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

## Country Report: Bulgaria



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

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

## Short summary

**Background:** Climate change receives little attention in Bulgaria. Bulgaria is the country with the highest energy intensity in the EU. Its power mix is dominated by lignite and nuclear, despite some growth in renewables. Energy prices are state regulated and below EU average, while utilities are facing financial difficulties. 2013 was a year of political turmoil for Bulgaria, with a government resigning after protests initiated by a winter energy price hike, subsequent elections and continued protests over many months.

**Non-ETS emission reduction target:** The Bulgarian 2020 target is a limitation on emission growth of +20% (compared to 2005) while emissions have grown by 6% between 2005 and 2011. According to the latest national projections submitted to the Commission and taking into account the existing measures, the target is expected to be missed with a margin of 3 percentage points: +23% in 2020 compared to 2005.

### Key indicators 2011:

GHG emissions	BG	EU27
ESD EU 2020 GHG target (comp. 2005)	+20%	
ESD GHG emissions in 2011 (comp.2005)	+6%	-9%
Total GHG emissions 2012 (comp.2005)	-2%	-12%
GHG emissions/capita (tCO <sub>2</sub> eq)	9.0	9.0

→ Same per capita emissions as EU average

GHG emissions per sector	BG	EU27
Energy/power industry sector	58%	33%
Transport	12%	20%
Industry (incl. industrial processes)	12%	20%
Agriculture (incl. forestry & fishery)	10%	12%
Residential & Commercial	3%	12%
Waste & others	6%	3%

→ Energy/power industry sector

Energy	BG	EU27
EU 2020 RES target	+16%	
Primary energy consumption/capita (toe)	2.6	3.4
Energy intensity (kgoe/1000 €)	712	144
Energy to trade balance (% of GDP)	-6.8%	-3.2%

→ Around **22% lower** per capita consumption and **4 times higher** energy intensity than EU average, contribution of energy to trade balance **double** EU average

Taxes	BG	EU27
Share of environmental taxes (% of GDP)	2.9%	2.4%
Implicit tax rate on energy (€/toe)	67	184

→ **Slightly higher** share of environmental taxes and **63% lower** implicit tax rate on energy than EU average.

**Key policy development in 2013:** There have been minor improvements in energy efficiency policy, with the amendments to the Energy Efficiency Act. Renewable energy production faced opposition from incumbent producers and the government had to stop anti-RES interventions by the grid operator. The Supreme Administrative Court of Bulgaria overruled the grid access fee on the feed-in-tariff, but the government amended the Renewable Energy Law at the end of the year to allow for a fee on RES revenues. Use of ETS auctioning revenues is foreseen under a new climate mitigation law (implementing the revised EU ETS directive of 2009).

**Key challenges:** The highest share of emissions stems from power supply, reflecting the high energy intensity of the Bulgarian economy as well as the reliance on high-emissions energy sources. The greatest gaps are apparent in the transport and the residential sector. Policy developments on energy efficiency are hampered by the fact that electricity prices are the lowest in the EU. The amendment of the Energy Efficiency Act that, for example, stipulates to increase the number of near-zero energy buildings, constitutes a small improvement but is only a small step considering that Bulgaria wants to halve its energy intensity until 2020.

Emissions from transport represent a considerable share of overall emissions in Bulgaria but are hardly addressed. Emissions from newly registered cars are among the highest in the EU. However, vehicle taxes are low and not based on CO<sub>2</sub> emissions, and taxes on transport fuel are well below the EU average, thus not creating incentives for more efficient and sustainable transport. Bulgaria also observed a strong shift away from rail to road transport, both for passenger and freight. Considering the importance of this sector it is noteworthy that no policy developments took place in 2013.

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## I Background on climate and energy policies

In general, climate change policy receives little attention in Bulgaria. However, energy policies as such and energy prices in particular are an item of political contest. In 2013, the main focus of the political debate was on the turmoil caused by the resignation of Prime Minister Boyko Borisov on 20 February 2013, which came after public protests among other issues concerning a winter energy price hike. The resignation was followed by a political standstill of nearly four months, after which early parliamentary elections on 12 May 2013 established a new government under Plamen Oresharski. From June to November, thousands of demonstrators gathered daily in Sofia to protest corruption, patronage and widespread poverty, demanding the resignation of Oresharski and his coalition.

In an emergency session following Borisov's resignation, the Bulgarian Parliament had approved changes to existing bills, including an amendment of the Energy Efficiency Act (Закон за енергийната ефективност). According to Borisov's party GERB, these changes would enable the Bulgarian State Commission for Energy and Water Regulation (DKEVR) to reduce spending for electricity.<sup>1</sup>

In July 2013 however, the Parliamentary Committee for Energy announced to the public that all three electricity distributing companies operating in Bulgaria (ČEZ, EVN and Energo Pro) were facing insolvency. The explanation provided was that this had been caused by falling electricity prices, as well as new rules for the purchase of electricity from renewable sources which had come into effect in March 2013. The committee unveiled that EVN has recorded losses of almost BGN 300 million and CEZ nearly BGN 200 million. And Energo-Pro announced expected losses totalling BGN 143 million by the end of 2013 (Novinite, 2013j). This situation will notably hamper further investments in the energy infrastructure.

On 18 June 2013, the Supreme Administrative Court of Bulgaria overruled the controversial grid access fee for photovoltaic power plants built in 2010-2012, after almost 1,000 companies filed official complaints (PV Magazine 2013). The court concluded that the fee was introduced in violation of the Energy Act, which stipulates that prices must be non-discriminatory, based on objective criteria and determined in a transparent manner (Capital 2013a).

