.74	87.14	83.53	79.93	76.33
34	***PPs with an installed capacity over 1 000 kW and up to 5 000 kW, indirectly using energy from municipal sewage sludge***									
	Price	89.16	86.30	83.43	80.57	77.71	74.85	71.98	69.12	66.26
35	***PPs with an installed capacity up to 5 000 kW, without cogeneration, operating through thermal gasification of biomass obtained from forest management, pruning and other wood waste***									
	Price	349.32	342.37	335.43	328.48	321.53	314.59	307.64	300.69	293.74
36	***PPs with an installed capacity up to 5 000 kW, with cogeneration, operating through thermal gasification of biomass obtained from forest management, pruning and other wood waste***									
	Price	387.04	378.74	370.43	362.13	353.82	345.52	337.21	328.91	320.60
37	***PPs with an installed capacity over 5 000 kW, without cogeneration, operating through thermal gasification of biomass obtained from forest management, pruning and other wood waste***									
	Price	337.44	330.10	322.75	315.41	308.06	300.72	293.37	286.03	278.68
38	***PPs with an installed capacity over 5 000 kW, with cogeneration, operating through thermal gasification of biomass obtained from forest management, pruning and other wood waste***									
	Price	373.76	365.56	357.37	349.17	340.97	332.78	324.58	316.38	308.18

2. Feed-in prices, set by Decision Ts–18 of 28 June 2012

No	Type of RES	Feed-in prices, set by Decision No Ts–18 of 28 June 2012.	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT							
			percentage of grant financing							
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %
1	***PPs with an installed capacity up to 5 000 kW, operating on biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***									
	Price	276.54	272.23	267.93	263.62	259.31	255.01	250.70	246.39	242.08
2	***PPs with an installed capacity up to 5 000 kW, with cogeneration and using biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***									
	Price	295.72	290.38	285.04	279.70	274.36	269.02	263.67	258.33	252.99
3	***PPs with an installed capacity over 5 000 kW, operating on biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***									
	Price	240.15	236.15	232.15	228.15	224.15	220.16	216.16	212.16	208.16
4	***PPs with an installed capacity up to 5 000 kW using agricultural crop residues***									
	Price	197.32	195.06	192.79	190.53	188.27	186.01	183.74	181.48	179.22
5	***PPs with an installed capacity up to 5 000 kW using energy crops***									
	Price	187.55	185.30	183.04	180.79	178.53	176.28	174.03	171.77	169.52
6	***PPs with an installed capacity up to 500 kW, indirectly using biomass from vegetable or animal substances***									
	Price	479.49	472.21	464.92	457.64	450.36	443.08	435.79	428.51	421.23
7	***PP with an installed capacity over 500 kW and up to 1 500 kW, indirectly using biomass from vegetable or animal substances***									
	Price	460.19	453.77	447.34	440.92	434.49	428.07	421.65	415.22	408.80
8	***PP with an installed capacity over 1 500 kW and up to 5 000 kW, indirectly using biomass from vegetable or animal substances***									
	Price	410.09	404.52	398.95	393.38	387.81	382.25	376.68	371.11	365.54

No	Type of RES	Feed-in prices, set by Decision No Ts–18 of 28 June 2012.	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT							
			percentage of grant financing							
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %
9	***PP with an installed capacity over 500 kW and up to 1 500 kW,*** with cogeneration, indirectly using biomass from vegetable or animal substances									
	Price	473.56	466.52	459.48	452.45	445.41	438.37	431.33	424.29	417.26
10	***PPs with an installed capacity up to 5 000 kW, without cogeneration, operating through thermal gasification of biomass obtained from forest management, pruning and other wood waste***									
	Price	371.80	364.01	356.21	348.42	340.63	332.84	325.04	317.25	309.46
11	***PPs with an installed capacity up to 5 000 kW, with cogeneration, operating through thermal gasification of biomass obtained from forest management, pruning and other wood waste***									
	Price	404.51	395.21	385.92	376.62	367.32	358.03	348.73	339.43	330.13
12	***PPs with an installed capacity over 5 000 kW, without cogeneration, operating through thermal gasification of biomass obtained from forest management, pruning and other wood waste***									
	Price	361.87	354.21	346.54	338.88	331.21	323.55	315.89	308.22	300.56
13	***PPs with an installed capacity over 5 000 kW, with cogeneration, operating through thermal gasification of biomass obtained from forest management, pruning and other wood waste***									
	Price	394.55	385.38	376.21	367.05	357.88	348.71	339.54	330.37	321.21