On 5 December 2013 however, the Bulgarian Parliament approved a proposal to introduce a new 20% fee on the revenues of photovoltaic plants and wind farms by amending the Renewable Energy Sources Act (Закон за енергията от възобновяеми източници) which will come into effect from 1 January 2014. Representatives of the renewable energy industry protested against this measure calling it "scandalous, discriminatory and illegal". On 12 December 2013, Bulgarian President Plevneliev decided to notify the Constitutional Court about the renewable fee stating that it had been adopted "amid a lack of transparency" and that it would have a "dramatic impact on the business climate in Bulgaria".

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<sup>1</sup> The amendments foresee the preparation of a national plan to increase the number of nearly zero emission buildings, introduce certificates for projected energy characteristics as well as energy certificates for existing buildings, and to establish an independent certificate control system (Novinite, 2013f).

In November 2013, the Bulgarian Ministry of Economy and Energy confirmed plans to construct a new unit at the Kozloduy nuclear power plant. Additionally, the Bulgarian Government also intends to extend the lifetime of units 5 and 6, which will expire in November 2017 and October 2019 respectively (Novinite, 2013p).

Hence, with regard to climate and energy policies, the current Bulgarian Government is focusing mainly on nuclear power generation to meet the country's emission targets rather than developing Bulgaria's renewable energy capacities. On the contrary, the Government intends to levy further taxes on the renewable industry in order to mitigate the economic burden for electricity consumers and to save the National Energy Company (NEK) from bankruptcy.

## 2 GHG projections

### Background information

In 2011, Bulgaria emitted 66.1 Mt CO<sub>2</sub>eq (UNFCCC inventory 2011) of which more than half came from energy supply. While emissions in that sector dropped significantly in the 1990s, mainly due to the transformation of the economy over the last two decades, emissions started to rise again since 2000 and were in 2011 almost back at 1990 levels. In contrast, emissions from energy use, industrial processes, and agriculture dropped between 55 and almost 80% between 1990 and 2011 due to economic contraction and a decreasing population. The decline in emissions from agriculture is the result of decreased livestock populations and abandonment of farmland. Emissions from transport, however, increased between 1990 and 2011 by almost 20% (UNFCCC inventory 2011, EEA 2012, UNFCCC 2012c). In 2012, GHG emissions are expected to be reduced due to emission reductions from energy supply and energy use while emissions from transport are expected to slightly increase (EEA 2013c).

### Progress on GHG targets

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

Under the Kyoto-Protocol the emission reduction target for Bulgaria for the period 2008-2012 was minus 8% based on 1988 for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O and on 1995 for F-gases. An evaluation of the latest complete set of greenhouse gas data (for the year 2011; there is only preliminary data for 2012) shows that Bulgaria's emissions have decreased on average by just over 50% against the Kyoto base year (EEA 2013a). Hence, Bulgaria is guaranteed to meet its Kyoto target through domestic emissions reductions directly (and will in fact significantly overachieve it).

By 2020, Bulgaria may increase its emissions not covered by the EU ETS by 20% compared to 2005, according to the Effort Sharing Decision (ESD) <sup>(2)</sup>. The latest data for

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<sup>2</sup> Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020.

2012 (EEA 2013b) shows that Bulgaria has already reached its Annual Emissions Allocation (<sup>3</sup>) for the year 2013; however, there is no clear trend in the development of non-ETS emissions in the last years (see **Fehler! Verweisquelle konnte nicht gefunden werden.**). By 2020, national projections (EEA 2013b) show that the country might fail to meet its 2020 target by almost 3 percentage points with existing measures but could meet its target with a margin of 11 percentage points if additional measures are taken.

**Table 1: GHG emission developments, ESD-targets and projections (in Mt CO<sub>2</sub>eq)**

	1990	2005	2010	2011	2012*	ESD target**		2020 Projections***	
						2013	2020	WEM	WAM
Total	109.5	63.7	60.4	66.1	62.4				
Non-ETS (% from 2005)		24.0	26.8	26.1	27.3 14%	27.3 14%	27.2 20%	28 23%	25 9%
Energy supply (% share of total)	38.8 35%	27.0 42%	31.5 52%	36.4 55%					
Energy use (w/o transport) (% share of total)	27.4 25%	10.4 16%	5.8 10%	6.0 9%					
Transport (% share of total)	6.8 6%	7.7 12%	8.0 13%	8.1 12%					
Industrial processes (% share of total)	8.8 8%	6.6 10%	3.6 6%	4.0 6%					
Agriculture (% share of total)	18.2 17%	6.2 10%	6.2 10%	6.1 9%					

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

\* proxies for 2012

\*\* The ESD target for 2013 and for 2020 refer to different scopes of the ETS: the 2013 target is compared with 2012 data and is therefore consistent with the scope of the ETS from 2008-2012; the 2020 target is compared to 2020 projections and is therefore consistent with the adjusted scope of the ETS from 2013-2020. 2005 non-ETS emissions for the scope of the ETS from 2013-2020 amounted to 23 Mt CO<sub>2</sub>eq.

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

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

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

National projections of GHG emissions up to 2020 need to be prepared by the Member States in accordance with the EU Monitoring Mechanism (<sup>4</sup>) every two years, and the latest submission was due in 2013. The projections need to be prepared reflecting a scenario that estimates total GHG emissions reductions in line with policies and measures that have already been implemented (with existing measures, WEM), and an

<sup>3</sup> Commission decision of 26 March 2013 on determining Member States' annual emission allocations for the period from 2013 to 2020 pursuant to Decision No 406/2009/EC of the European Parliament and of the Council. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:090:0106:0110:EN:PDF>

<sup>4</sup> Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

additional scenario that reflects developments with measures and policies that are in the planning phase (with additional measures, WAM) may also be submitted.

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

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

Existing Measures (only important national measures)		Status of policy in November 2013
Energy	Development and staged implementation of national programme "1000 sunny roofs"	To be implemented in 2015-2020
	Gas supply to households	To be implemented. The Energy Strategy of Bulgaria envisages creation of conditions for access to the gas distribution system to 30% of households in 2020 and substitution of electricity used for heating purposes which would save households more than 1 bln. BGN of energy costs. The use of natural gas instead of electricity for heating and domestic purposes is estimated to save about 100kWh/year at least, and up to 1800 kWh/year per household.
	Upgrading of cogeneration plants and district heating boilers (JI, ETS) Biomass for electricity and heat production (JI + Green Investment scheme)	Implemented. Support for introduction of biomass for heat and electricity production and diversification of energy supply
	Utilisation of captured methane for production of electricity	Implemented. On 14 February 2012, the "Act on the storage of carbon dioxide in the earth" came into effect, allowing the utilisation of carbon capture in Bulgaria
Networks	Funding from EU funds for new gas infrastructure to increase the use of natural gas in industry and households	Implemented under the Operational Programme Regional Development (OPRD)
Energy Efficiency	Support for energy audits for SMEs and obligatory implementation of the recommendations coinciding from the audits	Implemented under the Bulgaria Energy Efficiency for Competitive Industry Financing Facility (BEECIFF)
	Obligatory energy audits for consumers with loads over 10 MW and obligatory implementation of recommendations resulting from the energy audits, related to measures with less than 2-year pay-back period	Partially implemented. According to the Energy Efficiency Act, energy audits are obligatory for all public buildings with a useful area above 1000m <sup>2</sup>

	After the entry into force of the new directive on energy efficiency - restoration of the specified annual percentage of the overall public and government buildings (with total area over 250m <sup>2</sup> )	To be implemented in 2015-2020
	Introduction of mandatory energy efficiency scheme (reduction of the consumption of fuel and energy in the energy end-use consumption)	To be implemented in 2014-2020
	Taxes and charges for highways	Implemented. On Bulgarian state roads (highways), road tax vignettes are obligatory for all motor vehicles. The prices for 2013 are as following: 1 week - € 5, 1 month - € 13, 1 year - € 34.
	Subsidies for public transport: Reducing the share of trips by private motor vehicles	Implemented under the following schemes: <ul style="list-style-type: none"> <li>- Support for Integrated Public Transport in Sofia Municipality</li> <li>- Project for Integrated Urban Transport in Burgas</li> <li>- Support for integrated urban transport in 5 large cities: Varna, Plovdiv, Stara Zagora, Pleven, and Ruse</li> </ul>
Transport	Design and construction of new road infrastructure and rehabilitation and modernization of the existing road infrastructure to ensure optimum speed and optimum driving modes of automobile engines	Planned. To be implemented under the "Operational Programme Transport 2014-2020" (Оперативна програма ТРАНСПОРТ 2014-2020), which is currently being prepared by the Ministry for Regional Development.
	Introduction of intelligent transport systems along the national and the urban road network	Planned. To be implemented under the "Operational Programme Transport 2014-2020" (Оперативна програма ТРАНСПОРТ 2014-2020), which is currently being prepared by the Ministry for Regional Development.
	Lower excise for biofuels	Implemented. End consumers of biofuels resp. fuel producers are entitled to a reduced rate of excise duty for unleaded petrol or gas oil when bioethanol or biodiesel with 4% to 5% of volume has been added.
Waste	Construction of installations for mechanical and biological treatment (mbt) and installations for treatment and recovery of compost and biogas	From 2013 to 2014, 12 installations are expected to be built; until 2020, 54 installations are planned. As a result of its implementation for the period 2013–2020, 5.3 million tonnes of biodegradable waste will be diverted from landfills, with a reduction of 5,824 kt CO <sub>2</sub> -eq. As part of the National Waste Management Programme 2009–2013 and the National Strategic Plan for Gradual Reduction of Biodegradable Waste 2010–2020 the following measures are planned (EEA 2013c): <ul style="list-style-type: none"> <li>- systems for separate waste collection</li> <li>- differentiated charges for generating waste</li> <li>- markets for recycled waste materials</li> <li>- separate collection of green waste.</li> </ul>