3. Feed-in prices, set by Decision Ts–18 of 20 June 2012 and Ts–35 of 27 October 2011

No	Type of RES	Feed-in prices, set by Decision No Ts–18 of 20 June 2012 and Decision No Ts–35 of27/10/2011	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT							
			percentage of grant financing							
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %
1	***PPs with an installed capacity up to 5 000 kW, operating on biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***									
	Price	291.64	285.85	280.06	274.28	268.49	262.70	256.91	251.12	245.34
2	***PPs with an installed capacity up to 5 000 kW, with cogeneration and using biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***									
	Price	313.64	306.46	299.28	292.10	284.92	277.75	270.57	263.39	256.21
3	***PPs with an installed capacity over 5 000 kW, operating on biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***									
	Price	253.52	248.15	242.77	237.40	232.02	226.65	221.27	215.90	210.52
4	***PPs with an installed capacity up to 5 000 kW using agricultural crop residues***									
	Price	207.67	204.63	201.59	198.55	195.51	192.47	189.42	186.38	183.34
5	***PPs with an installed capacity up to 5 000 kW using energy crops***									
	Price	196.85	193.82	190.79	187.76	184.73	181.71	178.68	175.65	172.62
67	***PPs with an installed capacity up to 500 kW, indirectly using biomass from vegetable or animal substances***									
	Price	452.91	445.96	439.00	432.05	425.10	418.15	411.19	404.24	397.29
	PP with an installed capacity over 500 kW and up to 1 500 kW, indirectly using biomass from vegetable or animal substances									
	Price	432.02	424.93	417.85	410.76	403.68	396.59	389.50	382.42	375.33
8	***PP with an installed capacity over 1 500 kW and up to 5 000 kW, indirectly using biomass from vegetable or animal substances***									

No	Type of RES	Feed-in prices, set by Decision No Ts–18 of 20 June 2012 and Decision No Ts–35 of27/10/2011	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT							
			percentage of grant financing							
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %
	Price	358.08	352.30	346.51	340.73	334.94	329.16	323.37	317.59	311.80
9	***PP with an installed capacity over 500 kW and up to 1 500 kW, with cogeneration, indirectly using biomass from vegetable or animal substances***									
	Price	369.34	362.85	356.37	349.88	343.39	336.91	330.42	323.93	317.44
10	***PPs with an installed capacity up to 5 000 kW, without cogeneration, operating through thermal gasification of biomass obtained from forest management, pruning and other wood waste***									
	Price	397.95	387.47	376.99	366.51	356.03	345.56	335.08	324.60	314.12
11	***PPs with an installed capacity up to 5 000 kW, with cogeneration, operating through thermal gasification of biomass obtained from forest management, pruning and other wood waste***									
	Price	436.35	423.85	411.34	398.84	386.33	373.83	361.33	348.82	336.32
12	***PPs with an installed capacity over 5 000 kW, without cogeneration, operating on the basis of forest management, pruning and other wood waste through thermal gasification of biomass derived from wood residue***									
	Price	388.04	377.73	367.43	357.12	346.82	336.51	326.20	315.90	305.59
13	***PPs with an installed capacity over 5 000 kW, with cogeneration, operating through thermal gasification of biomass obtained from forest management, pruning and other wood waste***									
	Price	425.95	413.62	401.29	388.96	376.63	364.30	351.96	339.63	327.30

REPUBLIC OF BULGARIA

MINISTRY OF ENERGY

DECISION No. TS–14 of 1 July 2014 regarding prices for the purchase of electricity generated from renewable sources where the investment for the construction of the energy site is supported by funds under a national or EU aid scheme

1. Prices for electricity generated from power plant using renewable sources and constructed with funds from a national and/or EU support scheme