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

Additional Measures (only important national measures)		Status of policy in November 2013
Energy Efficiency	EU funds or new EBRD Funds for installation of solar collectors at institutional buildings and private homes	Starting from 2015, the development and phased implementation of the national programme “1000 Sunny Roofs” is planned which envisages 200 commissioned installations on multi-family buildings by 2016, 400 by 2018, and further 400 by 2020. The programme will be financed through the Energy Efficiency Fund, private investments, ESCO, and specialised credit lines.
Transport	Introduction of intelligent transport systems along the national and the urban road network	To be implemented under the “Operational Programme Transport 2014-2020” (Оперативна програма ТРАНСПОРТ 2014-2020), which is currently being prepared by the Ministry for Regional Development.
Waste	Construction of installations for mechanical and biological treatment (mbt) and installations for treatment and recovery of compost and biogas	From 2013 to 2014, 12 installations are expected to be built; until 2020, 54 installations are planned. As a result of its implementation for the period 2013–2020, 5.3 million tonnes of biodegradable waste will be diverted from landfills, with a reduction of 5,824 kt CO <sub>2</sub> -eq. As part of the National Waste Management Programme 2009–2013 and the National Strategic Plan for Gradual Reduction of Biodegradable Waste 2010–2020 the following measures are planned (EEA 2013c): <ul style="list-style-type: none"> <li>- systems for separate waste collection</li> <li>- differentiated charges for generating waste</li> <li>- markets for recycled waste materials</li> <li>- separate collection of green waste.</li> </ul>
Forestry	Restoration and maintenance of protective forest belts and new anti-erosion afforestation	Following measures are planned: Utilization of non-wooded areas intended for afforestation in forest areas, afforestation of abandoned agricultural land, arid lands and deforested areas, eroded and threatened by erosion land outside of forests; increase of areas for urban and suburban parks and green zones; restoration, protection, sustainable management and preservation of wetlands in forest areas, peatlands, marshlands; restoration and maintenance of protective forest belts and new anti-erosion afforestation; increasing the density in the listed natural and artificial plantations. Other planned measures include the prevention of forest fires through early warning systems and further measures to increase the carbon capture potential of forests (EEA 2013c).

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

According to the current state of implementation, some of the existing measures may not have been (or are no longer) realised to the full extent assumed under the scenario. However, some progress has been made to advance additional policies, in particular addressing emissions from non-ETS sectors such as from the waste sector. In sum, the assessment of the WEM/WAM scenarios indicates that Bulgaria needs to step up further actions in the non-ETS sectors and has to realise the planned measures to be able to reach its 2020 target.

### 3 Evaluation of National Reform Programme 2013 (NRP)

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

The NRP of April 2013 focuses on policies for energy efficiency such as the new Residential Energy Efficiency Credit Line (REECL) programme for energy efficiency in households or the "Energy efficiency and green economy" procedure. The draft Law on Climate Change Mitigation was submitted to Bulgarian Parliament in September 2013.

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

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

<b>Amendment of secondary regulations to simplify procedures for small RES plants</b>	
Status as stated in the NRP	Efforts are now focused on adjusting the secondary regulations in order to simplify procedures for connecting small RES power generators which can be mounted on roofs and facades so energy can be generated for own use.
Status as of Nov 2013	No progress has been made
Description of policy or measure	With the adoption of the Law Amending the RES Act in April 2012, and the Law Amending the Energy Act in July 2012, conditions for investing were adjusted to correspond to the current situation and development in the sector, and the rules for the determination of the preferential off-take price of electricity from renewables were changed. With the changes to the legal framework, efforts are now focused on adjusting the secondary regulations in order to simplify procedures for connecting small RES power generators which can be mounted on roofs and facades so energy can be generated for own use (NRP, 2013).
<b>New REECL programme for energy efficiency in households</b>	
Status as stated in the NRP	A new programme promoting the demand for energy efficient domestic appliances and equipment will be developed for the next programming period 2014-2020.
Status as of Nov 2013	No progress has been made
Description of policy or measure	Financial incentives for purchasing of energy efficient appliances and equipment for the households. Extension of low-interest loans, bank guarantees and grants for energy efficiency measures in multi-family residential buildings in 36 municipalities in urban agglomerations. 67 cities will be supported in the next programming period 2014–2020, according to the National Spatial Development Concept Paper (NRP, 2013).

**Implementation of projects under the procedure for Investments in Green Industry.**

Status as stated in the NRP	A total of 332 enterprises will be supported until 2015
Status as of Nov 2013	The project selection under call for proposals for Energy Efficiency and Green Economy continued until 31.10.2013.
Description of policy or measure	In 2013, the procedures "Energy efficiency and green economy" and "Investments in green industry" under the Operational Programme "Development of the Competitiveness of the Bulgarian Economy" (OPDCBE) were launched, providing financial support for the deployment of energy-saving technologies in enterprises and improvement of energy management

**Support for integrated urban transport in 5 large cities: Varna, Plovdiv, Stara Zagora, Pleven, and Ruse**

Status as stated in the NRP	In process of implementation under the Operational Programme "Regional Development" (OPRD) until 2013
Status as of Nov 2013	2013-2015: Implementation of the projects under OPRD 2007-2013. Until the end of August 2015: Completion of the contracts under OPRD 2007-2013
Description of policy or measure	Overall, a total of BGN 403 million (approx. € 200 m) will be spent by mid-2015 to improve public transport systems in seven major cities: Sofia, Burgas, Varna, Plovdiv, Stara Zagora, Pleven, and Ruse (Stroeji 2012). The projects envisage a set of measures for the modernisation of public transport, including automated ticketing systems, passenger information in real time, building new bike lanes, facilitating the access of buses and trams, etc.

**Law on Climate Change Mitigation**

Status as stated in the NRP	Draft law is to be put for discussion in the Parliament before the end of the second quarter of 2013.
Status as of Nov 2013	On 21 August 2013 a draft version of this law was published within the framework of a public consultation procedure (Портал за Обществени консултации, 2013). This public consultation was concluded on 03 September 2013 and the draft law was submitted to the Bulgarian Parliament (Народно събрание на Република България 2013).
Description of policy or measure	The law allocates some ETS auctioning revenues towards projects that contribute to low-carbon development. The draft defines the National Trust Eco Fund as the manager of this money. According to the Bulgarian think tank Energy Management Institute (EMI), the draft does not ensure the full implementation of European regulations, as the government shall assign at least 50% of the revenue from the trading of greenhouse gas emissions to certain activities.

### Support for the implementation of energy efficiency measures in the municipal educational infrastructure in urban agglomerations

Status as stated in the NRP	In the process of implementation under OPRD until 2012
Status as of Nov 2013	As of November 2013, this measure was fully implemented.
Description of policy or measure	<p>After the evaluation of the proposals in October 2010, funding was approved for 23 projects. The total grant amounted to BGN 77.96 million, of which 85% was financed from the ERDF and 15% from the beneficiaries (Europe 2010).</p> <p>Another 24 proposals qualified, but could not be funded due to a lack of sufficient financial resources under this scheme.</p> <p>23 of these remaining projects were approved in 2012 with a total grant of BGN 53.92 million (OPRD 2012b).</p>

### Support for energy efficiency in multifamily residential buildings

Status as stated in the NRP	In the process of implementation under OPRD until 2013
Status as of Nov 2013	Implemented
Description of policy or measure	<p>In 2013, the OPRD scheme "Support for energy efficiency in multifamily residential buildings" continued. The total budget of the scheme amounts to BGN 95 million. The scheme finances the implementation of energy efficiency measures in multifamily buildings in 36 municipalities. An additional funding of BGN 13.5 million is available from the Housing Renovation Fund (HRF).</p>

### National Energy Efficiency Strategy

Status as stated in the NRP	According to the NRP, the draft strategy should be submitted to the Council of Ministers until the end of May 2013 and to the National Assembly until the end of December 2013.
Status as of Nov 2013	As of November 2013, the National Energy Efficiency Strategy has not been adopted by the Bulgarian Parliament.
Description of policy or measure	<p>According to the Energy Efficiency Act (Закон за енергийната ефективност), the Bulgarian Parliament shall adopt a National Energy Efficiency Strategy, setting the national targets for energy savings and the necessary steps and measures to achieve this goal. The National Strategy shall be updated every five years.</p>

## 4 Policy development

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

In recent months, Bulgaria has made some progress in the energy efficiency sector (Amendment of Energy Efficiency Act, second round of the Bulgarian Energy Efficiency and Renewable Energy Credit Line, BEERECL and the Residential Energy Efficiency Credit Line, REECL). However, progress has been notably slowed down by the unclear political situation. Furthermore, the falling electricity prices as well as the new

reimbursement system for electricity from renewable sources have led the three distribution grid operators close to bankruptcy.

### **Horizontal Issues**

At the beginning of February 2013, thousands of Bulgarian citizens initiated protests in more than a dozen Bulgarian cities against skyrocketing electricity bills between December 2012 and January 2013 issued by the power distributors ČEZ, EVN, and Energo-Pro. Consumers reported 100% higher bills compared to the same period in 2012 (Novinite, 2013c).

As a result, the centre-right government of Prime Minister Boyko Borisov resigned on 20 February 2013, leading to early parliamentary elections on 12 May 2013. Following a political standstill of nearly four months, the Bulgarian Parliament elected a new minority government on 29 May 2013 under the lead of former Minister of Finance, Plamen Oresharski. However, between June and November, thousands of demonstrators gathered daily in the capital city, Sofia to protest against corruption, patronage and widespread poverty, demanding the resignation of Oresharski and his coalition. These allegations also concerned the Bulgarian energy sector. In May 2013 the World Bank detected “non-transparency in the management of state-owned companies, a widespread sense of corruption and an insufficiently independent regulator to control the entire energy system” (Novinite, 2013d). The protests were also directed at Oresharski’s plans to reinstate the project for constructing a new nuclear power plant with the help of Russian state company Atomstroyexport (Europe Online, 2013).

The draft Law on Climate Change Mitigation will transpose the revised ETS Directive 2009/29/EC into national Bulgarian legislation. On 21 August 2013 a draft version of this law was published within the framework of a public consultation procedure (Портал за Обществени консултации, 2013). This public consultation was concluded on 3 September 2013 and the draft law was submitted to the Bulgarian Parliament (Народно събрание на Република България, 2013).

According to a report on environmental conservation (Национален доклад за състоянието и опазването на околната среда; Council of Ministers, 2013) presented by the Ministry of Environment and Water on 9 April 2013, the energy sector was responsible for almost 80% of the total greenhouse gas emissions in Bulgaria in 2011. Further harmful emissions came from road traffic (fine dust pollution) and the agricultural sector (ammonia and NMVOC). The report stresses that these factors constitute a serious threat to human health. Additionally, they could also be considered a central reason for the degradation of ecosystems. Finally, more than 50% of the population lives in areas exposed to concentrations of fine dust pollution which are above permissible limits (Novinite, 2013e).

### **Energy Generation**

At the beginning of October 2013, the Bulgarian Ministry of Economy and Energy presented its plans to transfer the Bulgarian transmission grid, which is currently operated by the country’s largest utility NEK (Националната електрическа компания), to the Electricity System Operator (ESO). While ESO is currently still a subsidiary of NEK, the Bulgarian government envisages transferring the company to the Bulgarian Energy Holding (BEH), which owns NEK. The unbundling of NEK and ESO is a requirement under the EU’s Third Energy Package. Whereas some of NEK’s creditors disapprove of

this plan and criticise the lack of an acceptable financial model, the Ministry countered these claims and pointed out that the new model had been consulted with the creditors of NEK. Due to the fact that Bulgaria has so far failed to implement the Third Energy Package, the country could be penalised by the European Court of Justice with daily fines in the amount of € 8,448 (Novinite, 2013o).