No	Type of RES	Feed-in price of electricity	Price for electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT								
			percentage of grant financing								
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %	80–90 %
1.	***Micro HPPs with an installed capacity up to 200 kW***										
	Price	193.19	188.39	178.79	169.20	159.60	150.00	140.40	130.81	121.21	111.61
2.	***Low-thrust run-of-river diversion HPPs, reservoir HPPs and diversion HPPs with an annual compensating basin with net thrust of up to 30 metres and an installed capacity over 200 kW and up to 10 000 kW***										
	Price	189.31	184.60	175.20	165.80	156.39	146.99	137.59	128.18	118.78	109.38
3.	***Medium-thrust diversion HPPs, reservoir HPPs and diversion HPPs with an annual compensating basin with net thrust from 30 to 100 metres and an installed capacity over 200 kW and up to 10 000 kW***										
	Price	159.14	155.28	147.57	139.86	132.14	124.43	116.72	109.00	101.29	93.58
4.	***High-thrust diversion HPPs, reservoir HPPs and diversion HPPs with an annual compensating basin with net thrust of more than 100 metres and an installed capacity over 200 kW and up to 10 000 kW***										
	Price	152.36	148.69	141.36	134.02	126.69	119.35	112.02	104.68	97.35	90.01
5.	***Diversion tunnels with an annual compensating basin up to 10 000 kW***										
	Price	224.37	218.68	207.31	195.94	184.57	173.20	161.82	150.45	139.08	127.71
6.	***Run-of-river HPPs with an installed capacity up to 5 MW***										
	Price	236.92	231.00	219.17	207.35	195.52	183.69	171.87	160.04	148.22	136.39
7.	***Micro HPPs with pumps***										
	Price	93.69	91.52	87.18	82.84	78.50	74.16	69.82	65.48	61.14	56.80
8.	***Wind power plants with an installed capacity up to 30 kW with 2 250 hours***										
	Price	137.98	135.59	130.79	126.00	121.21	116.41	111.62	106.82	102.03	97.24
9.	***WPP with an installed capacity from 30 to 200 kW with 2 250 hours***										

No	Type of RES	Feed-in price of electricity	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT								
			percentage of grant financing								
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %	80–90 %
	Price	128.51	126.28	121.82	117.35	112.89	108.42	103.96	99.49	95.03	90.56
10.	***WPPs with an asynchronous cage rotor generator***										
	Price	83.16	82.21	80.29	78.38	76.47	74.55	72.64	70.72	68.81	66.90
11.	***PPPs of an installed capacity up to 5 kW mounted on roofs or facades***										
	Price	211.81	207.54	198.95	190.37	181.78	173.19	164.60	156.01	147.43	138.84
12.	***PPPs of an installed capacity over 5 kW and up to 30 kW mounted on roofs or facades***										
	Price	203.97	199.85	191.58	183.31	175.04	166.77	158.50	150.23	141.96	133.69
13.	***PPPs of an installed capacity over 30 kW and up to 200 kW mounted on roofs or facades***										
	Price	169.12	165.70	158.83	151.96	145.09	138.22	131.35	124.48	117.61	110.74
14.	***PPPs with an installed capacity up to 30 kW***										
	Price	152.19	149.18	143.14	137.09	131.05	125.00	118.95	112.91	106.86	100.81
15.	***PPP with an installed capacity over 30 kW and up to 200 kW***										
	Price	143.35	140.50	134.78	129.05	123.32	117.60	111.87	106.14	100.41	94.69
16.	***PPP with an installed capacity over 200 kW and up to 10 000 kW***										
	Price	134.03	131.34	125.93	120.52	115.12	109.71	104.30	98.89	93.48	88.08
17.	***PPPs with an installed capacity over 10 000 kW***										
	Price	131.36	128.77	123.56	118.34	113.12	107.90	102.68	97.46	92.24	87.02
18.	***PPs with an installed capacity up to 5 000 kW, operating on biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***										
	Price	250.82	248.72	244.52	240.32	236.12	231.92	227.72	223.52	219.32	215.12
19.	***PPs with an installed capacity up to 5 000 kW, with cogeneration and using biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***										
	Price	278.48	275.86	270.61	265.37	260.12	254.87	249.63	244.38	239.13	233.89
20.	***PPs with an installed capacity over 5 000 kW, operating on biomass obtained from forest management, pruning and other wood residue, biomass derived from wood waste***										