Furthermore, the Bulgarian Minister of Economy and Energy, Dragomir Stoynev, confirmed plans to construct a new unit at the nuclear power plant at Kozloduy. In November 2013 According to Stoynev, Bulgaria is currently in negotiations with the U.S. company *Westinghouse* and construction work could start as early as 2016. This plan must still receive approval by Prime Minister Oresharski. Furthermore, the Bulgarian Government also intends to extend the lifetime of units 5 and 6, which will expire in November 2017 and October 2019 respectively (Novinite, 2013p).

On 29 July 2013, the Bulgarian State Commission for Energy and Water Regulation (DKEVR) announced a decrease in electricity prices by an average 5% as of the beginning of August. For all three power distributors, ČEZ, EVN and Energo-Pro, the cost of daytime electricity decreased between 4.12% and 4.9%, while prices for night-time electricity were reduced by 3.43% to 6.82%. The final electricity prices for household customers range between BGN 0.15 and 0.16 (€ct 7.7 – 8.2) per kWh during the day and BGN 0.09 (€ct 4.6) per kWh during the night. These tariff changes came into effect on 1 August 2013 (Novinite, 2013i). This policy might restrain efforts for improving energy efficiency by sending the wrong price signals for energy consumption.

On 15 August 2013, the Bulgarian Minister of Economy and Energy, Dragomir Stoynev, approved an increase in coal prices. From 1 September 2013, the price of coal from the Maritsa Iztok Mines was raised from BGN 71.50 to BGN 75.00 per tonne of conditional fuel (Министерство на икономиката, енергетиката и туризма 2013). It is important to note that coal prices for the industrial sector in Bulgaria are regulated by the state and have not been increased over the past three and a half years and have even been reduced. However, according to the Confederation of Independent Trade Unions in Bulgaria (KNSB), the real market price of coal amounted to BGN 104 per tonne. Currently, KNSB is negotiating with the Ministry of Economy about a gradual increase in coal prices to the market level by the end of 2014. Most probably, this would also have an impact on the price of electricity (Capital 2013).

According to the Parliamentary Committee for Energy, all three electricity distributors operating in Bulgaria are facing bankruptcy. This situation was supposedly caused by falling electricity prices, as well as the new rules for the purchase of electricity from renewable sources, which came into effect in March 2013. Since then, the reimbursement of expenses by DKEVR has been limited (see more on this below). The committee unveiled that EVN has recorded losses of almost BGN 300 million and CEZ nearly BGN 200 million. According to Energo-Pro, the company expects to run up losses totalling BGN 143 million by the end of 2013. Before the amendment of the reimbursement system, power distributors bought renewable energy, sent invoices to the transmission system operator NEK and were reimbursed for their expenses. However, due to the fact that the renewable energy output was much higher than expected, NEK amassed debts of nearly BGN 2 billion. According to the new methodology which was introduced through an amendment of the Energy from Renewable Sources Act (Закон за енергията от възобновяеми източници), NEK reimburses the power distributors on the basis of

forecasts. Therefore, the risk of connecting excessive renewable capacity to the grid has been transferred to the distribution system operators (Novinite, 2013j)

### **Environmental Taxation**

In 2011, the share of environmental tax revenues in total tax revenues in Bulgaria amounted to 10.56%. It is the highest share in the EU. Compared to its GDP these taxes were the 7th highest in the EU at 2.88%. Bulgaria has no explicit carbon tax in place. The implicit tax rate amounted to 67.2 € per tonne of oil equivalent (toe). The share of energy taxes in total tax revenues is the highest in the EU (Eurostat 2013a), despite the fact that the implicit tax rate is very low. This might be explained by the fact that Bulgaria had the economy with the highest energy intensity in the whole EU in 2010.

No recent changes in the use of environmental taxation could be identified. However, on 25 October 2013, the Bulgarian Regional Inspectorate of Environment and Water (RIEW - Регионалната инспекция по околна среда и води) imposed a fine of more than BGN 64,000 (approx. € 32,700) over excessive sulphur dioxide emissions on "Maritsa Iztok-3", a lignite-fired thermal power plant belonging to the largest energy complex in South Eastern Europe. Furthermore, the companies Belovo Paper Mill and Fikosota Sintez OOD were fined penalties over improper wastewater disposal. Already in September 2013, the Bulgarian Ministry of Environment and Water had issued a report on the results of all inspections conducted by RIEW. Officials of the Ministry had inspected over 1,500 sites, issued 79 statements of offence and 626 instructions on how to deal with irregularities (Novinite, 2013q).

### **Energy Efficiency**

Despite decreasing the energy intensity of its economy by 17% between 2005 and 2011, Bulgaria is still the MS with the highest energy intensity in the EU. Over the period between 2005 and 2011 Bulgaria managed to reduce its energy consumption by 7%, but in the time between 2010 and 2011 this trend reversed and the consumption increased by 5%. Thus, Bulgaria is among the four countries that failed to reduce its consumption between 2010 and 2011 (Eurostat 2013a).

This problem was also acknowledged by Caretaker Prime Minister Marin Raykov who stated at a hearing at the Bulgarian Parliament on 22 May 2013, that "the biggest problem in Bulgaria's energy sector was the surplus production of electricity". He further explained that the over-production had not only been created during the rule of the previous government, but has been a reoccurring problem for the last twenty years (Novinite, 2013n). In attempt to decrease surplus electricity production, three decrees for the introduction of a third energy package were adopted in May 2013 by the State Commission for Energy and Water Regulation (DKEVR).

The chemical and steel industries have been the industrial branches of the Bulgaria economy where the most energy efficiency improvements took place. Since 2010 the positive trend in the industrial sector has slowed compared to previous years. Energy efficiency improvement in the household sector are also stagnant, with inconsequential development since 2002, when efficiency improvements stopped completely (Odyssey 2012) Energy efficiency developments are hampered by the fact that Bulgarian electricity prices are the lowest of the EU-27, with EUR 9.6 per kWh compared to the EU average of EUR 19.7 per kWh (Eurostat 2013a).

On 26 February 2013, the Energy Efficiency Act (Закон за енергийната ефективност) was approved by the Bulgarian Parliament. The parliamentary session was labelled "emergency" as the Government of Prime Minister Boyko Borisov had reigned less than a week earlier. According to GERB, the adoption of these pending bills would enable DKEVR to reduce electricity prices. The amendments foresee the preparation of a national plan to increase the number of nearly zero energy buildings, introduce certificates for projected energy characteristics as well as energy certificates for existing buildings, and establish an independent certificate control system (Novinite, 2013f). As of November 2013 however, there has been no further development in this regard.

In April 2013, Raiffeisenbank and the EBRD signed a second line of credit under the Bulgarian Energy Efficiency and Renewable Energy Credit Line (BEERECL). In total, the EBRD will allocate a loan in the amount of € 7.5 million which will be in turn lent by Raiffeisenbank to local enterprises. The second line of credit is less than half of the first, which was a BEERECL credit line of € 20 million for 25 projects in the field of energy efficiency and renewables. Eligible energy efficiency projects include the rehabilitation or replacement of boilers, the modernisation of energy infrastructure, heat and steam recovery, or process improvement including enhanced controls and automation systems. With regards to renewable energy projects, investments in biomass, geothermal and biogas installations, as well as small wind turbines and solar thermal and hydro power projects are covered. Investors may receive a grant upon project completion of up to 15% of the disbursed loan. The exact amount depends on the estimated energy savings in the case of energy efficiency projects and the capacity installed for renewable energy projects (Novinite, 2013m).

In 2013, the Operational Programme "Regional Development" (OPRD) scheme "Support for energy efficiency in multi-family residential buildings" will proceed. The total budget of the scheme amounts to BGN 95 million (ca. €48 million). It will finance the implementation of energy efficiency measures in multifamily buildings in 36 municipalities across Bulgaria. An additional funding of BGN 13.5 million (ca. €6.9 million) is available under the Housing Renovation Fund in the form of low-interest loans and bank guarantees, which will be allocated to home owners who cannot afford the 50% co-financing with their own funds (NRP, 2013).

## **Renewable Energy**

The share of renewable energy in gross final energy consumption increased from 9.2% to 13.8% between 2005 and 2011 (Eurostat 2013a). Thus, Bulgaria is on track to achieving its 2020 target of 16%. The share of renewable in gross electricity consumption has increased from 9% to 12.9% in 2011 (Eurostat 2013b).

In 2013, the reputation of renewable energy received a blow as several situations emerged around mismanagement. On 3 March 2013, the Electricity System Operator (ESO) suspended several units of the Maritsa Iztok Thermal Power Plant (lignite based) in order to ensure the stability of the power grid. Subsequently, ESO voiced their concern that renewable energy plants threatened Bulgaria's power system and announced that they were considering the termination of their electricity purchase contracts. Adding to the bad publicity around renewables, Asen Vasilev, Bulgaria's caretaker Minister of Economy, Energy and Tourism announced in late March 2013 that 40% of all PV and wind power plants had breached legal requirements by failing to submit real-time information about the amounts of electricity produced and would be therefore temporarily disconnected

from the Bulgarian power grid. Meanwhile, the Bulgarian Photovoltaic Association (BPVA) pointed out that since the beginning of April, ESO had ordered distribution companies to limit the output of renewable energy plants more than ten times, calling these measures non-transparent and illegal. Reacting to these complaints, caretaker Deputy Prime Minister Ekaterina Zaharieva ordered Vasilev to inspect the restrictions on the production of renewable energy set by ESO. As a result of this inspection, the Ministry of Economy ordered ESO to stop imposing restrictions on the production of wind and solar power plants on a regular basis (Novinite, 2013).

Electricity from renewable sources is mainly promoted through a feed in tariff (FIT). The FIT applies to producers of electricity from renewable energy sources who export their electricity to the public grid. After the adoption of the new Renewable Energy Act in May 2011, FIT rates are no longer regulated by law and can be reduced at any time. In September 2012, the regulatory authority DKEVR introduced a retroactive “Fee for the access to the transmission and distribution networks” (Цена за достъп до електропреносната и електроразпределителните мрежи) for any renewable energy plant connected to the grid since 2010 which was heavily contested by the renewable energy industry. These fees cut the tariff rates retroactively by as much as 39% for certain technologies. In turn, this created uncertainty in Bulgaria’s renewable energy investment climate. In December 2012, the European Commission began an examination of the grid access fee to determine whether it was breaching EU law (Balkan Insight 2012).

In March 2013, the Supreme Administrative Court of Bulgaria overruled the controversial grid access fee (Цена за достъп до електропреносната и електроразпределителните мрежи) for photovoltaic power plants built in 2010-2012, after almost 1,000 companies filed official complaints (PV Magazine, 2013). On 18 June, this decision was confirmed at a second instance and entered into force. The court argued that DKEVR did not act according to the administrative rules of procedure and has not provided evidence to justify the temporary access fees. Therefore, the court concluded that the fee was introduced in violation of the Energy Act, which stipulates that prices must be non-discriminatory, based on objective criteria and determined in a transparent manner (Capital 2013a).