No	Type of RES	Feed-in price of electricity	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT								
			percentage of grant financing								
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %	80–90 %
	Price	222.80	220.84	216.94	213.03	209.12	205.22	201.31	197.41	193.50	189.59
21.	***PPs with an installed capacity up to 5 000 kW using agricultural crop residues***										
	Price	176.96	175.64	173.01	170.38	167.75	165.12	162.50	159.87	157.24	154.61
22.	***PPs with an installed capacity up to 5 000 kW using energy crops***										
	Price	164.48	163.17	160.54	157.90	155.27	152.64	150.01	147.38	144.74	142.11
23.	***PPs with an installed capacity up to 500 kW, indirectly using biomass from vegetable or animal substances***										
	Price	453.12	448.88	440.41	431.94	423.48	415.01	406.54	398.07	389.60	381.14
24.	***PP with an installed capacity over 500 kW and up to 1 500 kW, indirectly using biomass from vegetable or animal substances***										
	Price	434.13	431.00	424.75	418.49	412.24	405.99	399.73	393.48	387.23	380.97
25.	***PP with an installed capacity over 1 500 kW and up to 5 000 kW, indirectly using biomass from vegetable or animal substances***										
	Price	387.53	384.73	379.12	373.51	367.90	362.29	356.67	351.06	345.45	339.84
26.	***PP with an installed capacity over 500 kW and up to 1 500 kW, with cogeneration, indirectly using biomass from vegetable or animal substances***										
	Price	447.43	443.99	437.12	430.24	423.37	416.50	409.63	402.76	395.88	389.01
27.	***PPs with an installed capacity over 150 kW, indirectly using energy from household waste***										
	Price	225.27	222.47	216.88	211.29	205.70	200.11	194.52	188.93	183.34	177.75
28.	***PPs with an installed capacity over 150 kW and up to 1 000 kW, indirectly using energy from household waste***										
	Price	213.90	211.29	206.08	200.87	195.66	190.44	185.23	180.02	174.81	169.60
29.	***PPs with an installed capacity over 1 000 kW and up to 5 000 kW, indirectly using energy from household waste***										
	Price	206.32	203.88	199.01	194.13	189.25	184.38	179.50	174.63	169.75	164.87
30.	***PPs with an installed capacity up to 150 kW, indirectly using energy from municipal sewage sludge***										
	Price	125.94	123.77	119.46	115.14	110.83	106.51	102.20	97.88	93.57	89.25

No	Type of RES	Feed-in price of electricity	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT								
			percentage of grant financing								
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %	80–90 %
31.	***PPs with an installed capacity over 150 kW and up to 1 000 kW, indirectly using energy from municipal sewage sludge***										
	Price	105.15	103.35	99.75	96.14	92.54	88.94	85.33	81.73	78.13	74.52
32.	***PPs with an installed capacity over 1 000 kW and up to 5 000 kW, indirectly using energy from municipal sewage sludge***										
	Price	89.16	87.72	84.86	81.99	79.13	76.27	73.40	70.54	67.68	64.81
33.	***PPs with an installed capacity up to 5 000 kW, without cogeneration, operating through thermal gasification of biomass and/or biodegradable fractions of industrial and household waste***										
	Price	350.22	346.75	339.80	332.85	325.91	318.96	312.01	305.06	298.12	291.17
34.	***PPs with an installed capacity up to 5 000 kW, with cogeneration, operating through thermal gasification of biomass and/or biodegradable fractions of industrial and household waste***										
	Price	387.94	383.79	375.48	367.18	358.87	350.57	342.26	333.96	325.65	317.35
35.	***PPs with an installed capacity over 5 000 kW, without cogeneration, operating through thermal gasification of biomass and/or biodegradable fractions of industrial and household waste***										
	Price	338.34	334.67	327.32	319.98	312.63	305.29	297.94	290.60	283.25	275.91
36.	***PPs with an installed capacity over 5 000 kW, without cogeneration, operating through thermal gasification of biomass and/or biodegradable fractions of industrial and household waste***										
	Price	375.26	371.16	362.96	354.77	346.57	338.37	330.17	321.97	313.78	305.58
37.	***Wind power plants with an installed capacity from 200 up to 1 000 kW with 2 250 hours***										
	Price	116.98	115.26	111.80	108.33	104.86	101.40	97.93	94.47	91.00	87.53
38.	***Wind power plants with an installed capacity from 1 000 up to 5 000 kW with 2 250 hours***										
	Price	95.55	93.52	90.66	87.80	84.94	82.08	79.21	76.35	73.49	70.63
39.	***PPs with an installed capacity up to 5 000 kW, operating on biomass derived from agricultural residue and waste***										
	Price	389.60	385.64	377.74	369.83	361.93	354.03	346.12	338.22	330.31	322.41

2. Price of electricity generated from sites constructed with funds from a national and/or EU support scheme by Decision Ts–019 of 28 June 2013

No	Type of RES	Feed-in price of electricity	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT by Decision								
			percentage of grant financing								
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %	80–90 %
1.	**PPs with an installed capacity up to 5 000 kW, operating on biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste**										
	Price	250.83	248.73	244.53	240.33	236.13	231.93	227.73	223.53	219.33	215.13
2.	**PPs with an installed capacity up to 5 000 kW, with cogeneration and using biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste**										
	Price	278.36	275.74	270.49	265.25	260.00	254.75	249.51	244.26	239.01	233.77
3.	**PPs with an installed capacity over 5 000 kW, operating on biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste**										
	Price	222.30	220.35	216.45	212.54	208.63	204.73	200.82	196.92	193.01	189.10
4.	**PP with an installed capacity over 500 kW and up to 1 500 kW, with cogeneration, indirectly using biomass from vegetable or animal substances**										
	Price	447.43	444.01	437.14	430.26	423.39	416.52	409.64	402.77	395.90	389.02

3. Price of electricity generated from sites constructed with funds from a national and/or EU support scheme by Decision Ts–018 of 28 June 2012

No	Type of RES	Feed-in price of electricity	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT by Decision Ts–018 of 28 June 2012								
			percentage of grant financing								
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %	80–90 %
1	**PPs with an installed capacity up to 5 MW, using thermal gasification of biomass and/or biodegradable fractions of industrial and household waste, with cogeneration**										
	Price	440.17	437.05	430.79	424.53	418.28	412.02	405.76	399.50	393.25	386.99

4. Price of electricity generated from sites constructed with funds from a national and/or EU support scheme by Decision Ts–035 of 27 October 2011 and Decision Ts–018 of 20 June 2011

No	Type of RES	Feed-in price of electricity	Price of electricity generated from sites constructed with funds from a national and/or EU support scheme, BGN/MWh before VAT by Decision Ts–035 of 27 October 2011 and Decision Ts–018 of 20 June 2011								
			percentage of grant financing								
			Up to 10 %	10–20 %	20–30 %	30–40 %	40–50 %	50–60 %	60–70 %	70–80 %	80–90 %
1.	***PPs with an installed capacity up to 5 MW, operating on biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste***										
	Price	296.45	293.56	287.76	281.97	276.18	270.38	264.59	258.79	253.00	247.21
2.	***PPs with an installed capacity up to 5 MW, operating on biomass derived from wood residue, biomass obtained from forest management, pruning and other wood waste, with cogeneration***										
	Price	317.18	308.09	289.89	271.69	253.50	235.30	217.10	198.90	180.71	162.51
3.	***PP with an installed capacity over 150 kW and up to 1 MW, indirectly using biomass from vegetable or animal substances***										
	Price	432.24	428.70	421.61	414.53	407.44	400.35	393.27	386.18	379.09	372.01
4.	***PPs with an installed capacity up to 5 MW, using thermal gasification of biomass and/or biodegradable fractions of industrial and household waste, with cogeneration***										
	Price	438.76	432.51	420.00	407.50	394.99	382.48	369.98	357.47	344.96	332.46

Annex 3

Monitoring and control of the environmental impacts following the application of the NPDEVI in accordance with Opinion on Environmental Assessment No 1–2/2012 of 8 August 2012

Within the Measures and conditions for preventing, reducing and remedying as fully as possible any adverse effects from the implementation of the NPDEVI:

A. General measures:

The construction of sites for the production of energy from RS is subject to the legislative procedures required under the environmental legislation.

The development proposals for projects which require an environmental impact assessment/environmental assessment and assessment of compatibility with the objectives and goals for the conservation of protected areas are approved once coordination with the competent authorities in charge of the environment has been agreed in compliance with the assessment's recommendations and the conditions of the relevant act.