In October 2013, the Ministry of Economy and Energy presented its plans to amend the Energy Act (Закон за енергетиката) as well as the RES Act (Закон за енергията от възобновяеми източници) in order to cope with increasing renewable energy production capacities and the associated impact on electricity prices. The options being discussed were the introduction of a tax on revenues from feed-in tariffs, a grid access fee for renewable energy plants or their inclusion in balancing groups for electricity trade. Prior to this, the Bulgarian Energy Holding (BEH) had asked the government to introduce a 30% tax on revenues of PV power plants from the feed-in tariff scheme. According to BEH, this measure would save the energy utility NEK from bankruptcy and reduce electricity prices for households. In response, the Ministry pointed out that another option would be to make renewable energy plants pay a fee for accessing the transmission and distribution grids, which have already been introduced temporarily by the regulatory authority DKEVR. However, the Supreme Administrative Court subsequently revoked these fees and ordered the distribution and transmission grid operators to reimburse a total of BGN 150 million (approx. € 76 m) that had been collected through these fees (Mediapool 2013).

Subsequently, on 5 December 2013 the Bulgarian Parliament approved a proposal to introduce a new 20% fee on the revenues of photovoltaic plants and wind farms by amending the Renewable Energy Sources Act which will come into effect from 1 January 2014. The proposal was initially presented as a tax, but subsequently revised to "fee". In a media statement, the Ministry of Economy and Energy referred to the Czech Republic and Greece as examples for countries which already have introduced taxes on renewables. However, on 12 December 2013, the Bulgarian President Rosen Plevneliev decided to notify the Constitutional Court about the renewable energy fee stating that it had been adopted "amid a lack of transparency" and that it would have a "dramatic impact on the business climate in Bulgaria". Meanwhile, representatives of the renewable energy industry are protesting against the new measure. The Bulgarian Photovoltaic Association (BPVA) called the new tax "scandalous, discriminatory and illegal".

### **Transport**

Emissions from transport have increased by almost 20% between 1990 and 2011. Their proportion among Bulgaria's total emissions remained relatively stable in the last years and reached 12% in 2011, representing the highest share of emissions after energy supply (Table 1). Average emissions for newly registered cars are very high in Bulgaria with a level of 149.2 CO<sub>2</sub>/km. The level is the 3rd highest in the EU and has decreased at a lower rate than EU average between 2005 and 2012 (Eurostat 2013a). Bulgaria has an ownership tax, which is based on the engine output and age of the vehicle (ACEA 2012) and there is a time based vignette system in place for passenger cars and HDVs (CE Delft 2012). The low tax rates charged on diesel put Bulgaria at the low end of EU MS, and taxes on petrol are also well below the EU average (European Commission 2013).

No recent developments could be identified within the period covered by this report.

### **Waste**

On 2 August 2013, twenty three senior officials were dismissed from the Ministry of the Environment, due to inefficient implementation of the projects being funded by the EU's Operational Programme. As a result, around BGN 600 million for "water" sub-division remained unabsorbed and had to be redirected. There is a serious threat that the same will happen with BGN 200 million envisaged for Sofia's long awaited waste plant. According to the Minister of the Environment, Iskra Mihaylova, Bulgaria must catch up with the delayed construction of regional household waste depots if it wants to avoid penalties under an ongoing EU infringement procedure. Originally, it was planned that twenty four waste depots would be constructed in Bulgaria by 2009 under the Operational Programme "Environment," however, only two have been built so far. Therefore, Bulgaria now faces fines amounting to several tens of thousands of euro each month for non-compliance with its EU Accession Treaty and the Waste Framework Directive of the EU (Novinite, 2013g). The delays are of particular concern also because the 2014-2020 Operational Programme is currently being drafted (Ministry of Environment and Water, 2013).

## 5 Policy progress on past CSRs

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

Existing Country Specific Recommendations	Progress
<p>Strengthen the independence of national regulatory authorities and the administrative capacity in particular in the energy and transport sectors, as well as for waste and water management. Remove market barriers, quotas, territorial restrictions and regulated prices and complete the market design by setting up a transparent wholesale market for electricity and natural gas.</p>	<p>Despite the clear requirements for unbundling, the National Electric Company (NEK) and the Electricity/Transmission System Operator (ESO) are still closely linked. No ownership unbundling has taken place and the ESO is completely owned by NEK. There are concerns over the Bulgarian Government's plans to introduce changes to the renewable energy legislation to allow funds collected by one division of the company (NEK) to be used for another division of the company (ESO) and vice versa.</p> <p>Prices for electricity and coal are still regulated. However, independent Trade Unions are negotiating with the Ministry of Economy about a gradual increase in coal prices to the market level by the end of 2014. Most probably, this would also have an impact on the price of electricity.</p>
<p>Accelerate electricity and gas interconnector projects and enhance the capacity to cope with disruptions.</p>	<p>Future investments in the transmission and distribution grid for electricity could be notably hampered by the fact that both the transmission system operator NEK as well as the three distribution grid operators are facing severe financial difficulties.</p> <p>The infrastructure to accommodate energy from RES is still lacking. Moreover, there are no officially published 10-year grid development plans for the distribution grid, leading to a lack of allocated budgets for reconstruction and development.</p>
<p>Step up efforts to improve energy efficiency.</p>	<p>Currently, there is a building obligation in place and an obligatory energy efficiency audit and certification scheme for public buildings (see: Policy development). No significant progress has been made in other areas of energy usage.</p>

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