B. Specific measures, stemming from the Opinion on the environmental assessment of the NPDEVI

1. The MOSV carries out mitigating measures for preventing, reducing and remedying as fully as possible any adverse consequences with respect to the protected areas resulting from the implementation of the OEA in relation to the ban which has been introduced on carrying out new consultation procedures (for which no procedure has been launched as of the OEA's date of issue) under ZOOS and ZBR for the construction of HPPs, small PPPs, PPPs and wind generators.

2. The introduction of incentives for second and third-generation biofuels:

The innovations arising from a low carbon economy are an integral part of the approach of OP Innovations and Competitiveness 2014–2020.

Promotional measures for stimulating the production and consumption of a new generation of biofuels will be formulated during the pending transposition of Directive 2015/1513 of the European Parliament and of the Council of 9 September 2015 amending Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Directive 2009/28/EC on the promotion of the use of energy from renewable sources.

3. **The assessment of the available and estimated potential of the types of resources for the production of energy from RS on the country's territory (within the meaning of Article 19(1) of the ZEVI) should contain data on the sensitivity of the territories with respect to their biodiversity (where 'biodiversity' shall cover both protected areas and zones and known biodiversity sites outside the Natura 2000 network and the network of protected areas such as nests of globally endangered species of birds, migration bottlenecks, and key bat conservation areas, etc.**).

The assessment of the available and estimated resources for the production of energy is an integral part of the investment research included in the investment processes associated with the construction of sites for the generation of electricity from RS.

As part of the regulated scope, totality and depth of the investment research, the relevant contracting authority should inform the authorities responsible for the environment of its intentions under Article 95(1) of ZOOS by requesting the specific applicable procedures under Chapter Six of ZOOS. In this context and taking into account the requirements arising from the scope of the investment research's specific legal framework, the contracting authority should be requested to provide full, adequate and detailed information about their intention at the investment research stage.

5. **The public relations campaign surrounding renewable-energy measures is also to draw attention to the risks posed to sensitive biodiversity areas.**

Implemented within the specific activities in accordance with the goal of the activity or event.

6. **Long- and short-term municipal programmes for promoting the use of renewable energy and biofuels are to contain detailed information on environmental risks posed to sensitive areas in the relevant municipality.**

The programmes under Article 9 of the ZEVI include information about environmental and economic benefits from the implementation of projects in the field of energy from RS on the territory of the relevant municipalities and their resource provision as well as the options for the different types of RES and the environmental impact from their use.

7. **Incentives are to be created for the use of biodegradable waste instead of wood or energy crops.**

Implemented within the environmental policy and, specifically, the waste management policy.

8. Introduction of administrative or other incentives for the development of renewable energy sources in areas that have already suffered from human impact, including damaged sites

Implemented within the environmental policy.

C. When implementing NPDEVI, the following measures and conditions are to be fulfilled:

1. When planning energy system components, preference is to be given to low-risk areas, such as land in the vicinity of industrial areas, motorways and other artificial landscapes.

Plans for the construction and operation of facilities for the production of electricity and facilities for electricity transmission via overhead cables are subject to EIA or an assessment of whether an EIA needs to be completed. This will include an assessment of any adverse impact on the environment from implementing the development proposal.

2. When electricity distribution and transmission companies expand and renew their networks, better coordination and greater clarity of their investments is to be ensured in order to improve the chances of including new renewable energy projects.

According to Article 21(1)(30) of the ZE, the KEVR 'controls the implementation of electricity transmission network operators' investment plans and submits in its annual report an evaluation of the operators' investment plans in relation to their conformity with the 10-year plans for development of the networks in the European Union.' Furthermore, on the grounds of Article 21(3)(8) of the ZE, the KEVR 'approves a 10-year plan for the development of the transmission network, monitors and controls its implementation under the provisions and its adherence to the procedure of Regulation No 3 on the licensing of activities in the energy sector.'

Indicators for monitoring and control of the impact on the environment from the implementation of the NPDEVI.

The reports on the condition of the environment in 2013 and 2014, published on the webpages of the 16 regional inspectorates of environment and water provide the following:

- there are no data from control measurements which indicate that permissible noise levels have been exceeded as regulated for by the legislation in force or the issued integrated permits for the operation of sites for the production of energy from RS, including wind generators;

- there are no data on issued decisions regarding investment projects for the construction of wind generators within protected areas of the Natural 2000 network.